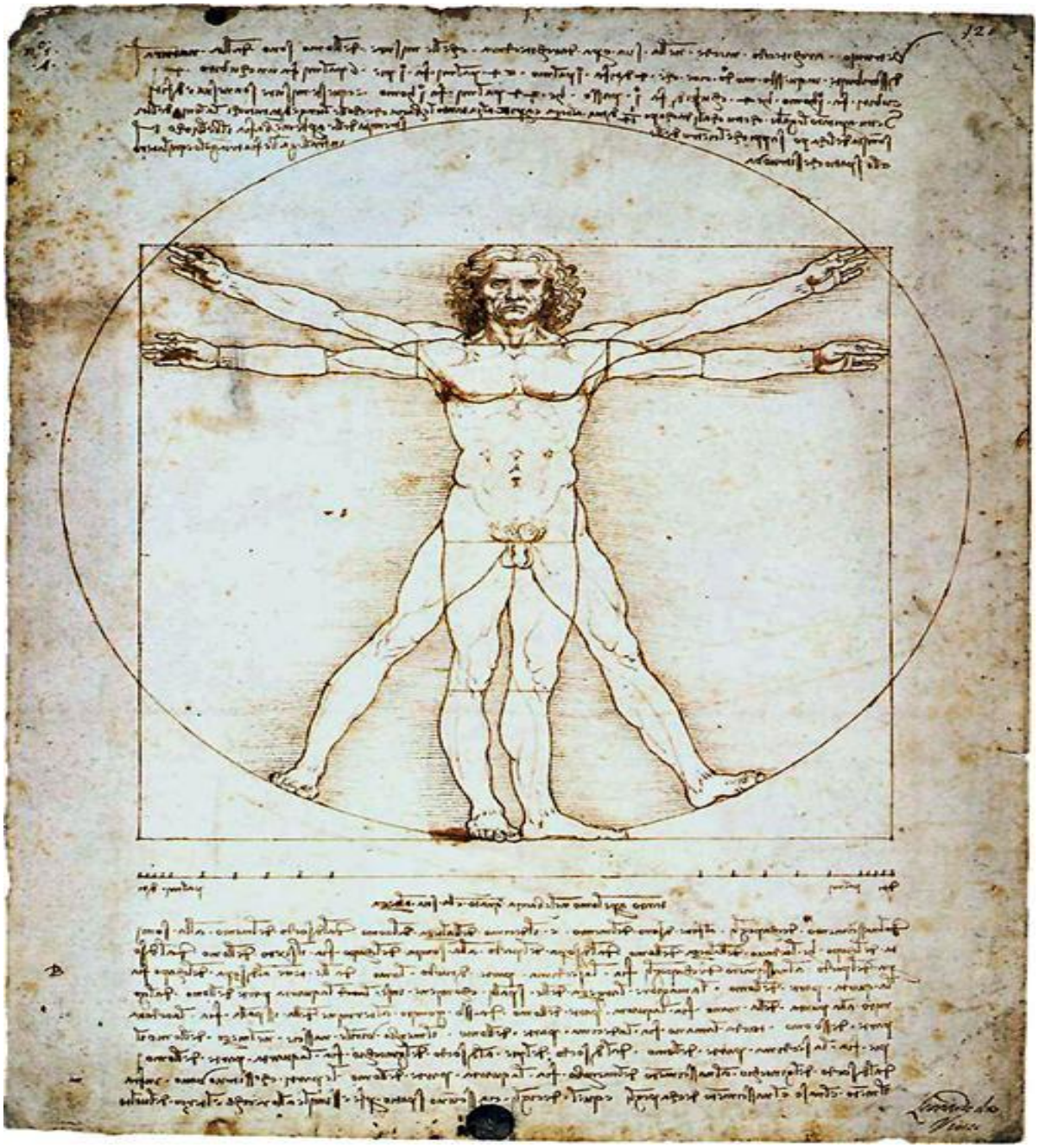
Yagenich L.V., Kirillova I.I., Siritsa Ye.A.

Latin and main principals of anatomical, pharmaceutical and clinical terminology

(Student's book)



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Contents

No.	Topics	Page
1.	UNIT I. Latin language history. Phonetics. Alphabet. Vowels and consonants classification. Diphthongs. Digraphs. Letter combinations. Syllable shortness and longitude. Stress rules.	**4-13**
2.	UNIT II. Grammatical noun categories, declension characteristics, noun dictionary forms, determination of the noun stems, nominative and genitive cases and their significance in terms formation. I-st noun declension.	**14-25**
3.	UNIT III. Adjectives and its grammatical categories. Classes of adjectives. Adjective entries in dictionaries. Adjectives of the I-st group. Gender endings, stem-determining.	**26-36**
4.	UNIT IV. Adjectives of the 2-nd group. Morphological characteristics of two- and multi-word anatomical terms. Syntax of two- and multi-word anatomical terms. Nouns of the 2nd declension	**37-49**
5.	UNIT V. General characteristic of the nouns of the 3rd declension. Parisyllabic and imparisyllabic nouns. Types of stems of the nouns of the 3rd declension and their peculiarities. 3rd declension nouns in combination with agreed and non-agreed attributes	**50-58**
6.	UNIT VI. Peculiarities of 3rd declension nouns of masculine, feminine and neuter genders. Muscle names referring to their functions. Exceptions to the gender rule of 3rd declension nouns for all three genders	**59-71**
7.	UNIT VII. 1st, 2nd and 3rd declension nouns in combination with II class adjectives. Present Participle and its declension. Anatomical terms consisting of nouns and participles	**72-81**
8.	UNIT VIII. Nouns of the 4th and 5th declensions and their combination with adjectives	**82-89**
9.	UNIT IX. Pharmaceutical terminology. Trivial (conditional) names of medicines. Botanic nomenclature. Medicinal plant names.	**91-104**
10.	UNIT X. Prescription structure. Latin prescription part. Verb in the prescriptions. Prescription definition and methods of their translation into Russian, abbreviations and their interpreting.	**105-118**
11.	UNIT XI. Chemical nomenclature. Latin names of the chemical elements and their compounds (acids, oxides, salts, esters).	**119-133**
12.	UNIT XII. Prescribing solid, semisold and liquid dosage forms.	**134-151**
13.	UNIT XIII. Structure of clinical terms. Word formation. Greek and Latin doublets	**153-164**
14.	UNIT XIV. Word formation. Greek suffixes *-itis, -osis, -oma, -iasis, -ismus* in clinical terminology. Prefixes. Antonymic pairs of prefixes and their meaning. CFs denoting functional and pathological processes and conditions of the human body.	**165-176**
15.	UNIT XV. Word formation. Greek-Latin doublets, specifying body parts, internal organs and tissues. Terminoelements denoting surgical operations.	**177-187**
16.	UNIT XVI. Multiword clinical terms referring to diagnoses and pathological processes in the main branches of medicine. Translation of	**188-199**

	clinical diagnoses.	
17.	UNIT XVII. Revision of lexical and grammatical material on "Drug Nomenclature and Prescription Writing" and "Clinical Terminology". Final test.	**200-205**
18.	Appendix	**206-208**
19.	Latin-English Vocabulary of anatomical, pharmaceutical and clinical terminology	**209-297**

UNIT I. Latin language history. Phonetics. Alphabet. Vowels and consonants classification. Diphthongs. Digraphs. Letter combinations. Syllable shortness and longitude. Stress rules.

In this unit

- General idea of Latin phonetics. Latin alphabet
- Pronunciation of vowels, consonants and diphthongs
- Letter combinations and Greek digraphs
- Long and short syllables and word stress

The subject you are going to study is the Latin Language. To some point, this name is relative, because nowadays there are no people speaking Latin. From the school course of world history you can remember, that many centuries ago, where nowadays Italy is, there was the Roman Empire. The Roman state, which included many lands and people, existed until 464 A.D. and Latin was its native language. Latin was the language of the area known as Latium (modern Lazio), and Rome was one of the towns of Latium founded by an Italian tribe in 753 B.C. Gradually, century after century, Rome became the most powerful state of the Mediterranean and Latin was widespread and acknowledged. At the time of Aristotle and Alexander, Rome was still an obscure city on the world stage, though it was beginning to assume a dominant role on the Italian peninsula. Within two hundred years, Rome had conquered most of the Mediterranean, including the ancient city-states of Greece. By the first century of the Christian era, the vast Roman Empire extended from the Atlantic Ocean to the Black Sea, from Egypt to the British Isles. Latin, once merely a regional Italic dialect in and around the city of Rome, had become the spoken and written language for most of what is today western Europe. Boasting a major literature of its own, it was also the medium by which the great achievements of Greece would be transmitted to the west. As Christianity developed, the Hebrew and Greek Bibles were translated into Latin. Even after the fall of Rome and the emergence of medieval Europe, Latin continued to thrive, especially within the powerful Catholic Church. It also became the language of state establishments, education and science. Every university would have a medical faculty. Diplomas and theses as well as the process of education itself were in Latin. In those areas where the use of Latin had become well established over centuries of empire, regional dialects of Latin evolved into new and distinct vernacular languages, including Italian, French, Spanish, Portuguese, and Romanian. Modern Latin was used by the Roman Catholic Church until the mid-20th century and is still used to some extent, particularly in the Vatican City, where it is one of the official languages.

As for medicine, Latin became the international professional language of physicians. Medical terms rooting from Latin and Greek are presented in any European language as borrowings.

It is estimated that about three-fourths of medical terminology is of Greek origin. The main reason for this is that the Greeks were the founders of rational medicine in the golden age of Greek civilization in the 5th Century B.C. The Hippocratic School and, later on, Galen (the Greek from Asia Minor who lived in Rome in the 2nd century A.D.) formulated the theories, which dominated medicine up to the beginning of the 18th Century. The Hippocratics were the first to describe diseases based on observation, and the names given by them to many conditions are still used today, for example, arthritis, nephritis, pleuritis (pleurisy). A second reason for the large number of Greek medical terms is that the Greek language is quite suitable for the building of compound words. When new terms were needed, with the rapid expansion of medical science during the last centuries, Greek words or Latin words with Greek endings were used to express the new ideas,

conditions, or instruments. The new words follow the older models so closely that it is impossible to distinguish the two by their forms. Such recent words as appendicitis, creatinine, cystoscope, epinephrine, streptococcus, and many others do not appear different from the classical terms. The fact is that about one-half of our medical terminology is less than a century old. A third reason for using the classical roots is that they form an international language.

Latin in medical terminology Greek medicine migrated to Rome at an early date, and many Latin terms crept into its terminology. Latin was the language of science up to the beginning of the 18th century, so all medical texts were written in Latin. Under the influence of the great anatomical work of Andreas Vesalius, De humani corporis fabrica (1543), the terminology of anatomy is almost exclusively Latin.

Among modern European languages English, and, particularly, medical English, contains a great number of Latin and Latinized Greek words. It becomes evident when comparing medical glossaries of Latin and English. To prove this compare some medical terms in Latin and English.

Latin clinical terms	English equivalents	Meaning
lipuria	lipuria	lipid exretion by urine
otogenus	otogenic	developing from the ear
tachycardia	tachycardia	abnormally fast heart rate

As we can see, in clinical terminology using Latin terms is particularly preferable, because one Latin word can change the whole group of English words, expressing some pathological phenomenon.

The proximity of medical terms in Latin and English can be explained very simply: it is well known, that English medical terminology developed from Medieval Latin terminology, which had absorbed ancient Latin and Greek medical lexical units. Both Latin and ancient Greek are an inexhaustible source for a new term building, and this process keeps on going. Latin was the language of science up to the beginning of the 18th Century, so all medical texts were written in Latin.

What's more, there exist lists of biological and medical terms, forming the so-called Nomenclatures, approved at the International Congresses of scientists–anatomical, histological, microbiological etc. Latin terms of those nomenclatures are used in education and scientific literature. That is why future doctors must study fundamentals of international medical terminology, based on Latin grammar and Latin and Greek word building elements (roots, stems and affixes).

LATIN ALPHABET

We aren't sure exactly how the ancient Romans pronounced the alphabet and words. We should use the so-called Roman Pronunciation of Latin, which aims to represent approximately the pronunciation of classical times.

The Latin, or Roman, alphabet was originally adapted from the Etruscan alphabet during the 7th century BC to write Latin. The earliest known inscriptions in the Latin alphabet date from the 6th century BC. It was adapted from the Etruscan alphabet during the 7th century BC. The letters Y and Z were taken from the Greek alphabet to write Greek loan words. Other letters were added from time to time as the Latin alphabet was adapted for other languages. In medieval times the letter I was differentiated into I and J and V into U, V, and W (is not included in the alphabet and used only in proper names), producing an alphabet equivalent to that of modern English with 26 letters.

Latin letters	**Name**	**Pronunciation**	**Examples** **Latin (English)**
A a	*a*	**a**	as in “**u**nder”: c**á**put (head)
B в	*be*	**b**	as in “**b**ath”: **b**ráchium (shoulder)
C c	*tse*	**ts,** **k**	as in “plan**ts**”: **c**érvix (neck) as in “**c**oner”: **c**ósta (rib)
D d	*de*	**d**	as in “**d**anger”: **d**éxter (right)
E e	*e*	**e**	as in “m**e**t”: m**e**atus (passage)
F f	*ef*	**f**	as in “**f**ast”: **f**ácies (surface, face)
G g	*ge*	**g**	as in “**g**et”: **g**áster (stomach)
H h	*ha*	**h**	as in “**h**and”: **h**epar (liver)
I i	*i*	**i**	as in “s**i**t”or “n**ee**d”: vag**í**na (vagina)
J j	*jot*	**j**	as in “**y**es”: má**j**or (large)
Kk	*ка*	**k**	as in “**k**ey”: s**k**életon
L l	*el*	**l’**	as in “**l**ife”: **l**ábium (lip)
M m	*em*	**m**	as in “**m**edical”: **m**anus (hand)
N n	*en*	**n**	as in “**n**ight”: **n**ásus (nose)
O o	*o*	**o**	as in “sp**o**t”: c**ó**rpus (body)
P p	*pe*	**p**	as in “**p**almer”: **p**álpebra (eyelid)
Q q	*ku*	**k**	as in “**qu**ite”: **qu**ádriceps (four-headed)
R r	*er*	**r**	as in “**r**end”: **r**en (kidney)
S s	*es*	**s,** **z**	as in “**s**ee”: **s**olútio (solution) as in “no**s**e”: inci**s**úra (notch)

T t	*te*	**t**	as in "**t**en": **t**ráctus (tract)
U u	*u*	**u**	as in "**p**ut"or "s**oo**n": **p**úlmo (lung)
V v	*ve*	**v**	as in "**v**ery": **v**álva (valve)
(Ww)	*dublve*	**v**	as in "**w**ill": unguentum **W**ilkinsoni- (Wilkinson's ointment)
X x	*iks*	**ks, kz**	as in "ne**x**t": rádi**x** (root)
Y y	*ipsilon*	**i**	as in "cr**y**stal": t**ý**mpanum (drum)
Z z	*zet*	**z**	as in "**z**ero": **z**ygóma (check-bone)

In the Latin alphabet there are 6 vowels **a, e, i, o, u, y** and 19 consonants: **b, c, d, f, g, h, j, k, l, m, n, p, q, r, s, t, v, x, z.** The vowels can be used as monophthongs or form diphthongs.

Latin is a hightly phonetic language, that is, the word sounds exactly like how it's written. So pronoucing the language is much easier than English once you learn the basics and keep certain rules in mind. In most cases, every letters in a word is sounded. eg. signate, don't say [signeit]. Prevent pronouncing everything like the english language, because that can't be right!

Vowels

A is pronounced as **[a]**, e.g.: **cáput** [kaput] – *head,* **artéria** [arteria] – *artery*, **abdómen** [abdomen] – *abdomen, belly*.

E is pronounced as **[e]**, e.g.: **nérvus** [nervus] – *nerve,* **téndo** [tendo] – *tendon.*

I is pronounced as **[i]**, e.g.: **línea** [linea] – *line,* **tíbia** [tibia] – *tibia* (but the vowel "**i**" placed before the vowels at the beginning of a word or between the vowels changes its sound characteristics and sounds as [**j**], e.g.: **maior** [major]. As in such cases the letter "**i**" sounds different compared to the vowel "**i**", the scientists in the XVI century decided to introduce a new letter "**j"** into the Latin alphabet, so as to substitute the vowel "**i**": **majalis, jejunum, major**. However, note that in the terms of the Greek origin the vowel "i" is always pronounced as **[i], e.g.:iater [iá:ter]** *physician* **(paediater, psychiater)**

O is pronounced as **[o]**, e.g.: **fóvea** [fovea] – *fovea,* **órganon** [organon] – *organ.*

U is pronounced as **[u]**, e.g.: **cútis** [kutis] **–** *skin,* **sutúra** [sutura] – *suture*.

Y is only met in the words of Greek origin and pronounced as **[i] (**that's why the Frenchmen call **y "igrek", i.e. "the Greek "i"):**, e.g.: **týmpanum** [timpanum] – *tympanum,* **lárynx** [larinks] – *larynx.*

Diphthongs

The diphthong is a combination of two vowels, which are pronounced as one sound or one syllable:

AE and **OE** are pronounced as one sound **[e],** e.g.: **aegrótus [**egrotus**] –** *sick,* **diáeta [**dieta**] –** *diet***, oedéma [**edema**] –** *edema***, oesóphagus [**ezofagus**] –** *esophagus*.

AU is pronounced as **[au],** e.g.: **áuris [**auris**] –** *ear***, aurícula [**aurikula**] –** *auricle.*

EU is pronounced as **[eu],** e.g.: **pléura [**pleura**] – *pleura*, pneumonía [**pneumonia**] –** *pneumonia.* **NB:** if there is "puncta diaeresis" – *points of separate*,(two dots placed over the second of two adjacent vowels) it indicates that it is to be pronounced separately rather than to form a diphthong with the first, e.g.: **áloë** [aloe] – *aloe,* **áër** [aer] – *air,* ***díploë*** *[diploe]* – *spongy substance*

Consonants

C is pronounced as **[ts]** before the vowels **e, i, y** and before the diphthongs **ae, oe**, e.g.: **cérebrum** [tserebrum] – *cerebrum,* **cílium** [tsilium] – *eyelash,* **coerúleus** [tseruleus] – *dark blue*; it is pronounced as [**k**] in all other cases, e.g.: **cávitas** [kavitas] – *cavity,* **cósta** [kosta] – *rib,* **cútis** [kutis] **–** *skin,* **Cúprum** [kuprum] **–** *copper,* **lac** [lak] – *milk.*

G is always pronounced as **[g]**, e.g.: **gingiva [**gingiva**] –** *gingiva [*jinˈjīvə*]*.

H is pronounced as **[h]**, e.g.: **hépar** [hepar] – *liver,* **hámulus** [hamulus] – *hamulus.*

J is used at the beginning of the word or between the vowels and pronounced as [j]: **májor** – *greater,* **juguláris** – *jugular,* **júgum** – *jugum,* **junctúra –** *junction.*

K is pronounced as **[k]**; it is used in borrowings only, e.g.: **Kálium** [kalium] (Arabic) – *potassium,* **skéleton** [skeleton] **(**Greek**)** – *skeleton.*

L is always pronounced softly, e.g.: **lábium** [labium] **–** *lip,* **clavícula** [klavicula] **–** *clavicle.*

S is pronounced as **[s]**, e.g.: **sutúra** [sutura] – *suture,* **sínus** [sinus] – *sinus,* and as [**z**] between two vowels and between a vowel and **m** or **n**, e.g.: **platýsma** [platizma] – *platysma,* **básis** [bazis] – *base*;

SS is always pronounced as **[s]**, e.g.: **fossa** [fosa] – *fossa*.

V is pronounced as **[v]**, e.g.: **nérvus** [nervus] – *nerve,* **véna** [vena] – *vein.*

X is pronounced as **[ks]** at the beginning and the end of the word, e.g.: **rádix** [radiks] – *root,* **fórnix** [forniks**] –** *fornix.* It is promounced as **[kz]** at the beginning of a word in the letter combination "**ex**" before a vowel, e.g.: **éxitus** [ekzitus] – *exit, outlet*.

Z is found in the words of Greek origin and pronounced as **[z]**, e.g.: **zóna** [zona] **–** *zone*, **zygóma** [zigóma] **–** *cheek-bone;* but it is pronounced as **[ts]** in the words of non-Greek origin **Zíncum –** *zink***, influénza –** *grippe*.

Letter Combinations

QU is pronounced as [**kv]**, e.g.: **áqua** [akva] **–** *water,* **Quércus** [kverkus] – *oak;* **Q** is used in this letter combination only.

NGU is pronounced as [**ngv]** before the vowel, e.g.: **língua** [lingva] **–** *tongue*, **sánguis** [sangvis] – *blood* and as [**ngu**] before the consonants, e.g.: **ángulus** [angulus] **–** *angle,* **língula** [lingula] – *lingual.*

SU is pronounced as [**sv]** before the vowels in the same syllable, e.g.: **suális** [svalis] – *pleasant,* **consuetúdo** [konsvetudo] – *habit.*

TI is pronounced as as [**ti**] before consonants, e.g.: **tíbia** [tibia] – *shinebone* and as [**tsi]** at the end of a word if followed by a vowel, e.g.: **solútio** [solutsio] **–** *solution,* **palpátio** [palpatsio**]** – *palpation.* However, after the letters **S, T, X** the letter combintaion **TI** is pronounced as [**ti], e.g.: óstium** [ostium] **–** *ostium, openin,* **míxti** [miksti] – *mixture,* **combústio** [kombustio] – *combustion.*

Greek Digraphs

These letter combinations are used only in the words of Greek origin.

CH is pronounced as **[h]**, e.g.: **chóle** [hole] – *bile,* **cóncha** [konha] – *concha,* **chórda** [*horda]* – chord.

PH is pronounced as **[f]**, e.g.: **phárynx** [farinks] – *pharynx,* **phálanx** [falanks] – *phalanx,* **sphenoidális** [sfenoidalis] – *sphenoidal*.

RH is pronounced as **[r]**, e.g.: **rháphe** [rafe] – *raphe*; **rhomboídeus** [romboideus] – *rhomboid*.

TH – is pronounced as **[t]**, e.g.: **thórax** [toraks] – *thorax, chest*, **ethmoidális** [etmoidalis] – *ethmoidal,* **thyroídeus** [tyroideus] – *thyroid*.

Rules of Word Stressing:

In Latin the stress depends on the length and the brevity of syllables. In a written form length is expressed with a *macron* (sign '¯' over the vowel), and brevity with a *caron* (sign 'ˇ' over it), e.g. ā, ă, ē, ĕ, *etc*. In Latin syllables are counted from the end of a word.

Examples: (artery)

ar-	te-	ri-	a
4	3	2	1

(joint)

ar-	ti-	cu-	la-	ti-	o
6	5	4	3	2	1

In words consisting of two syllables the second syllable from the end is stressed, e.g.: **cósta** – *rib*, **násus** – *nose*.

The place of the stress in a polysyllabic word depends on the length and the brevity of the second syllable from the end. **If the vowel of the second syllable is long, it is stressed, if it is short the stress is placed on the third syllable from the end.** The stress is only put on the second or on the third syllable from the end of a word. (**N.B.:** the number of syllables is equal to the number of vowels and diphthongs).

The syllable is long if:

1. it contains a **long vowel** "by nature" with a *macron* (sign '¯' over the vowel), e.g.: **forā́men – *foramen;***
2. it contains a **diphthong,** e.g.: **diáeta** – *diet*, **glutáeus** – *gluteal*;
3. it contains a vowel which is followed by **two or three consonants,** e.g.: **ligaméntum** – *ligament,* **maxílla** – *maxilla*. ***Exception:*** if a vowel is followed by combination of the consonants **b, c, d, g, p, t** with the letters **l** or **r** (**br, bl, cr, cl, dr, dl, gr, gl, pr, pl, tr, tl**) the syllable is considered to be short and unstressed, e.g.: **pálpěbra** – *eyelid,* **vértěbra** – *vertebra*;
4. it contains a vowel which is followed by the letters **x** or **z,** e.g.: **réflexus** – *reflex,* **Glycýrrhiza** – Liquorise (*name of a plant*);
5. it contains one of the **long suffixes** (**-ūr** (noun), **-āl** (adj), **-ār** (adj.), **-āt** (adj.), **-īn** (adj.), **-īv** (adj.), **-ōs** (adj.)),

e.g.: **sutúra**, **costális**, **mandibulāris**, **arcuátus**, **palatínus**, **incisívus**, **squamósus.**

The syllable is short if:

1. it contains a **short vowel** "by nature" with *caron* (sign 'ˇ' over it), e.g.: l**ámĭna** – *lamina;*
2. it contains **the vowel precedes another vowel**, e.g.: **línea** – *line*, **artéria** – *artery*; **xyphoídeus –** *xyphoid* (**EU** in the endings of adjectives is not to be considered as a diphthong) but in the adjective ending **-eus (not ideus)** the second letter from the end is stressed, e.g.: **glutéus** – *gluteal*, **laryngéus** – laryngeal

Exception: in Greek clinical terms with the ending **- ia** the letter «i» is usually stressed, e.g.: **otoscop<u>ía</u>** – *otoscopy, examination of the ear*;

3. it contains a vowel which is followed by one of Greek digraphs **CH, PH, RH, TH** or the letter **H** e.g.: **stóma<u>ch</u>us** – *stomach*;

4. it contains one of **<u>the short suffixes</u> (-ĭc** (adj.), **-ŭl** (noun), **-ŏl** (noun)), e.g.:**thorác<u>i</u>cus** – *thoracic*, **tubérc<u>u</u>lum** – *tubercule*, **alvé<u>o</u>lus** – socket

N.B. However, if the second vowel from the end precedes one consonant, it can be either short or long, so <u>consult the dictionary</u>**: forā́men lácĕrum** – lacerated foramen.

Practical exercises

Exercise 1. Read, pay attention to pronunciation of vowels and consonants:

ála (wing), mínor (small), artéria (artery), lámina (plate), abdómen (belly), fóvea (facet), fíbula (fibula), fémur (thigh-bone), línea áspera (rough line), pálma (palm), infundíbulum (funnel), régio (region), inférior (lower), antérior (anterior), membrána (membrane), manúbrium (manubrium), véna (vein), húmerus (bone of upper arm), gingíva (gum), úlna (medial bone of forearm), úvula (lingula), hépar (liver), hílus (hilus).

Exercise 2. Read, explain pronunciation of i or j in the following words:

intestínum (intestine), iáter (Gr.) (physician, doctor), páries inférior (lower wall), junctúra (junction), júgum (jugum), juguláris (jugular), canális palatínus májor (greater palatine canal), fossa infratemporális (infratemporal fossa), tubérculum május (greater tubercle), jejúnum (jejunum), ilíacus (iliac).

Exercise 3. Read the following words paying particular attention to the consonants c, s, l, x and z: fácies (surface), cérvix (neck), cérebrum (brain), cýstis (cyst), cytológia (cytology), cósta (rib), cáput (head), córpus (body), colúmna (pillar), cávum (cavity), cóllum (neck), crísta (crest), lac (milk), canális (canal), súlcus (groove), árcus (arch), córnu (horn), stérnum (breastbone), scápula (shoulder-blade), os (bone), spína (spine), násus (nose), básis (base), plásma (plasma), organísmus (organism), squamósus (scaly), tuberósitas (tuberosity), lóbus (lobe), látus (wide), músculus (muscle), lábium (lip), ángulus (angle), ánulus (ring), ápex (top), rádix (root), déxter (right), thórax (chest), xiphoídeus (swordshaped), zóna (zone), zygóma (cheek-bone), horizontális (horizontal), cávitas (cavity), ócciput (back of the head), trúncus (trunk), caécus (cecal), claviculáris (clavicular), accessórius (additional), músculus (muscle), cruciátus (cruciform), cávum cránii (cavity of skull), sáccus lacrimális (tear sac), cartilágo (cartilage), cóndylus (condyle), bíceps (two-headed), céllula (cell), súlci palatíni (palatine grooves), vertebrae cervicáles (cervical vertebrae), vértebrae sacráles (sacral vertebrae), os coccýgis (coccygeal bone), forámina sacrália dorsália (dorsal sacral openings), búcca (cheeck), búccae (cheeks).

Exercise 4. Read the following words paying special attention to the letter combinations ch, ph, qu, rh, th, ngu and ti:

núcha (nape), chóle (bile), chórda (cord), chárta (paper), phálanx (fingerbone), diaphrágma (diaphragm), phárynx (pharynx), áqua (water), squamósus (scaly), quádriceps (four-headed), rhizóma (rhizome), rhéxis (rupture), rheumatísmus (rheumatism), thórax (chest), rhinorrhagía (bleeding from the nose), therapía (treatment), thrómbus (blood clot), língua (tongue), únguis (nail), sánguis (blood), unguéntum (ointment), ángulus (angle), linguláris (lingular), trianguláris

(triangular), tíbia (shinebone), téstis (testis), tinctúra (tincture), óstium (opening), articulátio (joint), substántia (substance), spátium (space), solution (solution), curátio (treatment), vítium (defect).

Exercise 5. Read the following words paying special attention to Latin vowel digraphs and diphthongs:

áuris (ear), autopsía (necropsy), Áurum (gold), pléura (pleura), neurológia (neurology), pneumonía (inflammation of the lungs), cóstae (ribs), oedéma (swelling), anaemía (anemia), gangraéna (gangrene), amoéba (ameba), áër (air), Áloë (aloe), aërophobía (morbid fear of drafts or of fresh air), vertebrae (vertebrae), caécus (cecal), oesóphagus (oesophagus), auriculáris (auricular), córpus vesícae félleae (body of gallbladder), aponeurósis (aponeurosis), pseudomembrána (false membrane), uropoëticus (urogegenus/ urinogenous), díploë (diploe), haematopoëticus (hemopoietic), dýspnoë (dispnea), region glutaéa (gluteal region), peronaéus (fibular).

Exercise 6. Read the two-syllable words, stress the appropriate syllable:

fossa – facet, sulcus – sulcus, morbus – disease, apex – top, margo – margin, sinus – sinus, corpus – body, arcus – arch; atlas – the fist cervical, bursa – bursa, cavum – cavum, cauda – cauda, collum – neck, cornu – horn, ramus – branch, costa – rib, minor – lesser, manus – hand, vomer – vomer, sella – sella.

Exercise 7. Stress the following words according to the signs of length or shortness:

membrāna – membrane, vagīna – vagina, tunĭca – tunic, tympănum – tympanum, palātum – palate, tuberosĭtas humĕri – tuberosity of the shoulder, corpŏra – bodies, vulnĕra – wounds, homĭnis – of the man, thorācis – of the thorax, aegrōtus – patien, orgănon – organ, systēma – a system, oesophăgus – oesophagus.

Exercise 8. Stress the following words observing the rules of Latin word-stressing:

columna, processus, cerebrum, palpebra, profundus, transversus, internus, gangraena, refluxus, linea, rabies, reflexus, ampulla, tibia, sinister, spurius, Oryza, xiphoideus, facies, anatomia, coccygeus, caries, tabuletta, pterygoideus, externus, maxilla, curatio, solutio, substantia, eminentia, Belladonna, ligamentum, vertebra, sternum.

Exercise 9. Mark the stress, underline suffixes with short vowels with one line and with long vowels with two lines:

ventriculus (ventricle, stomach), spinosus (spinous), thoracicus (thoracic), apertura (opening), annulus (ring), angulus (angle), foveola (pit), incisura (notch, split), tuberculum (tubercle), articularis (articular), opticus (visual), basilaris (basic), cervicalis (cervical), musculus (muscle), fissura (fissure), lateralis (lateral), vertebralis (vertebral), lumbalis (lumbar), fossula (small depression or cavity), glandula (gland), scapula (shoulder-blade), mandibula (lower jaw), (maxillary), chronicus (chronic), gastricus (gastric), pelvinus (pelvic), fibrosus (fibrous), gelatinosus (gelatinous), venosus (venous), squamosus (scaly), spirituosus (spiritual), capitatus (capitate), destillatus (destilled), auditivus (auditory), vegetativus (vegetative), incisivus (incisive, cutting), junctura (junction), sutura (suture), temperatura (temperature), clavicula (clavicle), fibula (fibula), maxillaris, ceratus (waxy).

Exercise 10. Stress the following Latin anatomical terms:

alae voměris (wings of vomer), pars superior duodēni (superior part of duodenum), cartilaginous

(cartilaginous), articulatio sacrococcygēa (sacral-coccygeal joint), gingīva (gum), trachēa (windpipe), apertura thorācis inferior (lower opening of chest), orgănon gustus (taste organ), glossopharyngeus (glossopharyngeal), orbĭta oculi (eye-pit), pylōrus (opening of stomach into duodenum), peritoneum (serous membrane lining abdominal cavity), labyrinthus ethmoidalis (ethmoidal labyrinth), fossa pterygopalatina (pterygopalatine cavity), processus zygomaticus (zygomatic process), substantia compacta (thick substance), palpebra superior (upper eyelid), corpus maxillae (body of upper jaw), quadruplex (fourfold), facies poplitea (popliteal surface), ductus choledochus (bile duct).

Self-Assessment

Exercise 11. Read, explain pronunciation of vowel combinations (record your reading):
cóstae spúriae (false ribs), forámen caécum línguae (caecum foramen of tongue), Óleum Eucalýpti (eucalyptus oil), oedéma larýngis (edema of larynx), nérvus auriculáris (auricular nerve), aponeurósis línguae (lingual aponeurosis), célullae hematopoĕticae (blood-making cells), glándulae oesophagéae (oesophageal glands), pneumonía mígrans (migratory pneumonia).

Exercise 12. Read, explain pronunciation (record your reading):
nérvus ischiádicus (sciatic nerve), Strophanthínum (strophanthin), Synthomycínum (synthomycin), fébris haemorrhágica (hemorrhagic fever), ráphe pharýngis (pharyngeal raphe), ásthma bronchiále (bronchial asthma), vértebrae thorácicae (thoracic vertebrae), labyrínthus ethmoidális (ethmoidallabyrinth), rhizóma Glycyrrhízae (rhizome of licorice), Schizándra chinénsis (chinense magnolia vine), sectiónes hypothálami (sections of hypothalamus), dúctus cholédochus (common bile duct), trúncus brachiocephálicus (brachiocephalis trunk), distántia trochantérica (trochanteric distance), hemisphérium cerebélli (hemisphere of cerebellum), tubérculum pharyngéum (pharyngeal tubercle), véna saphéna (saphenous vein), cirrhósis hépatis (biliary cirrhosis), typhus abdominallis (abdominal typhus), flexúra duodenojejunális (duodenojejunal flexure), júga alveolária (alveolar yokes), articulátio compósita (complex joint), óstium atrioventriculáre déxtrum (right atrioventricular orifice), incisúra jugulăris (jugular notch), segméntum basá le antérius (anterior basal segment), básis óssis sácri (base of sacrum).

Exercise 13. Determine whether the second syllable is long or short, and mark the stress:
lamĭna arcus vertebrae (plate of vertebral arch), forāmen rotundum (round opening), vagīna processus styloidĕi (sheath of awl-shaped appendix), tuberosĭtas pterygoidĕa (pterygoid tuberosity), palātum osseum (bony palate), ligamentum popliteum oblīquum (oblique popliteal ligament), cavĭtas oris propria (proper oral cavity), atrium meātus medii (atrium middle meatus), cartilāgo thyroidĕa (thyroid cartilage), vesīca urinaria (bladder), extremĭtas inferior (lower extremity).

Exercise 14. Stress the following terms (explain why?):
processus accessorius (additional appendix), arcus posterior atlāntis (posterior arch of first cervical vertebra), lineae transversae (transverse lines), eminentia cruciformis (cruciform eminence), facies anterior (anterior surface), os triquetrum (three-sided bone), basis patellae (base of kneecap), recessus sacciformis (sacciform recess), spatia interossea metacarpi (interosseous spaces of metacarpus), labium superius (upper lip), pancreas accessorium (additional pancreas), regio respiratoria (respiratory region), bifurcatio trachēae (bifurcation of trachea).

Exercise 15. Read the following Latin proverbs, mark the stress and find their translation into English. Memorize at least two or three proverbs:

Dum spiro spero. – While I breathe, I hope.

Res, non verba. – _____

Carpe diem. – _____

Usus est magister optimus. – _____

Errare humanum est. – _____

UNIT II. Grammatical noun categories, declension characteristics, noun dictionary forms, determination of the noun stems, nominative and genitive cases and their significance in terms formation. I-st noun declension.

In this unit

- General idea of anatomical terms
- Nouns and its grammatical categories. Noun entries in dictionaries
- Genitive complement (Genitive case of nouns)
- Nouns of the 1st declension

Anatomical terminology is a system of terms used in Anatomy. The revision of modern anatomical terminology was initiated in 1887. More than a hundred years later the new Terminologia Anatomica - International Anatomical Terminology was finally accepted by the International Federation of Association of Anatomists (IFAA) in 1997. Anatomical terminology is the foundation of medical terminology and Latin is the international anatomical language. Only 27 Latin is the international basis for creating equivalent terms in other languages. English is not the basis for terminology in other languages. There is only a very little Latin grammar necessary to dissect anatomical terms.

PARTS OF SPEECH IN LATIN

The Parts of Speech in Latin are the same as in English: Nouns, Adjectives, Pronouns, Verbs, Adverbs, Prepositions, Conjunctions and Interjections; but the Latin has no article. Of these eight parts of speech the first four are capable of Inflection, i.e. of undergoing change of form to express modification of meaning. In case of Nouns, Adjectives and Pronouns this process is called Declension; in case of Verbs, Conjugation. Latin Anatomical terminology deals with only two Parts of Speech – Nouns and Adjectives.

NOUNS

A noun is the name of a person, place, thing or quality, as Caesar (Caesar), Roma (Rome), caput (head), virtus (courage). There are three genders – Masculine, Feminine and Neuter. Grammatical gender is determined by the ending of the word in its Nominative Singular.

For example, the Nouns with their ending –um (-on) are Neuter; the Nouns with the ending -er are Masculine.

There are 2 Numbers in Latin: the Singular and Plural. The Singular denotes one object; the Plural, more than one: Vertĕbrae (vertebrae), nervi (nerves), corpŏra (bodies), facĭes (surfaces)

There are six cases in Latin:

Nominative (Casus Nominativus) - Case of Subject
Genitive (Casus Genetivus) - Objective with of, or Possessive
Dative (Casus Dativus) - Objective with to or for
Accusative (Casus Accusativus) - Case of Direct Object
Ablative (Casus Ablativus) - Objective with by, from, in, in, with
Vocative (Casus Vocativus) - Case of Address

Latin Anatomical Terminology uses only two cases – Nominative and Genetive.

The nominative case (Casus Nominativus) is the case for the subject of the sentence and, as far as anatomy is concerned, for the first (or only) and key word in an anatomical term (answers the question *what?*).
The genitive case (Casus Genitivus) is most familiar to English speakers as the case that expresses possession: "my hat" or "Harry's house." In Latin it is used to indicate relationships that are most frequently translated into English by the preposition "of" (answers the question *of what?*), e.g. *angulus* (Nom.) *costae* (Gen.) – *angle of rib*

There are **3 genders** in Latin: masculine, feminine and neuter which are shortly abbreviated in the dictionary forms as **m, f,** or **n**.
Latin nouns have **grammatical gender**. Their gender is determined by the ending of Nominative singular. Thus, nouns ending in -a are feminine: scapŭla (shoulder blade), nouns ending in –us are masculine: muscŭlus (muscle), nouns ending in –um are neuter etc. The genders of a noun are indicated in the dictionaries with the letters: • m - masculine • f - feminine • n – neuter
Noun dictionary form contains a noun in Nominative case, ending of the genitive form and gender: nervus, i m; solutio,onis f

There are **five declensions** in Latin, distinguished from each other by the ending in their Genetive Singular, as follows:

Decl.	**I**	**II**		**III**			**IV**		**V**
Genders	**f**	**m**	**n**	**m**	**f**	**n**	**m**	**n**	**f**
e.g.	*ala,* ***ae f***	*lobus,* ***i m***	*cavum,* ***i n***	*pulmo,* *on***is m**	*radix,* *ic***is f**	*caput,* *it***is n**	*arcus,* ***us m***	*genu,* ***us n***	*facies,* ***ei f***
Nom. Sg.	**a**	**us, er**	**um, on**	**or, os, o** (io, go, do)**, er, es, ex**	**io, go, do, x** (ex)**, as, us, es, is***	**en, us, ur, ut, c, l, al, ar, e***	**us**	**u**	**es**
Gen. Sg.	***ae***	***i***		***is***			***us***		***ei***
Nom. Pl.	**ae**	**i**	**a**	**es**		**a (ia*)**	**us**	**ua**	**es**
Gen. Pl.	**arum**	**orum**		**um (ium*)**			**uum**		**erum**

Noun dictionary form has noun in Nominative case, ending of the genitive form and gender:
Ex: nervus, i m; solutio,onis f

NOUN STEM

To **decline** a noun, you should add the corresponding endings to the **stem**. To find the stem, remove the ending of the noun in the Genitive singular.

Determining the Stem

To determine the noun stem, we should change nominative noun ending into a genitive one, omit it and the rest of the word will be a stem:

Noun in Nom. sing.	**Noun in Gen. sing.**	**Stem**
incisura (notch)	incisur**ae** f (of the notch)	**incisur-**
sulcus (groove)	sulc**i** m (of the groove)	**sulc-**
tuber (tuber)	tuber**is** n (of the tuber)	**tuber-**
sinus (sinus)	sin**us** m (of the sinus)	**sin-**
facies (surface)	faci**ei** f (of the surface)	**faci-**

NB: Pay particular attention to the stems of the nouns of the 3rd declension because most of them do not coincide with the form of the Nominative case: *corpus, corpor**is*** n – *body* (**corpor-**); *apex, apic**is*** m – *apex* (**apic-**).

First declension of the nouns

These are the nouns of the feminine which end in -a. The Genitive form of the first declension nouns ends in –ae.

E.g.: costa, ae f - rib vertĕbra, ae f – vertebra

Decl.	**I**	**For example**
Genders	**f**	costa, ae f
Nom. Sg.	**a**	costa
Gen. Sg.	***ae***	costae
Nom. Pl.	**ae**	costae
Gen. Pl	**ārum**	costārum

Many medical terms are of Greek origin. Most of them were Latinized, that is took the form of Latin words, while some nouns keep the Greek inflections. There are three declensions of nouns of Greek origin in Latin.

Masculine nouns: diabet**es**, **ae** m – diabetes

Feminine nouns: diastol**e**, **es** f – diastole

Declension of Greek nouns (singular)

	Sg., **m**	Sg., **f**	Pl., **m**	Pl., **f**
Nom.	diabet**es**	diastol**e**	diabet**ae**	diastol**ae**
Gen.	diabet**ae**	diastol**es**	diabet**arum**	diastol**arum**

Practical exercises

Exercise 1. Determine the declension of the following nouns:

fovea, ae f __	facies, ei f__	aditus, us m__	encephalon, i n__
ramus, i m__	meatus, us m__	genu, us n__	cornu, us n__
arcus, us m__	tendo, inis m__	paries, etis m__	papilla, ae f__
nasus, i m__	ligamentum, i n__	crus, cruris n__	ostium, i n__
angulus, i m__	processus, us m__	septum, i n__	crista, ae f__

Exercise 2. Complete the dictionary forms of the nouns, e.g. fonticulus, i m. Why is the declension mentioned just for some of the nouns?

encephalon, ….	ramus, …. (2)	crus, …… (3)

nasus, ….	maxilla, ……	eminentia, ……
species, …. (5)	recessus, …. (4)	sinus, … (4)
palatum, ……	humerus, …. (2)	vena, ……
concha, ….	dorsum, …….	corpus, … (3)

Exercise 3. Determine the stem of the nouns, decline them and translate into English:

maxilla, ae f Nom. Sg- Gen.sing- stem-	femur, oris n Nom. Sg- Gen.sing- stem-	genu, us n Nom. Sg- Gen.sing- stem-	tuberculum, i n Nom. Sg- Gen.sing- stem-	tuberositas, atis f Nom. Sg- Gen.sing- stem-
os, ossis n Nom. Sg- Gen.sing- stem-	processus, us m Nom. Sg- Gen.sing- stem-	angulus, i m Nom. Sg- Gen.sing- stem-	clavicula, ae f Nom. Sg- Gen.sing- stem-	corpus, oris n Nom. Sg- Gen.sing- stem-
sulcus, i m Nom. Sg- Gen.sing- stem-	digitus, i m Nom. Sg- Gen.sing- stem-	arcus, us m Nom. Sg- Gen.sing- stem-	dens, dentis m Nom. Sg- Gen.sing- stem-	metacarpus, i m Nom. Sg- Gen.sing- stem-
tuber, eris n Nom. Sg- Gen.sing- stem-	ligamentum, i n Nom. Sg- Gen.sing- stem-	tibia, ae f Nom. Sg- Gen.sing- stem-	pediculus, i m Nom. Sg- Gen.sing- stem-	impressio, onis f Nom. Sg- Gen.sing- stem-
carpus, i m Nom. Sg- Gen.sing- stem-	facies, ei f Nom. Sg- Gen.sing- stem-	caput, itis n Nom. Sg- Gen.sing- stem-	foramen, inis n Nom. Sg- Gen.sing- stem-	dorsum, i n Nom. Sg- Gen.sing- stem-
articulatio,ōnis f	diaphragma, ătis n	tempus, ŏris n	cervix, īcis f	acromĭon, i n

Nom. Sg- Gen.sing- stem-	Nom. Sg- Gen.sing- stem-	Nom. Sg- Gen.sing- stem-	Nom. Sg- Gen.sing- stem-	Nom. Sg- Gen.sing- stem-

Exercise 4. Decline the words and translate each form into English:

	Latin	**English**
Nom. Sg.	vena canaliculi vestibuli	a
Gen. Sg.		of a
Nom. Pl.		s
Gen. Pl.		of s

	Latin	**English**
Nom. Sg.	ala nasi	a
Gen. Sg.		of a
Nom. Pl.		s
Gen. Pl.		of s

	Latin	**English**
Nom. Sg.	fossa glandulae	a
Gen. Sg.		of a
Nom. Pl.		s
Gen. Pl.		of s

	Latin	**English**
Nom. Sg.	sutura cranii	a
Gen. Sg.		of a
Nom. Pl.		s

Gen. Pl.		of s

	Latin	**English**
Nom. Sg.	arteria perinei	a
Gen. Sg.		of a
Nom. Pl.		s
Gen. Pl.		of s

Exercise 5. The dictionary forms are given. Translate into Latin:

1. head of the radius – caput, itis n radius, i m The answer:	2. apex of the tongue – apex, icis m lingua, ae f The answer:
3. arch of a vertebra – arcus, us m vertebra, ae f The answer:	4. carpal canal – canalis, is m carpus, i m The answer:
5. angle of a rib – angulus, i m costa, ae f The answer:	6. head of the humerus caput, itis n humerus, i m The answer:

Exercise 6. Learn the key vocabulary, complete the dictionary forms, and translate the terms into Latin:

1.apex of the patella- apex, ……. patella, …… The answer:	4. wing of the nose- ala, …… nasus, …. The answer:

2. sternal angle- angulus, …. sternum, …… The answer:	5. base of the patella- basis, …. patella, …. The answer:
3. tonsillar capsule- capsula, …… tonsilla, …. The answer:	6. mandibular canal- canalis, …. mandibular, …… The answer:

Exercise 7. Translate the following nouns of the 1st declension into Latin. Pay attention to their form!

English	Latin	English	Latin
of a pulp	pulpae	clavicles	
mandibles		a crest	
of vertabrae		of a capsule	
wings		of a diastole	
a rib		of diabetes (Sg.)	

Exercise 8. Complete and learn the dictionary forms of the nouns, translate the terms into Latin:

1. vertebral process – processus, …. vertebra, ……	4. spine of the scapula – spina, …. scapula, ….
2. dental pulp – pulpa, …… dens, ……	5. muscle of the uvula – musculus, …. uvula, ……

3. root of the tongue – radix, …. lingua, ……	6. costal groove – sulcus, …. costa, ….

7. lingual septum – septum, …. lingua, ….	9. tuberculum sellae – tuberculum, …… sella, ….
8. neck of a rib – collum, … costa, … The answer:	10. body of the tongue – corpus, … lingua, … The answer:

Exercise 9. Translate the terms and learn them by heart:

1. Ligamentum pylori – The answer:	9. caput costae – The answer:
2. ligamentum patellae – The answer:	10. crista capitis costae – The answer:
3. vena canaliculi vestibuli – The answer:	11. fossa glandulae – The answer:
4. corpus costae – The answer:	12. collum scapulae – The answer:
5. pediculus arcus vertebrae – The answer:	13. corpus linguae – The answer:
6. fossa glandulae – The answer:	14. glandula ventriculi – The answer:
plasma sanguinis–	15. ampulla ductus –

The answer:	The answer:
spina scapulae – The answer:	16. glandula ventriculi – The answer:

Exercise 10. Translate the following phrases into Latin:

tibial head– The answer:	7.cavity of the nose – The answer:
base of the patella – The answer:	8.neck of the rib – The answer:
septum of the tongue– The answer:	9.apex of the tooth – The answer:
angle of the sternum – The answer:	10. lip tubercle – The answer:
vertebral body– The answer:	11. root of the tongue – The answer:
tooth surface– The answer:	12. canal of the mandible – The answer:

Self-assessment

Compound anatomical terms and their structure

Attributes expressed by nouns in the Genitive case

A term is a word or a word combination used to express a specific concept in some fields of science, technology or art. Most Latin terms used in medicine consist of a noun – the nucleus of a term – and one or several attributes. An attribute is a word or phrase syntactically subordinate to another word (noun) that it modifies; it may be non-agreed (nouns in the Genitive and not depending on the form of the nucleus), or agreed (adjectives, corresponding with the nucleus in number, gender and case).

Thus, the non-agreed attribute answers the question of what? and it is expressed by a noun in the Genitive case, singular or plural: a noun in Nom. + a noun in Gen., e.g.: angulus sterni – angle of the sternum; collum costae – neck of the scapula.

NB: In some cases, an attribute can be translated into English with an adjective, e.g.: cavum tympani – tympanic cavity; cavitas oris – oral cavity, etc.

Exercise 11. Translate the following phrase into English:

apex linguae – The answer:	canālis radīcis dentis – The answer:
corpus tibiae – The answer:	tuber maxillae – The answer:
basis cranii – The answer:	processus radii – The answer:

crista tubercŭli – The answer:	nervus encephăli – The answer:
caput radii – The answer:	arcus vertebrae – The answer:
ligamentum patellae – The answer:	raphe palate – The answer:
facies tubercŭli costae – The answer:	angŭlus faciēi nasi – The answer:
septum nasi – The answer:	cervix vesīcae – The answer:

Exercise 12. Complete the dictionary forms of the nouns:

labium,	tubercŭlum,	cornu,
radius,	apex,	costa,
tuber,	sulcus,	corpus,
sinus,	forāmen,	basis,
patella	arcus,	canālis,
nasus,	dens,	mandibŭla,
radix,	caput,	encephălon,

Exercise 13. Find the correct dictionary forms of the words and their translation (Ex: patella, ae f). Learn these words by heart

ala,	crista,	processus,
angulus,	capsula,	pulpa,
basis,	dens,	radius,
apex,	fibula,	scapula,
arcus,	gallus,	sella,
canalis,	humerus,	septum,
caput,	lingua,	spina,
clavicula,	mandibula,	sulcus,
collum,	nasus,	tonsilla,
corpus,	patella,	tuberculum,
costa,	pediculus,	vertebra,

Exercise 14. Write the correct declension of the words:

fossa, ae f _____; ganglion, i n_____; sinus, us m_____; caput, ĭtis n_____; membrum, i n_____; articulatio, ōnis f_____; hiātus, us m_____; squama, ae f_____; margo, ĭnis m_____; dorsum, i n_____; radius, i m_____; ductus, us m_____; axis, is m_____; coccyx, ygis m_____; rectum, i n_____; os, ossis n_____; oesophăgus, i m_____; auris, is f_____.

Exercise 15. Write out the correct dictionary forms of the nouns and determine their stems:

ligamēntum Nom. Sg- Gen.sing- stem-	vértĕbra Nom. Sg- Gen.sing- stem-	línĕa Nom. Sg- Gen.sing- stem-	alvéŏlus Nom. Sg- Gen.sing- stem-	tuberositas, atis f Nom. Sg- Gen.sing- stem-
os, Nom. Sg- Gen.sing- stem-	ampúlla Nom. Sg- Gen.sing- stem-	cavĭtas Nom. Sg- Gen.sing- stem-	éczĕma Nom. Sg- Gen.sing- stem-	corpus, oris n Nom. Sg- Gen.sing- stem-
pólўpus Nom. Sg- Gen.sing- stem-	digitus, i m Nom. Sg- Gen.sing- stem-	arcus, us m Nom. Sg- Gen.sing- stem-	dens, dentis m Nom. Sg- Gen.sing- stem-	tuba Nom. Sg- Gen.sing- stem-
articulatio, Nom. Sg- Gen.sing- stem-	diaphragma, Nom. Sg- Gen.sing- stem-	tempus, Nom. Sg- Gen.sing- stem-	cervix, Nom. Sg- Gen.sing- stem-	acromĭon, Nom. Sg- Gen.sing- stem-

Please, find the dictionary forms of the following words and memorize them

ala,	**crista,**	**processus,**
angulus,	**capsula,**	**pulpa,**
basis, is	**dens,**	**radius,**
apex,	**fibula,**	**scapula,**
arcus,	**gallus,**	**sella,**
canalis,	**humerus,**	**septum,**
caput,	**lingua,**	**spina,**
clavicula,	**mandibula,**	**sulcus,**
collum,	**nasus,**	**tonsilla,**

corpus,	**patella,**	**tuberculum,**
costa,	**pediculus,**	**vertebra,**

UNIT III. Adjectives and its grammatical categories. Classes of adjectives. Adjective entries in dictionaries. Adjectives of the I-st group. Gender endings, stem-determining.

In this unit

- Adjectives and its grammatical categories
- Classes of adjectives
- Adjective entries in dictionaries
- Agreed attributes. Anatomical terms consisting of nouns and adjectives

An adjective is a member of a class of words functioning as modifiers of nouns, typically by describing, delimiting, or specifying quantity, as *nice* in a ***nice*** *day*, or *first* in *the* ***first*** *class.* In English, an adjective usually appears before the noun it modifies. In Latin, on the contrary, adjectives usually, though not always, follow the nouns they modify. According to their type of declension, all the adjectives are divided into two groups: the adjectives of the first and second noun declensions (I class) and the adjectives of the third noun declension (II class).

The adjectives of the 1st group have different forms for every gender:
- masculine **-us, -er,** e.g.: *transvers****us,*** *dext****er;***
- feminine **-a,** e.g.: *transvers****a,*** *dex****tra;***
- neuter **-um,** e.g.: *transvers****um,*** *dex****trum.***

The adjectives of the I class are declined according to the corresponding declension of nouns, so the adjectives of the I class have the same endings as **the nouns of the 1st and the 2nd declensions**: e.g. *muscul****us****, i* **m** – *musculus transvers****us****; line****a****, ae* **f** – *linea transvers****a****; ligament****um****, i* **n** – *ligamentum transvers****um***.

Their dictionary entry consists of three components:
1. the full form of an adjective in the masculine singular form;
2. the feminine ending;
3. the neuter ending**.** (in this very order!)

longus, a, um –long
liber, ĕra, ĕrum –free
dexter, tra, trum –right

The feminine and the neutral endings of the last two adjectives are enlarged. It is common for the adjectives with the ending **-er** in the masculine form because it helps us determine, whether the vowel -e in the feminine and the neutral forms is lost or not.
To determine **the stem** of an adjective, remove the ending from the feminine form, which always appears second:
e.g. ***thoracicus, a, um*** – *thoracica* – the stem *thoracic-*; ***sinister, tra, trum*** (left) – *sinistra* – the stem *sinistr-*
The feminine forms of the first group adjectives are declined using the first declension noun endings, masculine and neutral forms are used the second declension noun endings.

Group	**I**		
Gender	**m**	**f**	**n**
e.g.	*thoracic****us, a, um***		

	the stem –*toracic*+endings		
Nom. Sg.	**-us, er** **thoracic+us**	**-a** **thoracic+a**	**-um** **thoracic+um**
Gen. Sg.	**thoracic+i**	**thoracic+ae**	**thoracic+i**
Nom. Pl.	**thoracic+i**	**thoracic+ae**	**thoracic+a**
Gen. Pl.	**thoracic+orum**	**thoracic+arum**	**thoracic+orum**

An adjective following a noun is called an **agreed attribute** which means it **is agreed** with the noun **in gender, number and case. same gender, case and number.** The adjective follows the noun. To agree a noun and an adjective means to use them in the same **Gender, Number and Case.**

To agree a noun and an adjective you should:
1. write down the noun and adjective dictionary forms;
2. determine gender, number, declension and case of the noun;
2. determine group of the adjective by its dictionary form;
3. agree the adjective and the noun by gender, number and case.

For example: “mastoid process”, “carotid tubercule”
mastoid (which one? – adjective) process (what? – noun):
1) processus, us m - gender - masculine, number -singular, declension – IV, case - Nominative.
2) mastoideus, a, um: adjective of the 1st group (the ending **–us** is for a masculine form, **-a** – for feminine and **–um** – for neutral)
3) “processus” is the Nominative singular masculine noun, the adjective should be masculine as well. So, we choose the masculine form, i.e. “mastoideus”
The answer is **processus mastoideus**
carotid (which one? – adjective) tubercle(what? – noun)
1) tuberculum, i n - gender - neutral, number -singular, declension – II, case - Nominative.
2) caroticus, a, um: adjective of the 1st group (the ending **–us** is for a masculine form, **-a** – for feminine and **–um** – for neutral)
3) “tuberculum” is neuter , so we should choose the correct neuter form of the “caroticum”
The answer is **tuberculum caroticum**

You should be able to not only agree adjectives and nouns in the Nominative singular, but to form the Genitive singular or plural forms. So, let us make the Genitive singular forms of the abovementioned Nominative forms:
Nom. sing. processus mastoideus => Gen. sing processus (IV declention) mastoidei (1st group, m)
Nom. sing. tuberculum caroticum => Gen. sing. tuberculi (II declension) carotici (1st group, n)

Practical exercises

Exercise 1. Determine the stem of the adjectives of I class and decline them:
mastoideus, a, um (mastoid) => stem is mastoidem f n

Case	Masculine	Feminine	Neuter
Nom. Sg	mastoideus	mastoidea	mastoideum
Gen. Sg	mastoidei		
Nom. Pl.	mastoidei		
Gen. Pl.	mastoideorum		

ruber, bra, brum (red)

Case	Masculine	Feminine	Neuter
Nom. Sg			
Gen. Sg			
Nom. Pl.			
Gen. Pl.			

incisivus, a, um (incisive)

Case	Masculine	Feminine	Neuter
Nom. Sg			
Gen. Sg			
Nom. Pl.			
Gen. Pl.			

sinister, tra, trum (left)

Case	Masculine	Feminine	Neuter
Nom. Sg			
Gen. Sg			
Nom. Pl.			
Gen. Pl.			

Exercise 2. Construct the feminine form of the following adjectives:

thoracicus	
pelvinus	
asper (asper, aspera, asperum	
sinister	
palatinus	
dexter	
longus -	

thyroideus	

Exercise 3. Construct the neuter form of the following adjectives:

ruber	
caecus	
coronarius	
dexter,	
liber (liber, libera, liberum),	
pterygoideus,	
durus,	
longus,	

Exercise 4. Form the Genitive singular of the following forms of the 1st class adjectives:

oesophagea	
liber (liber, libera, liberum	
zygomatica	
rubrum	
palatinus	
transversa	
iliacum	
albus	

Exercise 5. Find and underline the adjectives, explain their form by determining the declension and gender of the nouns. Translate the terms into English.

os /III, n/ palatinum, substantia /__,__/ spongiosa, foramen /__,__/ spinosum, palatum /__,__/ durum, processus /__,__/ zygomaticus, linea /__,__/ transversa, dens/__,__/ incisivus, linea /__,__/ alba, sutura /__,__/ squamosa, scapula /__,__/ dextra, vena /__,__/ profunda, ductus /__,__/ choledochus

Exercise 6. Determine the declension and gender of the nouns and choose the correct endings for the adjectives:

1. palatum /II, n/ (durus, a, um) – palatum durum

2. facies /__,__/ (dexter, tra, trum) –
3. articulaio /__,__/ (compositus, a um) –
4. angulus /__,__/ (mastoideus, a, um) –
5. ductus /__,__/ (hepaticus,a , um) –
6. substantia /__,__/ (compactus, a, um) –
7. septum /__,__/ (fibrosus, a, um) –
8. sinus /__,__/ (petrosus, a, um) –
9. linea /__,__/ (transversa) –
10. foramen /__,__/ (magnus, a, um) –

Exercise 7. Choose the corresponding endings (that is agree the nouns and adjectives) and translate the terms into Latin:

1. venous arch – arcus, i m venosus, a, um arcus venosus	6. right horn – cornu, us n dexter, tra, trum
2. palatal groove – sulcus, i m palatinus, a, um	7. internal capsule– capsula, ae f internus, a, um
3. transverse ligament - ligamentum, i n transversus, a, um	8. osseous septum– septum, i n osseus, a, um
4. mastoid part - pars, partis f mastoideus,a um	9. thoracic duct – ductus, us m thoracicus, a, um
5. pterygoid muscle – musculus, i m pterygoideus, a, um	10. pharyngeal network– rete, is n pharyngeus, a, um

Exercise 8. Complete the dictionary forms, translate the terms into Latin:

1.deep lymphatic node– nodus, … lymphaticus, … profuindus, …	6 left trunk.– truncus, … sinister, …
2. transverse head – caput, … transversus, …	7. right plate – lamina, … dexter, …
3. thoracic fascia –	8. internal ganglion –

facsia, … thoracicus, …	ganglion, … internus, …
4. coronary sinus - sinus, … coronarius, …	9. palatoglossal arch – arcus, … palatoglossus, …
5. mesenteric artery – arteria, … mesentericus, …	10. palatine bone– os, … palatinus, …

Exercise 9. Determine the declension of the nouns and the class of the adjectives, decline the terms and translate each form into English:

sutura (___ declension) palatina (_____class)

	Latin	***English***
Nom. Sg.		a
Gen. Sg.		of a
Nom. Pl.		s
Gen. Pl.		of s

ramus (___ declension) articularis (_____class)

	Latin	***English***
Nom. Sg.		
Gen. Sg.		
Nom. Pl.		
Gen. Pl.		

ligamentum (___ declension) posterius (_____)

	Latin	***English***
Nom. Sg.		
Gen. Sg.		
Nom. Pl.		
Gen. Pl.		

arteria (___ declension) ethmoidalis (_____group) anterior (_____)

	Latin	***English***
Nom. Sg.		
Gen. Sg.		
Nom. Pl.		
Gen. Pl.		

Exercise 10. Determine the case and number of the terms and provide their appropriate forms:

English	Latin
of a zygomatic process, (Gen., Sg.) processus, us m – IV declension zygomaticus, a um – 1 st class	Nom. sing. – processus zygomaticus The answer is Gen.sing. – processus zygomatici
coccygeal horns (_____, _____) cornu, us n coccygeus,a ,um	
Of the transversal colon (_____, _____) colon, i n transversus, a, um	
of a fibrous ring (_____, _____) annulus, i m fibrosus, a, um	
of arcuate ligaments (____, ____) ligamentum, i n arcuatus, a, um	
of the first vertebra (____, ____) vertebra, ae f primus, a, um	
of transverse processes (_____, _____) processus, us m transversus, a, um	
carotid tubercles (_____, _____) tuberculum, i n caroticus, a, um	
of a thyroid gland (_____, _____) glandula, ae f thyroideus, a, um	
of auditory tubes (_____, _____) tuba, ae f auditivus,a,um	

Self-Assessment

Adjectives and its grammatical categories. Classes of adjectives. Adjective entries in dictionaries.Adjectives of the I-st group. Gender endings, stem-determining. The dictionary form of

adjectives are shown in a contracted way: profundus, a, um (deep) the adjectives of the 1st group - niger, gra, grum (black). The feminine gender of these adjectives is declined according to the first declension of Nouns and the Masculine and the Neuter genders – according to the second declension.

Exercise 11. The dictionary forms are given. Agree the nouns and adjectives and translate the terms into Latin:

1. venous valvule – valvula, ae f venosus, a, um	6. palatine sulcus – sulcus, i m palatinus, a, um
2. transverse head – caput, itis n transversus, a, um	7. internal ganglion – ganglion, i n internus, a, um
3. pterygoid muscle– musculus, i m pterygoideus, a, um	8. external surface – facies, ei f externus, a, um
4. fibrous ringanulus, i m fibrosus, a, um	9. palatoglossal arch – arcus, us m palatoglossus, a, um
5. mesenteric artery – arteria, ae f mesentericus, a, um	10. parathyroid gland – glandula, ae f parathyroideus, a, um

Exercise 12. Complete the dictionary forms, translate:

1. squamous suture – sutura, … squamosus, …	6. sacral bone – os, … sacrus, …
2. flat raphe – raphe, es f planus, a, um	7. right gastric artery – arteria, … gastricus, … dexter, …
3. zygomatic arch – 8. surgical neck – arcus, …. zygomaticus, …. collum, … chirurgicus, ….	8. surgical neck – collum, … chirurgicus, ….
4. gluteal line –	9. membranous wall –

linea, ae f gluteus, a, um	paries, … membranaceus, …
5. tympanic canaliculus – canaliculus, …. tympanicus, ….	10. left lobe – lobus, … sinister, …

Exercise 13. Determine the declension of the nouns and the class of the adjectives and put the terms into Genitive Singular (look the Table of endings for nouns and adjectives and the Vocabulary):

Nom. Sg	**Gen. Sg.**
nervus (2- nd) palatinus (I class)	nervi palatini _____
cornu (___) coccygēum (_____)	
canālis (___)longus (_____)	
margo (___) liber (_____)	
foramen (___) spinosum (_____)	
medulla (___) oblongata (_____)	
musculus (___) magnus (_____)	

Exercise 14. Memorize the terms and translate them into English:

1. arteria gastrica dextra-	6. facies palatina -
2. concha bullosa-	7. fissura petrosquamosa
3. foramen lacerum-	8. incisura ischiadica -
4. crista mastoidea-	9. caput longum -
5. eminentia arcuata-	10. crista iliaca

Exercise 15. Determine the case and number of the English terms and provide their appropriate Latin forms:

English	**Latin**
of osseous septums, (Gen., pl.) septum, i n – II declension osseus, a, um – 1 st class	Nom. sing. – septum osseum The answer is Gen.pl. – septa ossea

intermediate lines (_____, _____) linea, … intermedius, …	
Of a thoracic duct (_____, _____) ductus, … thoracicus, …	
of a transversal nerve (_____, _____) nervus, … transversus, …	
caval vein (____, ____) vena, … cavus, ...	
of a zygomatic process (____, ____) processus,… zygomaticus, …	
of a round foramen (_____, _____) foramen, … rotundus, …	
oblique muscles (_____, _____) musculus, … obliquus, …	
of lymphatic nodes (_____, _____) nodus, … lymphaticus, …	
of an internal capsule (_____, _____) capsula, … internus, …	

Key Vocabulary

arcuatus, a, um – arcuate	**ethmoidalis, e –** ethmoidal	**medialis, e –** medial
arteria, ae f – artery	**facies, ei f –** surface, face	**medulla, ae f –** medulla
articularis, e – articular	**fissura, ae f –** fissure	**nasalis, e –** nasal
canaliculus, i m – canaliculus	**gastricus, a, um –** gastric	**occipitalis, e –** occipital
chirurgicus, a, um – surgical	**incisura, ae f –** notch	**perpendicularis, e –** perpendicular
chorda, ae f – chord	**inferior, ius –** inferior	**petrosquamosus, a, um –**
concha, ae f – concha	**ischiadicus, a, um –** sciatic	**posterior, ius –** posterior

condylus, i m – condyle	**lamina, ae f –** lamina, plate	**sphenoidalis, e –** sphenoid
dexter, tra, trum – right	**lateralis, e –** lateral	**spinalis, e –** spinal
dorsalis, e – dorsal	**lingualis, e –** lingual	**tympanicus, a, um –** tympanic
eminentia, ae f – eminence	**major, jus –** greater	**zygomaticus, a, um –** zygomatic

UNIT IV. Adjectives of the 2-nd group. Morphological characteristics of two- and multi-word anatomical terms. Syntax of two- and multi-word anatomical terms. Nouns of the 2nd declension

In this unit

- Morphological characteristics of two- and multi-word anatomical terms
- Syntax of two- and multi-word anatomical terms
- Nouns of the 2nd declension

An adjective is a member of a class of words functioning as modifiers of nouns, typically by describing, delimiting, or specifying quantity, as *nice* in a ***nice*** *day*, or *first* in *the* ***first*** *class.* In English, an adjective usually appears before the noun it modifies. In Latin, on the contrary, adjectives usually, though not always, follow the nouns they modify.

According to their type of declension, all the adjectives are divided into two groups: the adjectives of the first and second noun declensions (I class) and the adjectives of the third noun declension (II class). **The adjectives of the second class** correspond to the nouns of **the 3rd declension.**

However, the dictionary forms of this group may differ as to the number of the endings presented, namely, one, two or three:

Adjectives of II class

	three endings*:	**two** endings:	**one** ending:
Number of Endings	masculine **-er** feminine **-is** neuter –**e**	masculine **-is** feminine **-is** neuter **-e**	masculine **-r, -s, -x** feminine **-r, -s, -x** neuter **-r, -s, -x**
Examples	**m** – salub**er** **f** – salubr**is** **n** – salubr**e**	**m** – occipital**is** **f** – occipital**is** **n** – occipital**e**	**m** – simple**x**, tere**s** **f** – simple**x**, tere**s** **n** – simple**x**, tere**s**
Entry	**saluber, is, e**	**occipitalis, e**	**simplex, icis; teres, etis**

* The adjectives with three endings are used very rarely.

To determine the stem of an adjective of II class, remove the ending from the feminine form for the adjectives with three or two endings. To determine the stem for the adjectives with one ending, remove the ending from the Genitive Singular:

e.g. ***saluber, bris, bre*** (healthy) – *salubris* – the stem *salubr-;* ***facialis, e*** – *facialis* – the stem *facial-*; ***simplex, icis*** – *simplicis* – the stem *simplic-*.

In medical terminology, we use some of the adjectives not in the positive, but in the comparative degree. Their endings mostly correspond to the endings of the adjectives of II class: masculine, feminine -(i)or, e.g.: superior, anterior, major; neuter -ius, e.g.: superius, anterius, majus. The entries for the adjectives in the comparative degree include two endings, e.g.: superior, ius; posterior, ius; minor, us.

2nd Declension (Declinatio Secunda)

The **masculine** nouns of the **second** declension end in **-us** or **-er** and the **neuter** nouns end in **-um** or **-on** (Gr.) in **Nom. Sg.,** while for all of them the ending for **Gen. Sg**. is **-i**, e.g.: *musculus, i* **m** *(muscle); cancer, cri* **m** *(cancer); ligamentum, i* **n** *(ligament); ganglion, i* **n** *(ganglion).*

Here are the exceptions of the 2-nd declension. These nouns have the endings characteristic of the **masculine** gender (**-us** or **-er)**, but belong to either **feminine** or **neuter** gender. It means that adjectives coming after them will have feminine or neuter gender depending on the noun.

alvus, i **f** *– alvus, stomach, abdomen*	*methodus, i* **f** *–method*
crystallus, i **f** *– crystal*	*periodus, i* **f** *– period*
diameter, tri **f** *– diameter*	*virus, i* **n** *– virus.*

Practical exercises

Exercise 1. Determine the stem of the adjectives of II class and decline them:

cervicalis, e

	m	f	n
Nom. Sg.	cervicalis		
Gen. Sg.	cervicalis		
Nom. Pl.	cervicales		
Gen. Pl.	cervicalium		

teres, etis (round)

	m	f	n
Nom. Sg.			
Gen. Sg.			
Nom. Pl.			
Gen. Pl.			

Anterior, ius

	m	f	n
Nom. Sg.			
Gen. Sg.			
Nom. Pl.			
Gen. Pl.			

Costalis, e

	m	f	n
Nom. Sg.			
Gen. Sg.			
Nom. Pl.			
Gen. Pl.			

Simplex, icis

	m	f	n
Nom. Sg.			
Gen. Sg.			
Nom. Pl.			
Gen. Pl.			

Exercise 2. Determine the class of the adjectives and complete the dictionary forms:

accessorius, ….	major, ….	dexter, ….
lateralis, ….	abdominalis, ….	inferior, ….
anatomicus, ….	sinister, ….	minor, ……
superior, …	medialis, ….	posterior, ….
cruciatus, ….	pyramidalis, ….	abdominalis, ….

Exercise 3. Determine the declension and gender of the nouns and choose the correct endings for the adjectives:

1. palatum /II, n/ (durus, a, um) – palatum durum

2. sulcus /__,__/ (obturatorius, a, um) –

3. papilla /__,__/ (incisivus, a, um) –

4. tuberculum /__,__/ (major, jus) –

5. processus /__,__/ (articularis, e; inferior, ius) –

6. vena /__,__/ (angularis, e) –

7. septum /__,__/ (fibrosus, a, um) –

8. apertura /__,__/ (superior, ius) –

9. spina /__,__/ (nasalis, e; anterior, ius) –

10. arteria /__,__/ (gastricus, a, um; sinister, tra, trum) –

Exercise 4. Choose the corresponding endings (that is agree the nouns and adjectives) and translate the terms into Latin:

1. frontal angle – angulus, i m frontalis, e angulus frontalis	6. articular surface – facies, ei f articularis, e facies articular….
2. mastoid canaliculus – canaliculus, i m mastoideus, a, um canaliculus mastoide……	7. posterior fontanel – fonticulus, i m posterior, ius fonticulus poster……
3. costal arch- arcus, us m costalis, e arcus costal……	8. femoral ring – anulus, i m femoralis, e anulus femoral….
4. external occipital crest- crista, ae f occipitalis, e externus, a, um crista occipital……extern….	9. anterior longitudinal ligament – ligamentum, i n longitudinalis, e anterior, ius ligamentum longitudinal…. anter…….
5. articular disc – discus, i m articularis, e discus articular….	10. cardiac opening – ostium, i n cardiacus, a, um ostium cardiac…….

Exercise 5. Without using the dictionary, translate the terms on the theme "Skeleton of the body" into English. Mind the word order:

1. columna vertebralis (rhachis – Gr.)-	5. vertebra cervicalis prima-
2. processus spinosus-	6. vertebra cervicalis secunda-
3. processus articularis superior-	7. vertebra lumbalis-
4. processus articularis inferior-	8. tuberculum posterius-

Exercise 6. Determine the declension of the nouns and the class of the adjectives, decline the terms and translate each form into English:

sutura (___ declension) palatina (_____class)

	Latin	English
Nom. Sg.		a
Gen. Sg.		of a
Nom. Pl.		s
Gen. Pl.		of s

ramus (___ declension) articularis (_____class)

	Latin	English
Nom. Sg.		
Gen. Sg.		
Nom. Pl.		
Gen. Pl.		

ligamentum (___ declension) posterius (_____)

	Latin	English
Nom. Sg.		
Gen. Sg.		

Nom. Pl.		
Gen. Pl.		

arteria (___ declension) ethmoidalis (_____group) anterior (_____)

	Latin	English
Nom. Sg.		
Gen. Sg.		
Nom. Pl.		
Gen. Pl.		

Exercise 7. Determine the declension of the nouns and the class of the adjectives and put the terms into Genitive Singular:

Nom. Sg.	Gen. Sg.
arteria (1st) angularis (II class) ala (___) major (_____) nervus (___) palatinus (_____) angulus (___) inferior (_____) septum (___) interlobulare (_____)	_____ _____ _____ _____ _____

Exercise 8. The dictionary forms are given. Agree the nouns and adjectives and translate the terms into Latin:

1. posterior nasal spine – spina, ae f nasalis, e posterior, ius	6. greater palatine sulcus – sulcus, i m palatinus, a, um major, jus
2. transverse head – caput, itis n transversus, a, um	7. central tendon – centrum, i n tendineus, a, um

3. femoral trigone – trigonum, i n femoralis, e	8. visceral cranium – cranium, i n visceralis, e
4. fibrous ring- anulus, i m fibrosus, a, um	9. palatoglossal arch – arcus, us m palatoglossus, a, um
5. superior mesenteric artery – arteria, ae f mesentericus, a, um superior, ius	10. inferior orbital fissure – fissura, ae f orbitalis, e inferior, ius

Exercise 9. Complete the dictionary forms, translate the terms into Latin:

1. inferior aperture – apertura, …. inferior, ……	3. alar lamina – lamina, …… alaris, …….
2. medial arcuate ligament – ligamentum, …. arcuatus, …… medialis, ……	4. first cervical vertebra – vertebra, …. cervicalis, ……. primus, …….

5. auditory tube – tuba, …. auditivus, …….	7. accessory vein – vena, ……. accessorius, ……

6. superior dental arch – arcus, … dentalis, … superior, ….	8. carotid tubercle – tuberculum, …… caroticus, ……

Exercise 10. Memorize the terms and translate them into English:

1. arteria gastrica dextra-	6. facies articularis posterior-
2. concha nasalis inferior-	7. fissura petrosquamosa-
3. condylus occipitalis-	8. incisura ischiadica major-
4. crista ethmoidalis-	9. lamina perpendicularis-
5. eminentia arcuata-	10. medulla spinalis-

Self-assessment

According to morphological characteristics of two and multi-word anatomical terms, they may consist of several nouns and adjectives in singular and plural: Facĭes temporālis alae minōris ossis sphenoidālis (temporal surface of the smaller wing of the sphenoid bone).

These words can be arranged in a number of ways but still they follow certain rules. The key patterns are:

1. One-word terms: a noun in Nom. Sg. or Pl.: hepar – liver; ossa – bones.

2. Two-word terms.

a) a noun in **Nom. Sg.** or **Pl.** + an adjective in **Nom. Sg.** or **Pl.** (agreed attribute): ***vertebra thoracica*** **–** *thoracic vertebra;* ***vertebrae thoracicae*** **–** *thoracic vertebrae.*

b) a noun in **Nom. Sg.** or **Pl.** + a noun in **Gen Sg.** or **Pl.** (non-agreed attribute)**:** ***collum costae*** **–** *neck of rib;* ***colla costarum*** *– necks of ribs*

Multi-word terms present a combination of two or more **key patterns**:

a) a noun in **Nom. +** two or more adjectives in the **same** form: ***facies articularis superior*** **–** *superior articular facet;*

b) a noun in **Nom. +** two or more nouns in **Gen.:** ***pediculus arcus vertebrae*** **–** *pedicle of the arch of a vertebra*;
c) a noun in **Nom. +** a noun in **Gen. +** an adjective in **Gen.** (attribute agreed with the second noun)**:** ***corpus vertebrae thoracicae*** **–** *body of thoracic vertebra*; **or**
c) a noun in **Nom. +** an adjective (or two adjectives) **in Nom.** (attribute agreed with the first noun) **+** a noun in **Gen.:** ***fossa glenoidalis scapulae*** **–** *glenoid fossa of scapula.*
d) a noun in **Nom. +** an adjective in **Nom.** (attribute agreed with the first noun) **+** a noun in **Gen. +** an adjective in **Gen.** (attribute agreed with the second noun)**:** ***linea intermedia cristae iliacae*** **–** *intermediate line of iliac crest.*

Exercise 11. Divide the following anatomical terms into groups according to the patterns and translate them into English (orally):

collum /vesicae felleae; anulus tympanicus; facies anterior/ partis petrosae; area cribrosa; arteria dorsalis /pedis; nervus cardiacus cervicalis superior; ossa / digitorum / pedis; cartilago /tubae auditivae; tuberositas /maxillae; caput / ossis / metacarpi; cervix / uteri; porus acusticus externus; canalis cervicalis /uteri; capsula fibrosa/ glandulae thyroideae

a noun in Nom. + an adjective in Nom.	1. _____ 2. _____
a noun in Nom. + a noun in Gen.	1. _____ 2. _____
a noun in Nom. + two or more adjectives in Nom.	1. _____ 2. _____
a noun in Nom. + two nouns in Gen.	1. _____ 2. _____
a noun in Nom. + a noun in Gen. + an adjective in Gen.	1. _____ 2. _____
a noun in Nom. + an adjective in Nom. + a noun in Gen.:	1. _____ 2. _____
a noun in Nom. + an adjective in Nom. + a noun in Gen. + an adjective in Gen.:	1. _____ 2. _____

Exercise 12. Underline the nouns with a straight line and the adjectives with a squiggly line, determine their number and case and translate them into English:

Nom.Sg. Gen.Sg. Gen.Sg. Gen.Sg.	
1. sulcus / nervi petrosi minoris – a groove for lesser petrosal nerve	6. ala major/ ossis sphenoidalis –
2. ampulla membranacea posterior –	7. angulus medialis / oculi –
3. arcus dentalis maxillaris –	8. musculus gluteus medius –
4. arteria profunda /linguae –	9. sulcus / arteriae occipitalis –
5. ligamentum collaterale fibulare –	10. crista / tuberculi minoris –

Exercise 13. Determine the gender of the 2nd declension nouns and choose the correct endings for the adjectives:

ligamentum (n) (transversus, a, (um); triangularis, (e); posterior, (ius);

bronchus (___) (lobaris, e; dexter, tra, trum; principalis, e);

hamulus (___) (lacrimalis, e; pterygoideus, a, um);

septum (___) (fibrosus, a, um; interalveolaris, e; transversus, a, um);

nervus (___) (palatinus, a, um; tibialis, e; vestibularis, e);

tuberculum (___) (adductorius, a, um; major, jus; articularis, e);

musculus (___) (intercostalis, e; externus, a, um; circularis, e);

ganglion (___) (aorticorenalis, e; mesentericus, a, um; superior, ius);

angulus (___) (mastoideus, a, um; occipitalis, e; superior, ius).

Exercise 14. Translate the terms into Latin. Provide both Singular and Plural forms:

Nominative Singular	Nominative Plural
1. auricular muscle – musculus auricular….	auricular muscles – muscul…. auricular……
2. external intercostal muscle – musculus intercostal…… extern….	external intercostal muscles – muscul…… intercostal……extern….
3. palmar interosseous muscle – musculus interosse…. palmar….	palmar interosseous muscles – muscul…… interosse…. palmar….
4. oblique arytenoid muscle – musculus arytenoide…obliqu….	oblique arytenoid muscles – muscul…… arytenoide…… obliqu….
5. dorsal interosseous muscle – musculus interosse…… dorsal……	dorsal interosseous muscles – muscul…. interosse…… dorsal……
6. costotransverse ligament – ligamentum costotransversari….	costotransverse ligaments – ligament……costotrasversari….
7. yellow ligament – ligamentum flav….	yellow ligaments – ligament…. flav….
8. interspinal ligament – ligamentum interspinal….	interspinal ligaments – ligament…… interspinal….

9. palmar ligament – ligamentum palmar….	palmar ligaments – ligamen…… palmar….
10. posterior sacroiliac ligament – ligamentum sacroiliac. …. poster….	posterior sacroiliac ligaments – ligament…. sacroiliac…. posterior….

Exercise 15. Underline the nouns with a straight line and the adjectives with a squiggly line, determine their number and case and translate into English:

Nom.Sg. Gen.Sg. Gen.Sg. 1. crista tuberculi majoris – a crest of greater tubercle	12. dorsum linguae –
2. collum chirurgicum –	13. frenulum labii superioris –
3. facies articularis tuberculi costae –	14. plicae semilunares coli –
4. ganglia trunci sympathici –	15. septum intermusculare brachii mediale –
5. papilla duodeni major –	16. skeleton membri superioris –
6. fonticulus posterior (occipitalis) –	17. disci intervertebrales –
7. nodi lymphatici submandibulares –	18. musculi interossei plantares –
8. collum tali –	19. musculi scaleni –

9. musculus obturatorius internus –	20. musculus rectus capitis posterior major –
10. nucleus accessorius nervi oculomotorii –	21. angulus lateralis oculi –
11. digitus minimus pedis –	22. canaliculus lacrimalis –

Key Vocabulary

Provide the dictionary forms for the following words, translate them into English and memorize:

ampulla,	os, oris n
cavum,	osseus,
colon,	papilla,
costotransversarius,	peritoneum,
dorsum,	pes,
duodenum,	petrosus,
eminentia,	principalis,
flavus,	profundus,
fonticulus,	pylorus,
frenulum,	sacrococcygeus,
ganglion,	sacroiliacus,
labium,	semilunaris,
latissimus,	skeleton,
ligamentum,	sternum,
lobus,	sympathicus,
malleus,	talus,
membrum,	uterus,
nasus,	ventriculus,
nervus,	

UNIT V. General characteristic of the nouns of the 3rd declension. Parisyllabic and imparisyllabic nouns. Types of stems of the nouns of the 3rd declension and their peculiarities. 3rd declension nouns in combination with agreed and non-agreed attributes

In this unit

- General characteristic of the nouns of the 3rd declension
- Parisyllabic and imparisyllabic nouns
- Types of stems of the nouns of the 3rd declension and their peculiarities
- 3rd declension nouns in combination with agreed and non-agreed attributes

The majority of Latin nouns in general and medical terms in particular fall into the 3rd declension. It includes nouns of all three genders and is characterized by a wide range of endings in **Nom. Sg.** These endings are not specific for each gender. Thus, the only reliable sign of the nouns of this declension is the ending ***-is*** in **Gen. Sg.** And the only way to be certain of a gender of these nouns is to **memorize** it.

Stem of the third declension nouns

The stem determination of Latin third declension nouns is significance because the stem gives the clue to the formation of the other forms, for example of plural forms. **The stem** of nouns of the 3rd declension is determined by **the Genitive singular form**. The stem of nouns of the 3rd declension is obtained from the Genitive singular form by removing the ending –is.

E.g.: forāmen, ĭnis n → foramĭn-is

caput, ĭtis n → capĭt-is

parĭes, ētis m → pariēt-is

Parisyllabic and imparisyllabic nouns

The 3rd declension nouns may be parisyllabic (having the same number of syllables in all cases of the singular) and imparisyllabic (having inflected forms with different numbers of syllables in Nominative and other cases of the singular).

To distinguish between the two, look at what is written after the coma in the dictionary form: **-is** only means a noun is parisyllabic, e.g.: *basis, **is*** f*; canalis, **is*** m*; pubes, **is*** f; while more letters before **-is** are a sign of an imparisyllabic noun, e.g.: *apex, **icis*** m (the stem is **apic**-); *tempus, **oris*** n (the stem is **tempor**-); *cartilago, **inis*** f (the stem is **cartilagin**-). For one-syllable words dictionaries provide the full form of **Gen. Sg.:** *pes, **pedis*** m; *dens, **dentis*** m; *pars, **partis*** f.

Types of stems

Some endings of the 3rd declension nouns (namely, **Genitive Plural** for all genders and **Nominative Plural** for **neuter** gender) may have an extra **-i** (**-ium** instead of **-um** and **-ia** instead of **-a**). To choose the proper ending, you should distinguish between the three types of stems:

а) consonant (characteristic of most 3rd declension nouns)**;**

б) vowel (or **-i-stem);**

в) mixed.

The consonant type. Imparisyllabic nouns of all **three genders** the stem of which ends in ***one*** **consonant** belong to this type, e.g.: *pulmo, pulmo**n**is* m (the stem **pulmon-**); *radix, radi**c**is* f (the stem **radic**-).

The vowel (-i-stem) type. Only **neuter** nouns ending in **-al, -ar, -e** belong to this type, e.g.: ret**e**, is n; anim**al**, alis n.

The mixed type includes the nouns:

1**) *imparisyllabic*** of all **three genders** the stem of which ends in ***two or three*** **consonants**, e.g.: *dens, dentis* m; *pars, partis* f; *os, ossis* n

2) ***parisyllabic*** of **masculine** and **feminine genders** ending in **-is** or **-es**, e.g.: *canalis*, *canalis* m; *pubes*, *pubis* f

	m	**f**	**n**
Nom. Sg.	*different*		
Gen. Sg	***-is***	***-is***	***-is***
Nom. Pl.	***-es***	***-es***	***-a (-ia)***
Gen. Pl.	***-um (-ium)***	***-um (-ium)***	***-um (-ium)***

The consonant type has the endings **–es** or **-a** in Nom. pl. and **–um** in Gen. pl.

The mixed type has the endings **–es** or **–a** in Nom. pl. and **–ium** in Gen. pl.

The vowel type has the endings **–ia** in Nom. pl. and **–ium** in Gen. pl.

Compare how the 3rd declension nouns of all three types are declined:

	The Consonant Type	**The Vowel (i-stem) Type**	**The Mixed Type**
Entry	*os, oris* n	*rete, is* n	*os, ossis* n
Nom. Sg.	*os*	*rete*	*os*
Gen. Sg	*oris*	*retis*	*ossis*
The stem	***or-***	***ret-***	***oss-***
Nom. Pl.	*ora*	*retia*	*ossa*
Gen. Pl.	*orum*	*retium*	*ossium*

Practical exercises

Exercise 1. Mark the following nouns as parisyllabic (=) or imparisyllabic (≠) and determine their stems:

canalis, is m (=) – canal – the stem: canal
foramen, inis n (__) – foramen – the stem:
margo, inis m (__) – margin, border – the stem:
os, ossis n (__) – bone – the stem:
pars, partis f (__) – part – the stem:
symphysis, is f (__)symphysis – the stem:
chiasma, atis n (__) – chiasm – the stem:
rete, is n (__) – rete, net – the stem:
tegmen, inis n (__) – roof – the stem:
lien, enis m (__) – spleen – the stem:
auris, is f (__) – ear – the stem:

Exercise 2. Find the stems of the following nouns and determine the type according to which they are declined, translate them into Latin:

caput, itis n – capit-; consonant - head os, ossis n –
atlas, antis m – tuber, eris n –
basis, is f – os, oris n –
trochanter, eris m – canalis, is m –
animal, alis n – gastritis, is f –
coma, atis n – rete, is n –
articulatio, onis f - pulmo, onis m -
apex, icis m - tempus, oris n -
cartilago, inis f - tendo, inis m -
pes, pedis m - dens, dentis m -
pars, partis f - cavitas, atis f -
foramen, inis n systema, atis n
hepar, atis n margo, inis m
ren, renis m lien, lienis m

Exercise 3. Determine the case and number of the following English terms; provide their Latin dictionary forms from the exercise 2, determine the type according to which they are declined and translate them into Latin:

English	**Latin**	**English**	**Latin**
of a head (Gen. sing.)	caput, itis n - consonant The answer: capitis	of a liver (_____)	
joints (_____)		of margins (_____)	
of foramens (_____)		kidneys (_____)	
of a cartilage (_____)		of a spleen (_____)	
systems (_____)		of bases (_____)	
of bones (_____)		mouths (_____)	
nets (_____)		parts (_____)	

Exercise 4. Agree the nouns and adjectives and decline the terms:

margo, inis m + lateralis, e (the noun is masculine, 3rd declension, consonant type; the adjective belongs to the 2nd group with 2 endings, so, for the masculine noun we choose the adjective masculine form with the ending –is

	Singularis	**Pluralis**
Nom.	margo lateralis	margines laterales
Gen	marginis lateralis	marginum lateralium

regio, onis f + epigastricus, a, um

	Singularis	**Pluralis**
Nom.		
Gen		

foramen, inis n + incisivus, a, um

	Singularis	**Pluralis**
Nom.		
Gen		

cartilago, inis f + nasalis,e + accessorius, a, um

	Singularis	**Pluralis**
Nom.		
Gen		

rete, is n + venosus, a, um

	Singularis	**Pluralis**
Nom.		
Gen		

canalis, is m + palatinus, a, um + minor,minus

	Singularis	**Pluralis**
Nom.		
Gen		

Exercise 5. Choose the correct adjective endings and translate the terms into English:

1. caput (n) infraorbital….. (infraorbitalis, e)	6. foramen (n) palatin…. ma…. (palatinus, a, um; major, jus)
2. caput (n) zygomatic…… (zygomaticus, a, um)	7. crus (n) lateral….. (lateralis, e)
3. corpus (n) geniculat….. lateral….. (geniculatus, a, um; lateralis, e)	8. crus (n) dextr…… (dexter, tra, trum)
4. diaphragma (n) urogenital….. (urogenitalis, e)	9. rete (n) arterios….. (arteriosus, a, um)
5. foramen (n) supraorbital…..	10. rete (n) acromial….

(supraorbitalis, e)	(acromialis, e)

Exercise 6. Choose (circle) corresponding endings of the following adjectives; memorize the dictionary forms; translate the terms:

1. aponeurosis, is f – (palatinus, (a), um; palmar(is), e);
2. articulatio, onis f – (compositus, a, um; sternoclavicularis, e);
3. caput, itis n – (lateralis, e; profundus, a, um);
4. cartilago, inis f – (nasalis, e; accessorius, a, um;
5. corpus, oris n – (geniculatus, a, um; medialis, e)
6. dens, dentis m – (incisivus, a, um; molaris, e);
7. extremitas, atis f – (acromialis, e; anterior, ius);
8. foramen, inis n – (frontalis, e; incisivus, a, um);
9. impressio, onis f – (cardiacus, a, um; renalis, e);
10. margo, inis m – (interosseus, a, um; frontalis, e);
11. os, ossis n – (hyoideus, a, um; centralis, e);
12. pars, partis f – (cardiacus, a, um; clavicularis, e);
13. radix, icis f – (motorius, a, um; medialis, e);
14. regio, onis f – (epigastricus, a, um; sacralis, e)
15. vas, vasis n – (lymphaticus, a, um; collateralis, e).

Exercise 7. Complete the dictionary forms for the adjectives, agree the 3rd declension nouns with them, translate the terms and provide Gen. Sg.:

1. palatine aponeurosis – (aponeurosis, is f; palatinus, a, um) Nom. sing – aponeurosis palatina Gen. sing. – aponeurosis palatinae	5. anterior margin – (margo, inis m; anterior, …….) Nom. sing – margo anter…. Gen. sing. –
2. occipital region – (regio, onis f; occipitalis, ……..) Nom. sing – regio occipital… Gen. sing. –	6. trapezoid body– (corpus, oris n; trapezoideus, ……..) Nom. sing – corpus trapezoide…. Gen. sing. –
3. lower wall – (paries, etis m; inferior, ……) Nom. sing – paries infer … Gen. sing. –	7. articular cavity – (cavitas, atis f; articularis, ……) Nom. sing – cavitas articular…. Gen. sing. –
4. nasal bone – (os, ossis n; nasalis, ……..) Nom. sing – os nasal…. Gen. sing. –	8. mastoid foramen – (foramen, inis n; mastoideus, ……..) Nom. sing – foramen mastoide…. Gen. sing. –

Exercise 8. Complete the dictionary forms (see the vocabulary) and translate the terms into Latin:

1. lesser ischial foramen– foramen, …. ischiadicus, …. minor, …	8. central nervous system – systema, …. nervosus, …. centralis, …
2. sacrococcygeal joint – articulatio, …. sacrococcygeus, ….	9. infraorbital margin – margo, … infraorbitalis, ….
3. posterior crus – crus, …. ; posterior, …	10. cuboid bone – os, … cuboideus, …
4. sesamoid cartilagecartilago, …. sesamoideus, ….	11. mastoid part– pars, … mastoideus, …
5. right kidney – ren, …. dexter, ….	12. deltoid tuberosity– tuberositas, …. deltoideus, ….
6. canine tooth – dens, …. caninus, ….	13. vertebral region – regio, … vertebralis, …
7. accessory spleen – lien, …. accessorius, ….	14. deep lymphatic vessel – vas, … lymphaticus, …. profundus, …

Exercise 9. Provide the dictionary forms and translate the terms:

1. right lung –	5. cerebral cord–
2. lateral wall –	6. parietal bone –
3. lesser trochanter –	7. superior margin –
4. cavity of the ear–	8. frontal tuber –

Exercise 10. Translate into English:

1. apex pulmonis sinistri –	8. cavitas oris propria –
2. os occipitale –	9. arteria radialis indicis –
3. alae vomeris –	10. fascia dorsalis pedis –
4. paries vestibularis ductus cochlearis–	11. systema nervosum periphericum –
5. lobus anterior hypophysis–	12. facies articularis capitis fibulae –
6. pia mater encephali –	13. crus mediale cartilaginis alaris majoris–
7. pars thoracica –	14. rete venosum dorsale pedis –

Self-Assessment

Exercise 11. Translate the following nouns of the 3rd declension into English. Pay attention to their form!

Latin	English	Latin	English
Partes (Nom.pl.)	parts	ora	
systematis		parietis	
ossium		radices	
margines		capitum	
foraminis		retia	

Exercise 12. Translate into English:

1. ala voměris -	7. pars abdominalis –
2. pars cruciformis vaginae fibrosae –	8. articulatio capĭtis costae –
3. os scaphoideum –	9. os cuneiforme mediale –
4. paries gastris posterior –	10. margo anterior partis petrosae –
5. margo linguae dexter –	11. forāmen mastoideum ossis temporālis –

6. regio lateralis sinistra –	12. systema nervosum autonomicum –

Exercise 13. Provide the dictionary forms and translate the terms:

1. base of heart –	6. orbital part –
2. posterior margin –	7. lateral root –
3. greater palatine canal –	8. thyroid cartilage –
4. temporal bone –	9. root of lung –
5. transverse part –	10. facial region –

Exercise 14. The dictionary forms are given. Analyse the following terms and translate them into English:

1. tubercula dentis – noun Nom.pl + noun Gen. sing tuberculum, i n (II declension) dens, ntis m (III declension, mixed) tubercles of the tooth	6. processus pterygoideus ossis sphenoidalis – processus, us m pterygoideus, a, um os, ossis n sphenoidsalis, e
2. pyramides renales– pyramis, idis f renalis, e	7. fibular border of foot – margo, inis m fibularis, e pes, pedis m
3. ossa membri inferioris – os, ossis n membrum, i n inferior, ius	8. regio thorācis posterior – regio, onis f thorax, icis m posterior, ius
4. vasa lymphatica superficialia - vas, vasis n lymphaticus, a, um superficialis, e	9. impression cardiaca pulmonis – impressio, onis f cardiacus, a, um pulmo, onis m
5.articulationes pedis– artuculatio, onis f pes, pedis m	10. regiones faciei – regio, onis f facies, ei f

Exercise 15. Provide the dictionary forms for the following words, translate them into English and memorize:

abdomen,	infraorbitalis,
abdominalis,	intermedius,
accessorius,	lien,
appendix,	nervosus,
articulatio,	margo,
auricula,	obturatus,

autonomicus,	peripheric**u**s,
brevis,	os,
canalis,	pars,
cartilago,	radiocarpeus,
cervicalis,	regio,
chiasma,	ren,
cruciformis,	scaphoideus,
crus,	rete,
cuneiformis,	sinister,
femur,	systema,
foramen,	vagina,
hepar,	venosus,

UNIT VI. Peculiarities of 3rd declension nouns of masculine, feminine and neuter genders. Muscle names referring to their functions. Exceptions to the gender rule of 3rd declension nouns for all three genders

In this unit

- Peculiarities of 3rd declension nouns of masculine, feminine and neuter genders
- Muscle names referring to their functions
- Exceptions to the gender rule of 3rd declension nouns for all three genders

Though the 3rd declension nouns may have lots of different endings for each gender, there are certain patterns which are followed quite consistently. In this Unit we will consider the most characteristic endings for each gender, as well as the exceptions to the gender rules.

3rd Declension Nouns of Masculine Gender

Nom.	**Gen.**	
-o	**-onis**	*pulm**o**, pulmonis* m – *lung*
	-inis	*hom**o**, hominis* m – *man*
-or	**-oris**	*tum**or**, tumoris* m – *tumour*
-os	**-oris**	*fl**os**, floris* m – *flower*
-er	**-ěris**	*vom**er**, voměris* m – *vomer*
	-ris	*vent**er**,ventris* m – *venter, belly*
-es	**-edis**	*p**es**, pedis* m – *foot*
	-etis	*pari**es**, parietis* m - *wall*
-ex	**-icis**	*ap**ex**, apicis* m – *apex*

🖫 Memorize the exceptions to the masculine gender rule. These nouns have the endings characteristic of the masculine gender, but belong to either feminine or neuter gender. Determine types of stems (consonant, vowel or mixed) they have:

os, ossis **n** – *bone*: **mixed** type	*gaster, tris* **f** – *stomach*: _____ type
os, oris **n** – *mouth*: _____ type	*mater, tris* **f** – *mater*: _____ type
tuber, eris **n** – *tuber*: _____ type	*pia mater – pia mater*
cor, cordis **n** – *heart*: _____ type	*dura mater – dura mater*

3rd Declension Nouns of Feminine Gender

Here are the noun with the typical for 3-rd declension feminine gender endings.

Nom.	**Gen.**	
-io	**-onis**	*reg**io**, regi**onis*** f – *region*
-go	**-inis**	*cartila**go**, cartilag**inis*** f
-do	**-inis**	*longitu**do**, longitud**inis*** f – *length*
-as	**-atis**	*tuberosit**as**, tuberosit**atis*** f
-is	**-is** (pari-	*aur**is**, aur**is*** f – *ear*
-es	syllabic)	*pub**es**, pub**is*** f - *pubes*
-us	**-udis**	*inc**us**, incudes* f – *incus, anvil*
-cons.	**-tis**	*par**s**, par**tis*** f – *part*

+s		
-x **(-~~ex~~)**	**-gis** **-cis**	*menin**x**, meninges* f – *meninx* *vo**x**, vo**cis*** f – *voice*

These nouns have the endings characteristic of the feminine gender, but belong to either masculine or neuter gender.

atlas, antis **m** – *atlas, the 1st cervical vertebraaxis, is* **m** – *axis; the 2nd cervical vertebra* *calix, icis* **m** – *calix, a cuplike organ or* *cavitycanalis, is* **m** – *canal* *dens, dentis* **m** – *tooth* *fornix, icis* **m -** *vault, fornix* *hallux, ucis* **m** – *hallux, the great toe* *larynx, ngis* **m** *(Gr.) – larynx*	*margo, inis* **m** – *margin* *sanguis, inis* **m** – *blood* *tendo, inis* **m** – *tendon* *thorax, acis* **m** *(Gr.) – thorax, chest* *unguis, is* **m** – *nail* *vermis, is* **m** – *vermis, a wormlike structure* *pharynx, ngis* **m** *(Gr.) – pharynx* *coccyx, ygis* **m** *(Gr.) – coccyx*
pancreas, atis **n** *(Gr.) – pancreas*	*vas, vasis* **n** – *vessel*

3rd Declension Nouns of Neuter Gender

Nom.	**Gen.**	
-en	**-inis**	*faram**en,** foram**inis*** **n**
-us	**-oris** **-uris** **-eris**	*corp**us**, corpor**is*** **n** – *body* *cr**us**, cr**uris*** **n** – *leg, crus* *vuln**us,** vuln**eris*** **n** – *wound*
-ur	**-oris**	*fem**ur**, fem**oris*** **n**
-e	**-is**	*ret**e**, ret**is*** **n** – *rete, net*
-al	**-alis**	*anim**al**, anim**alis*** **n**
-ar	**-atis**	*hep**ar**, hep**atis*** **n –** *liver*
-ma **(Gr.)**	**-atis**	*syste**ma,** systema**tis*** **n**
-c	**-tis**	*la**c**, lac**tis*** **n –** *milk*
-l	**-is**	*fe**l**, fel**lis*** **n –** *bile*
-ut	**-itis**	*cap**ut**, cap**itis*** **n** – *head*

Memorize the exceptions to the neuter gender rule:

ren, renis **m** – *kidney*	*lien, lienis* **m** – *spleen*

🖫 There is one more 3rd declension word which should be memorized because of peculiarities of its endings for Plural which are typical for the 2-nd declantion :

	Singularis	**Pluralis**
Nom.	vas *(vessel)*	vas-**a** *(vessels)*
Gen.	vas-**is** *(of the vessel)*	vas-**orum** *(of the vessels)*

Practical exercises

Exercise 1. Complete the dictionary forms and translate into Latin:

1. apex of the heart – apex, … cor, ….	6. body of the ischium – corpus, …. os, …. ischium, ….
2. notch of the apex of the heart – injcisura, … apex, … cor, ….	8. lateral cuneiform bone – os, … cuneiformis, … lateralis, ….
3. apex of the sacrum- apex, … os, … sacrum, ….	7. body of the ilium – corpus, … os, … ilium, ….
4. toes – digitus, … pes, ….	9. navicular bone – os, …. navicularis, ….
5. hilus of the lung – hilus, … pulmo, ….	10. parietal bone – os, …. parietalis, ….

Exercise 2. Study the endings for the Nominative and Genitive cases and find their stems:

Nom.	**Gen.**	**Examples:**	
-io	**-onis**	*reg**io**, reg**ionis*** f – *region*	
-go	**-inis**	*cartila**go**, cartilag**inis*** f	
-do	**-inis**	*longitu**do**, longitud**inis*** f – *length*	
-as	**-atis**	*tuberosit**as**, tuberosit**atis*** f	
-is **-es**	**-is** (pari-syllabic)	*aur**is**, aur**is*** f – *ear* *pub**es**, pub**is*** f - *pubes*	
-us	**-udis**	*inc**us**, incudes* f – *incus, anvil*	
-cons. +s	**-tis**	*par**s**, part**is*** f – *part*	
-x **(-~~ex~~)**	**-gis** **-cis**	*menin**x**, meninges* f – *meninx* *vo**x**, vo**cis*** f – *voice*	

Exercise 3. Translate the following nouns of the 3rd declension into Latin (see exercise 8 and exceptions for dictionary forms).

English	*Latin*	*English*	*Latin*
***of a** region*	*region**is***	***of an** atlas*	
*t**ee**th*		*tendon**s***	

of a *pancreas*		*part**s***	
of *margin**s***		***of a*** *meninx*	
blood		*ear**s***	
*nail**s***		***of*** *anvil**s***	
of a *hallux*		***of a*** *coccyx*	

Exercise 4. Complete the dictionary forms and translate into Latin:

1. sternocostal **joints** – articulatio,… sternocostalis,…. Nom.pl:	6. **cartilages** of the larynx - cartilago,… larynx,… Nom.pl:
2. intercarpal **articulations** – articulatio,…. intercarpeus,….. Nom.pl:	7. incisive **teeth** – dens,… incisivus,… Nom.pl:
3. lateral **canals** – canalis,… lateralis,… Nom.pl:	8. premolar (**teeth**)– dens,… premolaris,… Nom.pl:
4. lesser palatine **canals** – canalis,… palatinus,… minor,…. Nom.pl:	9. lateral abdominal **regions** – regio,… abdominalis,… lateralis,…. Nom.pl:
5. lesser alar **cartilages** – cartilago,… alaris,…… minor,… Nom.pl:	10. **regions** of the neck – regio,… collum,… Nom.pl:

Exercise 5. Underline the nouns, determine their declension, number and case and translate the terms into English:

3rd, Nom. Sg. 1. articulatio radioulnaris distalis – *distal radioulnar articulation (joint)*	6. cartilagines nasales accessoriae –
2. axis bulbi externus –	7. cavitas glenoidalis scapulae –
3. canalis nervi facialis –	8. ligamentum transversum atlantis –
4. facies buccalis dentis –	9. margo posterior patris petrosae –
5. ligamentum apicis dentis –	10. ostium appendicis vermiformis –

Exercise 6. Translate the terms into Latin and decline them:

ciliary body:corpus, oris n; *ciliaris, e*

Nom. Sg.	*corpus ciliare*
Nom. Pl.	
Gen. Sg.	
Gen. Pl.	

autonomic nervous system: systema, atis n; *nevrosus, a, um*; *autonomicus, a, um*

Nom. Sg.	
Nom. Pl.	
Gen. Sg.	
Gen. Pl.	

lesser palatine foramen: foramen, inis n; *palatinus, a, um*; *minor, us*

Nom. Sg.	
Nom. Pl.	
Gen. Sg.	
Gen. Pl.	

Exercise 7. Agree the nouns with the adjectives, circle correct endings, translate the terms (orally):

foramen (ethmoidalis, e; anterior, ius; frontalis, e; magnus, a, um);
corpus (adiposus, a, um; ciliaris, e);
crus (lateralis, e; anterior, ius);
rete (acromialis, e; arteriosus, a, um; medialis, e);
caput (brevis, e; longus, a, um; obliquus, a, um; lateralis, e; profundus, a, um);
systema (urogenitalis, e; lymphaticus, a, um; centralis, e; respiratorius, a, um).

Exercise 8.Provide the dictionary forms for the following words, translate them into English and memorize:

articulatio,	impressio,
carpus,	pelvis,
cavitas,	pulmo,
chiasma,	pupilla,
cor,	radix,
crus,	rete
digitus,	systema,
femur,	tympanum,
hepar,	ulna,
hilus,	vas,

Exercise 9. Write out the Latin words for translation with their dictionary form and translate into Latin:

E.g.: frontal wall of stomach – paries frontalis gastris

1) Skin of the forehead-	**15)** major posterior straight muscle of the head-

2) vault (fornix) of the stomach-	**16)** right (left) lobe of the liver
3) cochlear duct of the internal ear –	**17)** anterior pedicle of the internal capsule-
4) cochlear duct of the internal ear-	**18)** right margin of the uterus-
5) superficial lymphatic vessel-	**19)** orbicular muscle of the mouth-
6) posterior nucleus of the trapezoid body-	**20)** minor horn of the hyoid bone-
7) base of the heart, pyloric part of the stomach-	**21)** apex of the posterior horn-
8) left lobe of the liver-	**22)** cardiac incisure of the left lung-
9) cardial impression (impression, ionis f) of the lung-	**23)** infraorbital channel of the upper jaw-
10) anterior region of the face-	**24)** cartilage of the septum of the nose-
11) lateral region of the neck-	**25)** superior aperture of the pelvis-
12) apex and root of the lung-	**26)** synovial vagina of the tendon of the posterior tibial muscle-
13) lateral cartilage of the nose-	**27)** anular part of the fibrous vagina-
14) termination (termination, ionis f) of the nerve of the skin –	**28)** tympanic cavity of the middle ear-

Exercise 10. Exercise 8. Translate anatomical terms into English:

E.g.: vasa sanguinea retinae – blood vessels of the retina

1) Organa oculi accessoria-	14) bursa trochanterica musculi glutaei minimi
2) arteriae ciliares posteriores longae-	15) venae meningeae mediae-
3) rami alveolares-	16) ductus parauthrales-
4) superiores anteriores, arteriae renis-	17) rami capsulares-
5) corpora paraaortica -	18) ductuli transversi-
6) glandulae pharyngeae-	19) plicae semilunares coli-
7) ventriculi larynges-	20) fibrae obliquae-
8) vasa auris-	21) musculi diaphragmatici pelvis-
9) recessus subhepatici-	22) musculi intercostales externi-
10) synchondroses cranii-	23) ligamenta tarsi interossea-
11) alveoli dentales-	24) articulationes cinguli membri superioris-
12) foramina intervertebralia-	25) articulationes synoviales cranii-
13) sulci arteriosi-	26) ossa mebri inferioris-

Self-assessment

Muscle Names Referring to Their Functions

📖 The Greeks and Romans conducted the first studies done on the human body in Western culture. The educated class of subsequent societies studied Latin and Greek, and therefore the early pioneers of anatomy continued to apply Latin and Greek terminology or roots when they named the skeletal muscles. The large number of muscles in the body and unfamiliar words can make learning

the names of the muscles in the body seem daunting, but understanding the etymology can help.

Etymology is the study of how the root of a particular word entered a language and how the use of the word evolved over time.

The suffix **-or** is frequently used to form nouns of masculine gender of the 3rd declension to name muscles based on the action they perform.

Example	**Latin or Greek Translation**	**Mnemonic Device**
ad	to; toward	ADvance toward your goal
ab	away from	n/a
sub	under	SUBmarines move under water.
ductor	something that moves	A conDUCTOR makes a train move.
anti	against	If you are antisocial, you are against engaging in social activities.
epi	on top of	n/a
apo	to the side of	n/a
longissimus	longest	“Longissimus” is longer than the word “long.”
longus	long	long
brevis	short	brief
maximus	large	max
medius	medium	“Medius” and “medium” both begin with “med.”
minimus	tiny; little	mini
rectus	straight	To RECTify a situation is to straighten it out.
multi	many	If something is MULTIcolored, it has many colors.
uni	one	A UNIcorn has one horn.
bi/di	two	If a ring is DIcast, it is made of two metals.
tri	three	TRIple the amount of money is three times as much.
quad	four	QUADruplets are four children born at one birth.
externus	outside	EXternal
internus	inside	INternal

Anatomists name the skeletal muscles according to a number of criteria, each of which describes the muscle in some way. These include naming the muscle after its shape, its size

compared to other muscles in the area, its location in the body or the location of its attachments to the skeleton, how many origins it has, or its action.

The skeletal muscle's anatomical location or its relationship to a particular bone often determines its name. For example, the frontalis muscle is located on top of the frontal bone of the skull. Similarly, the shapes of some muscles are very distinctive and the names, such as orbicularis, reflect the shape. For the buttocks, the size of the muscles influences the names: gluteus maximus (largest), gluteus medius (medium), and the gluteus minimus (smallest). Names were given to indicate length—brevis (short), longus (long)—and to identify position relative to the midline: lateralis (to the outside away from the midline), and medialis (toward the midline). The direction of the muscle fibers and fascicles are used to describe muscles relative to the midline, such as the rectus (straight) abdominis, or the oblique (at an angle) muscles of the abdomen.

Some muscle names indicate the number of muscles in a group. One example of this is the quadriceps, a group of four muscles located on the anterior (front) thigh. Other muscle names can provide information as to how many origins a particular muscle has, such as the biceps brachii. The prefix bi indicates that the muscle has two origins and tri indicates three origins.

The location of a muscle's attachment can also appear in its name. When the name of a muscle is based on the attachments, the origin is always named first. For instance, the sternocleidomastoid muscle of the neck has a dual origin on the sternum (sterno) and clavicle (cleido), and it inserts on the mastoid process of the temporal bone. The last feature by which to name a muscle is its action. When muscles are named for the movement they produce, one can find action words in their name. Some examples are flexor (decreases the angle at the joint), extensor (increases the angle at the joint), abductor (moves the bone away from the midline), or adductor (moves the bone toward the midline).

Muscle names are based on many characteristics. The location of a muscle in the body is important. Some muscles are named based on their size and location, such as the gluteal muscles of the buttocks. Other muscle names can indicate the location in the body or bones with which the muscle is associated, such as the tibialis anterior. The shapes of some muscles are distinctive; for example, the direction of the muscle fibers is used to describe muscles of the body midline. The origin and/or insertion can also be features used to name a muscle; examples are the biceps brachii, triceps brachii, and the pectoralis major.

It is evident that up until introduction of the B.N.A. there was an extremely liberal approach to naming muscles, deserving great respect in the retrospective terminological studies if complete and relevant results are to be achieved. Without this knowledge of the vernacular of the ages past, modern researchers can find themselves 'reinventing the wheel' in looking for their answers.

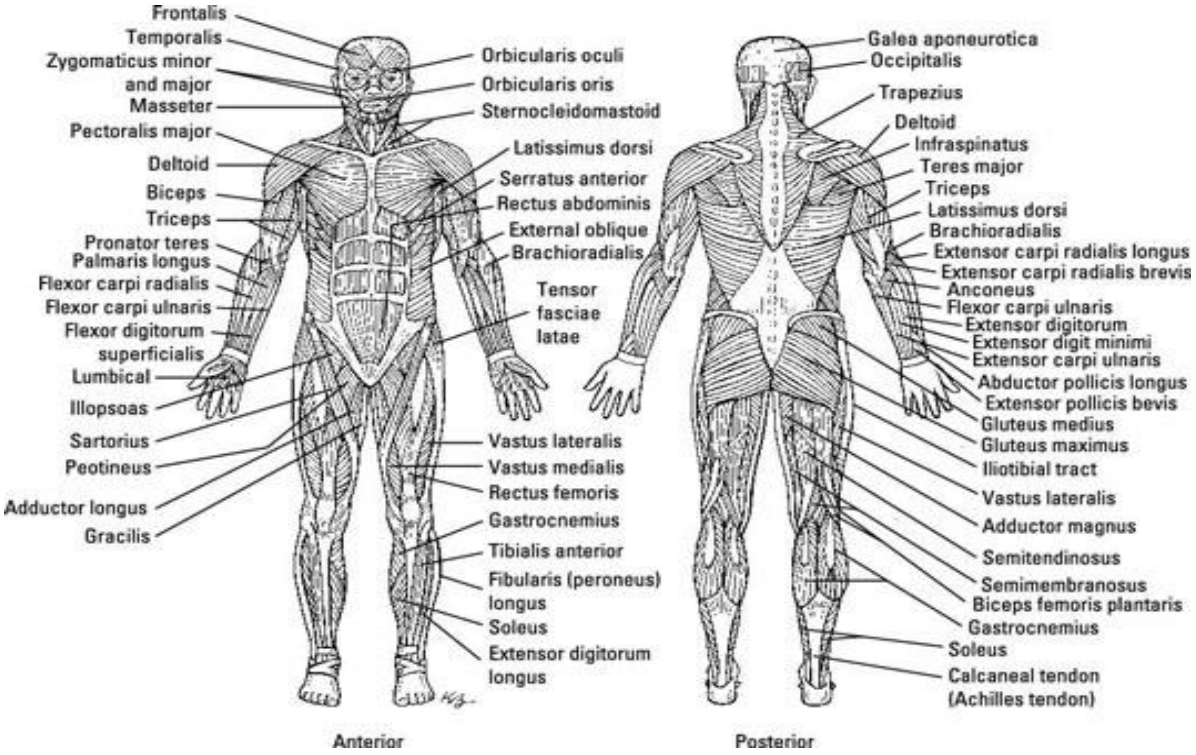
These names of muscles consist of two nouns in **Nominative** case: the first noun is "*musculus*", usually abbreviated as "***m.***", and the second one is a 3rd declension noun of masculine gender with the suffix **-or** (sometimes **-er** in the words of Greek origin). The number and case of these two nouns always coincide, e.g.:

Nom. Sg. *musculus constrictor ;* **Gen. Sg.** *musculi constrictoris*

The names of muscles according to their function are translated into English with the word order opposite to that in Latin, e.g. *m. abductor – abductor muscle.* Except for the **Nominative Case** for the nouns denoting muscle function, multi-word terms for muscles follow the same rules as other terms, e.g.: *musculus **(Nom.)** levator **(Nom.)** scapulae **(Gen.)***

Memorize the names of the following muscles according to their functions:

m.abductor	abductor muscle
m.adductor	adductor muscle
m.buccinator	buccinator muscle
m.constrictor	constrictor muscle
m.corrugator	corrugator muscle
m.cremaster	cremaster muscle
m.depressor	depressor muscle
m.dilatator	dilator muscle
m.flexor	flexor muscle
m.erector	erector muscle
m.extensor	extensor muscle
m.levator	levator muscle
m.masseter	masseter muscle
m.pronator	pronator muscle
m.rotator	rotator muscle
m.sphincter	sphincter muscle
m.supinator	supinator muscle
m.tensor	tensor muscle



Exercise 11. Provide the dictionary forms, translate the terms into Latin and explain their function in English:

1. <u>levator costae muscle –</u> musculus, …… levator, … … costa, … …	<u>5. levator scapulae muscle –</u> musculus, …… levator, …… scapula, ……

L: musculus levator costae **E:** a muscle lifting a rib	**L:** **E:**
2. depressor septi nasi muscle – musculus, … … depressor, … … septum, … … nasus, … … **L:** **E:**	6. abductor digiti minimi muscle – musculus, …… abductor, …… digitus, …… minimus, …… **L:** **E:**
3. flexor carpi radialis muscle - musculus,… flexor,…. carpus,….. radialis,…. **L:** **E:**	7. tensor fasciae latae muscle – musculus,…. tensor,… fascia,…. latus,….. **L:** **E:**
4. corrugator supercilii muscle – musculus, …. corrugator,…. supercilium,…. **L:** **E:**	8. depressor anguli oris muscle – musculus,…. depressor,…. angulus,…. os,……. **L:**

Exercise 12. Decline the muscle names:

	Latin	***English***
Nom. Sg.	*musculus masseter*	
Gen. Sg		
Nom. Pl.		
Gen. Pl.		

	Latin	***English***
Nom. Sg.	*musculus mcorrugator*	
Gen. Sg		
Nom. Pl.		
Gen. Pl.		

	Latin	***English***
Nom. Sg.	*musculus constrictor*	
Gen. Sg		
Nom. Pl.		
Gen. Pl.		

Exercise 13. Translate the following names of the muscles:

1. musculi levatores costarum-	9. musculi rotatores -

2. musculi levatores costarum breves-	10. musculi rotatores cervicis-
3. musculi levatores costarum longi-	11. musculi rotatores thoracis-
4. musculus adductor magnus-	12. musculus depressor labii inferioris-
5. musculus erector spinae-	13. musculus levator anguli oris-
6. musculus extensor carpi radialis-	14. musculus sphincter pupillae-
7. musculus flexor digitorum brevis-	15. musculus tensor tympani-
8. musculus levator labii superioris-	16. musculus masseter-

Exercise 14. Provide the dictionary forms and translate the terms into Latin:

1. accessory interrenal **bodies** – corpus, oris n interrenalis, e accessorius, a, um ***corpora*** *interrenalia accessoria*	9. right and left **crura** –
2. paraaortic **bodies** –	10. membranous **crura** –
3. nutricient **vessels** –	11. intervertebral **foramina** –
4. right and left **kidneys** –	12. pelvic sacral **foramina** –
5. lymphatic system –	13. fascia of the leg –
6. venous rete –	14. fovea of the head of the femur –
7. accessory spleen –	15. infraorbital foramen –

8. frontal tuber –	16. hilus of the spleen –

Exercise 15. Underline the nouns, determine their declension, number and case and translate the terms into English:

1. appendix fibrosa hepatis-	6. foramen ischiadicum majus –
2 systema nervosum autonomicum-	7. chiasma tendinum –
3. systema nervosum peripherіcum-	8. septum intermusculare cruris anterius –
4. facies articularis capitis fibulae –	9. fascia lata femoris –
5. cavitas abdominis-	10. rete venosum dorsale pedis –

Key Vocabulary

Provide the dictionary forms for the following words, translate them into English and memorize:

articulatio,	impressio,
carpus,	pelvis,
cavitas,	pulmo,
chiasma,	pupilla,
cor,	radix,
crus,	rete
digitus,	systema,
femur,	tympanum,
hepar,	ulna,
hilus,	vas,

UNIT VII. 1st, 2nd and 3rd declension nouns in combination with II class adjectives. Present Participle and its declension. Anatomical terms consisting of nouns and participles

In this unit

– 1st, 2nd and 3rd declension nouns in combination with II class adjectives
– Present Participle and its declension
– Anatomical terms consisting of nouns and participles

The adjectives of the second class correspond to the nouns of **the 3rd declension.** However, the dictionary forms of this group may differ as to the number of the endings presented, namely, one, two or three:

Adjectives of II class

Number of Endings	**three** endings*: masculine **-er** feminine **-is** neuter **–e**	**two** endings: masculine **-is** feminine **-is** neuter **-e**	**one** ending: masculine **-r, -s, -x** feminine **-r, -s, -x** neuter **-r, -s, -x**
Examples	**m** – salub**er** **f** – salubr**is** **n** – salubr**e**	**m** – occipital**is** **f** – occipital**is** **n** – occipital**e**	**m** – simple**x**, tere**s** **f** – simple**x**, tere**s** **n** – simple**x**, tere**s**
Entry	**saluber, is, e**	**occipitalis, e**	**simplex, icis; teres, etis**

***** The adjectives with three endings are used very rarely.

To determine the stem of an adjective of II class, remove the ending from the feminine form for the adjectives with three or two endings. To determine the stem for the adjectives with one ending, remove the ending from the Genitive Singular:

e.g. ***saluber, bris, bre*** (healthy) – *salubris* – the stem *salubr-; **facialis, e** – facialis* – the stem *facial-*; ***simplex, icis*** – *simplicis* – the stem *simplic-*.

1st, 2nd and 3rd declension nouns in combination with II class adjectives.

spina, ae **f (1st declension noun**) + nasalis, e (II class with 2 endings (**-is** for masculine and feminine forms; -e for neuter forms) adjective) => spina (f) nasal**is**

labium, i **n (2nd declension noun)** + medialis,e **(**II class with 2 endings (**-is** for masculine and feminine forms; **-e** for neuter forms) adjective) => labium (n) medial**e**

canalis, is **m (3rd declension noun) +** infraorbitalis, e (II class with 2 endings (**-is** for masculine and feminine forms; **-e** for neuter forms) adjective) => canalis (m) infraorbitalis

articulatio, onis f **(3rd declension noun) +** simplex, icis (II class with 1 ending (**-x** is common for all genders) adjective) => articulatio (f) simple**x**

	1st declension noun + II class adjective	**2nd declension noun + II class adjective**	**3rd declension noun + II class adjective**
Nom. Sg.	*spin**a** nasal**is***	*labi**um** medial**e***	*articulati**o** simple**x***
Gen. Sg	*spin**ae** nasal**is***	*labi**i** medial**is***	*articulation**is** simplic**is***
Nom. Pl.	*spin**ae** nasal**es***	*labi**a** medial**ia***	*articulation**es** simplic**es***
Gen. Pl.	*spin**arum** nasal**ium***	*labi**orum** medial**ium***	*articulation**um** simplic**ium***

Present Participle (Participium praesentis activi)

A participle is formed from a verb but looks and functions like an adjective. This means that it agrees with the noun it modifies in **number, case** and **gender**. We form **Participium praesentis activi** by adding the ending **-ns** to the stems of the first and second conjugation verbs (**Gen. -ntis**), and the ending **-ens** to the stems of the third and fourth conjugation verbs (**Gen. -entis**):

sano, sanavi, sanatum, ***sana-re*** *I – to treat*	***sana-ns*** *– treating*
misceo, miscui, mixtum, ***misce-re*** *II – to mix*	***misce-ns*** *– mixing*
solvo, solvi, solutum, ***solv-ere*** *III – to dissolve*	***solv-ens*** *– dissolving*
audio, audivi, auditum, ***audi-re*** *IV – to hear*	***audi-ens*** *– hearing*

The dictionary form of the **Present Participle** resembles the entry for the adjectives of II class with one ending, e.g.: *simplex, icis.* To differentiate between the **participles** and the **3rd declension nouns** mind that **gender** reference in the dictionary is for **nouns** only: *sanans, ntis; miscens, ntis; solvens, ntis; audiens, ntis.*

Practical exercises

Exercise 1. Provide the dictionary forms and translate into Latin:

1. pyramidal muscle – musculus, … pyramidalis, …	3. inferior nucleus – nucleus, … inferior, …
2. medial meniscus – meniscus,… medialis, …	4. scapular line – linea, … scapularis, …

5. lateral ligament – ligamentum, … literalis, …	9. supraorbital notch – incisura, … supraorbitalis, …
6. vertebral foramen – foramen, ... vertebralis, …	10. ciliary body – corpus, … ciliaris, …
7. fossa of the lacrimal gland – fossa, … glandula, … lacrimalis, …	11. posterior auricular muscle – musculus, … auricularis, … posterior, …
8. joints of thorax – articulatio, … thorax, …	12. interosseous membrane of forearm – membrana, … interosseous, … antebrachium, …

Exercise 2 Translate the terms into English:

1. ligamentum atlantooccipitale anterius –	6. vena scapularis dorsalis –
2. sulcus ulnaris antebrachii –	7. regio lumbalis lateralis –
3. septum intermusculare cruris posterius –	8. musculus spinalis thoracis, cervicis et capitis –
4. regio umbilicalis –	9. partes laterales ossis sacri –
5. plica longitudinalis duodeni –	10. membrana atlantooccipitalis anterior –

Exercise 3. Complete the dictionary forms. Agree the nouns and adjectives and translate the terms into Latin:

1. occipital belly – venter, … … occipitalis, …….	6. occipital region – regio, ……. occipitalis, …….
2. muscular coat of the pharynx – tunica, ……. muscularis, ……. pharynx, …….	7. lateral malleolar network – rete, …… malleolaris, …… lateralis, ……
3. tuberosity of the distal phalanx – tuberositas, ……. phalanx, ……. distalis, …….	8. tibialis posterior muscle – musculus, ……. tibialis, ……. posterior, …….
4. infraglenoid tubercle – tuberculum, ……. infraglenoidalis, …….	9. anterior wall – paries, ……. anterior, …….
5. groove for the ulnar nerve – sulcus, ……. nervus, ……. ulnaris, …….	10. geniculum of the facial canal – geniculum, ……. canalis, ……. facialis, …….

Exercise 4. Provide the dictionary forms and translate the terms in Pl.:

1. tracheal **cartilages** – cartilago, … trachealis, …	3. orbiculares **muscles** – musculus, … orbicularis, …
2. lesser **wings** – ala, …. major, …	4. collateral **ligaments** – ligamentum, … collateralis, …

5. superior and inferior labial **arteries** – arteria, … labialis, … superior, …. inferior, ….	7. superior and inferior costal **foveae** – fovea, … costalis, … superior, … inferior, ….
6. dorsal sacral **foramina** – foramen, … sacralis, … dorsalis, ….	8. lateral **parts** of the occipital bone – pars, … lateralis, … os, …. occipitalis, ….

Exercise 5. Determine the class of the adjectives and participles and complete the dictionary forms:

thoracicus, ….	major, ….	intermedius, ….
pyramidalis, ….	permanens, ….	opponens, ….
gastricus, ….	efferens, ….	peripherícus, ……
recurrens, …	lumbalis, ….	posterior, ….
inferior, ….	peripherícus, ….	accelerans, ……

Exercise 6. Exercise 1. Determine the stem of the present participles and decline them. Mind Nominative Plural for the neuter gender!

descendens, ntis (dscending)

	m	**f**	**n**
Nom. Sg.	***descendens***	***descendens***	***descendens***
Gen. Sg.	***descendentis***	***descendentis***	***descendentis***
Nom. Pl.	***descendentes***	***descendentes***	***descendentia***
Gen. Pl.	***descendentium***	***descendentium***	***descendentium***

efferens, ntis (efferent)

	m	**f**	**n**
Nom. Sg.			
Gen. Sg.			
Nom. Pl.			
Gen. Pl.			

reccurens, ntis (reccurent)

	m	**f**	**n**
Nom. Sg.			
Gen. Sg.			
Nom. Pl.			
Gen. Pl.			

Exercise 7. Determine the declension of the nouns and the group (class) of the adjectives and put the terms into Genitive Singular:

Nom. Sg.	***Gen. Sg.***
nervus (**2nd**) tibialis (**II class**)	*nervi tibialis*
ventor (___) inferior (_____)	_____
cartilago (___) minor (_____)	_____
aorta (___) ascendens (_____)	_____
ligamentum (___) posterius (_____)	_____
costa (___) fluctuans (_____)	_____

Exercise 8. Determine the declension of the nouns and the class of the adjectives or participles, decline the terms and translate each form into English:

nervus (___ declension) abducens (_____)

	Latin	***English***
Nom. Sg.		
Gen. Sg.		
Nom. Pl.		
Gen. Pl.		

vas (!) (___ declension) prominens (_____)

	Latin	***English***
Nom. Sg.		
Gen. Sg.		
Nom. Pl.		
Gen. Pl.		

camera (___ declension) anterior (_____)

	Latin	***English***
Nom. Sg.		
Gen. Sg.		
Nom. Pl.		
Gen. Pl.		

foramen (___ declension) vertebralis (_____)

	Latin	***English***
Nom. Sg.		
Gen. Sg.		

Nom. Pl.		
Gen. Pl.		

Exercise 9. Complete the dictionary forms and translate the terms into Latin (provide both Sg. and Pl. Nom. forms):

1. anterior ascending branch**es** – ramus, … … anterior, … … ascendens, … … **Nom. Sg.:** **Nom. Pl.:**	7. radial recurrent arteri**es** – arteria, … … recurrens, … … radialis, … … **Nom. Sg.:** **Nom. Pl.:**
2. posterior tibial recurrent arteri**es** – arteria, … … recurrens, … … tibialis, … … posterior, … …. **Nom. Sg.:** **Nom. Pl.:**	8. 7th prominent vertebr**a** – vertebra, … … prominens, … … septimus, … … **Nom. Sg.:** Why **no** Plural?
3. descending colon – colon, … …. descendens, … … **Nom. Sg.:** Why **no** Plural?	9. ascending aorta – aorta, … … ascendens, … … **Nom. Sg.:** Why **no** Plural?
4. perforating branch**es** – ramus, … … perforans, … … **Nom. Sg.:** **Nom. Pl.:**	10. permanent t**ee**th – dens, … … permanens, … … **Nom. Sg.:** **Nom. Pl.:**
5. comitant arteri**es –** arteria, … … comitans, …… **Nom. Sg.:** **Nom. Pl.:**	11. opponens muscle**s** – musculus, …… opponens, … … **Nom. Sg.:** **Nom. Pl.:**
6. deferent duct**s** – ductus, …… deferens, …… **Nom. Sg.:** **Nom. Pl.:**	12. ascending palatine arteri**es** – arteria, … … palatinus, …… ascendens, …… **Nom. Pl.:**

Exercise 10. Match the corresponding adjectives (given in the table) and the following nouns and translate the terms into English:

~~*thoracica descendens,*~~ *cava ascendens, fluctuans, communicantes, communicans posterior, ascendens, efferens, opponens pollicis, abducens*

Latin term	*Translation into English*
1. aorta *thoracica descendens*	*descending thoracic aorta*
2. colon	
3. nervus	
4. vas	
5. vena	
6. arteria	
7. arteriae	
8. musculus	
9.costa	

Self-Assessment

Features of the use of degrees of comparison in anatomical terminology. Present participles in anatomical terminology. Features of declension.

Comparative adjectives

Comparative adjectives are used to compare differences between the two objects they modify (larger, smaller, longer, shorter).

The comparative degree is formed by adding the suffixes **–ĭor** for masculine and feminine and –**ĭus** for neuter to the stem of adjectives.

The dictionary form of the adjectives has two components:

1. Nominative singular masculine and feminine form;
2. Suffix –ĭus of the Nominative singular neuter form.

E.g.: **major, jus**

Remember the comparative adjectives used in the anatomical terminology:

major, ius (*major, larger, greater*)

minor, minus (*minor, smaller)*

anterior, ius (*anterior*)

posterior, ius (*posterior*)

superior, ius (*superior, upper)*

inferior, ius (*inferior, lower)*

For the paired anatomical formations the comparative form is used.

*E.g.: ala **major** – ala **minor** (larger wing – smaller wing) cornu **majus** – cornu **minus** (larger horn – smaller horn).*

In case of the unique formations the positive adjective is used.

*E.g.: foramen occipitale **magnum** (large occipital foramen)*

Superlative adjectives

Superlative adjectives are used to denote the highest degree of comparison.

The superlative degree is formed by adding the suffix **–issim** and endings **–us, -a, -um** to the adjective stem.

E.g.: longus ,a, um =>stem: **long+-issim- + -us, -a, -um = longissimus, a, um** *(the longest)*

The exceptions:

maxĭmus, a, um largest, greatest

minĭmus, a, um smallest, least

suprēmus, a, um supreme, highest

The dictionary form of the superlative adjectives is like the 1st group adjective one and consists of three components:

1. full masculine form;
2. the feminine ending;
3. the neuter ending.

Participle Present Active (Participium praesentis actīvi)

The Participle Present Active is frequently used in anatomical nomenclature. It is declined similarly to the 3rd declension adjectives with one ending -ns, which is common to all genders, e.g.: communĭcans, ntis – communicant.

Exercise 11. Provide the dictionary forms and translate the terms into Latin, provide both Nom. and Gen. Sg. forms):

1. anterior line– … … … … **Nom. Sg.:** **Gen. Sg.:**	4. posterior surface– … … … … **Nom. Sg.:** **Gen. Sg.:**
2. inferior bone– … … … … **Nom. Sg.:** **Gen. Sg.:**	5. superior artery – … … … … **Nom. Sg.:** **Gen, Sg.:**

3. larger groove **–** … … …… **Nom. Sg.:** **Gen. Sg.:**	6. lesser foramen– …… … … **Nom. Sg.:** **Gen. Sg.:**

Exercise 12. Complete the dictionary forms. Agree the nouns and adjectives and translate the terms into Latin:

1. the longest muscle of the neck – musculus, ……. longissimus, ……. collum, …….	4. little finger (the smallest finger).– digitus, ……. minimus, …….
2. the smallest gluteal muscle – musculus, ……. gluteus, ……. minimus, ……	5. the supreme nuchal line – linea, ……. supremus, ……. nucha, …….
3. the supreme nasal concha - concha, ……. nasalis, ……. supremus, …….	6. the longest muscle of the head – musculus, ……. longissimus, ……. caput, …….

Exercise 13. Determine the case, number and gender of the terms and provide their appropriate forms:

Latin	*English*
1. ligament**orum** collateral**ium** *liganentum, i n* *collateralis, e* **(Gen., Pl., n)**	***of** collateral ligament**s***
2. cartilaginis trochlearis (_____, _____, _____)	
3. venae cavae ascendentis (_____, _____, _____)	
4. vasa efferentia (_____, _____, _____)	
5. foraminis sacralis dorsalis (_____, _____, _____)	
6. musculorum orbicularium (_____, _____, _____)	
7. arteria communicans (_____, _____, _____)	
8. coli ascendentis	

(_____, _____, _____)	
9. nervi abducentes (_____, _____, _____)	
10. costarum fluctuantium (_____, _____, _____)	
11. foveae costalis (_____, _____, _____)	

Exercise 14. Translate into English:

1. ala voměris -	7. pars abdominalis –
2. pars cruciformis vaginae fibrosae –	8. articulatio capĭtis costae –
3. os scaphoideum –	9. os cuneiforme mediale –
4. permanent teeth –	10. ascending colon –
5. comitant artery -	11. of recurrent artery –
6. perforanting rami –	12. descendending arteries –

Exercise 15. Provide the dictionary forms for the following words, translate them into English and memorize:

abducens,	longitudinalis,
afferens,	lumbalis,
antebrachium,	membrana,
aorta,	meniscus,
ascendens,	opponens,
atlantooccipitalis,	permanens,
auricularis,	perforans,
commitans,	plica,
communicans,	pollex,
descendens,	prominens,
deferent,	pyramidalis,
fluctuans,	recurrens,
efferens,	scapularis,
glandula,	ulnaris,
index,	umbilicalis,

UNIT VIII. Nouns of the 4th and 5th declensions and their combination with adjectives

In this unit

- Nouns of the 4th and 5th declensions
- Revision of all topics on anatomical terminology

4th Declension (Declinatio Quarta)

🖫 The 4th declension consists of a relatively small but fairly important group of nouns, many of which were derived originally from Latin verbs. You may be perplexed to learn that they all have the ending -us; superficially, therefore, they can be confused with 2nd declension nouns like focus and animus or with 3rd declension neuter nouns like **corpus and onus**. The nouns of **masculine** gender ending in **-us** and nouns of **neuter** gender ending in **-u** in **Nominative singular** belong to the **fourth declension**. The ending in **Genitive singular** is **-us** for both genders, e.g.:

processus, us **m** – *process; cornu, us* **n** – *horn, cornu.*

IF ANY LATIN **-us** NOUN HAS AN ENGLISH DERIVATIVE WITH A *-u-* BEFORE THE FINAL SYLLABLE, IT IS ALMOST SURE TO BE A 4TH DECLENSION LATIN WORD. To illustrate, if you are confronted with an unfamiliar –**us** noun—say, **manus** ("hand")—and you can think of an English word in *–**u**al* like *"man**u**al,"* assume that the word belongs to the 4th declension.

🖫 Memorize the **exceptions** to the **masculine** gender rule. These nouns have the ending **-us**, but belong to **feminine** gender:

manus, us **f** – *hand*	*Quercus, us* **f** – *oak*

A few 4th declension nouns appear unchanged in English: status, sinus, census, consensus, hiatus, apparatus. If you should want to pluralize any of these words in English, and you mean to follow Latin practice, you will not change the word in spelling—the Latin plural of census is census. It would be correct to say, in English, "one apparatus, two apparatus;" but it would also be acceptable to anglicize and say, "two apparatuses." Whatever you do, don't say "two apparati," since that is neither Latin nor English.

Latin **manus** has no simple noun derivative in English, though it is, of course, the source of French *la main*. As the French gender reveals, the Latin word was feminine, though most 4th declension nouns were MASCULINE. The following table presents a small sampling of these nouns; you will meet quite a few more when we come to examine the Latin verb, since most 4th declension nouns are derived from verbs.

LATIN FOURTH DECLENSION NOUNS (M.)			
gradus	step, grade	**sinus**	curve, fold
manus (F.)	hand	**situs**	position, site
ritus	ceremony, rite	**spiritus**	breath, spirit

5th Declension (Declinatio Quinta)

🖫 The nouns of **feminine** gender ending in **-es** in **Nominative singular** belong to the **fifth declension**. The ending in **Genitive singular** is **-ei**, e.g.:

facies, ei **f** – *face, surface; species, ei* **f** – *species, tea (a dosage form).*

As usual, the ending of **Gen. Sg. (-ei)** helps to distinguish between these nouns and the **3rd declension** nouns of **masculine** and **feminine** genders, e.g.: *pari**es**, et**is*** **m**; *tab**es**, **is*** **f**

Practical exercises

Exercise 1. Determine the stem of the nouns, decline them and translate into English:

	Latin	***English***	***Latin***	***English***
Entry	*arcus, us* m		*genu, us* n	
Nom. Sg.				
Gen. Sg				
The stem				
Nom. Pl.				
Gen. Pl.				

🖉 **Exercise 2. Provide the dictionary forms and translate into Latin:**

1. anterior arch of the atlas – arcus, …… anterior, …… atlas, ……	7. opening of nasolacrimal duct apertura, …… ductus, …… nasolacrimalis, ……
2. parotid duct – ductus, …… parotideus, …	8. maxillary sinus**es** – sinus, …… maxillaris, ……
3. aortic opening (hiatus)– hiatus, …… aorticus, ……	9. nasolacrimal duct**s** – ductus, …… nasolacrimalis, ……
4. external acoustic meatus – meatus, …… acusticus, …… externus, ……	10. anterior clinoid process – processus, …… clinoideus, …… anterior, ……
5. pterygoid plexus – plexus, …… pterygoideus, ……	11. aditus of the larynx – aditus, …… larynx, ……
6. pyramidal process**es** – processus, …… pyramidalis, ……	12. costal pit of transverse process fovea, …… costalis, …… processus, …… transversus, ……

Exercise 3. Agree the nouns with the adjectives, circle the correct ending:
processus (costotransversarius, a, um; coronoideus, a, um; pterygoideus, a, um; zygomaticus, a, um; sphenoidalis, e; lacrimalis, e; jugularis, e);
facies (posterior, ius; medialis, e; infraorbitalis, e; temporalis, e; articularis, e);
arcus (palmaris, e; profundus, a, um; superficialis, e);
sinus (caroticus, a, um; cavernosus, a, um; frontalis, e);
cornu (coccygeus, a, um; inferior, ius; lateralis, e; sacralis, e; major, jus; temporalis, e).

Exercise 4. Decline the following terms and translate them into English (orally):

sinus, us m; *transversus, a, um*

	Singularis	**Pluralis**
Nom.		
Gen.		

cornu, us n; *inferior, ius*

	Singularis	**Pluralis**
Nom.		
Gen.		

cornu, us n; *sacralis, e*

	Singularis	**Pluralis**
Nom.		
Gen.		

facies, ei f; *articularis, e; cuboideus, a, um*

	Singularis	**Pluralis**
Nom.		
Gen.		

Exercise 5. Complete the dictionary forms and translate the terms:

	Singularis	**Pluralis**
arcus, us m	inferior dental arch – arcus, …. dentalis, …. inferior, ……	superior et inferior arches –
plexus, us m	inferior rectal plexus- plexus, …. rectalis, …. inferior, ….	inferior rectal plexuses –
	cardiac plexus – plexus, …. cardiacus, ….	cardiac plexuses –
cornu, us n	greater horn – cornu, …. major, ….	greater horns –
	coccygeal horn – cornu, ….	coccygeal horns –

	coccygeus, ….	
processus, us m	ciliary process- processus, …. ciliaris, …	ciliary processes –
	anterior clinoid process – processus, …. clinoideus, …. anterior, ….	anterior clinoid processes –
tractus, us m	pyramidal tract – tractus, …. pyramidalis, ….	pyramidal tracts –

Exercise 6. Provide the dictionary forms and translate into Latin:

1. spinous process –	2. lesser sublingual duct**s** –

3. posterior process of the talus –	9. inferior sagittal sinus –
4. jugular process**es** –	10. inferior nasal meatus –
5. piriform recess**es** –	11. pharyngeal plexus –
6. frontal sinus**es** –	12. accessory process**es** –
7. cochlear duct**s** –	13. pterygoid process –
8. inferior surface of the tongue –	14. articular facet of tubercle of rib

Exercise 7. Translate the terms into English:

1. ductus sublinguales majores –	5. processus mastoidei –

2. facies lingualis dentis –	6. ductus lymphaticus dexter –
3. hiatus canalis nervi petrosi majoris –	7. genu capsulae internae –
4. meatus nasi medius –	8. arcus lumbocostales laterales –

9. processus lateralis tuberis calcanei –	12. arcus tendineus fasciae pelvis –
10. apertura sinus frontalis –	13. articulatio genus –
11. cartilago meatus acustici –	14. facies articularis capitis costae –

Exercise 8.Provide the dictionary forms for the following words, translate them into English and memorize:

aditus,	plexus,
apertura,	recessus,
ductus,	sinus,
genu,	olfactorius,
hiatus,	submucosus,
meatus,	tendineus,
piriformis,	tractus,

Exercise 9. Analyze grammatical categories of the words in the proverbs and translate them into English. Dictionary forms are provided:

Optimum medicamentum quies est.
optimus, a, um – the best, excellent
medicamentum, i n – *remedy, medicine*
quies, etis f – *rest, quiet*
est = is

_____

Salus aegroti suprema lex (est).
salus, utis f – *well-being, health*
aegrotus, i m – *a patient, a sick person*
supremus, a, um – the greatest, supreme
lex, legis f – *law*

_____

Exercise 10. Translate anatomical terms into English:
E.g.: ganglia sensoria nervorum cranialium – sensory nervous nodes of the cranial nerves

Sinus venarum cavarum atrii dextri	*stratum lamellarum generalium externarum et internarum*

noduli valvularum semilunarium	*plexus cavernosi concharum*
rami trigeminales et trochleares	*tunica conjunctiva palpebrarum*
Cavernae corporum cavernosorum	*Nervi vasorum*
vaginae tendiunum digitorum pedis	*vasa vasorum*
Retinaculum musculorum fibularium	*terminatio nervorum*
facies anterior palpebrarum	*Rima palpebrarum*
Vagina synovialis musculorum perineorum	*ganglia sensorial nervorum cranialium*

Self-assessment

Please, revise all units grammar material, make the following task and send screened variant to your teacher

Part 1
I. Define the pronunciation of Latin letter-combination: a-**qu**-a: a) kv; b) ku
II. Determine the declension of the noun: **digitus, i m:** a) 1; b) 2; c) 3; d) 4; e) 5
III. Determine the case of the 3-rd declension noun: apic**es:** a) Nom. sing. b) Gen. sing. c) Nom. pl. d) Gen. pl.
IV. Determine the class of the adjective: **fibrosus, a, um:** a) I; b) II; c) the Comparative degree
Part 2
V. Make agreement between the noun and the adjectives, choose and circle correct generic endings: **1. angulus** 1) mastoideus, a, um 2) medialis, e 3) superior, ius
VI. Choose the correct answer: **petrosal** a) vena petrosus **vein** b) vena petrosa c) vena petrosum
VII. Determine the gender of the 3-rd declension noun:

apex, icis a) m; b) f; c) n
VIII. Circle corresponding generic ending: aponeurosis (palmar**is**, palmar**e**)
IX. Determine the case: **pulmonis sinistri** a) Nom. Sg. c) Nom. Pl.; b) Gen. Sg. d) Gen. Pl.
X. Make agreement, circle corresponding ending (the term is in Nom. pl.): **ligamenta –** a) cruciat**a** b) cruciat**es** c) cruciat**um**

Part 3	
I. Complete the dictionary forms, translate the terms into Latin:	**II. Translate into English:**
1. lesser wings – ala, …. minor, ….	1. os cuneiforme mediale – **–**
2. apex of the patella – apex, …. patella, ……	2. musculus flexor digitorum brevis –
3. alveolar arch – arcus, …. alveolaris, …	3. musculus adductor longus **–**
4. left coronary artery – arteria, …. coronaries, … sinister, ….	4. margo superior partis petrosae –
5. atlantoaxial joint – articulatio, …. atlantoaxialis, ….	5. ligamentum transversum acetabuli –
6. external cranial base – basis, …… cranium, , , , , externus, ….	6. lamina horizontalis ossis palatini **–**
7. lacrimal canaliculus – canaliculus, … lacrimalis, ….	7. corpus coccygeum –
8. infraorbital head – caput, …… infraorbitalis, ….	8. foramen ischiadicum majus-
9. cricoid cartilage – cartilago, …. cricoideus, ….	9. concha nasalis superior –
10. abdominal cavity –	10. chiasma tendinum –

cavitas, … abdomen, ….	

Part II.

Pharmaceutical terminology

UNIT IX. Pharmaceutical terminology. Trivial (conditional) names of medicines. Botanic nomenclature. Medicinal plant names.

In this unit

- Generic names (INNs). Combining forms in INNs.
- Botanical nomenclature.
- Medicinal plant names.

Pharmaceutic terminology is a complex, including terminologies of a number of sciences, united under one name – "**pharmacy'**. Pharmacy is a field of medicine studying exploration, obtaining, production and application of drugs of vegetable, mineral, animal and synthetic origin. The central place belongs here to the Nomenclature of Drugs, which is a vast total combination of names of medical substances and preparations, officially allowed for use. One may distinguish some typical groups within the Nomenclature of drugs, each of them having some definite peculiarities in the meaning and construction of the terms included into it.

Basic terms of pharmacy:

A DRUG is a substance or a mixture of substances, used in prevention, diagnosis, alleviation, treatment, or cure of disease.

A MEDICINAL SUBSTANCE is a drug with an individual chemical structure or a biological substance.

DOSAGE FORM is a form which is given to a mixture of substances, prepared at a pharmaceutical plant, taken in a certain dosage and in a certain drug form.

A MEDICAL PREPARATION is a drug given in a certain drug form.

e.g Prednisolonum **-** medicinal substance (crystal powder).

Tablets of Prednisolon, unguentum of Prednisolon, solution of Prednisolon - medicinal preparations.

COMBINED MEDICINAL DRUGS include several ingredients in one medicinal form.

The whole complex of drugs names is called nomenclature. They single out several typical groups in this nomenclature.

1. Names of medicinal raw materials of vegetable and plant origin. Pieces of plants (grass, leaves, flowers, fruits etc.) and products of them.

2. Names of medicinal preparations, which are the extracts from vegetable raw materials (tinctures, extracts, decoctions etc.)

3. Generic names of chemical substances, which are names of organic substances obtained from plants (glycosides, alkaloids, etc.), names of synthetic substances and their compounds (salts, ethers)

4. Names of pharmaceutical specialities with the designation of a drug form (names of ointments, tablets, solutions, etc.)

5. Pharmacopoeal chemical nomenclature (names of chemical elements, oxides, acids, salts)

Generic (nonproprietary) names of medicines.

A drug can have at least three different names. The chemical name is the chemical formula for the drug. It is also called a **scientific** or **systematic** name.

Many chemical compounds, used as pharmaceutical substances, retain their half-systematic chemical names, which describe but partially the structure of this substance.

E.g.: Zinci oxydum, acidum acetylsalicylicum, Natrii chloridum).

Any chemical name reflects the composition of a medical substance.

E.g.: 2,6-Dimethyl-4/2-Nitrophenyl/-1,4-Dihydropyridine-3,5–diethyl ether of the carbonic acid.

The **nonproprietary** (**generic**) name is usually a simple version of the chemical name for the drug. **International Nonproprietary Name (INN**) is the nonproprietary (generic) designation recommended by the World Health Organization for any pharmaceutical preparation The above given systematic name has its trivial analogue ***"nifedipin***".

In their Latin form generic names of pharmaceutical substances are nouns of the neuter gender of the 2nd declination with the ending ***-um***. They are pronounced with the stress on the second from the end syllable and they are capitalized: "Urethánum", "Nifedipínum".

In modern languages they lose the ending "-um" as a rule or get the ending "-e" in some of the European languages:

E. g.: "Уретан" - in the Russian Pharmacopoeia

"Urethan" - in Pharmacopoeia of the USA

"Urethane" - in British and French Pharmacopoeias

From generic names we can get some information about the chemical structure of pharmaceutical substances, their origin, their effect in the human organism, against what disease this or that substance is used, etc.

For example, the name "Mentholum" shows, that this substance was obtained from the plant "Mentha".

In trivial names common parts of words are often used to indicate this or that kind of information. The trivial names is formed mainly by combination of word-forming elements:

E.g.: **Phen**aminum => **phen** – presence of phenylic group;

amin – presence of amino group;

Cardiovalenum => **card** – heart;

vale – health – is used in heart diseases;

Apilacum => **apis** – bee;

lac – milk – preparation on the base of bee larval food;

Papaverinum => alkaloid of the plant **Papaver** – poppy;

Latin generic names are the **second declension neuter nouns** with the ending –**um** in **Nom.sing.** As a rule, English equivalents of the names do not have the ending –**um**. Modern names of drug preparations do not often have the ending –**um** either. However, they are the the **second declension neuter nouns.** In prescriptions they are written in **Genetivus** and have the ending **–i** which is added to the name in **Nom.sing.**

There are some **exceptions** which have the ending **–a** in **Nom.sing.** and **–ae** in **Gen.sing.** These names are the first declention nouns.

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Signa:

Drug nomenclature is the systematic naming of drugs, especially pharmaceutical drugs. Generic names for drugs are nowadays constructed out of affixes and stems that classify the drugs into different categories and also separate drugs within categories. These parts of the words are called **combining forms (CFs)**

COMBINING FORMS USED IN TRIVIAL NAMES OF DRUGS

a) The combining forms reflecting anatomical and physiologic characteristics

Combining form	*Meaning*	*Examples*
-aesth(es)-	anaesthetics	An**aesthes**inum
-allerg-	antiallergic agents	**Allerg**anum
-angi- **-vas-**	vasoconstrictors; vasodilators	**Angio**tensinum Troxe**vas**inum
-asthm(at)-	antiasthmatic drugs	Ant**asth**man
-card- **-cor-**	cardiovascular agents	**Card**iovalenum **Cor**valolum
-chol- **-bil-**	cholagogues (stimulating the flow of bile)	Allo**chol**um
-pres(s)- **-ten(s)-**	antihypertensive agents	De**press**anum Physio**tens**
-ur-	diuretics	**Ur**odanum
-vit-	vitamins	Unde**vit**um

b) The combining forms denoting groups of drugs

-alg- **-dol-** **-odyn-**	Pain, analgesics	An**alg**inum Pana**dol**
-as-	enzymes	Lyd**as**um
-barb-	barbiturates	**Barb**amylum
-cain-	local anesthetics (LAs)	Novo**cain**um
-cid-	antibacterial agents	Strepto**cid**um
-cillin-	penicillin antibiotics	Oxa**cillin**um
-cyclin-	tetracycline antibiotics	Mino**cyclin**e
-flog- **phlog-**	anti-inflammatory agents	**Flog**inax **Phlog**ex
-hypn- **-dorm-** **-nox-** **-noct-**	soporific (somniferous) (to sleep)	**Dorm**igal **Hypn**oter **Noct**osom
-lax-, **-purg-**	purgative agents	Regu**lax**
-myc(et)- **-fung-**	antifungal agents	**Myc**osolum Nitro**fung**inum
-mycin-	streptomycin antibiotics	Mono**mycin**um
-pyr-	antipyretics	Anti**pyr**inum
-sed-, **-stress-,** **-tranqu-**	sedative, tranquilizer	**Sed**ralum **Tranqu**il

-sept-	antiseptics	Entero**sept**olum
-sulfa-	sulfa drugs	**Sulfa**dimezinum
-vir-	antivirals	**Vir**osol

c) The combining forms reflecting their chemical composition

-aeth-	presence of ethyl	**Aeth**azolum
-amin-	presence of aminogroup	**Amin**ocainum
-benz-	presence of benzyl	**Benz**odixinum
-flu- **-phth(or)-**	presence of fluorine	**Flu**magin Vita**phthor**um
-hydro-	presence of hydrogen	**Hydro**cortisonum
-meth-	presence of methyl	**Meth**azidum
-naphth-	presence of naphthalan	**Naphth**izinum
-ox(y)-	presence of oxygen	**Oxy**tocinum
-phen(yl-)	presence of phenyl	**Phen**acetinum
-phosph-	presence of phosphorus	**Phosph**orenum
-phthal-	presence of phthalic acid	**Phthal**azolum
-thi(o)-	presence of sulfur	**Thio**glycosidum
-yl-	presence of carbohydrate or acidic radical	Am**yl**um, Vin**yl**inum
-zol- **-zin-** **-zid-**	presence of nitrogen	Norsulfa**zol**um Pipera**zin**um Salu**zid**um

d) Hormone preparations

-oestr-	female sex hormones	Syn**oestr**olum
-andr- **-test-** **-vir-** **-ster-**	male sex hormones	Ret**andr**olum **Test**o**ster**one
-thyr(eo)-	thyrotropic hormones	**Thyreo**idinum
-insul-	hormones of the pancreas	**Insul**inum
-cort(ic)-	adrenocortical hormones	**Cort**isonum

NB! 1. The prefix "**a (an)"** means **"**absence, denying, removing" **(An**alginum = **an**-absence of – **alg**-pain)

e) The combining forms indicating <u>alkaloids and glycosides</u>

Combining form	Meaning	Name of drugs
-phyll-	leaf; often substances extracted from plant leaves	Eu**phyll**inum
-the-	tea; tea <u>alkaloids</u>; may indicate presence of alkaloids, produced from chocolate tree seeds (theobroma cacao), mainly theobromine.	**The**ophyllinum **The**obrominum

-anth-	(flower) often substances extracted from plant flowers	Stroph**anth**īnum

N.B. 1. **Alkaloid**, a chemical substance of plant origin composed of carbon, hydrogen, nitrogen, and (usually) oxygen. Most alkaloids have pronounced effects on the nervous system of humans and other animals. They are used as drugs. Some familiar alkaloids are caffeine, nicotine, quinine, cocaine, and morphine. Alkaloids occur mainly in various genera of seed plants, such as the opium poppy and tobacco plant. Alkaloids can be found in almost all parts of these plants, including the leaves, roots, seeds, and bark. Each plant part usually contains function of alkaloids in plant metabolism is not known. Of the hundreds of alkaloids found in nature, only about 30 are used commercially.

2. **Glycoside.** In chemistry, **glycosides** are certain molecules in which a sugar part is bound to some other part. Glycosides play numerous important roles in living organisms. Many plants store important chemicals in the form of inactive glycosides. Many such plant glycosides are used as medications.

Botanic nomenclature.

Medicinal plants are widely used in pharmacology. The names of medicinal herbs in botanical nomenclature are very often different from the plant names which are used in pharmaceutics, i. e. in the nomenclature of medicinal remedies.

It is necessary to differentiate botanical and pharmaceutical names of medicinal plants, to understand binominal nomenclature, according to which each plant (and animal) has two names: generic and specific, in order to use them correctly in prescriptions.

In XVII-XVIII centuries there were a lot of botanical (as well as zoological) terms derived from Greek and Latin words. It was necessary to find new methods of classifying different kinds of plants and animals. Their names were rendered by word combinations, which was rather difficult and inconvenient.

The Swedish scientist Carolus Linnaeus (1707-1778) introduced **binominal** nomenclature, according to which each plant and animal had two names: generic and specific. **A generic name** is a noun in **Nom.** and **a specific name** is usually an adjective or (not often) a noun. In the pharmaceutical terminology, herbs typically possess either a generic or a specific name. For example:

Botanical name	Pharmaceutical name
Atropa belladonna	Belladonna

Quite often, the part of the plant used is also mentioned first, followed by the official name of the plant in Genitive, e.g., Cortex Granati (pomegranate bark). Thus, to be able to use plant names correctly, we will focus on two groups of terms: parts of the plant and the plant names proper.

Memorize the list of most common plants used in medicine.

Latin	English	Latin	Latin
Adonis vernalis (*Gen. Adonidis vernalis)*	adonis vernalis (pheasant's eye)	***Crataegus, i f***	hawthorn
Aloe, es f	aloe	***Linum, i n***	flax
Althaea, ae f	marsh mallow	***Mentha, ae f***	mint
Amygdala, ae f	almond	***Mentha piperita, ae f***	peppermint
Anisum, i n	anise	***Oliva, ae f***	olive

Aralia, ae f	aralia, polyscias	***Oryza, ae f***	rice
Arnica, ae f	wolfs bane	***Persicum, i m***	peach
Artemisia, ae f	wormwood, absinth	***Plantago, inis f***	plantain
Belladonna, ae f	belladonna	***Quercus, us f***	oak
Betula, ae f	birch tree, birch	***Rheum, i n***	rhubarb
Bidens, ntis f	bur marigold	***Ricinus, i m***	castor oil plant
Calendula, ae f	calends	***Rosa, ae f***	dog rose
Capsicum, i n	pepper	***Rubus, i m***	raspberry
Chamomilla, ae f	chamomile	***Salvia, ae f***	sage
Chelidonium, i n	celandine	***Sambucus, i m***	elder
Convallaria, ae f	lily of the valley	***Schizandra, ae f***	magnolia vine
Digitalis, is f	foxgloves	***Senna, ae f***	senna, cassia
Eucalyptus, i f	eucalyptus	***Sinapis, is f***	wild mustard
Foeniculum, i n	fennel	***Taraxacum, i n***	dandelion
Frangula, ae f	buckthorn	***Thermopsis, idis f***	mountain thermopsis
Glycyrrhiza, ae f	licorice	***Tilia, ae f***	linden
Helianthus, i m	sunflower	***Urtica, ae f***	nettle
Hypericum, i n	Saint John's wort	***Valeriana, ae f***	valerian
Juniperus, i f	juniper	***Viburnum, i n***	guilder rose
Leonurus, i m	motherwort	***Viola, ae f***	violet

Memorize the parts of the plants:

bacca, ae f	berry	**gemma, ae f**	bud
bulbus, i m	bulb	**herba, ae f**	herb
cortex, icis m	bark	**radix, icis m**	root
flos, floris m	flower	**rhizoma, atis m**	rhizome
folium, i n	leaf	**semen, inis n**	seed
fructus, us m	fruit	**strobilus, I m**	cone
sirupus, i m		**succus, i m**	juice, sap

Medical plant names are used:

1. In the names of liquid drug forms: Tinctūra Valeriānae –tincture of valerian; Decoctum cortĭcis Quercus –decoction of oak bark

2. In the labels of different packages containing the components of medical plants:

Folia Urtĭcae –leaves of nettle; Semen Lini –seed of flax

3. As a component of the medical prescription:

Recĭpe: Extracti Aloës fluĭdi 1 ml–Take: Liquid extract of aloe 1ml

Recĭpe : Cortĭcis Crataegi 30, 0 –Take: Cortex of hawthorn 30, 0

N.B.! the name of a plant part is always placed before a plant name.

Many plants are used for production of oils some of which are quite popular in medicine. Mind that when we form a name of **oil made of stone fruits** we **put the name of the plant into Genitive Plural,** e.g., *oleum Amygdalarum*. Other oil names follow general rules, e.g., *oleum Ricini.*

Practical exercises

Exercise 1. Match the combining forms with their meanings (use The combining forms used in trivial names of drugs table):

1) **-dorm-**	a) hypotensive agents
2) **-fung-**	b) presence of nitrogen
3) **-mycin-**	c)hormones of the pancreas
4) **-phyll-**	d) presence of sulfur
5) **-sulfa-**	e) soporific (somniferous)
6) **-thi(o)**	f) antimicrobial sulfonamides
7) **-pres(s)-**	g) streptomycin antibiotics
8) **-insul-**	h) antifungal agents
10) **-zin-**	j) leaf; often substances extracted from plant leaves

Exercise 2. Provide the corresponding combining forms for the following groups of drugs:

Drug group	CF	Drug group	CF
presence of fluorine		sedative, tranquilizer	
antipyretics		purgative agents	
tetracycline antibiotics		substances extracted from plant flowers	
vasodilators, vasoconstrictors		diuretics	
analgesics		cardiovascular agents	

Exercise 3. Underline CFs and match the drug name with the group:

Drug name	Drug group
1. Dibazōlum	a) antibacterial agents
2. Corticotrophinum	b) antiasthmatic drugs
3. Streptocīdum	c) local anesthetics (LAs)
4. Bicillinum	d) streptomycin antibiotics
5. Novocainamidum	e) presence of nitrogen
6. Antiasthmocrinum	f) vitamins
7. Pentavitum	g) penicillin antibiotics
8. Brulamycinum	h) adrenocortical hormones

Exercise 4. Explain the meaning of the combining forms in bold:

Drug name	Meaning
1. **Phen**i**amin**um	
2. Aceto**lax**	
3. **Press**oton	
4. **Flog**icort	
5. Cyclo**dol**um	
6. **Sed**onal	
7. **Sept**rin	
8. Di**ur**ometan	

9. Dim**oestr**olum	
10. Lio**thyr**oninum	

Exercise 5. Underline the combining forms, explain their meanings:

Drug name	Meaning
1. Hexavitum	
2. Paphyllinum	
3. Choletrast	
4. Laxasept	
5. Pharmacillin	
6. Propasa	
7. Pyrabutil	
8. Novosed	
9. Œstramon	
10. Sanotensin	
11. Sulfalenum	
12. Phrenazol	
13. Tensonalum	
14. Methylencycline	
15. Neocain	
16. Apticor	
17. Folcidine	
18. Tiotioron	
19. Frenyl	
20. Diovascol	
21. Anodynin	
22. Decicain	
23. Testosteronum	
24. Methandrosterōnum	
25. Anaesthesinum	

Exercise 6: Translate the names of raw materials into Latin (provide the dictionary forms) and decline them:

mint leaf

Example: *folium, i n* **(**What? Nom. sing.= leaf) *Mentha, ae* f (Of what? Gen. sing.= of mint)

Nom.Sing. foli**um(2nd decl)** Mentha**e** (1st decl.) *(mint leaf)*	**Nom.Plur.** foli**a** Mentha**e** *(mint leaves)*
Gen.Sing. foli**i** Mentha**e** *(of mint leaf)*	**Gen.Plur.** foli**orum** Mentha**e** *(of mint leaves)*

elder fruit

Nom.Sing.	**Nom.Plur.**
Gen.Sing.	**Gen.Plur.**

dandelion root

Nom.Sing.	**Nom.Plur.**
Gen.Sing.	**Gen.Plur.**

juniper berry

Nom.Sing.	**Nom.Plur.**
Gen.Sing.	**Gen.Plur.**

oak bark

Nom.Sing.	**Nom.Plur.**
Gen.Sing.	**Gen.Plur.**

Exercise 7. Determine the number and case of the English terms, translate them into English in Nom. sing. or pl. and provide the forms in Gen. sing. or pl.:

English	**Latin Nom**	**Latin Gen.**
1. seed**s of** wild mustard (Nom. pl.)	*semen, inis n (Nom. pl.)+ Sinapis, is f (Gen. sing.)the stem: semin* Nom. pl. semin**a** Sinap**is**	Gen.pl. semin**um** Sinap**is**
2. birch juice		
3. leaves of belladonna		
4. roots of dandelion		
5. Saint John's wort herb		
6. berries of raspberry		
7. rhubarb syrup		

8. flowers of violet		
9. marsh mallow root		
10. aloe juice		
11. rhizomes of valerian		
12. fennel fruit		
13. oak bark		
14. flowers of linden		
15 fruits of dog rose		

Exercise 8. Determine which fruits are stone fruits. Then translate oil names into Latin and put them into Genitive:

English	Latin Nom.	Latin Gen.
1. olive oil (stone fruit oil) *oleum, f n + name of fruit in Gen.pl.*	Ole**um** olivarum	Ole**i** olivarum
2. peppermint oil		
3. castor oil		
4. cacao *(indeclin.)* oil		

5. sunflower oil		
6. almond oil		
7. peach oil		
8. eucalyptus oil		

Exercise 9. Provide forms in Genitive and translate into English:

Latin Nom.	**Latin Gen.**	**English**
1.folia Aloes		
2. semina Helianthi		
3. folia Sennae		
4. cortex Frangulae		
5. herba Convallariae		
6. cortex Viburni		
7. herba Thermopsidis		
8. herba Leonuri		
9. semina Ricini		
10. semina Lini		
11. folia Belladonnae		
12. flores Tiliae		
13. fructus Viburni		
14. cortex Quercus		
15. folia Betulae		

Exercise 10. Translate into Latin:

English	**Latin**
1.**of** adonis vernalis herb	*herb**ae** Adonidis vernalis*
2. of almond seeds	
3. of hawthorn flowers	
4. of buckthorn bark	
5. of dandelion roots	
6. of plantain leaves	

7. of fennel fruit	
8.of eucalyptus oil	
9. of hawthorn fruit	
10. of magnolia vine seeds	

Self-Assessment

Trade or brand names

As you already know, a substance or a mixture of substances, prepared at a pharmaceutical plant, taken in a certain dosage and in a certain drug form is called a pharmaceutical speciality.

It may be sent to pharmacies under its generic name. The generic (official) name of the medical substance is usually included into the name of the pharmaceutical speciality. But in world drug sale pharmaceutical specialities containing one and the same substance are issued into sale under various brand names or trade names.

Trade names are used to differentiate the products of one drug producing company from those of all others. The trade name or the brand name is a private property of an individual drug manufacturer and no competitor may use it. Trade names often have the superscript after or before the name, for example: Rocephin ^{R} Most drugs have several trade names because each manufacturer producing the drug has a right to introduce the name of his choice for the product.

A pharmacist must dispense a drug, prescribed under a certain trade (or brand) name and must not substitute it by a drug under some other trade name.

It is common practice to capitalize the first letter of a trade name.

The following lists give the chemical, generic and trade names of the well known antibiotic drug, ampicillin. Note that the drug can have several trade names but only one generic, or official, name.

Some drugs have over 200-300 trade names, as a result of which there appears a great number of synonyms in world drug names. At the same time pharmaceutical specialitites may bear generic names alongside with the trade names, for example, the Bulgarian company Pharma-chim and the Polish firm Polfa issue the drug under its generic name “NIFEDIPIN”.

Drugs having trade names are more expensive, and thanks to vast advertising are known to a greater number of physicians.

Trade names may have the Latin ending “-um”, for example: Cordiamium, Librium, Relanium, but more often than not they have no ending. Some of them are pronounced according to the rules of modern languages:

e.g.: Majeptil [madgeptil]; Sucrace [sukreis]; One – alfa [wan elfa]

Very often drug names contain information on drug application, which is contained in the Combining forms Stems (CF), used in drug names.

Exercise 11. Explain the meaning of the combining forms in bold:

Drug name	Meaning
1. **Card**il	
2. **Angi**zem	
3. **Theophyll**amin	
4. **Cort**iazem	

5. **Dol**obid	
6. **Tens**iomin	
7. **Asth**mopen	
8. **Tranqu**il	
9. Ano**pyr**in	
10. **Vas**aphrestan	

Exercise 12. Underline the combining forms, explain their meanings:

Drug name	Meaning
1. Saluzidum	
2. Pantocidum	
3. Tenoric	
4. Phthorocort	
5. Haemofer	
6. Isocard	
7. Olivomycinum	
8. Dipidolor	
9. Lopresor	
10. Thepaphylline	
11. Sulfalenum	
12. Antipyrinum	
13. Decicain	
14. Laxasept	
15. Algezal	
16. Allergol	
17. Trenpress	
18. Allocholum	
19. Pharyngosept	
20. Polyoestradiolum	

Exercise 13. Now provide your own examples of the drug names, find the combining forms in these names and explain their meaning. You can either go to a chemist's or surf the Internet (e.g., https://www.emedexpert.com/lists/lists.shtml):

Drug	CF	Meaning
1.		
2.		
3.		
4.		
5.		
6.		

Exercise 14. Translate into English:

Latin	English
1. foliorum Digitalis	*of foxgloves leaves (Gen. pl.)*
2. florum Calendulae	
3. fructus Capsici	
4. herbae Chelidonii	
5. rhizomatis Valerianae	
6. radicum Glycyrrhizae	
7. corticis Frangulae	
8. seminum Helianthi	
9. foliorum Menthae piperitae	
10. fructuum Oryzae	

Exercise 15. Translate into Latin:

English	Latin
1. of rhubarb roots	
2. of hawthorn flowers	
3. of celandine herb	
4. of eucalyptus leaves	
5. of juniper berries	
6. of anise fruit	
7. of valerian root	
8. of birch buds	
9. of buckthorn bark	
10. of nettle leaves	

UNIT X. Prescription structure. Latin prescription part. Verb in the prescriptions. Prescription definition and methods of their translation into Russian, abbreviations and their interpreting.

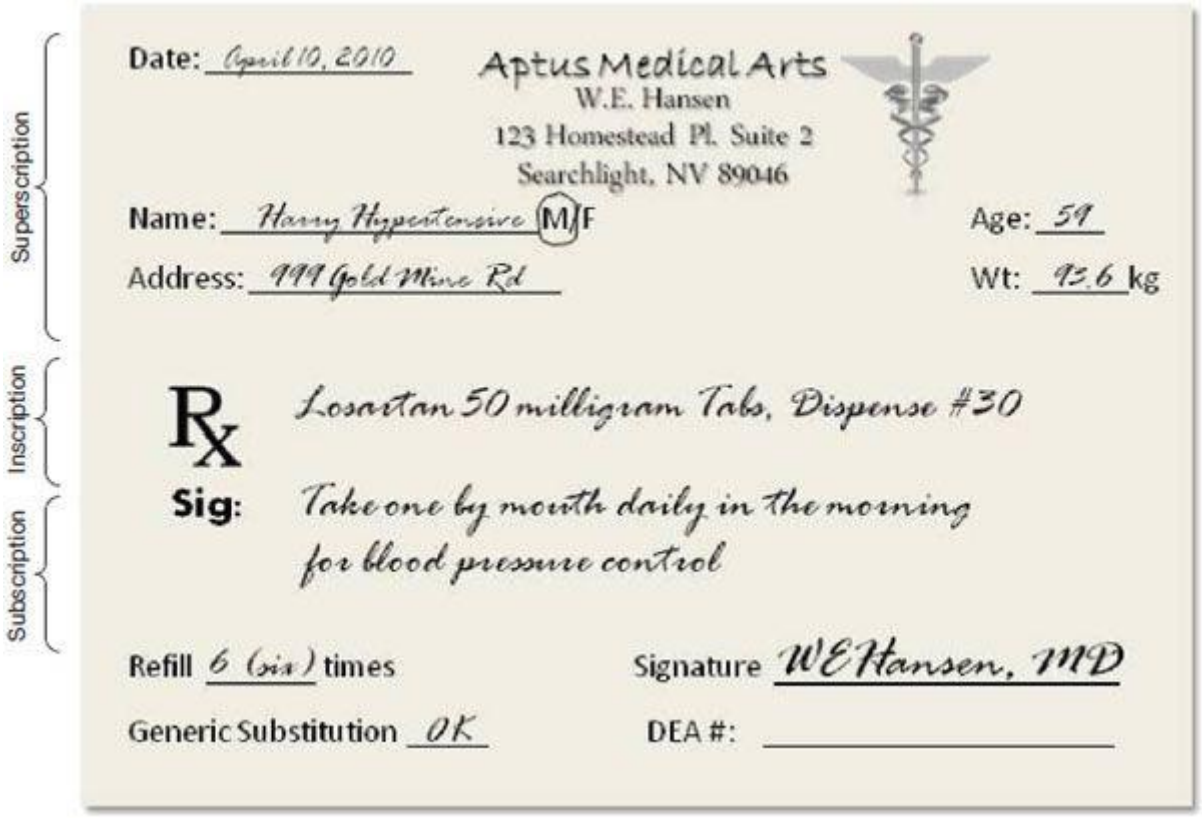
In this unit

- Verbs. Imperative and subjunctive moods (Modus Imperativus et Modus Conjunctivus).
- The verb *fio, fieri.* Verbs in prescriptions.
- Prescription and its structure.
- Prescription terminology in Latin and English.
- Abbreviations used in prescriptions.
- Prepositions.

Prescriptions (also called **prescription orders**) are usually written on preprinted forms containing the traditional symbol **Rx** (meaning recipe, take thou, or you take), name, address, telephone number, and other pertinent information regarding the physician or other prescriber. In addition, blank spaces are used by the prescriber to provide information about the patient, the medication desired, and the directions for use.

🖫 So, a **prescription** is an order for medication issued by a licensed prescriber, a physician, dentist, or veterinarian, for example, designating specific medication, dose, and dose rate to be prepared by a pharmacist and dispensed to the patient.

🕮 The above example is in English only (which is a common practice in the USA) but in many countries the information intended for a pharmacist is still written in Latin to avoid mistakes and to make prescriptions internationally understandable. Thus, the superscription, the inscription, the superscription and the word *Signa* should be presented in Latin.



🖫 To do it correctly, observe the following rules:

- Write each drug or ingredient name on a new line with a **capital letter** in **Genitive** case strictly

- **one under another**.
- **Always Capitalize** names of medical substances, chemical elements and plants.
- **Never Capitalize** (unless it is the first word in the line!) names of the plant parts (*radix, herba, folia*) and acids and second components in the names of oxides, salts, esters, as well as adjectives.
- Indicate the **amount after** the name of a drug or ingredient **on the right**.
- Prescribe **solid** substances in **grams**.

The abbreviation ***g*** may be absent, and a zero is used instead (e.g., 1.0 – one gram; 10.0 – 10 grams; 0.5 – 0.5 grams; 0.01 – 10 mg; 0.003 – 3 mg), for example:

R_x:	*Kalii bromidi 6.0*	**Take**:	*6 g of potassium bromide*
	Codeini phosphatis 0.18		*180 mg of codeine phosphate*

- Prescribe **liquid** medicines in **milliliters** (1 mL; 100 mL) or **grams** if their amount is 1 mL or more. Dose in **drops** if it is less than 1 mL.

1 drop = to 0.05 mL. Use Roman figures and the word "drop(s)" in the Accusative Case, e.g. *gutt**am I**, gutt**as II** (III, etc.),* for example:

R_x: *Solutionis Kalii bromidi 2% 200 mL*	**Take**: *200 mL of potassium bromide solution*
Tincturae Convallariae 6 mL	*6 mL of lily of the valley tincture*
R_x: *Olei Menthae guttas XV*	**Take**: *15 drops of mint oil*

- Prescribe **equal amounts** of two or more ingredients using the word ***ana*** *(Eng. in equal parts)* after the last drug name, for example:

R_x: *Tincturae Valerianae*	**Take**: *equal amounts of 10 mL of valerian and*
*Tincturae Convallariae **ana** 10 mL*	*lily of the valley tinctures*

- Use orders (**verbs in Imperative Mood**) to provide instructions for the pharmacist (we have discussed this topic in Unit IX).
- Explain to the patients how to use a drug (i.e., indicate the dose to be taken, a number of doses per day, as well as other important information) after the word ***Signa*** in their native language.

Memorize the most common phrases used in prescriptions:

Latin	English
Orders (verbs in Imperative Mood)	
Misce, **fiat** pulvis (*or any other dosage form in **Singular**)*	Mix to make **a powder**.
Misce, **fiant** pulveres (*or any other dosage form in **Plural**)*	Mix to make **powders**.
Da. Signa.	Give. Designate.
Misce. Da. Signa.	Mix. Give. Designate.
Da tales doses numero 10 (5, etc.).	Give such doses number 10 (5, etc.).
Repete (bis)!	Repeat (twice).
Other expressions (prepositions + nouns) *(in Latin prepositions are used with two cases only: Casus Accusativus et Casus Ablativus. Learn the following expressions with the correct endings by heart)*	
in tabulettis (obductis)	in (coated) tablets
in capsulis (gelatinosis, amylaceis)	in (gelatinous, starch) capsules
in ampullis	in ampules

ad usum externum	for external use
ad usum internum	for internal use
pro injectionibus	for injections

For example:

Latin	English
Recipe: Amidopyrini *Butadioni ana 0,125* *Da tales doses numero 20 in tabulettis* *Signa*. 1 tablet 4 t/d after meal	*Take: 125 mg of Amidopyrine* *125 mg of Butadion* *Give such doses number 20 in tablets* *Designate*. 1 tablet 4 t/d after meal

MEMORIZE expressions with prepositions which are used in prescriptions:

pro injectionibus - for injections

pro narcosi - for narcosis (anesthesia)

pro auctore - for author

pro me - for me

per os - through mouth

ad usum externum - for external use

(pro usu externo)

ad usum internum - for internal use

(pro usuinterno)

Additional information given in prescriptions

Some adverbs and word combinations are used in prescriptions. If it is necessary to get medications immediately a physician, medical attendant or obstetrician writes at the top: Cito! (Quickly!) Statim! (Immediately!) If a patient uses the prescription twice, a physician should write at the top of a prescription: ‘Repete bis!’ (Repeat twice!) or ‘Bis repetatur!’ (Repeat twice!)

Adverbs used in prescriptions

Cito	quickly
Citissime	very quickly
Statim	immediately
Ana	as much of each
Quantum satis	as many as possible

Prepositions in prescriptions

1) Prescriptions with the Accusative forms of nouns:

ad – for

per- through, with the help of

2) Prepositions with the Ablativus forms of nouns:

Cum-with,

Pro- for in
in Conjunctions in prescriptions et and ut as seu or (for synonyms) aut or (for antonyms)

The verb is any of a large class of words in a language that serves to indicate the occurrence or performance of an action, the existence of a state or condition, etc. **Verbs** are often formally distinguished, as by being inflected for tense, voice, mood, person and number.

Tense (Tempus)

Latin verbs have **six** basic **tenses**. Each tense may be active or passive. We'll limit our attention to the Present tense (Tempus Praesens), e.g.: ***spīrat*** *– (he/she/it)* ***breathes, sum – (****I) am.*

Number (Numĕrus)

Number denotes whether the verb is used in singular or in plural: **Numerus singularis (Sg.)** – singular (e.g., *miscet – (he/she/it) mixes*) and **Numerus pluralis (Pl.)** – plural (e.g., *miscent – (they) mix*).

Person (Persōna)

Person is a grammatical category into which pronouns and forms of verbs are subdivided depending on whether they refer to the speaker (the 1st person), the person addressed (the 2nd person), or some other individual, thing, etc. (the 3rd person).

Mood (Modus)

Mood is a property of verbs in which the speaker's attitude toward the factuality or likelihood of the action or condition expressed. The Latin language uses three moods by changing the form of the infinitive: indicative, imperative, and subjunctive.

1. The **indicative** mood (modus indicatīvus) is for facts, as in: *"He is sleepy."*
2. The **imperative** mood (modus conjunctīvus) is for commands, as in: *"Go to sleep."*
3. The **subjunctive** mood (modus conjunctīvus) is for uncertainty, often expressing as a wish, desire, doubt or hope as in: *"I wish I were sleepy."*

Voice (Genus)

Voice is a grammatical feature that describes the relationship between the **verb** and the **subject** (also known as the **agent**) in a sentence.

There are two main types of voice:

1. **active** voice (genus **actīvum**), as in *"She wrote a novel."*
2. **passive** voice (genus **passīvum**) as in *"The house was purchased by an elderly couple."*

Verb entries (Dictionary forms)

A typical verb entry includes four forms. Each form represents a specific part of the verb. We will study only the first two of these, namely:

1. the 1st person singular of the Present Indicative Active (**praesens indicativi activi**) with the ending **-o**;
2. the infinitive (**infinitivus praesentis activi**) with the ending **-re**;

e.g. *curo, āre – to cure; misceo, ēre – to mix; solvo, ĕre – to dissolve.*

Conjunction (Conjugatio)

Latin verbs are divided into four conjunctions (**conjugationes**), which we determine by the stem. To find a stem, you should take away the ending **-re** of the infinitive for the verbs of the I, II, IV conjunctions and the suffix **-ĕre** of the infinitive for the III conjunction.

Four Conjunctions of the Latin Verbs

Conjunction	Infinitive	Praesens stem	Praesens stem ending
I	curāre	**curā-**	-ā
II	miscēre	**miscē-**	-ē

III	solvĕre, diluĕre	**solv-, dilu-**	consonant, -ŭ
IV	linīre	**linī-**	-ī

The Imperative Mood (Modus Imperativus)

Conjunction	Infinitive	Imperative mood singular	Imperative mood plural
I	curāre	Cura! – **Cure**!	Curā-te! – **Cure**!
II	miscēre	Misce! – **Mix**!	Miscē-te! – **Mix**!
III	solvĕre, diluĕre	Solve! – **Dissolve**! Dilue! – **Dilute**!	Solv-**ĭ**-te! – **Dissolve**! Dilu-**ĭ**-te! – **Dilute**!
IV	linīre	Lini! – **Lubricate**!	Linī-te! – **Lubricate**!

🖫 To form a negation, we use **noli** (singular) or **nolīte** (plural) + the infinitive:

e.g. ***Noli*** *miscēre! – Do not mix.* ***Nolīte*** *solvĕre! – Do not dissolve.*

The verb fio, fiĕri– "to form, to become"

The irregular verb **fio, fiĕri** is conjugated according to the IV conjunction. In prescriptions it is used in the Subjunctive Mood (the 3rd person singular and plural).

Present Indicative (Indicativi)		Present Subjunctive (Conjunctivi)	
Sg.	**Pl.**	**Sg.**	**Pl.**
fit	*fiunt*	***fiat***	***fiant***

e.g. Misce, fiat pasta. – Mix to form a paste.

Misce, fiant species. – Mix to form species.

Practical exercises

Exercise 1. Determine the stem and the conjunction of the verbs:

praeparo, āre *to prepare* *praep**a-, I***	repeto, ĕre *to repeat*	debeo, ēre *must*	addo, ĕre *to add*
nutrio, īre *to feed*	disco, ĕre *to learn*	scio, scīre *to know*	recipio, ĕre *to take*
do, āre *to give*	video, ēre *to see*	steriliso, āre *to sterilize*	ausculto, āre *to auscultate*
vivo, ĕre *to live*	misceo, ēre *to mix*	sentio, īre *to feel*	finio, īre *to finish*

Exercise 2. Put the following verbs into imperative mood:

Verb	Positive Singular	Positive Plural	Negative Singular	Nagative Plural
finīre to finish, to complete	*Fini!*	*Finīte!*	*Noli finīre!*	*Nolĭte finīre!*
bibĕre to drink				

praeparāre to prepare				
dividĕre to divide				
repetĕre to repeat				
valēre to be healthy				
nominăre to name				
dormīre to sleep				
signāre to designate				

Exercise 3. Match the most common orders from prescriptions in Latin with their English equivalents.

1.	Da. Signa.	a.	Sterilize!
2.	Misce. Da. Signa.	b.	Mix to make an emulsion.
3.	Sterilisa!	c.	Mix. Give. Designate
4.	Da tales doses numero 10.	d.	Mix to make an ointment.
5.	Misce, fiat unguentum.	e.	Mix to make a solution.
6.	Misce, fiat solutio.	f.	Give. Designate
7.	Misce, fiat emulsum.	g.	Mix to make a powder.
8.	Misce, fiat pulvis.	h.	Give such doses number 10.

Exercise 4. Translate the prescriptions into English.

Saccharum, i n – sugar

Latin	English
1. R_x: Indometacini 0.025 *Da tales doses numero 30 in capsulis* *Signa.* 1 caps. orally 3-4 t/d.	
2. *R_x: Anaesthesini 1.0* *Naphthalani 2.0* *Pastae Zinci 20.0* *Misce, fiat unguentum.* *Da. Signa.* For external use	
3. *R_x: Dibazoli 0.003* *Sacchari 0.2* *Misce, fiat pulvis* *Da tales doses numero 15* *Signa.* 1 powder a day for 2 weeks	
4. *R_x: Theophyllini 0.15* *Sacchari 0.25*	

Misce, fiat pulvis *Da tales doses numero 15* *Signa.* 1 powder 3 t/d	
5. R_x: *Mentholi 0.1* *Lanolini 2.0* *Vaselini 8.0* *Misce, fiat unguentum* *Da. Signa.* Ointment for the nose	

✎ **Exercise 5. Translate the prescriptions into Latin. Remember that drug names in Latin are neuter gender nouns of the 2nd declension,** e.g., analgin – *Analginum, i* n.

starch – *Amylum, i* n **finest** – *subtilissimus, a, um*

talc – *talcum, i* n

English	Latin
1. Take: 500 mg of pancreatin Give such doses number Designate. *1 powder 3 t/d*	
2. Take: 30 g of the finest streptocide Give. Designate. *Apply on the affected areas*	
3. Take: 25 g of indometacin Give such doses number 30 in capsules Designate. *1 capsule 3-4 t/d*	
4. Take: 1 milligram of prazosin Give such doses number 30 Designate. *1/2 tablet before meal*	
5. Take: 500 mg of phthalazol Give such doses number 20 Designate. *2 tablets 4 t/d after meal*	
6. Take: 5 g of heparin Give such doses number 30 in ampules Designate. *For intramuscular injections*	
7. Take: 250 mg of barbamyl 200 mg of amidopyrine Mix to make a powder Give such doses number 10 Designate. *1 powder before sleep*	
8. Take: Equal quantities of 250 mg of amidopyrine and analgin Give such doses number 10 in tablets Designate. *1 tablet 4-6 t/d*	
9. Take: Equal quantities of 50 g of talc and	

starch Mix to make the finest powder Give such doses number 30 in capsules Designate. *Powder for children*	
10. Take: 25 mg of chloridin Give such doses number 10 in tablets Designate. *1 tablet 2 t/d for 4 days*	
11. Take: 100 mg of menthol 2 gr of lanolin 8 gr of vaselin Mix to make an ointment Designate. *For treatment of nasopharyngitis*	

Exercise 6. Write the following prescriptions in Latin:

English	**Latin**
1) Rx: Peppermint leaves 10,0 Ethyl alcohol 90% 5ml Distilled water 50ml Sugar 60,0 Mix. Give. Designate:	
2) Rx: Herb of pheasant's eye 8,0 Peppermint leaves 1,0 Mix, to get a species. Give 6 such doses Designate:	
3) Rx: Decoction of oak cortex 20,0- 200ml Give. Designate:	
4) Rx: Castor-bean oil 10ml Ethyl alcohol 95% 100ml Mix. Give Designate:	
5) Rx: Brilliant green 2,0 Ethyl alcohol 70% 100ml Mix. Give. Designate:	
6) Rx: Dry extract of aloe 160,0	

Ethyl alcohol 40% up to 1000ml Mix. Give. Designate:	
7) Rx: Wild-rose fruits 50,0 Give. Designate:	

Exercise 7. Translate from Latin into English:

1) Solutio Iodi spirituosa-

2) Tabuletta radicis Rhei-

3) Extractum Thermopsidis siccum cum Codeino in tabulettis-

4) Decoctum rhizomatis Nupharis lutei-

5) Aether in vitro nigro-

Exercise 8. Translate from English into Latin:

1. Analgin powder with sugar-

2. Solution of nitroglycerin (nitroglycerine solution)-

3. Oily solution of vitamin A-

4. Decoction of marsh mallow root (marsh mallow root decoction)-

5. Suspension of dexamethasone-

Exercise 9. Translate the prescriptions into English:

Latin	**English**
1) Recipe: Extracti Filicis maris spissi 0,5 Da tales doses numero 10 incapsulis gelatinosis Signa: 1 capsule 15 minutes	
2) Recipe: Solutionis Novoimanini spirituosae 30% 50 ml Detur . Signetur:	
3) Recipe: Aetherispro narcosi 100 ml Da tales doses numero 6 in vitro nigro Signa:	

4) Recipe: Narcolani 5,0 Aquae destillatae Mucilaginis Amyli ana 100ml Misce. Da. Signa:	

Exercise 10. Translate into Latin:

1. Ointment of streptocidum-

2. Tablet of codeine-

3. Liniment of synthomycinum-

4. Tablet of analgin-

5. Liniment of streptocid-

6. Ointment of heparin-

7. Tablets of baralgin-

Self-Assessment

Abbreviations are widely used in precriptions to save time of prescribers. However, not to harm a patient, you should follow strcitly the rules of their usage. Here are some most essential ones:

1. We usually shorten the words denoting dosage forms, parts of a plant, instructions to a pharmacist and some others.
2. Abbreviations always end in a consonant. If a syllable which is to be shortened ends in two or more consonants all of them are kept in an abbreviation, e.g., *suppositorium – supp.*, *emplastrum – empl.*
3. We never contract names of ingredients, which have similar spelling to avoid confusion, e.g., *sulfas* and *sulfis***.**
4. Instructions for a pharmacist can be shortened to one letter, e.g., D. t. d. N 10 = Da tales doses numero 10.

Abbreviation	Latin/Greek	English
aa	ana	of each
Acid, Ac.	Acidum	Acid
Ampul., amp.	Ampulla	Ampule
Aq. purificata	Aqua purificata	Purified water
Comp.	Compositus, a, um	Compounded of
D.	Da	Give
D. t. d. N.	Da tales doses numero	Give such doses number
D.S.	Da. Signa	Give. Designate
Dec.	Decoctum	Decoction
Dil.	Dilutus, a, um	Diluted

Emuls.	Emulsum	Emulsion
Empl.	Emplastrum	Plaster
Extr.	Extractum	Extract
f.	Fiat (fiant)	To make
fol.	Folium	Leaf
Gtts.	Guttas	Drops
In amp., in ampull.	In ampullis	In ampules
In caps. amyl.	In capsulis amylaceis	In starchy capsules
In caps. gel.	In capsulis gelatinosis	In gelatinous capsules
In tab.	In tabulettis	In tablets
Inf.	Infusum	Infusion
Linim.	Linimentum	Liniment
Liq.	Liquor	Liquid
M.	Misce	Mix
M. D. S.	Misce. Da. Signa	Mix. Give. Designate
M. f.	Misce, fiat (fiant)	Mix to make
mL	Milliliter	Milliliter
Mucil.	Mucilago	Mucilage
N.	Numero	Number
Obduct.	Obductus, a, um	Coated
Ol.	Oleum	Oil
Pil.	Pilula	Pill
Pulv.	Pulvis	Powder
q.s.	Quantum satis	As much as required
Rad.	Radix	Root
Rp. (R_x)	Recipe	Take
Rhiz.	Rhizoma	Rhizome
S.	Signa	Designate
Sem.	Semen	Seed
Sicc.	Siccus, a, um	Dry
Simpl.	Simplex	Simple
Sir.	Sirupus	Syrup
Sol.	Solutuo	Solution
Steril.!	Sterilisa!	Sterilize!
Supp.	Suppositorium	Suppository
Tab.	Tabuletta	Tablet
T-ra, Tinct.	Tinctura	Tincture
Ung.	Unguentum	Ointment

Exercise 11. Rewrite the prescriptions providing the full forms of the abbreviations:

1. R_x: Acrichini 0.1 *Glucosi 0.3* *M.f.pulv.* *D.t.d. N 10 in caps.*	

S.:	
2. R_x.: Extr. Belladonnae 0.1 *Dimedroli 0.02* *Euphyllini 0.02* *M.f. pulv.* *S.:*	
3. R_x: Tab. Thyreoidini obduct. 0.1 N 50 *D.S.:*	
4. R_x: Theophyllini 0.25 *Dimedroli 0.002* *D.t.d. N10 in tab.* *S.:*	
5. R_x: Ol. Ricini 1.0 *D.t.d. N 15 in caps. gelatin.* *S.*	
6.Rp.: Furacilini 0.2 *Aq.destill. 1000 mL* *M.D.S.:*	

Exercise 12. Rewrite the prescriptions using abbreviations. Translate them into English:

Latin	Latin (abbreviated)
1. Recipe: Solutionis Glucosi 10% 10 mL *Sterilisa!* *Da tales doses numero 10* *Signa:*	
2. Recipe.: Anasthesini 0.05 *Thymoli 0.1* *Olei Menthae guttas X* *Olei Persicorum 20.0* *Misce. Da.* *Signa:*	
3. Recipe: Solutionis Progesteroni oleosae 1% *1 mL* *Da tales doses numero 10 in ampullis* *Signa:*	
4. Recipe: Tabulettas Butadioni 0.15 *Da tales doses numero 12* *Signa.*	
5. Recipe: Tannalbini 4.0 *Sirupi Sacchari 15 mL* *Aquae destillatae 180 mL* *Misce. Da. Signa:*	
6. Recipe.: Infusi florum Chamomillae 100 mL *Da. Signa.*	

7. Recipe.: Suspensionis Griseofulvini 100.0 *Da. Signa:*	
8. Recipe: Iodoformii 2.5 *Vaselini ad 25.0* *Misce. fiat unguentum* *Da. Signa.*	
9. Recipe.: Linimenti Streptocidi 5% 30.0 *Da. Signa.*	
10. Recipe.: Acidi hydrochlorici diluti 20,0 *Da. Signa:*	
11. Recipe.: Anaesthesini 7.5 *Amyli 2.5* *Misce. fiat pulvis subtilissimus* *Da. Signa:*	

Exercise 13. Write out prescriptions in accordance with the following instructions:

1.Write out 6 tablets containing equal parts of 300 mg of amidopyrine (**Amidopyrinum**) and analgin (**Analginum**), 15 mg of codein (**Codeinum**), 10 mg of phenobarbital (**Phenobarbitalum**). *Prescribe by 1 tablet in headache.*	R_x:
2. Write out 100 capsules containing 400 mg of piracetam (**Piracetamum**). *Prescribe by 1-2 capsules after meals.*	R_x:
3. Write out 170 mL of almagel (**Almagelum**). *Prescribe by 1-2 teaspoonful before meals*.	R_x:
4. Write out 50 ampules containing 5 mL of essentiale N (**Essentiale N**). *Prescribe by 5-10 mL once a day.*	R_x:
5. Write out 20 capsules containing 280 mg of linex (**Linex**). *Prescribe by 1-2 capsules 3 t/d.*	R_x:
6. Write out 20 capsules containing 20 mg of loperamide (**Loperamidum**). *Prescribe by 2 caps. before and 1 caps. after every defecation in diarrhoea.*	R_x:
7. Write out 3 ampules containing 300 mg of novarsenol (**Novarsenolum**). *Prescribe for intravenous injections.*	R_x:
8. Write out 6 ampules containing 1 g of vipraxin (**Vipraxinum**). *Prescribe for intramuscular injections.*	R_x:

9. Write out 5 ampules containing 1 g of oxytocin (**Oxytocinum**). *Prescribe by 1 mL for intramuscular injections.*	R_x:
10. Write out 10 tablets containing 250 mg of theophyllin (**Theophyllinum**) and 2.25 g of dimedrol (**Dimedrolum**). *Prescribe 1 tablet a day before meal*.	R_x:

Exercise 14. Translate into Latin:

1. Tablets of anesthesin-

2. Suppository with glycerin -

3. Ointment of tetracycline in tube -

4. Dragee of phenoxymethylpenicillin-

Exercise 15. Translate prescriptions in Latin:

English	**Latin**
1) Rx: Tincture of Lily of valley15 ml Give. Designate: 15 drops pro dosi	
2) Rx: Tincture of peppermint 10 ml Give. Designate: 20 drops pro dosi	
3) Rx: Triturated camphor 2,0 Tincture of valerian 20 ml Mix. Give. Designate: 20 drops three times a day	

UNIT XI. Chemical nomenclature. Latin names of the chemical elements and their compounds (acids, oxides, salts, esters).

In this unit

– Chemical nomenclature.
– Latin names of chemical elements and their compounds (acids, oxides, salts, esters).

Many chemical compounds are used in medicine. Misspelling of their names may cause a fatal mistake, *e.g. barium* ***sulfate*** *($BaSO_4$)* is a drug for internal use, but *barium* ***sulfite*** *($BaSO_3$)* is for external use. So, you should be very attentive when memorizing the names of chemical compounds.

Latin names of chemical elements are the **second declension neuter gender** nouns which have the ending **-um** in Nom. Sg., *e.g. Bromum, i n; Iodum, i n; Hydrogenium, i n.*

The exceptions*: Phosphorus, i* ***m*** (phosphorus),*Sulfur, uris* ***n*** (sulphur).

–

– **The Names of the Most Common Chemical Elements**

Latin name	**Symbol**	**English name**
Aluminium	Al	alumin(i)um
Argentum	Ag	argentum, silver
Arsenicum	As	arsenic
Aurum	Au	aurum, gold
Barium	Ba	barium
Bismuthum	Bi	bismuth
Borum	B	boron
Bromum	Br	bromine
Calcium	Ca	calcium
Carboneum	C	carbon
Chlorum	Cl	chlorine
Cuprum	Cu	copper
Ferrum	Fe	iron
Hydrargyrum	Hg	mercury
Iodum	I	iodine
Kalium	K	potassium
Lithium	Li	lithium
Magnesium seu Magnium	Mg	magnesium
Manganum	Mn	manganese
Natrium	Na	sodium
Nitrogenium	N	nitrogen
Oxygenium	O	oxygen
Phosphorus	P	phosphorus
Plumbum	Pb	lead
Silicium	Si	silicon
Stibium	Sb	antimony
Sulfur	S	sulphur

Thallium	Tl	thallium
Zincum	Zn	zinc

–

– **Names of Acids**

As names of most chemicals in English have been derived from Latin, translation of them from English into Latin is, in fact, all about using the correct endings. Study the following examples and memorize the rule:

The Latin names of acids consist of the noun "acĭdum" (acĭdum, i n -acid) and the concordant adjective of the 1st group:

–

acĭdum + stem of the chemical element name + -ĭc/ōs- + -um

–

a) Latin adjectives with the suffix -ĭc- and the ending -um correspond to English adjectives ending by –ic

E.g.: arsenic acid - Acĭdum arsenicĭcum (Arsenĭcum, i n → arsenic + ĭc + um);

- sulphuric acid - Acĭdum sulfurĭcum (Sulfur, ŭris n → sulfur + ĭc + um);

- silicic acid - Acĭdum silicĭcum (Silicĭum, i n → silic + ĭc + um);

b) Latin adjectives with the suffix -ōs and the ending -um correspond to English adjectives ending by –ous.

E.g.: nitrous acid - Acĭdum nitrōsum (Nitrogenĭum, i n → nitr + ōs + um);

• sulphurous acid - Acĭdum sulfurōsum (Sulfur, ŭris n → sulfur + ōs + um);

• arsenicous acid - Acĭdum arsenicōsum (Arsenĭcum, i n → arsenic + ōs + um)

c) Latin acid names with the prefix hydro- ending by -ĭcum correspond to English acid names with the prefix hydro- ending by -ic (Acĭdum hydrochlorĭcum – hydrochloric acid).

NB!!!!! - Acid names used as drugs after pharmaceutical forms are written with the first capital letter:

E.g.: • Tabulettae Acĭdi folĭci - tablets of folic acid

• Dragée Acĭdi ascorbinĭci - dragée of ascorbic acid

–

– **Names of Oxides, Salts and Esters**

Names of all these compounds in Latin are built according to the same pattern: the first word (usually a cation) is a **noun in Genitive Singular** (the form is always **Capitalized** and **cannot be changed**), and the second one is a **noun in Nominative Singular** (the form **can be changed** if appropriate), e.g.: ***Kalii** oxyd**um, Kalii** oxyd**i.***

– Here are some examples of the second components in these names:

English	Latin	English	Latin
ox**ide**	ox**ydum, i** n	sulf**ate**	sulf**as, atis** m
perox**ide**	perox**ydum, i** n	nitr**ite**	nitr**is, itis** m
hydrox**ide**	hydrox**ydum, i** n	brom**ide**	brom**idum, i** n

– 🖫 To translate the name of an oxide, salt or ether into Latin, follow the pattern:

English	Latin	English	Latin
…… **ide**	…… **ydum*, i** n	…… **ate**	…… **as, atis** m

……**ide**	……**idum**, i** n	…… **ite**	…… **is, itis** m

* For nouns having the root *oxide* in English.

** For all other nouns (not having the root *oxide* in English).

Practical exercises

Exercise 1. Using the above rule, translate the following names of acids into Latin. Provide both Nom. Sg. and Gen. Sg. forms:

English	Latin	
	Nom. Sg.	**Gen. Sg.**
arseni**ous** acid	acidum _____	acidi _____
arsen**ic** acid	acidum _____	acidi _____
nitr**ous** acid	acidum _____	acidi _____
nitr**ic** acid	acidum _____	acidi _____
phosphor**ous** acid	acidum _____	acidi _____
phosphor**ic** acid	acidum _____	acidi _____
fol**ic** acid	acidum _____	acidi _____
citr**ic** acid	acidum _____	acidi _____
sulphur**ous** acid	acidum _____	acidi _____
acetylsalicyl**ic** acid	acidum _____	acidi _____

Exercise 2. Translate from English into Latin:

1) Oily solution of camphora for external use-
2) chloroform for narcosis-
3) liniment of synthomycin with Novocain-
4) solution of prednisolon for injections-
5) glyceric solution of ichthyol-
6) spirituous solution of iodine for internal use-
7) solution of novocain in ampoules-
8) solution of nicotinic acid-
9) mucilages of althea root-
10) diluted hydrochloric acid-
11) boric acid-
12) tablets of lipoic acid-
13) dragée of ascorbinic acid-
14) zinc ointment-
15) clear sulfur, yellow mercury oxide-

Exercise 3. Using the above rule, translate the following names of oxides, salts and esters into Latin. Provide both Nom. Sg. and Gen. Sg. forms:

English	Latin	
	Nom. Sg.	**Gen. Sg.**
1. sodium hydrocarbon**ate**	***e.g.*** *Natri**i** hydrocarbon**as***	*Natri**i** hydrocarbon**atis***
2. calcium hydroxide		
3. copper oxide		
4. hydrogen peroxide		
5. sodium bisulfite		
6. lead oxide		
7. aluminium hydroxide		
8. potassium metabisulfite		
9. silver phosphate		
10. barium sulfate		
11. sodium nitrite		
12. potassium bromide		
13. morphine hydrochloride	*Morphini*	*Morphini*
14. methyl salicylate	*Methylii salicylas*	
15. ammonium nitrite	*Ammonii*	

Exercise 4. Translate into English:

Latin	English
1. Hydrogenii peroxydum	
2. Natrii nitris	
3. Hydrargyri oxydum	
4. Natrii iodidum	
5. Argenti nitras	
6. Calcii phosphas	
7. Natrii hydrocarbonas	
8. Zinci oxydum	
9. Kalii sulfas	
10. Ferri hydroxydum	
11. Kalii nitras	

Exercise 5. Translate the following prescriptions from English into Latin:

English	Latin
1) Take: Folic acid 0,0008 Ascorbic acid 0,1 Give of such doses number 30 in tablet form Designate:	
2) Take: White mercurial ointment 5% - 25,0 Let it be given Let it be designated:	

3) Take: Spirituous solution of salicylic acid 1% - 40 ml Give Designate:	
4) Take: Acetylsalicylic acid Phenacetin of each 0,25 Caffeine 0,05 Give of such doses number 12 in a tablet form Designate:	
5) Take: Ointment of hydrocortison 1% - 10,0 Give Designate:	
6) Take Dragée of ascorbic acid 0,05 number 50 Give Write on a label:	
7) Take: Tablets of phthalazol 0,05 number 20 Give Write on a label:	
8) Take: Tincture of plantain leaves 10,0 - 20 ml Give Write on a label:	
9) Take: Salicylic acid 5,0 Zinc oxide 0,5 Talc 50,0 Mix to make a powder Let it be given Let it be designated:	
10) Take: Yellow mercury oxide 0,6 Ichthyol 0,80 Ointment of zinc 20,0 Mix to make an ointment Let it be given Let it be designated:	
11) Take: Chloroform	

Ethyl alcohol 95% - 20 ml Ethyl ether 10 ml Liquid ammonia 5 drops Mix Give Designate:	
12) Take: Clear sulfur Magnesium oxide Sacchar of each 10,0 Mix to make a powder Give Designate:	
13) Take: Anaesthesin Xeroform Talc of each 10,0 Mix to make a powder Give Designate:	
14) Take: Coated tablets of glutaminic acid 0,25 number 100 Give Designate:	
15) Take: Ichthyol 1,25 Zinc oxide Wheat starch of each 12,5 Vaseline up to 50,0 Mix to make a paste Give Designate:	

Exercise 6. Translate from English into Latin:

1) Complex liniment of salicylate-
2) isotonic solution of sodium chloride-
3) tablets of calcium gluconate, coated tablets of tetracyclin hydrochloride-
4) diluted solution of hydrogen peroxide, basic acetate of lead-

5) powder of oxytetracyclin, matricary flowers for internal use-
6) sodium hydrocitrate for injections-
7) basic bismuth nitrate with belladonna extract-
8) phenoxymethylpenicillin for injections-
9) oily solution of synoestrol in ampoules-
10) tincture of plantain leaves-
11) milfoil herb, solution of mercury cyanide-
12) tincture of matricary flowers-
13) solution of sulfacyl-sodium in ampoules-
14) solution of thiamin bromide-
15) aloe syrup with iron-

Exercise 7. Translate the following prescriptions from English into Latin:

English	**Latin**
1) Take: Blue methylen 0,5 Solution of glucose 25% - 50 ml Give of such doses number 3 in ampoules Designate:	
2) Take: Tincture of spring adonis herb 180 ml Amidopyrin 2,0 Sodium bromide 4,0 Codeine phosphate 0,2 Mix. Give. Designate:	
3) Take: Tincture of althea root 180 ml Sodium hydrocarbonate Sodium benzoate of each 5,0 Simple syrup 20,0 Mix. Give. Designate:	
4) Take: Tablets of tetracycline hydrochloride 0,1 number 30 Give Designate:	
5) Take: Suspension of hydrocortisone acetate 2,5% - 2 ml	

Give of such doses number 5 Designate:	
6) Take Dimedrol 0,01 Ephedrin hydrochloride 0,1 Peach oil 10 ml Mint oil I drop Mix Give Designate:	
7) Take: Tablets of phthalazol 0,05 number 20 Give Designate:	
8) Take: Coated tablets of oleandomycin phosphate 0,125 number 25 Give Designate:	
9) Take: Iodine 0,03 Iodide potassium 1,3 Glycerin 30,0 Peppermint oil III drops Mix. Give. Designate:	
10) Take: Ascorbic acid Nicotinic acid of each 0,05 Riboflavin Thiamine bromide of each 0,01 Sacchar 0,3 Mix to make a powder Give of such doses number 30 Designate:	

Exercise 8. Translate into English and write out dictionary forms for the nouns:

Latin	**English**	**Dictionary form**
1. Aqua Plumbi		

2. Unguentum Zinci		
3. Sulfur depuratum		
4. Sulfur praecipitatum		
5. Unguentum Hydrargyri album		
6. Emplastrum Plumbi compositum		
7. Emplastrum Plumbi simplex		
8. Ferrum reductum		

Exercise 9. Translate form English into Latin:

English	**Latin**
1. Rx: Reduced iron 1,0 Give 15 such doses in gelatin capsules. Designate: 1 caps. 3 times a day	
2. Rx: Purified sulphur 0,3 Peach-kernel oil 30 ml Mix. Sterilize!Give. Designate: for intramuscular injections	
3. Rx: Lead water 200 ml Give. Designate: for washing	

Exercise 10. Translate into English:

1. Solutio Acidi borici spirituosa-

2. Tabuletta Acidi glutaminici obducta-

3. Tabuletta Acidi dehydrocholici seu tabuletta Chologoni-

4. Solutio Acidi ascorbinici pro injectionibus -

Self-assessment

Names of the Most Important Chemical Elements

Aluminium, i n – aluminium

Argentum, i n – silver

Bismuthum, i n – bismuth

Calcium, i n – calcium

Chlorum, i n – chlorine

Cuprum, i n – copper

Ferrum, i n – iron

Iodum, i n – iodine

Hydrargyrum, i n – mercury

Hydrogenium, i n – hydrogen

Kalium, i n – potassium

Lithium, i n – lithium

Magnesium, i n – magnesium

Natrium, i n – sodium

Nitrogenium, i n – nitrogen

Plumbum, i n – lead

Thallium, i n – thallium

Zincum, i n – zinc

All Latin names of chemical elements are neuter gender nouns with the ending - um.

Exceptions : Sulfur, uris n – sulfur; Phosphorus, i n - phosphorus

MEMORIZE expressions with prepositions used in prescriptions:

pro injectionibus - for injections

pro narcosi - for narcosis (anesthesia)

pro auctore - for author

pro me - for me

per os - through mouth

ad usum externum - for external use

(pro usu externo)

ad usum internum - for internal use

(pro usuinterno)

MEMORIZE THE NAMES OF DRUG PREPARATIONS:

Liquid anise ammonia – liquor Ammonii anisatus (Gen.Sing. liquoris Ammonii anisati)

Strong ammonium solution – solutio caustici liquid ammonia (Gen.Sing. solutionis Ammonii caustici)

Brilliant green – viride nitens (Gen.Sing. viridis nitentis)

Exercise 11. Translate into Latin:

1) acetylsalicylic acid in tablets-
2) tablets of amidopyrin and phenacetin of each 0,25-
3) phenoxymethylpenicillin for suspension-
4) oily solution of synoestrol in ampoules-
5) powder for suspensions -
6) suppositories with dimedrol for children-
7) diluted solution of hydrogen peroxide-
8) hydrosulfuric acid –
9) nicotinic acid in tablets –
10) acetic acid-
11) phosphoric acid-
12) magnesium peroxide-
13) zinc oxide-
14) calcium hydroxide-
15) hydrogen peroxide-
16) benzoic acid.

Exercise 12. Translate the following prescriptions into Latin:

English	**Latin**
1. Take: Phenobarbital 0,03 Dimedrol 0,05 Analgin Amidopyrin Acetylsalicylic acid of each 0,15 Mix to make a powder Give of such doses number 20.	

Designate:	
2) Take: Salicylic acid Menthol Synthomycin of each 2,5 Ethyl alcohol 70%-50 ml Mix. Give. Designate:	
3. Take: Diluted solution of hydrogen peroxide 10% - 30 ml Give. Write on a label. 19) Take: Menthol 0,1 Zinc oxide Boric acid of each 0,5 Vaseline 10,0 Mix to make an ointment Give Designate:	
4. Take: Benzoic acid 0,6 Salicylic acid 0,3 Vaseline 10,0 Mix to make an ointment Give Designate:	
5. Take: Boric acid 0,1 Chinosol 0,03 Tannin 0,06 Cocoa oil 2,0 Mix to make a vaginal suppository Give of such doses number 10 Designate:	
6. Take: Boric acid 5,0 Zinc oxide Wheat starch of each 25,0 Ointment of naphthalan 45,0	

Mix to make a paste Give Designate:	

Exercise 13. Translate into Latin:

16) chloroform for narcosis-
17) powder of foxglove leaves-
18) granules of furazolidon-
19) powder and tablets of phthivazid-
20) oily solution of anaesthesin-

Exercise 14. Translate the following prescriptions into Latin:

English	**Latin**
Take: Analgin Amidopyrin Phenacetin of each 0,2 Coffeine sodium benzoate 0,02 Codeine phosphate 0,015 Give of such doses number 10 in a tablet form Designate:	
Take: Methol 0,1 Phenyl salicylate 0,3 Vaseline oil up to 10 ml Mix. Give. Designate:	
Take: Extract of belladonna 0,01 Basic bismuth nitrate Phenyl salicylate of each 0,25 Mix to make a powder Give of such doses number 10: Designate:	
Take: Chloroform Sunflower-seed oil Methyl salicylate of each 15 ml Mix to make a liniment	

Give Designate:	
Take: Magnesium carbonate 4,0 Potassium carbonate 5,0 Sodium hydrocarbonate 1,0 Glycerin in sufficient amount Mix to make a paste Give Designate:	
Take: Streptocid Norsulfazol of each 3,0 Benzylpenicillin sodium 50 000 ED Ephedrin hydrochloride Acetylsalicylic acid of each 0,15 Mix to make a powder Give Designate:	
Take: Solution of dicain 0,5% - 5 ml Solution of adrenalin hydrochloride 0,1% - III drops Mix Give Designate:	
Take: Oily solution of testosteron propionate 1% - 1 ml Give of such doses number 6 in ampoules Write on a label. 19) Take: Menthol Ethylmorphin hydrochloride of each 0,01 Sacchar 0,03 Mix to make a powder Give of such doses number 10 Designate:	
Take: Tincture of valerian root 200 ml Sodium bromide 5,0	

Sodium barbital 2,0 Ethylmorphin hydrochloride 0,15 Mix. Give. Designate:	

Exercise 15. Translate into English:

1. Linimentum Zinci oxydi-

2. Hydrargyri oxydum flavum-

3. Unguentum Hydrargyri oxydi flavi-

4. Solutio Hydrogenii peroxydi diluta-

5. Solutio Hydrogeniiperoxydi concentrate-

UNIT XII. Prescribing solid, semisold and liquid dosage forms.

In this unit

- Drug nomenclature.
- Dosage forms: solid, semisold, liquid.

A drug is defined as a substance used for diagnosis, prevention and treatment of a disease. The term **Dosage form** is rather recent and appears to be replacing the expression **Pharmaceutical preparation**. **A dosage form** is a product suited for administration to the patient by various routes. Suitable dosage forms are needed to protect the drug from destructive influences of the atmospheric oxygen or moisture or from gastric juice in oral administration, to mask unpleasant taste or odour, to control drug release rate, etc.

The major groups into which all the drugs may be divided are as follows:

SOLID DOSAGE FORMS

Powder (*pulvis, eris* m) is a homogeneous dispersion of finely divided, relatively dry particulate matter consisting of one or more substances. Powders can be used internally or externally.

Tablet (*tabuletta, ae* f) is a powder subjected to mechanical pressures and compressed into a small discoid shape. Tablets may be coated with gelatin, sugar or other coatings suitable for improving their taste.

The prescription regulations for tablets are:

• There are two prescription forms of tablets:

1. Initially a drug name with the dose is indicated followed by the phrase
"Da tales doses numĕro … in tabulettis" (Give of such doses number… in a tablet form).
2. The second prescription form begins with the word "Tabulettam", followed by the drug name and the dose, and ends with the phrase "Da tales doses numĕro …" (Give of such doses number …).

Compare:

1st prescription form:

Recipe: Paracetamōli 0,3
Da tales doses numĕro 6 in tabulettis
Signa: 1 tablet in case of headache

2nd prescription form:

Recipe: Tabulettam Paracetamōli 0,3
Da tales doses numĕro 6
Signa: 1 tablet in case of headache

Tablets known as trade drug names are prescribed as follows: initially the word "Tabulettas" is indicated, the drug name is placed after the pharmaceutical form in Nominative and is in inverted commas, followed by the word "numĕro":

Recipe: Tabulettas "Nicoverīnum" numĕro 20
Da. Signa: 1 tablet twice a day

Capsule (*capsula, ae* f) is a small soluble container, usually made of gelatin, that encloses a dose of an oral medicine or a vitamin. Capsules are tasteless, readily swallowed, and rapidly disintegrate in the stomach, where they discharge their contents. These are available in various sizes

and are most popular dosage forms.

Species (*species, erum* f/pl) are a class of dosage forms consisting of a mixture of dried plants, not pulverized, but in sufficiently fine division to be conveniently used in the making of extemporaneous decoctions or infusions, as a tea.

LIQUID MEDICINAL FORMULATIONS

Emulsion (*emulsum, i* n) is a system containing two immiscible liquids in which one is dispersed, in the form of very small globules (internal phase), throughout the other (external phase).

Infusion (*infusum, i* n) is a dosage form obtained by steeping the crude drug in water.

Mixture (*mixtura, ae* f) is a liquid containing one or more medications in suspension. The proportions of the ingredients are specific to each mixture.

Mucilage (*mucilago, inis* f) is a dosage form consisting of a solution in water of the mucilaginous principles of vegetable substances; used as a soothing application to the mucous membranes and in the preparation of official and extemporaneous mixtures.

Solution (*solutio, onis* f) is a liquid preparation of one or more soluble chemical substances usually dissolved in water. The Genitive form after "Recipe" – Solutiōnis.

• Solutions can be alcoholic, oil and glyceric, respectively the Latin Genitive forms after "Recipe" are Solutiōnis spirituōsae, Solutiōnis oleōsae, Solutiōnis glycerinōsae (solutio – feminine!), the adjective to be placed at the end of the prescription line before the dosage.

• The solution concentration is indicated in the following way: Recipe: Solutiōnis Camphŏrae oleōsae 10% - 100 ml.

Suspension (*suspensio, onis* f) is a dosage form of finely divided, undissolved drugs (for example, powders for suspension) dispersed in liquid vehicles (substances used as media) for oral or parenteral use.

Tincture (*tinctura, ae* f) is an alcoholic or hydroalcoholic solution prepared from vegetable drugs or chemical substances.

• **Drops amounts (are used seldom**) – the number of drops is indicated with Roman figures – singular guttam (one drop - guttam I), plural guttas (five drops - guttas V); • Sometimes a physician does not indicate the dosage but affords to a pharmacist an opportunity to determine the quantity of a drug on his own; in that case quantum satis is written in the prescription. If several drugs are prescribed in the same amount, so the dose is indicated only after the latter one and the abbreviation ana (of each) is written: E.g: Recipe: Cupri citrātis Lanolīni Vaselīni ana 5,0

Take: Coper citrate Lanoline Vaseline of each 5,0

Writing good prescriptions • careful use of decimal points to avoid ambiguity: o avoid unneccessary decimal points: 5 mL instead of 5.0 mL to avoid possible misinterpretation of 5.0=50 o alway zero prefix decimals: e.g. 0.5 instead of .5 to avoid misinterpretation with .5=5 o never have trailing zeros on decimals: e.g. use 0.5 instead of .50 to avoid misinterpretation with .50=50 o avoid decimals altogether by changing the units: 0.5 g =500 mg

SEMISOLID DOSAGE FORMS

Liniment (*linimentum, i* n) is a medicinal preparation in an oily, soapy, or alcoholic vehicle, intended to be rubbed on the skin as a counterirritant, a cleansing agent, etc.

Ointment (*unguentum, i* n) is a semisolid preparation for external application to the skin or mucous membranes. Official ointments consist of medicinal substances incorporated in suitable vehicles (bases).

Paste (*pasta, ae* f) is a semisolid preparation containing one or more drug substances, for

topical application.

Plaster (*emplastrum, i* n) is a pastelike mixture that can be spread over the skin and that is adhesive at body temperature; varied uses include skin protectant and counterirritant.

Suppository (*suppositorium, i* n) is a solid preparation for administration to body cavities. There are rectal, vaginal and urethral suppositories.

The prescription regulations for tablets, suppositories and ophthalmic films are different from other pharmaceutical forms. The names of these pharmaceutical forms in prescriptions after "Recipe" are not in Genitive but in Accusative. You will have to remember the endings of these pharmaceutical forms as follows:

• Tabulettam (obductam)- tablet (coated)

• Tabulettas (obductas)- tablets (coated)

• Suppositorĭum (vagināle, rectāle)- suppository (rectal, vaginal)

• Suppositorĭa (vaginalĭa, rectalĭa) - suppositories (rectal, vaginal)

• Lamellas (membranŭlas) ophthalmĭcas - ophthalmic films

PREPOSITION "CUM" IN PRESCRIPTIONS

The names of suppositories and ophthalmic films drugs are often used with the preposition "cum" – with. You will have to remember the nouns endings after the preposition "cum" as follows:

• Singular • Nouns of the 2nd declension – ending -o (cum Ichthyōlo, cum Oxytetracyclīno)

• Plural • Nouns of the 3rd declension – ending -ĭbus (with valerian roots - cum radicĭbus Valeriānae)

The drug names with the nouns of other declensions with the preposition "cum" are not in use.

Practical exercises

Exercise 1. Provide forms in Gen. Sg. and translate into English:

Latin	English
1. Pasta Zinci Gen.	
2. Aqua Plumbi Gen.	
3. Emplastrum Plumbi simplex (compositum) Gen.	
4. Unguentum Hydrargyri album Gen.	
5. Sulfur depuratum Gen.	
6. Extractum Crataegi fluidum Gen.	
7. Solutio Hydrogenii peroxydi diluta	

Gen.	
8. Pulvis Ferri reducti Gen.	

Exercise 2. Translate the prescriptions. Write them down in an abbreviated form:

English	Latin
1. Take: 10 tablets of furacilin for external use Give. Designate.	
2. Take: 250 mg of Analgin 350 mg of Amidopyrine Mix to make powder. Give such doses number 12. Designate.	
3. Take: Dragée “Revitum” Give such doses number 100 Designate.	
4. Take: “Ascophen” tablets number 6 Give. Designate.	
5. Take: 300 mg of amidopyrine 5 mg of caffeine Mix to make a powder Give such doses number 10. Designate.	
6. Take: 200 mL of infusion of juniper fruits Give. Designate.	
7. Take: 200 mL of infusion of mint leaves Give. Designate.	
8. Take: 1.5 g of amidopyrine 3 mL of lily-of-the-valley tincture 100 mL of distilled water Mix. Give. Designate.	
9. Take: 1 mL of 1% solution of progesterone Give 10 such doses in ampules Designate.	
10. Take: 50 mg of anesthesin 100 mg of thymol 10 drops of mint oil 20 g of peach oil Mix. Give. Designate.	

Exercise 3. Translate into English:

Latin	English
1. R_x.: Unguenti Tetracyclini 7.0 *Da. Signa*	
2. R_x.: Suppositoria vaginalia cum *Synthomycin**o** numero 10* *Da. Signa.*	
3. R_x.: Suppositoria "Bethiolum" *numero 10* *Da. Signa.*	
4. R_x.: Linimenti Streptocidi 5% 30.0 *Da. Signa.*	
5. R_x.: Iodoformii 2.5 *Vaselini ad 25.0* *Misce, fiat unguentum* *Da. Signa.*	
6. R_x.: Linimenti Aloës 100 mL *Da. Signa.*	
7. R_x: Acidi salicylici 5.0 *Zinci oxydi 25.0* *Talci 50.0* *Misce, fiat pulvis* *Da. Signa.*	

Exercise 4. Rewrite the prescriptions using full forms of the words:

1. R_x.: Acrichini 0.1 *Glucosi 0.3* *M. f. pulv.* *D.t.d. N 10 in caps.* *S.*	
2. R_x.*: Extr. Belladonnae 0.1* *Dimedroli 0.02* *Euphyllini 0.02* *M. f. pulv.* *S.*	
3. R_x.: Tab. Thyreoidini obduct. 0.1 N 50 *D.S.*	
4. R_x.: Theophyllini 0.25 *Dimedroli 0.0025* *D.t.d. N.10 in tab.* *S.*	
5. R_x: Ol. Ricini 1.0 *D.t.d. N 15 in caps. gelatin.* *S.*	
6. R_x.: Furacilini 0.2	

Aq.destill. 1000 mL *M.D.S.*	

Exercise 5. Rewrite the prescriptions abbreviating those words which can be shortened:

Full forms	Abbreviated forms
1. Recipe: Solutionis Glucosi 10% 10 mL *Sterilisa!* *Da tales doses numero 10* *Signa*	
2. Recipe.: Anasthesini 0.05 *Thymoli 0.1* *Olei Menthae guttas X* *Olei Persicorum 20.0* *Misce. Da. Signa:*	
3. Recipe: Solutionis Progesteroni oleosae 1% 1 mL *Da tales doses numero 10 in ampullis* *Signa:*	
4. Recipe: Tabulettas Butadioni 0.15 *Da tales doses numero 12* *Signa.*	
5. Recipe: Tannalbini 4.0 *Sirupi Sacchari 15 mL* *Aquae destillatae 180 mL* *Misce. Da. Signa.*	
6. Recipe.: Suspensionis Griseofulvini 100,0 *Da. Signa.*	
7. Recipe: Iodoformii 2.5 *Vaselini ad 25.0* *Misce, fiat unguentum* *Da. Signa.*	
8. Recipe: Linimenti Streptocidi 5% 30.0 *Da. Signa.*	
9. Recipe: Unguenti Wilkinsoni 20.0 *Unguenti Zinci ad 100.0* *Misce. Da. Signa.*	
10. Recipe: Anaesthesini 7.5 *Amyli 2.5* *Misce, fiat pulvis subtilissimus* *Da. Signa.*	

Exercise 6. Translate the following abbreviated prescriptions into English:

1. R_x.: Tab. "Ascophenum" N 6.	

D. S.	
2. R_x.: Amidopyrini 0.3 *Coffeini 0.005* *M., f. pulv.* *D. t. d. N 10.* *S.*	
3. R_x.: Tab. Prednisoloni 0.005 *D. t. d. N 50* *S.*	
4. R_x.: Dibazoli 0.005 *Sacchari 0.3* *M., f. pulv.* *D. S.*	
5. R_x.: Tab. Vikasoli 0.015 *D. t. d. 20* *S.*	
6. R_x.: Olimetini 0.5 *D. t. d. N 12 in caps. gelatin.* *S.*	
7. R_x.: Theophyllini 0.25 *Dimedroli 2.25* *D. t. d. N 10 in tab.* *S.*	
8. R_x.: Mentholi 0.01 *Amidopyrini 0.3* *M., f. pulv.* *D. t. d. N 10* *S.*	

Exercise 7. Translate the following prescriptions into Latin using the following words:

English	Latin
castor oil	**oleum Ricini**
up to	**ad**
distilled water	**aqua destillata**
precipitated sulphur	**Sulfur pr**ae**cipitatum**

English	**Latin**
1. Take: 200 g of castor oil 3 g of phenyl salicylate 2 g of benzonaphthol Mix. Give. Designate.	
2. Take: Tannalbin and Bismuth subnitrate in equal quantities of	

300 mg Give such doses number 10 in tablets. Designate.	
3. Take: Purified sulphur, Magnesium oxide and sugar in equal quantities 10 g Mix to make powder. Give. Designate.	
4. Take: Equal quantities of 10 g of sodium bromide and potassium bromide 10 ml of valerian tincture Mint water up to 200 ml Mix. Give. Designate.	

5. Take: 15 mg of morphine hydrochloride 50 mg of diluted hydrochloric acid 200 mL of distilled water Mix. Give. Designate	
6. Take: 500 mg of salicylic acid 600 mg of zinc oxide 500 mg of vaseline Mix to make an ointment Give. Designate	
7. Take: 1 g of precipitated sulphur 2 g of glycerin 60 mL of distilled water Mix. Give. Designate.	
8. Take: 1 g of salicylic acid Equal parts of 3 g of mercury amid chloride and bismuth subnitrate Equal parts of 15 g of vaseline and lanolin Mix to make an ointment Give. Designate.	
9. Take: 1 g of sodium salicylate 100 mg of potassium iodide 6 drops of 5% solution of iodine Up to 200 mL of distilled water Mix. Give. Designate.	
10. Take: 1 mL of 3% solution of Thiamine bromide Give such doses number 10 in	

ampules. Designate.	

Exercise 8. Translate from English into Latin and determine the dosage form type:

English	**Latin**
Ointment of tetracycline-	
solution of Novocain-	
tablets of octoestrol-	
solution of glucose-	
ointment of heparin-	
tablets of myelosan-	
tincture of valerian-	
tincture of motherwort-	
herb of valerian-	
extract of motherwort-	
tablets of theophylline-	
flowers of matricary-	
tablets of baralgin-	
liniment of streptocid-	
ophthalmic ointment of dibiomycin-	
antiasthmatic species-	
tincture of valerian root-	
extract of buckthorn-	
tincture of oak root-	

Exercise 9. Translate from English into Latin, using the given vocabulary:

English	Latin
1. Give 10 ml of epinephrin solution.	
2. Take 200 ml of valerian root tincture.	
3. Add 5 ml of castor oil.	
4. Give 10 ml of menthol oil. 133	
5. Take 30,0 of xeroform ointment.	
6. Mix 5 ml of mint tincture and 10 ml of motherwort tincture.	
7. Add 3 ml of peppermint oil.	
8. Sterilize 20 ml of castor oil.	
9. Take 5,0 of boromenthol ointment.	
10. Give 25,0 of synthomycin liniment.	
11. Mix 10 ml of lily of the valley tincture and 15 ml of valerian tincture.	
12. Give 25 ml of motherwort extract.	
13. Take 20,0 of castor oil emulsion.	
14. Sterilize 200 ml of novocain solution.	

Exercise 10. Translate the following prescriptions from English into Latin:

English	Latin
1) Take: Tincture of lily of the valley Tincture of valerian of each 10 ml Solution of nitroglycerin 1% - 1 ml Validol 2 ml Let it be mixed. Let it be given. Let it be deignated:	
2) Take: Liquid hawthorn extract 25 ml Let it be given.	

Let it be deignated:	
3) Take: Solution of glucose 5% - 500 ml Let it be sterilized! Give. Designate:	
4) Take: Powder of rhubarb root 0,06 Give of such doses number 50 Designate:	
5) Take: Emulsion of castor oil 30,0 - 200 ml Give. Write on a label:	
6) Take: Phenobarbital 0,05 Sacchar 0,2 Mix to make a powder Give of such doses number 10 Designate:	
7) Take: Cerebrolysin 1 ml Give of such doses number 10 in ampoules Designate:	
8) Take: Anaesthesin 2,5 Talc 15,0 Vaseline up to 50,0 Mix to make a liniment Give. Designate:	
9) Take: Solution of aminophyllin 24% - 1 ml Give of such doses number 6 in ampoules Designate:	
10) Take: Fluid extract of buckthorn 4,0 Powder of rhubarb root 3,0 Dry extract of belladonna 0,7 Mix. Give. Designate:	

Self-assessment

Injections are groups of drug in different sterile medicinal formulations (solutions, powders, suspensions, emulsions) aseptically packed and used for parenteral infusions. Drugs for injections can be in ampules or bottles made of special glass in aseptic environment. Drugs for injections usually are prescribed for intravenous, intramuscular or subcutaneous injections, etc. Usually drugs for one injection are administered in ampules, for several injections — in bottles. Nowadays we also can use unit-dose syringe. Almost all medicinal formulations for injections are officinal. As solvents we can take special water for injections (lat. Aqua pro injectionibus), 5 % glucose solution, 0,9 % Sodium-Chloride

SOFT DRUG FORMS

To the soft forms belong pastes, ointments, suppositories, plasters, creams etc. They are united within one group. As a basis, they include greases and substances like grease. These substances shouldn't take any harmful effect on the skin, react to the medicinal matters and change during the storage. They mast have a capacity of easy joining with drugs, of greasing as well as of melting by the body's temperature. Bases are to be accessible. Depending on the ointment description, some bases have to be well adsorbed by skin, the other by contrast have to remain on the skin like a thin cover. Very important are ointments' abilities of no spoiling clothes, not to leave spots and to be lightly washed off if necessary with the help of soap or without it. Ointments are drug forms for external use. A soft consistence is their typical feature. Ointments consist of a base and of medical matters which are divided within and belong to undivided drug forms. They are prescribed in a recipe with a common amount. Ophthalmic ointments are prescribed in amount of 5,0 – 10,0. Ointments for treating affected parts of skin are prescribed from 20,0 to 100,0 and more. An ointment consisting of one medical matter and one base is called a simple one. Such an ointment can be prescribed by two ways: 1) by a developed way and 2) by a shorted one: solution, 33 % ethyl alcohol, etc.

Count of a drug for example, 2 tablets at one time, or 2 capsules at one time, etc. were written originally as roman numerals. For example ***i*** for 1, ***ii*** for 2, and ***iii*** for 3. This then changed into T (which can be thought of the capital roman letter I) with a dot on it.

For example to prescribe Amoxicillin 250 mg tablets, taken 2 tablets orally three times a day for 7 days you will write (note the T with dots in red):

You can write the Ts or ii. Don't, however, put one T with two dots on it. It is error prone.

SO WHAT ARE SOME EXAMPLES OF THE COUNT/QUANTITY?

- ii tablets (two tablets)
- i capsule or i cap (1 capsule)
- 4 mL (suspension). See notes about the suspension below.

SUSPENSION ADMINISTRATION

Administering table/tea spoons is error prone due to spilling and inaccuracy in filling. Putting quantity in measurable units is preferred. However, for the patient there has to be a way to

measure this exact quantity and use. Syringes can be used. Problem with the syringes is the availability, and more importantly choking hazard by the syringe cap for small children.

My opinion is that metric units can be used where the administration is in expert staff's hand. For a patient table spoon and tea spoon are still the most easy method for compliance.

Route of Administration

A drug can be administered by many routes or exactly only one route depending upon its chemical formulation and the intent of administration. Common routes of administration and their terms are following:

- p.o. (per os) mouth
- p.r. (per rectum)
- SubQ (subcutaneous)
- IV (intravenous)
- IM (intramuscular)
- IN (intranasal)
- IT (intrathecal)
- SL (sublingual)
- Vag (vaginally)

In the Amoxicillin example above the p.o. is for oral administration.

Formulation

There can be various formulations of the same drug. This is to allow administration of a drug to patients of various ages and state of health. Scope of a drug's distribution also dictates the formulation. Some common formulations are following:

- Tab (tablet)
- Cap. (capsule)
- Bolus (discrete amount)
- Susp. (suspension)
- Syr. (syrup)
- fl. (fluid)
- Cr. (cream)
- Ung. (unguentum) ointment

In the Amoxicillin example above we used ***tablets***, we could have used ***tab*** as well with the same clarity.

Frequency of Administration

Writing frequency is possibly the most commonly bothersome area. My approach is to teach the terms that make up the frequency. For example ***cibum*** in Latin is for ***meal***, and ***anti*** is for ***before***. So anything before meal will be said to be anti cibum and written as a.c.

HERE ARE SOME TERMS FOR FREQUENCY TO KEEP IN MIND

- Cibum: meal
    - a.c. (ante-cibum) before meal.
    - p.c. (post cibum) after meal.
- Meridian (noon)
    - a.m. (ante meridian) in the morning.
    - p.m. (post meridian) in the evening.
- Die: day
- Hora: hour
- Somni: sleep
- Quque: every
    - qh: every hour
- Sumendus (take)
- p.r.n. (pro re nata) as needed

FREQUENCY INVOLVING DAYS

- o.d. (once a day). Note: this should be replaced with the word ***daily.***
- q.d. a.m. (quaque die ante meridien) every day after morning
- b.i.d. (bis in die) two in a day. bds (bis die sumendus. Two in a day take).
- t.i.d. (ter in die) three in a day. tds (tre die sumendus. Three in a day take)
- q.i.d. (quarter in die) four in a day. qds (quarter die sumendus. Four in a day take.)
- q.a.d. (quaque altera die) every alternate day
- (bis in 7 d) every 7 days. Weekly.

FREQUENCY INVOLVING HOURS

- q.i.d. a.m. a.c. (quque in diem ante meridien ante cibum). Once daily before meal. Again the preferred writing method will be to ***once daily before meal***.

- q.i.d. p.c. (once daily after meal). See above point.
- h.s. (hora somni) at sleeping time.
- hor. alt (hora alternis) every other hour.
- q.h. (every hour).
- q.1.h. (every hour) q1h.
- q.2.h. (every two hour) q2h.

Exercise 11. Make up the following prescription:

English	**Latin**
1. 20 coated tablets of Atenolol 0.05 g. 1 tablet orally twice a day before meals. Tablets should be swallowed with little fluid, no chewing.	
2. 25 tablets of Digoxin 0.00025 g. 1 tablet orally once a day.	
3. 20 tablets of Baralgin. Combined drug. 1 tablet orally 3 times a day.	
4. 20 dragees of Tolperisone 0.05 g. 1 dragee orally 3 times a day.	
5. Powder of Amoxicillin in bottles to prepare 60 ml of suspension for internal use 125 mg /5 ml. Dissolve the content of the bottle in 60 ml of water. Take 1 tea spoonful 3 times a day.	
6. Powder of Didanosine 2.0 g in bottles to prepare 125 ml of solution for internal use in children. Take 1 tea spoonful twice a day.	
7. 30 powders of Riboflavin 0.001 g. 1 powder orally twice a day.	
8. 30 capsules of Rifampicin 0.15 g. 3 capsules orally once a day.	

Exercise 12. Make up the following prescription:

English	Latin
1. 10 ml eye drops 0.3 % solution of Gentamycin. By 1 drop into both eyes 3 times a day.	
2. 10 ml 0.5 % spirituous (alcoholic) solution of Ergocalciferol. By 3 drops orally once a day.	
3. 180 ml solution of Potassium iodide, for the patient to get 0.45 g Potassium iodide per one dose. 1 table spoonful orally 3 times a day after meals.	
4. 100 ml mixture containing 2.0 g of Chloralum hydratum and equal amounts of Amylum and distilled water. For 2 enemas.	
5. 200 ml emulsion from 30 ml Oleum Ricini. Orally for 3 doses.	
6. 180 ml extract from 6.0 g herba Adonidis vernalis. 1 table spoonful orally 3 times a day.	
7. 200 ml broth from 20.0 g cortex Frangulae. 1 table spoonful orally before bedtime.	
8. 25 ml tincture of Echinopanacis. 35 drops orally 2–3 times before meals.	
9. 15 ml of Adonisidum. 15 drops orally 2–3 times a day.	
10. The mixture containing 180.0 ml extract from 0.45 g herba Thermopsidis and 0.2 g Codeini phosphas. 1 table spoonful orally 3 times a day	

Exercise 13. Translate into English:

English	Latin
1. Linimentum Synthomycini	
2. Emulsum Olei Vaselini	

3. Pituitrinum in ampullis	
4. Tabulettae Chinocidi obductae	
5. Unguentum Tetracyclini ophthalmĭcum	
6. Tabulettae Mycoheptini	
7. Extractum Leonūri fluĭdum	
8.Ointment of streptocidum	
9. Tablet of codeine	
10. Liniment of synthomycinum	
11. Tablet of analgin	
12. Liniment of streptocid	
13. Ointment of heparin	
14. Tablets of baralgin	

Exercise 14. Translate the following prescriptions into Latin:

English	**Latin**
1. Rx: Novocain 0,5 Distilled water 200 ml Mix. Give. Designate:	
2. Rx: Butadione Analgin so much of each 15 ml Mix. Give 20 such doses in tablets. Designate:	
3. Rx: Valocormide 30 ml Give. Designate:	
4. Rx: Prednisolone ointment 20,0 Give. Designate:	

Exercise 15. Translate from Latin into English:

1) Solutio Iodi spirituosa-

2) Tabuletta radicis Rhei-

3) Extractum Thermopsidis siccum cum Codeino in tabulettis-

4) Decoctum rhizomatis Nupharis lutei-

5) Aether in vitro nigro-

6) Analgin powder with sugar-

17) Solution of nitroglycerin (nitroglycerine solution)-

18) Oily solution of vitamin A-

19) Decoction of marsh mallow root (marsh mallow root decoction)-

20) Suspension of dexamethasone-

Part III.

Clinical terminology

Medical Terminology – Head and Neck Anatomy 1

- Cephal(o)- = Head
- Facio- = Face
- Crani(o)- = Skull

- Trich(o)- = Hair
- Stoma-/Oro- = Mouth
- Gloss(o)-/Linguo- = Tongue

- Labio-/Cheilo- = Lips

- Dent-/Odont(o)- = Teeth

- Gingivo- = Gums
- Rhino-/Naso- = Nose

- Buccal = Cheek
- Geni(o)-/Mento- = Chin
- Mandibulo- = Mandible

UNIT XIII. Structure of clinical terms. Word formation. Greek and Latin doublets

In this unit

- Structure of clinical terms.
- Types of clinical terms according to their structure.
- Greek and Latin doublets for body parts, internal organs and tissues.
- CFs (combining forms) denoting signs of the disease, methods of diagnosis and treatment.

CLINICAL TERMINOLOGY

Clinical terminology is a number of terminologies concerned to sick organism. It is usually called pathologia – pathology (phatos – disease + logia- science, study). So, clinical terminology includes both the names of` symptoms of diseases, or disorders of physiological functions, structural changes in organs and tissues, diagnosis, treatment and prophylaxis of diseases.

INTRODUCTION TO GREEK AND LATIN MEDICAL TERMINOLOGY

Although medical terms have been drawn from many languages, a large majority are from Greek and Latin. The long and formidable sounding medical terms are a combination of words which describe parts of the body, a function, or a condition. The basic terms occur over and over again in various combinations.A knowledge of the meaning of the roots, prefixes, and suffixes enables the student to analyze the medical terms into component parts. This is of the greatest aid in learning to understand thevocabulary of medicine. Some names of diseases given by the ancients and still used today are, in many instances, simply descriptions of the outstanding symptoms; for example, hydrophobia-fear of water-for rabies. It is estimated that about three-fourths of the English medical terminology is of Greek origin. The main reason for this is that the Greeks were the founders of rational medicine in the golden age of Greek civilization in the 5th Century B.C. The Hippocratic School and, later on, Galen (the Greek from Asia Minor who lived in Rome in the 2nd century A.D.) formulated the theories which dominated medicine up to the beginning of the 18th Century. The Hippocratics were the first to describe diseases based on observation, and the names given by them to many conditions are still used today, for example, arthritis, nephritis, pleuritis (pleurisy).

The second reason for the large number of Greek medical terms is that the Greek language lends itself easily to the building of compounds. When new terms were needed, with the rapid expansion of medical science during the last century, Greek words or Latin words with Greek endings were used to express the new ideas, conditions, or instruments. The new words follow the older models so closely that it is impossible to distinguish the two by their forms.

Such recent words as appendicitis, creatinine, cystoscope, epinephrine, streptococcus, and many others do not appear different from the classical terms. The fact is that about one-half of our medical terminology is less than a century old.

The third reason for using the classical roots is that they form an international language, easily understood by anyone familiar with the subject matter. The terminology of the modern medicine is the most complicated terminological system of the modern science. The total amount of medical terms remains unknown, but its estimated amount exceeds one million terms. You realize that it is impossible to learn one million words, even for an intelligent person, because we use in our native language only several thousands words. This course will help you to understand and use about fifty thousand main medical terms. It teaches you how medical terms are ‘built’ or ‘put together’ instead of just memorizing lots of medical words and their meanings. You will learn to

recognize the meaning of a medical term by dividing the word into its three basic component parts: the prefix, root and suffix.

By knowing the meanings of the prefixes, suffixes, and root words, you can easily figure out the meaning of a medical term. For example, if you see a medical term containing the root word ‘cardi’ and the suffix ‘itis’, you know that the term has to do with an ‘inflamed’ (itis) ‘heart’ (cardi). This technique of word building is a simple and straightforward way to learn medical terminology without long hours of memorizing the medical vocabulary.

Greek and Latin medical terms can be broken down into one or more word parts. For simplicity in explanation, let's say that there are four possible word parts, and any given medical term may contain one, some, or all of these parts:

1. root terminological elements (a shorthand notation “root”)
2. final terminological elements (or “suffixes”)
3. prefixes
4. combining vowels

An example of a word with three of the above parts is the medical term pericarditis, which means inflammation of the outer layer of the heart. Pericarditis can be divided into three parts:**• peri - card - itis**

Once divided into its essential parts, pericarditis can be translated:

• the prefix peri- translates to surrounding,
• the root –card- translates to heart, and
• the suffix –itis translates to inflammation.

Hence, pericarditis is an inflammation of the area surrounding the heart, or an inflammation of the outer layer of the heart, anatomically known as the pericardium. Medical terms always consist of at least one root, although they may contain more. The root of a word is that part which contains the essential meaning of the word. An example of this was seen above in the term pericarditis. The root of the word - card - refers to the heart, so any prefix or suffix added to the root (card) will only function to add to the specificity of that word. An example of this would be the prefix brady, which means slow. If "brady" is added to the root "card", the term bradycard – which roughly means slow heart - is created. Then, if the suffix ia – which means abnormal state - is added to "bradycard", the medical term bradycardia is formed. The translation of bradycardia (brady-cardia) is slow - heart - abnormal state, or the abnormal state of a slow heart rate. Linking or Combining Vowels: As was discussed above, a medical term must have at least one root, but may not have a prefix and/or a suffix. An example of this is the term sternocleidomastoid, which is a muscle that has attachments at the sternum, the clavicle, and the mastoid. The term sternocleidomastoid can be divided into three parts (three roots, in this case): stern - o - cleid - o - mastoid. Notice that there are vowels between the three roots. These are linking or combining vowels, which serve to make a term easier to pronounce. The vowel used most of the time is o, but other vowels such as i and a are also used. Combining vowels are often used between roots and suffixes or roots and other roots, but they are NOT used between prefixes and roots.

LEARNING TO READ A MEDICAL TERM

When you look at a medical term and attempt to decipher its meaning you begin with the suffix, move to the prefix (if present) and then the root word. For example: When trying to understand the word pericarditis you would identify itis (meaning inflammation), then peri (meaning around) and then card (meaning heart). Therefore, this word means inflammation around the heart. Let’s try

another one: for example: leukocytopenia - penia (meaning decrease), then leuk/o (meaning white) and finally cyt/o (meaning cell). Therefore, this word means a decrease in white cells.

Clinical terminology, also referred to as **medical terminology**, is key to clinical process and clinical documentation. Becoming familiar with it is like learning a new language.

Clinical terms are made of Greek or Latin word bases, and similar in many languages. It is impossible to memorize all of the thousands of medical terms. However, you can figure out the meaning of many different terms simply by analyzing word parts.

🖫 These parts are called combining forms. A **combining form (CF)** is a modified form of an independent word that occurs only in combination with other combining forms, prefixes and suffixes to form compounds or derivatives, e.g., ***cardiogenesis*** (from ***cardio-*** *the heart,* ***genesis*** *origin, development*), *a development of the heart in an embryo,* ***pancreatodynia*** (from ***pancreat(o)-*** *pancreas,* ***-(o)dynia*** *pain), pain in the pancreas*

🕮 According to their structure, clinical terms can be divided into groups:

- **Root words** which can be standalone words, e.g., ***inflammatio, onis f*** *– inflammation;* ***hernia****;* ***stupor*****;**
- **Words consisting of roots** (combining forms) and **affixes** (prefixes and suffixes), e.g., ***gastritis*** (the root ***gastr(o)-*** *stomach* and the suffix ***-itis*** *inflammation*), *inflammation of the stomach*. These words are normally not translated into native languages and are understood by most medical professionals all over the world;
- **Collocations** (word combinations), mostly of Latin origin, consisting of several words arranged in correspondence with the rules of Latin grammar, e.g., ***inflammatio acuta*** *– acute inflammation;* ***ulcus pharyngis*** **–** *ulcer of the pharynx.*

Memorize the following combining forms denoting science, methods of diagnosis or pathological conditions and provide your own examples from medicine or everyday life:

CF	Meaning
-algia **-odynia** **-algesia**	pain or painful condition (in the terms pancreat**odynia**, proct**odynia**) excessive sensitivity
-genes (genus)	causing smth or caused by smth. (-genous)
-genesis	an origin or beginning of *the* process; development of some processes
-graphia	1. recording of contraction (*speaking of the heart),* process of recording 2. method of investigation by means of X-rays
-gramma	1. the result of contraction recording 2. X-ray (roentgenologic) picture
-iatria	science of treatment
-logia	science,study
-malacia	pathologic softening of the organs or tissues
-metria	process of measuring
-paedia	correction of the defects
-pathia	disease
-sclerosis	pathological hardness of organs and tissues
-scopia	examination of inner walls and surfaces of organs with special instruments, imaging studies

-therapia	1**.** treatment of diseases with various methods (non-operative); 2. science of treatment of the internal diseases

Memorize the following combining forms used at the end of the terms and provide examples from everyday life (orally).

Greek CF	Meaning	Greek CF	Meaning
-ergia	work; reactivity of the organism	**-lysis**	dissolution or loosening, destruction
-pnoë	breathing	**-poësis**	production, creation
-necrosis	death of organ or its part	**-rrhagia**	abnormal or excessive flow, bleeding
-penia	deficiency	**-rrhaphia**	suturing or operative repair
-phobia	fear, morbid fear	**-stasis**	stagnation of the blood or other fluids
-plegia	paralysis, apoplexy, stroke		

Memorize the following combining forms denoting different characteristics:

acro-	extremity, topmost; height	**mono-**	single
allo-	other or differing from the normal or usual	**pan-**	all, entire
andro-	pertaining to a man	**photo-**	light
brady-	slow	**tachy-**	denoting something as fast, irregularly fast
hetero-	other or different	**terato-**	monstrosity, malformation (*great congenital deformity)*
homo-	the same or like; equal, of the same origin	**xero-**	dry

Practical exercises

Exercise 1. Match Latin equivalents with Greek CFs, provide their dictionary forms and memorize both variants:

ventriculus; ~~cor;~~ corpus; caput; vesica urinaria or cysta; cerebrum; medicus; tumor; pulmo; abdomen; aqua; dens; os; nasus; vertebra; infans

Greek	Latin	English
cardio-	*cor, cordis* n	heart
cephalo- (kephalo-)		head
cysto-		urinary bladder cyst (pathological fluid in an organ)
encephalo-		brain
gastro-		stomach
hydro-		water
laparo-		abdomen
odonto-		tooth
onco-		tumor
osteo-		bone

pneum(on)o-*		lung
rhino-		nose
somato-		body
spondylo-		vertebra
iatro-		physician
paedo-		infant, child

***** The initial CF ***pneumo-*** in combination with the name of the organ denotes *accumulation of air in this organ,* e.g., ***pneumoperitoneum,*** *accumulation of air in the abdominal cavity.* The CF ***pneum(on)o-*** is usually used to refer to *a lung*.

Exercise 2. Match the following CFs having similar spelling in both Greek and Latin with their meaning:

1. **arterio-**	a. relating to speech or words
2. **duodeno-**	b. pelvis
3. **embryo-**	c. disease
4. **hepat-**	d. hormone
5. **hormono -**	e. artery
6. **logo-**	f. duodenum
7. **patho-**	g. embryo
8. **pelvio-**	h. liver

Exercise 3. Form clinical terms and explain their meanings:

osteo-	-sclerosis	
	-logia	
	-pathia	
	-malacia	
	-genesis	
	-genes	
cardio-	-gramma	
	-graphia	
	-sclerosis	
	-logia	
	-pathia	
	-metria	

Exercise 4. Analyse the terms according to the meanings of the combining forms:

Term	Meaning
1. gastralgia	
2. cardiographia	
3. spondylogramma	
4. cystoscopia	
5. pneumonosclerosis	
6. pancreatodynia	
7. somatoscopia	
8. gastralgia	

9. hormonotherapia	
10. pneumothorax	
11. odontographia	
12. osteomalacia	
13. cystogramma	
14. myosclerosis	
15. arteriosclerosis	
16. hydrotherapia	
17. pathogenesis	
18. paediatria	
19. oncologia	
20. cephalometria	
21. laparoscopia	
22. embryographia	
23. myalgia	
24. pelviometria	

Exercise 5. What are the medical terms for the following definitions? Spell them both in Latin and in English:

Meaning	Term
1. development of the bony tissue	
2. any disease of a vertebra	
3. science of treatment of children	
4 .causing a disease	
5. softening of the brain	
6. result of graphic registration of the heart movements	
7. development of the organism since impregnation to the birth	
8. toothache	
9. instrumental examination of the stomach and duodenum	
10. process of origin and development of tumor	
11. caused by a physician’s mistake	
12. any speech disorder	
13. branch of science concerned with the physiology and pathology of the organs of speech and theur correction.	
14.measurement of the female pelvic diameters in relation to those of the fetal head	
15. a morbid condition in the embryo or fetus	
16. formation of hormones	

Exercise 6. Match the terms with their meaning:

osteosclerosis; osteopathia; osteomalacia; somatoscopia; laparoscopia;cardiopathia; odontopathia; spondylopathia

1. any disease of teeth	
2. pathological hardening of bones	
3. any disease of bones	
4. pathological softening of a bone	
5. any disease of a vertebra or spinal column	
6. instrumental examination of the abdomen	
7. any disease of the heart	
8. examination of the body	

Exercise 7. Match the terms with their meaning:

a) *haemorrhagia; gastrorrhagia; otorrhagia; rhinorrhagia; dermatorrhagia; odontorrhagia*

1. profuse bleeding from the socket after the extraction of a tooth	
2. bleeding from the ear	
3. hemorrhage from or into the skin	
4. bleeding from the nose	
5. escape of blood through vessel walls	
6. hemorrhage from the stomach	

b) monophobia; photophobia; cancerophobia; acrophobia; claustrophobia [L.*claustrum*, an enclosed space]; cardiophobia; teratophobia; androphobia; panphobia

1. morbid fear of men, or of the male sex	
2. morbid fear of heart disease	
3. morbid fear of height	
4. morbid fear of solitude or of being left alone	
5. morbid dread and avoidance of light	
6. a morbid fear of acquiring a malignant growth	
7. fear of everything	
8. morbid fear of carrying and giving birth to a malformed infant	
9.a morbid fear of being in a confined place	

Exercise 8. Complete the terms:

1.of nervous origin – neuro…….	6. glandular carcinoma – ……carcinoma
2.presence of bile in the blood – chol……..	7.nerve pain – ……..algia
3.stagnation of the blood; the stopping of bleeding – haemo…….	8. inflammation of the gallbladder – …….itis
4.the formation of tissues and organs from undifferentiated cells – histo……..	9. incision of the tendon – ……..tomia
5. transplantation of foreign bodies (gold,	10. presence of urea $(CO)NH_2)_2$ in the blood –

silver, plastic) into a human body to remove defects – allo……..	……..aemia

Exercise 9. Analyse the terms according to the meaning of CF:

Term	Meaning
1. dermatosis	
2. histolysis	
3. tenorrhaphia	
4. lymphorrhoea	
5. hyperergia	
6. ophthalmoplegia	
7. tachyphagia	
8.cholangitis	
9. mononeuritis	
10.cholelithiasis	
11.proctorrhagia	
12.proctostasis	
13.leucoderma	
14.chondrodystrophia	
15.gastrectasia	
16.leucopenia	
17.apnoë	
18.myopathia	

Exercise 10. Form the terms having the following meanings:

Meaning	Term
1.instrumental examination of the eye	
2. progressive changes that may result from defective nutrition of a tissue or organ	
3. rapid breathing	
4. stagnation of the blood	
5. disease of the gallbladder	
6. bleeding from the nose	
7. passing of the bile into the blood	
8. destruction or dissolution of glandular tissue	
9. fear of everything	
10. the branch of science concerned with the production, development, anatomy, and classification of malformed fetuses.	
11. excessive dryness of the conjunctiva and cornea of the eye	
12. abnormal development or growth of tissue	
13.diminution in the number of monocytes in the circulating blood	

Self-assessment

Clinical terminology is a terminological complex of medico-biological branches including problems related to a sick organism. It is called pathology /gr. pathos – suffering + logos–science/. It studies, first of all, the clinic of the disease, i.e. its symptoms and manifestations, the disturbances of physiological functions, the structural alterartions of the organs and tissues as well as treatment and prophylaxis. The fundamentals of the clinical terminology is the terminology of pathological anatomy – the science which studies material, structural bases of the disease, its morphological essence /Gr.morphe – form, structure/. The Greek–Latin duplicates and single terminoelements /TE/ of the clinical terminology are given in a table illustrating the names of the organs, tissues and some pathological processes.

! N.B.! 1. Clinical terms denoting 'Congenite or acquired absence of some organ or part of body' are formed as follows: Prefix "a-, an-" + stem of greek name of organ + ending "-ia" E.g.: acheiria – absence of hand apodia – absence of leg acephalia – absence of head 2. Terminoelement -scopia denotes 'methods of internal examination with the help of special instruments': endoscopia – examination of the inner layers of the internal tubular organs with the help of endoscopes. 3. Greek stem -stoma (opening) occurs as: a/ -stoma – fistule made by surgeon (the result of surgical operation b/ -anastomosis – artificial conjunction between hollow organs, vessels, cavities of the human body. E. g.: gastrostoma gastroduodenostomia

Exercise 11. Make the clinical terms and explain their meaning:

Combining elements	**A term**	**Meaning**
• cardi(o)- (-graphia; -gramma; -pathia; -logia);		
• angi(o)- (-pathia; -graphia; -logia; -gramma);		
• cholecyst(o)- (-pathia; -tomia; -ectomia; -graphia; -gramma);		
• mast(o)-; mamm(o)- (-graphia; -ectomia; -gramma);		
• cyst(o)- (-graphia; -tomia; -ectomia; -gramma);		
• encephal(o)- (-pathia; -gramma; -graphia).		

Exercise 12. Explain the meaning of the following terms and write down their combining elements:

A term	Meaning	Combining elements
gastrectomia		
Gastrotomia-		
angiogramma-		
Angiologia-		
Angiopathia-		
Angiographia-		
Angiocardiographia-		
keratectomia-		
Keratotomia-		
cystectomia-		
Cystogramma-		
Cystographia		
Cystotomia		
Cytologia		
Cytogramma		
colpotomia		
Enteropathia		

Exercise 13. Give the Latin term:

disease of vessels-

• science of cells-

• removal of stomach-

• science of natural vital processes in the human body-

• disease of small intestine-

• X-ray examination of heart-

• X-ray film of brain-

• X-ray examination of urinary bladder-

• removal of cornea-

• cutting of vagina-

• X-ray film of gallbladder-

• X-ray film of heart-

• science of life-

• disease of breast-

• science of blood vessels-

Exercise 14. Match missing Latin equivalents with Greek CFs, provide their dictionary forms and memorize both variants:

intestinum crassum; textus; struma; nervus; glandula; vesica fellea; oculus; medulla spinalis; medulla ossium; cellula; cornea; musculus; tendo

Greek CF	**Latin synonym**	**Meaning**
adeno-		gland
chole- **-cholia**	*fel, fellis n*	bile discharge of the bile
cholecysto-		gallbladder
colo- **-colon**		colon
cyto-		cell
dermo-; dermato-	*cutis,is f*	skin
ger-, geront-	*senilis, e*	senile, ageing
histo-		tissue
kerato-		cornea, cornification
lipo-	*adeps, ipis m*	fat, fat tissue
myelo-		spinal cord
myo-, myos-		muscle
neuro-		nerve, nervous system
ophthalmo-		eye
osteomyel-		bone marrow
pharmaco-	*medicamentum, i n*	medicine
phono- **-phonia**	*vox, vocis f*	voice, sound sounding
pyo-*	*pus, puris n*	pus
teno-		tendon
thyreo-		thyroid gland, goiter
tox-, toxic-	*venenum, i n*	poison

Exercise 15.Explain the meaning of the following terms:

1. Osteologia-
2. Osteoarthropathia-
3. Stomatologia-

4. Somatoscopia-
5. Acroalgia-
6. Spondylodynia-
7. Arthropathia-
8. Stomatologia-
9. Pathologia-
10. Stethometria-
11. Cardiographia-
12. Hormonotherapia-

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UNIT XIV. Word formation. Greek suffixes *-itis, -osis, -oma, -iasis, -ismus* in clinical terminology. Prefixes. Antonymic pairs of prefixes and their meaning. CFs denoting functional and pathological processes and conditions of the human body.

In this unit

- Word formation.
- Greek suffixes ***-itis, -osis, -oma, -iasis, -ismus*** in clinical terminology.
- Prefixes. Antonymic pairs of prefixes and their meaning.
- CFs denoting functional and pathological processes and conditions of the human body.

Greek suffixes *-itis, -osis, -oma, -iasis, -ismus* in clinical terminology

In order to make a clinical term denoting some inflammatory or other pathological condition, we take the body part name and add the necessary suffix from given in the table:

Suffix	Meaning	Examples
-itis	inflammation	***arthritis*** *– inflammation of the joints* ***laryngitis*** – ***rhinitis*** –
-osis	a) non-inflammatory, chronic condition	***arthrosis*** *– uninflammatory disease of joints of the chronic character;* ***hepatosis*** – ***neurosis*** –
	b) disease caused by substance or pathogene	***toxicosis*** *– disease, caused by the poison substances;* ***mycosis*** –
	c) pathological or physiological increase	***leucocytosis*** *– increase in the number of leucocytes in peripheral blood;* ***fibrosis -***
-iasis	abnormal condition or disease	***nephrolithiasis –*** *formation of stones in the kidneys* ***candidiasis*** –
-oma*	tumor	***chondroma –*** *a benign tumor of the cartilage;* ***myoma*** –
-ismus	non-inflammatory condition	***hyperthyroidismus*** *– the overproduction of thyroid hormones by an overactive thyroid* ***gigantismus*** –

*** Malignant** tumours of some tissues have traditional names, e.g.: ***carcinoma*** (Gr. *karkinos – cancer*) *– cancerous tumour;* ***sarcoma*** *(*Gr. *sark – meat, flesh) – sarcoma; tumour, looking like rotten meat.*

Medical words are often put together, cobbled from two or more building blocks. Among these building blocks are the prefixes.

CFs denoting functional and pathological processes and conditions of the human body.

Initial and final CF	Latin synonym	Meaning
arthro-	articulatio,onis f	

carcino-	cancer,cri m	
-cele	hernia,ae f	
entero-	intestinum,i n intestinum tenue	
-lithus	calculus,i m	
metro-, hystero- **-metrium**	uterus,im	
myco-	fungus,i m	
nephro-	ren,renis m	
procto-	rectum,i n	
pyelo-	pelvis renalis	
rhino-	nasus, i m	
splanchno-	viscera (pl)	
spleno-	lien,enis m	
tomo-	stratum, i n	

Greek CF	**Meaning**
-ectasia, -ectasis	dilation or expansion
-ectomia	surgical operation of removing any organ or tissue
-lysis	1. destruction 2. operation for breaking up the adhesions in an organ
-pexia	surgical fixation
-plastica	surgical (restorative) plastic operation, plastic surgery
-ptosis	falling or downward displacement of an organ
-stenosis	narrowing, constriction, stricture
-stomia	operation of making up artificial or surgical opening
-tomia	surgical incision, a cutting operation

GREEK	**LATIN**	**ENGLISH**
aesthes- **-aesthesia**	sensus, (4th declension)	sensation, sensibility
angio-	vas,	vessel
chondro-	cartilago,	cartilage
haemo- haemato- *	sanguis,	blood
morpho-	forma,	form
oto-	auris,	ear
phlebo-	vena,	vein
uro-	urina,	urea, urine, the urinary system

* Initial CF **haemo- haemato**- in combination with the name of the organ means haemorrhage into the organ cavity, e.g., **haemothorax** – haemorrhage into the pleural cavity.

Greek CF	**Meaning**	**Greek CF**	**Meaning**
-aemia	blood condition	**-rrhoea**	discharge, flowing
-ectasia	dilation, expansion	**- stenosis**	narrowing, constriction

-gnosis, -gnosia	knowledge		
-mnesis/mnesia	pertaining memory	**tono-** **-tonia**	blood pressure, tension
-plasia	development (of tissues)		
		-uria	urination

Prefixes. Antonymic pairs of prefixes and their meaning.

Many medical terms include Greek and Latin prefixes. Prefixes are never used independently, but when added before verbs, adjectives, or nouns, they modify their meaning. Here is a list of the most common prefixes used in medical terms.

Latin prefixes: they are added to latin origin words only:

Prefix	Meaning	Examples
ab-	from, away from, off; outside of	**abductor** –
ad-	increase, toward, to	**adductor** –
co-	with, together, in association	**coordinatio** –
contra-	against, opposing,contrary, contrasting	**contralateralis** –
de-, des-	away from, cessation	**desinfectio** –
ex-	out of, outside of, from	**exspiratio** –
extra-	outside or beyond an area	**extracellularis** –
infra-	below *or* beneath	**inframandibularis** –
inter-	between *or* among	**intervertebralis** –
intra-	within, inside	**intravenosus** –
per-	through	**perforatio** –
post-	after *or* behind	**posthaemorrhagicus –**
pre-	before, in front of	**precordium –**
re-	backward, again	**reversio** –
retro-	backwards, behind	**retrocardialis** –
sub-	under, *or* beneath	**sublingualis** –
super-	more than, above, superior	**supersonic –**
supra-	over, above, beyond or greater than excessive	**suprarenalis** –
trans-	across or through	**transfusio** –

Greek origin prefixes are added to the Greek words

Prefix	Meaning	Example
a- (**an** before a vowel or *h*,**)**	not, without, absence of	**atonia -** *absence of tone*
ana-	back, again	**anamnesis –** *information about the disease obtained from the patient or the relatives*
ant-, anti-	against, opposing, counter- acting	**antisepticus -** *antiseptic, killing microbes*
auto-	self	**autoserotherapia –** *treatment with the injection of the own serous fluid*
cata-	down; absolute completeness	**catamnesis –** *total information concerning the disease after the treatment*
dia-	through, during, across	**diagnosis –** *the determination of the nature of the disease*
dys-	difficulty, being wrong, disordered, abnormal	**dysbacteriosis** – *disturbance of normal intestinal flora*
ecto-, ect-, exo-	outside or situated on the outer side	**ectomia** – *excision of an organ or part*
en-,endo-	in, within; inner layer	**endocarditis -** *inflammation of inner lining of cardiac chambers*
epi-	upon, on	**epidermis –** *an outer layer of the skin*
hemi- **semi-**	half	**hemiplegia –** *paralysis of one half of the body* **semicomatosus** – a state of half consciousness
hyper-	above, extreme, beyond normal	**hypertonia –** *an increase of vascular tonus*
hypo-	under, below normal *or* deficient	**hypotonia –** *a decrease of vascular tonus*
meta-	after, behind	**metamorphosis –** *change in a form or structure*
para-	beside, near, resembling	**paratyphus-** *a disease resembling the typhus*
peri-	surrounding, around	**pericardium -** *membranous sac enclosing the heart*
poly-	many, much; plurality of smth	**polyuria –** *the state or condition of discharging abnormally large quantities of urine*
pro-	before another	**prognosis** – *the determination of the nature of the disease*
sym-/syn-	similarity, likeness, or being together	**synostosis** – *movable union of bones*

Practical exercises

Exercise 1. Match the following CFs having similar spelling in both Greek and Latin with their meaning:

Greek CF	Meaning
1. bronch-	a) pylorus (of the stomach)
2. fibr-	b) tuberculosis
3. helminth-	c) thrombocyte
4. laryng-	d) fiber
5. leucocyt-	e) larynx
6. phthis-	f) bronchus
7. pylor-	g) parasitic helminths
8. thrombocyt-	h) leucocyte

Exercise 2. Match the terms with their meaning:

a) *osteoma; odontoma; sarcoma; fibroma*

1.a tumor of odontogenic origin	
2. a benign slowgrowing mass of mature, predominantly lamellar bone	
3. a benign neoplasm derived from fibrous connective tissue	
4. a connective tissue neoplasm usually highly malignant, formed by proliferation of mesodermal cells	

b) *duodenitis; encephalitis; enteritis; proctitis; rhinitis; pyelitis; cystitis*

II. a)	II. b)
1. inflammation of the brain	
2. inflammation of the intestine, especially of the small intestine	
3. inflammation of the nasal mucous membrane	
4. inflammation of a bladder, especially the urinary bladder	
5. inflammation of the renal pelvis	
6. inflammation of the duodenum	
7. inflammation of the mucous membrane of the rectum	

Exercise 3. Analyse the terms according to the meanings of CF, provide dictionary forms of Latin equivaents to the CFs denoting organs. Consult the dictionary if necessary:

Term	Latin Equivalents	Meaning
1. gastroenteritis	*ventriculus,i m intestinum tenue*	*inflammation of the stomach and the small intestine*
2. proctostenosis		
3. splanchnologia		
4.bronchomycosis		
5. helminthosis		
6. osteoplastica		
7. tomographia		
8.hepatopexia		
9. odontoma		
10. laparotomia		

11. phthisiatria		
12. spondylosis		
13. pyelographia		
14. hysterectomia		
15. cystolithiasis		

Exercise 4. Construct the terms with the following meanings:

Meaning	Clinical term
1. inflammation of the liver	
2. presence of calculi in the liver	
3. downward displacement of the liver	
4. narrowing of the lumen of bronchial tube	
5. a benign neoplasm derived from fibrous connective tissue	
6.a condition characterized by the occurrence of multiple fibromas with a relatively large distribution.	
7. dissection of the viscera by insicion	
8.surgical restoration of the nose	
9. pain in the rectum	
10. inflammation of the rectum	
11. disease caused by fungi	
12. constriction of the larynx	
13. dissecting of the lung tissue	
14. removal of the urinary bladder	
15.downward displacement of the internal organs	
16.creation of an opening into the urinary bladder	
17.a connective tissue neoplasm, usually highly malignant	
18.a disease caused by toxins	
19.a degenerative affection of a joint	
20. establishment of a communication between the stomach and the intestine	

Exercise 5. Choose the prefixes in accordance with the given meanings:

1. situated on the opposite side	…….**lateralis**
2. inflammation of inner lining of cardiac chambers	…….**carditis**
3. situated between the ribs	……..**costalis**
4. situated above the clavicle	…….**clavicularis**
5. situated beneath the **s**kull	…….**cranialis**
6. situated above the kidneys	…….**renalis**
7. implanting in one part a tissue or organ taken from another part or from another individual	…….**plantatio**

8. situated within the substance of muscle	…….**muscularis**
9. situated above the sternum	…….**sternalis**
10. situated behind the brain	……**cerebralis**
11. repeated implanting of tissue	…….**implantatio**
12. situated below the orbit	……**orbitalis**
13. situated above the orbit	……**orbitalis**
14. situated outside the lung	…….**pulmonalis**
15. situated under the skin	……**cutaneus**
16. through the liver	…….**hepaticus**

Exercise 6. Explain the prefixes, give the meanings of the clinical terms:

	Prefix	**Meaning**
1.extravascularis		
2.infraorbitalis		
3. interosseus		
4.intramuscularis		
5.retromandibularis		
6. postoperativus		
7. transfusio		
8. transplantatio		`
9. subacromialis		
10. intracellularis		
11. subcutaneus		

Exercise 7. Match prefixes with their meanings:

1. semi-, half-;	a. epi-
2. many, multiple	b. endo-
3. near, around	c. syn-
4. inside	d. dys-
5. connection	e. a-, an-
6. disorder	f. hyper-
7. absence	g. hemi-
8. increase	h. poly-
9. above	i. peri-

Exercise 8. Write out the prefixes, explain the meaning of the terms:

	Prefix	**Meaning**
1. autogenesis		
2. autoinfectio		
3. catamnesis		
4. diagnosis		
5. dysplasia		
6. enuresis		

7. hemiplasia		
8. hemialgia		
9. hyperalgesia		
10. hypomnesia		

Exercise 9. Compose the terms according to their meanings:

Meaning	Clinical term
1. the medical speciality concerned with the basis of anaesthesia	
2. the recording of the venous pulse	
3. treatment of a disease by the use of blood	
4. the science concerned with the configuration or the structure.	
5. presence of urea in the blood	
6. a forecast of the probable course and/or outcome of a disease	
7. loss of memory	
8. narrowing of one or more blood vessels	
9. pain in a cartilage	
10. formation of a cartilage	

Exercise 10. Complete the terms:

1. coordinated or correlated action of two or more structures, agents –	**…… ergia**
2. increased amount of sugar in the blood -	**….. glykaemia**
3. impairment of the normal function of intestinal flora-	**…… bacteriosis**
4. an increase in the number of cells in a tissue or organ -	**…… plasia**
5.any intimate association between two species -	**……. byosis**
6.total or partial inability to recall past experience-	**……. mnesia**
7. absence of tone-	**…… tonia**
8. the drug that reduces the blood pressure of hypertensive individuals-	**anti…….tonicus**
9. restoration, following disease, illness, or injury, of the ability to function in a normal or near normal manner -	**…….habilitatio**
10. an agent that reduces the output of urine (adj.) –	**…….diureticus**
11. pain in the epigastric region -	**epigastr ……..**
12.a disease process involving a number of peripheral nerves –	**polyneuro……**

Self-assessment

A great number of these terms are made up with prefixes and suffixes of Latin or Greek origin.

! Nota bene! Remember the following Greek prefixes:

1. A- /an-/ – without /amnesia – loss of memory/
Dys- – abnormal /dystopia – malposition/
Eu- – normal /eupnoe – normal breathing/
Ana- – up /anacrota/
Cata- – down /catacrota/
Poly- – many /polydipsia – excessive thirst/
Peri- – around /pericardium – heart bag/
Para- – near /parametrium – cellular layer near uterus/
Endo- /en-/ – inside /endocardium/
Epi- – above /epicardium/
Exo- /ecto-/ – outside /exophthalmus – protruding eye/
Prae- – before /praesenilis – before senility/
Meta- /met-/ – behind, moving from one state to another /metastasis/
Hypo- – less than normal /hypotonia/
Hyper- – more than normal /hypertonia/
Dia- – over, across /diametrum/
Anti- – against /vaccinum antipestosum – vaccin against plague/
Sym- /syn-/ – together /symbiosis/

Affixation plays an active role in the formation of clinical terms.

2. Composed clinical terms occur as word combinations with coordinated and uncoordinated attributes. These terms are formed by nouns and adjectives in Nominativus and Genetivus Singularis or Pluralis:

1. icterus neonatorum – jaundice of newborns
2. asthma bronchiale – bronchial asthma
3. caries profunda – profound caries
4. tumour caeci – caecum tumour
5. sclerosis endocardii diffusa – diffuse sclerosis of endocardium
6. oedemata membrorum inferiorum – oedemas of inferior extremitie

Exercise 11. Match th eterms with their meaning:

a) 1. hepatitis; 2. hepatocele; 3. hepatolithiasis; 4. hepatoptosis; 5. hepatonecrosis; 6. hepatopexia

1. inflammation of the liver	
2. downward displacement of the liver	
3. death of liver cells	
4. hernia of the liver	
5. presence of calculi in the liver	
6. anchoring of the liver to the abdominal wall	

b) 1. fibrogenesis; 2. fibroma; 3. fibromatosis; 4. fibrosarcoma; 5. fibrosis; 6. fibrothorax

1. growing of the fiber tissue	

2. a condition characterised by the occurrence of multiple fibromas, with a relatively large distribution	
3. the production or development of fibers	
4. fibrosis of the pleural space	
5. a benign neoplasm derived from fibrous connective tissue	
6. malignant neoplasm derived from deep fibrose tissue	

c) 1. laryngoscopia; 2. laryngophthisis; 3. laryngometria; 4. laryngoptosis; 5. laryngotomia; 6. laryngomalacia; 7. laryngostomia; 8. laryngopathia; 9. laryngoplastica; 10. laryngostenosis

1. stricture or narrowing of the lumen of the larynx	
2. a surgical incision of the larynx	
3.any disease of the larynx	
4.the establishment of a permanent opening from the neck into the larynx	
5. reparative or plastic surgery of the larynx	
6. an abnormally low position of the larynx at birth (which may be congenital or acquired)	
7. tuberculosis of the larynx	
8. visual examination of the interior larynx	
9. the systematic measurement of the larynx.	
10. a softening of the tissues of the larynx	

Exercise 12. Form the Greek & Latin clinical terms according to the meaning:

• inflammation of the tissue surrounding the heart-	
• internal examination of nose	
• fixation of kidney	
• removal of bone	
• inflammation of uterus mucous	
• science of skin	
• cutting of uterus	
• removal of anus and rectum	
• inflammation of renal pelvis and urinary bladder	
• disease of bones	
• abnormal condition of skin	
• inflammation of lips	
• fixation of anus and rectum	
• disease of uterus	

• inflammation of vertebrae	
• internal examination of oral cavity	
• inflammation of nose	
• tumour of kidney	
• removal of kidney	

Exercise 13. Build up clinical terms with the given roots and suffixes, explain their meaning:

• hyper- (-keratosis; -mastia; -nephroma; -plasia; -trichosis; -trophia);	
• hypo- (-plasia; -trophia; -gastrium; -thyreosis);	
• dys- (-enteria; -trophia; -plasia; -keratosis;);	
• a-; an- (-trophia; -plasia; -ophthalmia; -trichia; -dentia; -cheilia);	
-(o)rrhagia (ot-; metr-; proct-; gastr-; enter-; stomat-; ophthalm-; odont-; hyster-; cheil-; rhin-);	
• trich(o)- (-pathia; -rrhoea; -osis; -algia);	
• ot(o)- (-genus; -rrhagia; -scopia; -itis);	
• phleb(o)- (-gramma; -graphia; -itis; -tomia; -ectomia; -rrhaphia);	
• rhin(o)- (-scopia; -rrhagia; -rrhoea; -pathia; -itis; -algia).	

Exercise 14. Find Latin or Greek suffixes and explain their meaning in the following clinical terms:

Latin	**English**
Acidosis-	
Helminthosis-	
Silicosis-	
Myocardium-	
Myocardiofibrosis-	
Myositis -	

Myoma-	
Myoblastoma-	
Ventriculitis-	
Rhinitis-	
Thrombocytes-	
thrombocytosis,	
sarcomatosis-	
papillomatosis-	
Omphalitis-	
Typhlitis-	
Oophoritis-	
Salpingitis-	
Orchitis-	

Exercise 15. Translate clinical terms into English:

A) Hernia vaginalis-
B) hernia subcutanea-
C) lymphocytosis infectiosa acuta-
D) colitis superficialis-
E) resectio pylori-
F) colitis ulcerosa non specifica-
G) Inflammation purulenta-
H) sarcoma osteogenum-
I) chondromatosis ossium-
J) punctio pancreato–

UNIT XV. Word formation. Greek-Latin doublets, specifying body parts, internal organs and tissues. Terminoelements denoting surgical operations.

In this unit

- Word formation.
- CFs denoting names of surgical procedures.
- Formation of complex clinical terms using given CFs.

Memorize Greek CFs, provide dictionary forms for Latin equivalents and memorize them:

Greek CF	Latin synonym	Meaning
bio-	*vita,*	life
blasto-(-blastus)	*germen, inis n*	germinal cell at an early embryo stage
cheil- ***-cheilia***	*labium,*	lip pertaining to the lip
colpo-	*vagina,*	vagina
dactyl-	*digitus,*	finger
masto- ***-mastia***	*mamma,*	breast, mammary gland; man' pectoral muscle
meningo-	*mater,*	meninx*(membrane of the brain and the spinal cord)*
noso-	*morbus,i m*	disease
onycho- ***-onychia***	*unguis,*	nail pertaining to the nail
oophor-	*ovarium,*	ovary
psycho-	*animus,i m*	mind, soul
salpingo-	*tuba uterina*	uterine tube, Fallopian tube
sial- ***-sialia***	*saliva,*	saliva pertaining to the saliva
stomat-	*os,*	mouth, oral cavity
thermo- ***-thermia***	*calor, oris m*	warmth, heat heating
topo- ***-topia***	*locus,i m*	place, topica pertaining to a place
typhlo-	*caecum,*	cecum

Memorize the following CFs :

- asthenia	lack of strength	**-schisis**	split, cleft
-kinesia	movement	**-sthenia**	strength, force, power
-opia; -opsia	vision, eyesight	**oligo-**	little, few
-phagia	eating, swallowing	**-rrhexis**	splitting or rupture of a part
-philia	disposition, inclination, propensity		

Memorize the following CFs:

CF	Latin synonym	Meaning	Examples
chromo-; **chromato-** **-chromia**	color, oris m	colour	
cyano-	coeruleus, a, um	dark-blue, cyanotic	
erythro-	ruber, bra, brum	red, erythrocyte	
glyco-; glyk-	dulcis, e	sugar, glucose, sweet	
leuc-	albus, a, um	white; leucocyte	
macro-	magnus, a, um	large, great	
mega-; megalo- **-megalia**	magnus, a, um	large, increased enlargement of an organ	
micro-	parvus, a, um	small, reduced	
polio-	griseus, a, um	pertaining to the grey substance of the brain	
poly-	multus, a, um	multiple, many	
pseudo-	spurius, a, um	false	
xantho-	flavus, a, um	yellow	
xero-	siccus, a, um	dry	

Memorize the following final CFs. Denoting surgical methods of treatment:

Greek CF	Meaning
-ectasia, -ectasis	dilation or expansion
-ectomia	surgical operation of removing any organ or tissue
-lysis	1. destruction 2. operation for breaking up the adhesions in an organ
-pexia	surgical fixation
-plastica	surgical (restorative) plastic operation, plastic surgery
-ptosis	falling or downward displacement of an organ
-stenosis	narrowing, constriction, stricture
-stomia	operation of making up artificial or surgical opening
-tomia	surgical incision, a cutting operation

Pay attention to some names of internal organs:

a/ names of female organs:

colp- – vagine
oophor- – ovary
salping- – uterine tube
trachel- – neck of the uterus

b/ names of organs with terminoelement ‘cyst’:

cyst- – urinary bladder
cholecyst- – gallbladder
dacryocyst- – lacrimal sac

c/ names of organs identical in anatomy and clinics:

pylorus, i m (pylor-) trachea, ae f (trache-)
hepar, atis n (hepat-) – liver peritoneum, i n (periton-)
duodenum, i n (duoden-) colon, i n (col-)
gaster, tris f (gastr-) – stomach ileum, i n (ile-)
oesophagus, i m (oesophag-) urethra, ae f (urethr-)
larynx, ngis m (laryng-) ureter, eris m (ureter-)
pharynx, ngis m (pharyng-) thorax, acis m (thorac-) – chest

! N.B.!

1. One must distinguish meanings of the terminoelements -ectasia (pathological process of the organ distension**, e.g**. gastrectasia – distension of the stomach) and -eurysis (artificial dilatation of any hollow organ with the special instrument called –eurynter, e.g. metreurysis – artificial dilatation of the uterus with the metreurynter to stimulate the process of the childbirth)
2. One must keep in mind that the terminoelement -schisis very often denotes the congenital vices of embryonic development (e.g.cranioschisis – congenital splitting of the cranium bones, cleft cranium)
3. One may use the terminoelement -centesis (in the composition of the compound terms) and the Latin word punctio, onis f (with the Latin name of the organ or tissue in the Genetive) to determine English puncture. **E.g**. English paracentesis of the ovary may be translated as follows: Latin – punctio ovarii, Greek – oophorocentesis.

Practical exercises

Exercise 1. Match the terms with their meaning:

a) *1. thermoneurosis; 2. thermolysis; 3. thermotherapia; 4. thermohyperaesthesia; 5. thermoplegia*

1. treatment of a disease by therapeutic application of heat	
2. very acute sensitivity to the heat	
3. loss of body heat by evaporation, radiation, etc.	
4. sunstroke	
6. elevation of the temperature of the body due to an emotional influence	

b) *1.nosomycosis; 2. nosophobia; 3. nosophilia; 4. nosotoxicosis*

1. an inordinate dread and fear of disease	
2. a morbid desire to be sick	
3. any disease caused by a fungus	
4. a morbid state caused by a toxin	

c) *1. onychodystrophia; 2. onychograph; 3.onychotrophia; 4.onychomalacia*

1. dystrophic changes in the nails occuring as a congenital defect or due to any illness or injury that may cause a malformed nail	
2. an instrument for recording the capillary blood pressure as shown by the circulation under the nail	
3. abnormal softness of the nails	

4. nutrition of the nails	

Exercise 2. Analyse the terms, translate them into English:

1. arterial **suture**	**arterio**…….
2. surgical **restoration** of a joint function forming new joint surfaces	**arthro……**
3.surgical **incision** of a joint with the diagnostic and therapeutic name	**arthro……**
4. **dissection** of the alveola wall	**alveolo……**
5. surgical **removal** of the gingiva	**ul……..**
6. surgical **removal** of the tooth apex	**apic…….**
7. **plastic surgery** of the lip	**cheilo……**
8. Caesarean **section** of the vagina	**colpohystero……**
9. surgical **fixation** of the uterus to the anterior abdominal wall	**hystero……**
10. making **of an opening** from the larynx on the neck in case of laryngostenosis (*the narowing of the larynx)*	**laryngo……..**

Exercise 3. Analyse the terms, provide Latin equivalents to the names of the organs and translate into English:

Term	Latin equivalent	Meaning
1.anonychia		
2. mastoptosis		
3. chondroblastus		
4. sialorrhoea		
5. cheiloschisis		
6. onychorrhexis		
7. typhlostenosis		
8. salpingoophoritis		
9. psychiatria		
10.mastopathia		
11.stomatitis		
12.oophorectomia		
13.thermotherapia		
14.phleborrhexis		
15.oligokinesia		
16.onychotrophia		
17.neurasthenia		
18.typhlostenosis		

Exercise 4. Form the terms with the following meanings:

Meaning	Term
1.science about classification of the diseases	
2.local pain	

3.caused by psychic reasons	
4.rupture of the uterine tube	
5.treatment by the methods of psychic influence	
6. inflammation of the mammary gland	
7. pain in the ovary	
8. instrumental examination of the mouth cavity	
9. fungous (mycotic) lesion of nails	
10. rupture of the blood vessel	
11.a process for measuring the regional temperature of a body part or organ	
12. greater than normal moving activity	
13. microscopic investigation of a piece of vital tissue	
14.muscle weakness	
15. difficulty in performing voluntary movements	
16. inflammation of meninges (brain layers)	
17. swalling of air while eating	
18. rupture of the heart wall	

Exercise 5. Find and write down the correct meanings:

a) *1. psychoneurosis; 2. psychonosologia; 3. psychologia; 4. psychiatria; 5. psychopharmacologia; 6. psychogenesis*

1. the use of drugs to treat mental disorders	
2. the origin and development of the psychic processes including mental, behavioral, personality.	
3. mental or behavioral disorder of a mild or moderate severity.	
4. the classification of mental illnesses	
5. the science dealing with the mind and mental processes, especially in relation to human and animal behavior	
6. The branch of medicine that deals with the diagnosis, treatment, and prevention of mental and emotional disorders	

b) *1. sialoangiectasia; 2. sialolithiasis; 3. sialostenosis; 4. sialoadenectomia*

1. the formation or presence of a salivary calculus	
2. dilation of the salivary ducts	
3. excision of the salivary gland	
4. stricture of the salivary duct	

c) 1.oligaemia; 2. oligocholia; 3.oligodactylia; 4. oligotrophia; 5. oliguria; 6. oligosialia

1. deficient nutrition	
2. a deficiency in the amount of blood in the body	
3. a deficient secretion of the bile	

4. presence of fewer than five digits on one or more extremities	
5. scanty urination	
6.a scanty secretion of the saliva	

Exercise 6. Match the terms and their meaning:

a) ***1****.uropoesis; 2.erythropoesis; 3. haemopoesis*

1. formation of the urine	
2. formation of the erythrocytes	
3. formation of blood	

b) 1.acromegalia;2.acrophobia;3.acrocyanosis; 4. acrogeria; 5.acrokeratosis

1. a disorder marked by progressive enlargement of peripheral parts of the body	
2. a circulatory disorder in which the hands, and less commonly the feet, are persistently cold and blue	
3. disease, characterised by warty excrescences of the hands and feet	
4.morbid fear of height	
5. congenital reduction or loss of subcutaneous fat and collagen of the hands and feet, giving the appearance of senility	

Exercise 7. Explain the meaning of the following terms:

1. leucolysis	
2. microchirurgia	
3. oliguria	
4. polyneuritis	
5. leucocytosis	
6. erythropenia	
7. adiponecrosis	
8. microgastria	
9. megacolon	
10. erythrodermia	
11. chromaturia	
12. megalosplenia	
13. glykaemia	
14. nephromegalia	
15. polioencephalitis	
16. macrocephalia	
17. polyarthritis	
18. autohaemotherapia	
19. megarectum	
20. leukaemia (leucosis)	

21. microsplenia	
22. cyanodermia	
23. microbiologia	
24. glycogenesis	
25.leuconychia	

Exercise 8. Form the terms with the following meanings:

Meaning	Term
1.the passage of copious amounts of urine	
2. low concentration of white cells in the blood	
3.small sizes of the stomach	
5.method of treatment by the transfusion of the body's own blood	
7. inflammation of many muscles	
8. discharge of glucose with urine	
9.inflammation of the grey substance of the spinal cord	
10. red blood cell	
11. dissolution of erythrocytes	
12. discharge of abnormally coloured urine	

Exercise 9. Match the terms with their meanings:

a) 1. anergia; 2.polyphagia; 3. leucocytopoesis; 4.erythrophobia; 5.glycogeusia

1. abnormal desire to consume excessive amounts of food	
2. lack of energy	
3. formation of leucocytes	
4. painful sensitivity to a red colour	
5. the condition in which there is a sweet taste in the mouth without sweet taste stimulus	

b) 1. megalopsia; 2. xanthoderma; 3. xerosis; 4. xantopsia; 5. macroglossia

1. congested or aquired enlargement of the tongue	
2. seeing things enlarged	
3. abnormal dryness of bodily tissues, esp. the skin, eyes, or mucous membranes	
4. yellow skin. any yellow coloring of the skin	
5. yellow vision; seeing things in a yellow colour	

c) 1.pseudoanaemia; 2.polydactylia; 3. micropsia; 4.microgenia, micrognathia; 5.acromegalia

1.a defect of vision in which objects appear to be smaller than they appear to a person with normal vision	
2.a condition in which one or both jaws are unusually small	

3.false anaemia	
4.a condition caused by excessive secretion of growth hormone, usually by a benign tumour of the anterior pituitary gland	
5. posessing more than the normal number of fingers or toes	

Exercise 10. Complete the terms:

1. loss of sensitivity of one or more of the extremities	…….**anaesthesia**
2.inflammation of the skin of the extremities	**acro……..itis**
3. abnormal colour of the urine	……...**uria**
4. formation of the white blood cells	**leucocyto……..**
5. abnormal enlargement of the viscera	**splanchno…….**
6.formation of red blood cells	**…….poësis**
7.frequent urination	**…….uria**
8.multiple sclerosis	**…….sclerosis**

Self-assessment

Clinical terminology is a terminological complex of medico-biological branches including problems related to a sick organism. It is called pathology /gr. pathos – suffering + logos–science/. It studies, first of all, the clinic of the disease, i.e. its symptoms and manifestations, the disturbances of physiological functions, the structural alterartions of the organs and tissues as well as treatment and prophylaxis. The fundamentals of the clinical terminology is the terminology of pathological anatomy – the science which studies material, structural bases of the disease, its morphological essence /Gr.morphe – form, structure/. The Greek–Latin duplicates and single terminoelements /TE/ of the clinical terminology are given in a table illustrating the names of the organs, tissues and some pathological processes

Exercise 11. Explain the meaning of the following terms and write out their combining parts:

A term	**Meaning**	**Combining parts**
Splanchnologia		
gastroenterologia		
intestinoplastica		
ileocoloplastica		
Laparotomia		
Gastrectasia		
nephrostomia		

splenoptosis		
nephrotomographia		
hysterocervicotomia		
dacryocystographia		
gastroschisis		
gastroschisis		
Cholangitis		
colostomia		
splanchnoptosi		
ureterotomia		

Exercise 12. Translate into Latin:

1) Pain in the vertebral column-
2) fixation of the kidney-
3) falling/prolapse/ of the kidney-
4) excision of the uterus-
5) incision of the abdomen-
6) formation of fistula on the uterine tube-
7) incision of the gallbladder-
8) fixation of the urinary bladder-
9) incision of the colon-
10) formation of fistula on the stomach-
11) tumour of the dental tissue/tooth/-
12) spasm of the caecum-
13) excision of the prostate-
14) fixation of the spleen-
15) pain in the rectum

Exercise 13. Group the terms according to the following meaning, translate them and write their combining elements:

Haemotherapia, haemangioma, haematoma, haemarthrosis, haematonephrosis, haematoma, azotaemia, cholaemia, uraemia, haematuria, urethritis, myoma, thymocytus, acrohidrosis. Myocardium, myometrium, hydraemia, lymphocytus, hydrarthrosis, lymphorrhoea, herniorrhaphia, epipharynx, gastrocele, meningocele, anaemia, toxaemia, myasthenia.
Neurosis, neuritis, neuroma, angioneurosis, adenotomia, lymphadenitis, lymphangiitis, hyperaemia, lymphadenoma, lymphangioadenographia, hidradenitis, anhidrosis, aesthesiologia. Angiectasia,

phlebectasia, anaesthesia, hypaesthesia, phlebosclerosis, dermatosis, dermatitis, sphygmographia, lithotomia, cholelithiasis, urolithiasis, broncholithus, broncholithiasis.
Pyodermia, pyaemia, pyorrhoea, pyothorax, pyuria, pyometria, endocrinologia, haemorrhagia, gastrorrhagia, odontorrhagia. Aplasia, dysplasia, hyperplasia, myelodysplasia, myelosis, osteomyelitis, mastoptosis, hydrocephalus, otitits, ophthalmologia, gynaecologia, paediatria, logopaedia, orthopaedia, phonopaedia, gerontologia, hydrophobia, photophobia, acrophobia, monophobia, hydrophilia, haemophilia. Apnoe, dyspnoe, eupnoe, pneumocephalia, pneumographia, pneumarthrosis, atrichia, anonychia, dacryadenitis, coprostasis, amnesia, sialadenitis, pyoophoritis, blepharitis, keratitis. Hypertrichia, aphonia, schizophrenia, dacryocystographia, lipodystrophia, dacryocystorhinostomia, ulorrhagia, uranorrhaphia, odontolithus, meloplastica.

Meaning	**Translation**	**Combining elements**
Everything connecting with blood		
Everything connected with tumor		
Inflammatory diseases		
Non-inflammatory diseases Science names		

Phobia		
Lithiasis diseases		
EX-ray procedures		
Pus-containing diseases		

Exercise 14. Match the terms with their meaning:

a) *osteoma; odontoma; sarcoma; fibroma*

1.a tumor of odontogenic origin	
2. a benign slowgrowing mass of mature, predominantly lamellar bone	
3. a benign neoplasm derived from fibrous connective tissue	
4. a connective tissue neoplasm usually highly malignant, formed by proliferation of mesodermal cells	

Exercise 15. Group the following words according to their common combining element and write their meaning:

Acidosis, coniosis /gr. conios – dust/, pneumoconiosis, ascaridosis, mycosis, fibrosis, osteoarthrosis, tuberculosis, lymphologia, lymphocytus, lymphocytosis, lymphocytoma, lymphoma, morphinismus, mercurialismus, prostatismus, arthrosis, arthritis, nephrosis, nephritis, hepatosis, hepatitis cholangitis, spondylosis, spondylitis, thrombocytosis, cretinismus /fr.cretine` – cretin/, amoebiasis, pyelitis, helminthosis, silicosis, myocardium, myocardiofibrosis, myositis, myoma, myoblastoma, ventriculitis, thrombosis, rhinitis, thrombocytus, thrombocytosis, sarcomatosis, papillomatosis.

UNIT XVI. Multiword clinical terms referring to diagnoses and pathological processes in the main branches of medicine. Translation of clinical diagnoses.

In this unit

- Multiword clinical terms referring to diagnoses and pathological processes in the main branches of medicine.
- Translation of clinical diagnoses.

The clinical terms to denote diagnosis

For the health care professional, it is imperative that precision is used in the way patients' physical conditions and diseases are described. Modern medical terms and terminology provides such precision and specificity. It facilitates effective communication and correspondence between physicians across borders and from different parts of the world. In addition, medical terminology is used in colleges of medicine and other areas of the health sciences.

A system of words, medical terminology can contain a prefix, root word, a combining vowel and a suffix to create medical terms. Medical terms describe medical aspects and diseases. Specific locations on the body are indicated by prefixes. The meanings of medical terms change with different beginnings and endings. Medical terms can contain multiple root words, combining vowels etc. A physician must be very precise when dictating a term. If a letter or word is misused or inadvertently changes, the result could be unnecessary tests and appointments. In addition, an unnecessary treatment or an incorrect diagnosis could occur. The rules that specify how the multitude of roots, prefixes, and suffixes can be combined are generally based in Latin.

Diagnosis is the process of identifying a disease based on a person's signs and symptoms, which may be gleaned from a simple physical examination or require ancillary testing, lab work, imaging studies, etc. The multiword terms in Latin are the most precise names of pathological conditions and diseases. The words in such terms are arranged in accordance with the rules of Latin grammar.

Nouns

amputatio, onis f	**amputation** (operation of cutting off the limb, its part or amputation of some organs)
asthenia, ae f	**asthenia**, fatigue (an abnormal loss of strenth)
abscessus,us m	**abscess** (collection of pus resultant to inflammation)
aneurysma,atis n	**aneurysm** (pathologic dilation of the wall of the vessel)
auscultatio,onis f	**auscultation** (method of examination of inner organs by the use of stethoscope), mediate auscultation
coma,atis n	**coma** (complete loss of consciouness)
cancer,cri m	**cancer** (any malignant neoplasm)
colica,ae f	**colic** (spasmodic pains in any organ, as the abdomen or stomach, kidney, etc.)
cysta,ae f	**cyst** (1 – a bladder; 2 –a sac, containing gas, fluid, etc)
diabetes, ae m	**diabetes** (the disease having in common the symptom "polyuria"
exstirpatio, onis f	**extirpation** (complete removal of an organ or diseased tissue)
extractio,onis f	**extraction** (of a tooth or of a fetus using obstetrical forceps)
gangraena, ae f	**gangrene** (death and decay of tissue as the result of interrupted blood supply,disease or injury

hernia,ae f	**hernia** (the projection of an organ or part through the lining of the cavity in which it is normally situated, esp.the protrusion of intestine through the front wall of the abdominal cavity)
infarctus,us m	**infarction** (a localized area of dead tissue (necrosis) resulting from obstruction of the blood supply to that part, esp.by the embolus)
inflammatio,onis f	**inflammation** (tissue-vascular response of the organism to pathogenic stimulus)
palpatio,onis f	**palpation** (method of examination of inner organs with the help of fingers)
paralysis,is f	**paralysis** (impossibility of voluntary movements in a muscle through injury or the disease of its nerve supply)
paresis,is f	**paresis** (incomplete or slight paralysis of motor finctions)
percussio, onis f	**percussion** (the act of striking a part with short, sharp blows as an aid in diagnosing the condition of the underlying parts by the sound obtained)
polypus,i m	**polyp (**small vascularized growth arising from the surface of a mucous membrane,having a rounded base or a stalklike projection)
punctio,onis f	**puncture** (taking the cerebrospinal fluid with the diagnostic aim)
resectio,onis f	**resection** (excision of a part of a bone, organ, or other part)
sectio, onis f	**incision**, **cut, section** (an act of cutting)
ulcus,eris n	**ulcer** (a disintegration of the surface of the skin or a mucous membrane resulting in an open sore that heals very slowly)

Adjectives

acutus,a,um	**acute**
acquisitus, a um	**acquired** (*opposite to* ***congenital)***
benignus,a,um	**benign** (denoting a mild character of an illness or the nonmalignant character of a neoplasm)
cerebellaris,e	**cerebellar**
chronicus,a,um	**chronic** (of long duration; denoting a disease of slow progress and long continuance)
congenitus,a,um	**congenital** (born with mental and physical anomalies, malformations; existing at birth)
diabeticus,a,um	**diabetic (**relating to or suffering from diabetes)
diffusus,a,um	**diffused**, dispersed
gangraenosus,a,um	**gangrenous**, mortified (pertaining to gangrene)
gastricus,a,um	**gastric** (pertaining to the stomach)
hepaticus,a,um	**hepatic** (pertaining to the liver)
infectiosus,a,um	**infectious**, contagious
malignus,a, um	**malignant**
mucosus,a,um	**mucous**
peritonsillaris,e	**peritonsillar** (located around one or both tonsils)
progressivus,a,um	**progressive**, advancing
purulentus,a,um	**purulent** (containing, consisting of or forming pus)

senilis,e	**senile**
serosus,a,um	**serous**, **serosal** (containing or producing serum or resembling a susbstance having a watery consistency)
spasticus,a,um	**spastic**, spasmodic
simplex,icis	**simple**
spinalis,e	**spinal**
subcutaneus,a,um	**subcutaneous**
totalis,e	**total**
transmuralis,e	**transmural**(through any wall, as of the body, or of a cyst or any hollow structure)
umbilicalis,e	**umbilical**

Practical exercises

Exercise 1. Make an agreement between the adjectives and nouns:
aneurysma (n) (axialis,e; cardiacus, a, um; diffusus, a, um)
coma (n) (diabeticus,a,um; hepaticus,a,um)
inflammatio (f) (acutus,a,um;allergicus,a,um; catarrhalis,e; chronicus,a,um)
punctio (f) (lumbalis,e; sternalis,e)
ulcus (n) (malignus, a,um; callosus,a,um; acutus,a,um; trophicus,a,um)
paralysis (f) (congenitus,a,um; spasticus,a,um; progressivus,a,um; acquisitus,a,um);
infarctus (m) (haemorrhagicus,a,um; bilirubinicus,a,um; albus,a,um; ruber,bra,brum)
amputatio (f) (obliquus,a,um; ,minor,us; ovalis,e)
hernia (f) (abdominalis,e; diaphragmaticus,a,um; femoralis, e)
morbus (m) (ulcerosus, a, um; chronicus, a, um)

Exercise 2. Translate the terms into English:

Latin	English	Latin	English
1. abscessus diffusus		12. hernia abdominalis	
2. paresis facialis		13.infarctus intestini	
3.inflammatio purulenta		14.aneurysma congenitum	
4.paralysis progressiva		15. ulcus chronicum	
5.amputatio minor		16.cysta ossea benigna	
6. exstirpatio vesicae felleae		17.cancer linguae	
7. colica renalis		18.punctio lumbalis	
8.aneurysma aortae		19.resectio ventriculi	
9.coma		20.palpatio et	

hepaticum		percussio abdominis	
10.auscultatio thoracis		21.inflammatio purulenta	
11. polypus nasi		22. morbus acutus	

Exercise 3. Translate the terms into Latin, explain meaning of the underlined words:

English	**Dictionary forms**	*Latin*
1. abscess of the lung	abscessus, us m pulmo,onis m	
2. removal of the gallbladder	exstirpatio, onis f vesica fellea, ae f	
3. resection of the maxilla	resectio,onis f maxilla,ae f	
4. renal colic	colica, ae f renalis,e	
5. congenital paralysis	paralysis,is f congenitus,a,um	
6. chronic ulcer	ulcus,eris n chronicus,a,um	
7. subcutaneous hernia	hernia,ae f subcutaneus,a,um	
8. cancer of rectum	cancer, cri m rectum,i n	
9. percussion of the abdomen	percussio,onis f abdomen,inis n	
10.spinal puncture	punctio, onis f spinalis,e	
11.infarction of the kidney	infarctus,us m ren,renis m	
12.cyst of pancreas	cysta,ae f pancreas,atis n	
13.transmural infarction of the myocardium	infarctus,us m myocardium,i n transmuralis,e	
14.diabetic coma	coma,atis n diabeticus,a,um	
15.nasal polyp	polypus,i m nasus,i m	
16.umbilical hernia	hernia,ae f umbilicalis,e	
17.functional paralysis	paralysis,is f functionalis,e	
18.peritonsillar abscess	abscessus,us m peritonsillaris,e	

19. amputation of the left foot	amputatio, onis f pes,pedis, m sinister,tra,trum	
20. diabetic coma	coma,atis n diabeticus,a,um	
21. pancreatic colic	colica,ae f pancreaticus,a,um	

Exercise 4. Translate the terms into English:

Latin	English
1. paresis cerebellaris	
2. inflammatio acuta	
3. aneurysma aortae	
4. auscultatio thoracis	
5. cancer pulmonis	
6. polypus mucosus	
7. colica gastrica	
8. paralysis spastica	
9. hernia abdominalis externa	
10.exstirpatio uteri	
11.paralysis nervi facialis	
12.punctio lumbalis	
13.resectio septi nasi	
14.palpatio et percussio abdominis	
15. asthenia totalis	
16. ulcus duodeni	

Exercise 5. Translate into Latin, use one word instead of the underlined words:

English	Latin
1. lesion of the mucous membrane of the stomach	**e.g.:** ulcus ventriculi
2. partial paralysis of the face	
3. a total removal of the gallbladder	
4. malignant neoplasm of the lip	
5. method of investigation of the chest by means of tapping	
6.a long-standing collection of pus	
7.method of examination of the abdomen with help of fingers	
8.removal of a tooth	
9.pathologic dilatation of the aorta wall	

10.a state of profound unconsciousness in patients suffering from diabetes	
11. spasmodic pain in the kidney	
12. sudden blood insufficiency of the myocardium	
13.partial removal of the rectum	

14.sac containing fluid in the pancreas	
15. incision through the abdominal wall and the uterus for extraction of the fetus (2 words)	
16. cutting off the lower or upper extremity above the ankle or the wrist (2 words)	

Exercise 6. Translate into Latin, explain the meaning of the underlined words:

English	Dictionary forms	**Latin**
1. insufficiency of the valve of aorta	insufficientia,ae f valva,ae f aorta,ae f	
2.syndrome of the minor occipital nerve	syndromum,i n minor,us occipitalis,e nervus,i m	
3. chronic disease	morbus, i m chronicus,a,um	
4. rupture of the uterine tube	ruptura,ae f tuba,ae f uterinus,a,um	
5.benign tumor	tumor,oris m benignus,a,um	
6.bronchial asthma	asthma,atis n bronchialis,e	

Exercise 7. Translate the terms into Latin using Greek suffixes:

Inflammation of the tongue-
tumour of the cheek-
inflammation around tooth-
non-inflammatory process of the bone and articulation-
cancer of the lip-
tumour of the tooth/tissue/-
inflammation of the knee-
cancer of the cheek-
inflammation of the nose-
non-inflammatory process of the vertebra-
inflammation of the mouth-

Exercise 8. Translate clinical terms into English, taking into consideration the grammatical rules of Latin adjectives with nouns agreement:

Allergic rhinitis-
fracture of the leg-
epidemic myalgia-
capillary haemangioma-
diffuse osteosclerosis-
acute glossalgia-
anterior rhionoscopy-
lumbal spondylarthrosis-
extirpation of the uterus-
marginal periodontitis-
interphalangeal luxation-
replantation of the tooth-
uterine chloasma-
chronic encephalopathia-

Exercise 9. Translate into English the following terms:

1. pyuria
2. adenocytus
3. hydrophobia
4. microgastria
5. anaesthesiologia
6. aphagia
7. myopathia
8. neurorrhaphia
9. rhinolithus
10. gastroduodenostomia
11. phlebitis
12. cholecystotomia
13. ophthalmoplegia
14. haemarthrosis
15. cardiologia

Exercise 10. Translate the following clinical diagnoses into English, write out the dictionary forms of the Latin words for translation:

Latin word	**Dictionary form**	**Translation**
Thrombus ruber		
necrosis dentis		
dysplasia cerebri polycystosa		

Psychosis exogena		
angina phlegmonosa		
gastritis haemorrhagica		
oliguria renalis		
avitaminosis endogena		
palpatio et percussio abdominis		
ruptura tubae uterinae		
aphonia psychogena		
vasculitis infectiosa		
encephalopathia toxica bilirubinica		
stenosis ostii aortae		
insufficientia circulationis sanguinis		

Self-assessment

The clinical terms to denote diagnosis

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physicians across borders and from different parts of the world. In addition, medical terminology is used in colleges of medicine and other areas of the health sciences.

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Exercise 11. Exlain the meaning of the following clinical terms:

Heterochromia-

Neophilia-

Xerophthalmia-

Brachyspondylia-

Bradysystolia-

Melanoma-

Tachysystolia-

Hypoxia-

Acrocyanosis-

Brachydactylia-

Brachycephalia-

Pseudoretinoblastoma-

Neoplasma-

Panophthalmitis-

Polyangiitis-

Polyarteriitis-

Polyarthritis-

Monoarthritis-

Polymastia-

Polyneuritis-

Pancarditis-

Xerodermia-

Telepathia-

Orthopnoe-

Cryoretinopexia-

Thermoplegia-

Brachyphalangia-

Melanodermia-

Leucodermia-

Hyperglykaemia-

Melanoma-

Cyanodermia-

Dyschromatopsia-

Platycephalia-

Xanthodermia-

Chloropsia-

Poliomyelitis-

Anonychia-

Chlorodontia-

Exercise 12. Make up clinical terms with the given meaning:

Science about old men diseases-

pain in the breast-

swallowing of the air-

less than normal insuline quantity in the blood-

less than normal quantity of sugar in the blood-

inflammation of all the arteries-

abnormal urination (diuresis)-

more than normal arterial pressure-

disturbance of breathing-

small size of the spleen-

small size of the head-

big size of the liver-

lack of erythrocytes in the blood-

therapy by high temperature-

absence of the skin colour-

white skin-

black tumour-

long head-

Exercise 13. Translate clinical terms into Latin:

Congestive xanthochromy-

serous acute leptomeningitis-

hypertrophic gingivitis-

peritoneal abscess-

acute poliomyelitis-

trophic parodontyhopathy-

angiogene sclerosis-

subtotal resection of the ventricle-

supravaginal extirpation of the uterus-

cavernous tuberculosis of the lungs-

abscess of the hard palate-

sanation of the oral cavity-

Exercise 14. Translate clinical terms into English:

Endocarditis subacuta primaria-

unsufficientia valvae aortae-

cardiosclerosis myocardialis-

fibrillatio atriorum bradysystolica-

anaemia neonatorum haemolytica-

morbus cordis ischaemicus chronicus-

Exercise 15. Make up the terms with the given meaning:

a/ pain in: chest, bone, vertebral column-

b/ science about: heart, articulations, bones, mouth-

c/ measurement of: head, chest, leg-

d/ graphy of: knee, vertebral column, upper jaw, lower jaw-

e/ examination of: stomach, oesophagus, colon-

f/ disease of: extremity, bones, articulations, nose, mouth-

g/ pain in: tongue, heart, gums, head, articulations, chest-

UNIT XVII. Revision of lexical and grammatical material on "Drug Nomenclature and Prescription Writing" and "Clinical Terminology". Final test.

In this unit

- Revision of lexical and grammatical material on "Drug Nomenclature and Prescription Writing" and "Clinical Terminology".

Pharmaceutic terminology is a complex, including terminologies of a number of sciences, united under one name – "pharmacy'. Pharmacy is a field of medicine studying exploration, obtaining, production and application of drugs of vegetable, mineral, animal and synthetic origin. The central place belongs here to the Nomenclature of Drugs, which is a vast total combination of names of medical substances and preparations, officially allowed for use. One may distinguish some typical groups within the Nomenclature of drugs, each of them having some definite peculiarities in the meaning and construction of the terms included into it.

Basic terms of pharmacy:

A DRUG is a substance or a mixture of substances, used in prevention, diagnosis, alleviation, treatment, or cure of disease.

A MEDICINAL SUBSTANCE is a drug with an individual chemical structure or a biological substance.

DOSAGE FORM is a form which is given to a mixture of substances, prepared at a pharmaceutical plant, taken in a certain dosage and in a certain drug form.

A MEDICAL PREPARATION is a drug given in a certain drug form.

Drug nomenclature is the systematic naming of drugs, especially pharmaceutical drugs. Generic names for drugs are nowadays constructed out of affixes and stems that classify the drugs into different categories and also separate drugs within categories. These parts of the words are called **combining forms (CFs).**

Medicinal plants are widely used in pharmacology. The names of medicinal herbs in botanical nomenclature are very often different from the plant names which are used in pharmaceutics, i. e. in the nomenclature of medicinal remedies.

It is necessary to differentiate botanical and pharmaceutical names of medicinal plants, to understand binominal nomenclature, according to which each plant (and animal) has two names: generic and specific, in order to use them correctly in prescriptions.

In XVII-XVIII centuries there were a lot of botanical (as well as zoological) terms derived from Greek and Latin words. It was necessary to find new methods of classifying different kinds of plants and animals. Their names were rendered by word combinations, which was rather difficult and inconvenient.

Prescriptions (also called **prescription orders**) are usually written on preprinted forms containing the traditional symbol **Rx** (meaning recipe, take thou, or you take), name, address, telephone number, and other pertinent information regarding the physician or other prescriber. In addition, blank spaces are used by the prescriber to provide information about the patient, the medication desired, and the directions for use.

So, a **prescription** is an order for medication issued by a licensed prescriber, a physician, dentist, or veterinarian, for example, designating specific medication, dose, and dose rate to be prepared by a pharmacist and dispensed to the patient.

Clinical terminology, also referred to as medical terminology, is key to clinical process and clinical documentation. Becoming familiar with it is like learning a new language.

Clinical terms are made of Greek or Latin word bases, and similar in many languages. It is impossible to memorize all of the thousands of medical terms. However, you can figure out the meaning of many different terms simply by analyzing word parts.

< These parts are called combining forms. A combining form (CF) is a modified form of an independent word that occurs only in combination with other combining forms, prefixes and suffixes to form compounds or derivatives, e.g., *cardiogenesis* (from *cardio- the heart, genesis origin, development*), *a development of the heart in an embryo, pancreatodynia* (from *pancreat(o)- pancreas, -(o)dynia pain), pain in the pancreas*

& According to their structure, clinical terms can be divided into groups:

· Root words which can be standalone words, e.g., *inflammatio, onis f – inflammation; hernia; stupor*;

Words consisting of roots (combining forms) and affixes (prefixes and suffixes), e.g., *gastritis* (the root *gastr(o)- stomach* and the suffix *-itis inflammation*), *inflammation of the stomach*. These words are normally not translated into native languages and are understood by most medical professionals all over the world;

· Collocations (word combinations), mostly of Latin origin, consisting of several words arranged in correspondence with the rules of Latin grammar, e.g., *inflammatio acuta – acute inflammation; ulcus pharyngis – ulcer of the pharynx.*

Practical exercises

Exercise 1. Translate clinical diagnoses into English:

a) syndromum adrenogenitale congenitum-

b) extirpatio uteri supravaginalis-

c) tuberculosis pulmonum cavernosa-

d) sanatio cavitatis oris-

e) oedema cerebri acutum-

Exercise 2. Make up clinical terms with the given meaning:

a) rupture of: heart, spleen, vessel, neck of uterus;

b) suturing of: vein, trachea, vagina;

c) white tumour, white skin, white nail, white hair;

d) eye paralysis, half of the tongue paralysis;

e) muscle weakness, soul weakness, nerve weakness;

f) pathological distension of: vagina, bronch, vessel;

g) pain of: head, urinary bladder, lumbus;

i) formation of: blood, urine

Exercise 3. Translate clinical diagnoses into Latin:

a) spermatogenous granuloma

b) hernia of the linea alba

c) abdominal caesarean section

d) grippous angina

e) hemorrhagic xanthochromia of cerebrospinal liquid

f) thrombosis of the veins of the left leg

g) infectious jaundice

Exercise 4. Translate the following prescriptions into Latin:

English	**Latin**
1) Rx.: Dibazole 0,05 Sugar 0,3 Mix let there be made some powder Give 20 such doses Designate: 1 powder 3 times a day	
2) Rx.: Sodium thiosulphate 10,0 Mix. Give. Designate: 1 table spoon pro dosi	
3) Rx.: Sodium hydrocarbonate 0,45 Sodium chloride Calcium chloride Potassium chloride Glucose 500 ml Mix. Sterilize! Give. Designate: Intravenous.	
4) Rx.: Yellow mercury oxide 0,6 Ichthyole 0,8 Ointment of Zinc 20,0 Mix to get an ointment. Give. Designate: ointment	
5) Rx.: Blue Methylene 0,5 Ethyl alcohol 70 % 50 ml Mix. Give. Designate: To salve skin	

6) Rx.: Infusion of thermopsis herb 0,1-100 ml Ammonium chloride-anisic drops 1ml Syrup of Marshmallow 20 ml Mix. Give. Designate: 1 tea spoon 3 times a day	
7) Rx.: Decoction of buckthorn bark20,0-200 ml Give. Designate: 1 tea spoon 3 times a day	
8) Rx.: Eye hydrocortisone ointment0,5 % 10,0 Give. Designate: put behind the lower eyelid 2 times a day	
9) Rx.: Fluid aloe extract 1ml Give 10 such doses in ampules. Designate: 1 ml intramuscular	
10) Rx.: Oil retinol acetate solution10 ml Give. Designate: 5 drops on a piece of bread	

Exercise 5. Translate into English:

Latin	**English**
1. Massa pilularum	
2. Oleum Ricini	
3. In capsulis gelatinosis	
4. Infusum foliorum Cerasi	
5. In tabulettis	
6. In capsules amylaceis	
7. Extractum Viburni fluidum	
8. Extractum Frangulae	
9. Recipe: Olei Menthae piperitae guttas III	
10. Acidum hydrochloricum dilutum	
11.Oleum Terebinthinae rectificatum	
12. Extractum Crataegi fluidum	

Exercise 6. Abbreviate the following prescriptions:

Full form	Abbreviated form
1. Rp: Choles medicatae conservatae 250,0 Da. Signa:	
2. Rp: Olei Terebinthinae Olei Camphorae Chloroformii ana 100,0 Misce. Da. Signa:	
3. Rp: Extracti Frangulae fluidi 0,15 Extracti Viburni fluidi Herbae Thymi ana 20 ml Misce. Da. Signa:	
4. Rp: Olei Ricini 1,0 Da tales doses numero 15 in capsulis gelatinosis. Signa :	
5. Rp : Acidi hydrochlorici diluti 5 ml Pepsini 2ml Aquae purificatae 180 ml Sirupi Cerasi 200 ml Misce. Da. Signa :	

Exercise 7. Translate into Latin:

1. In gelatinous capsules

2. In starchy capsules

3. The tincture of valerian (lily of the valley)

4. The infusion of birch leaves

5. Take: the tincture of peppermint, five drops

6. Rectified turpentine: 10 ml

7. Dry extract of alder bucktorn

8. Analginum in tablets

9. Powder. Triturate

10. Mass of the pill as much as required

Exercise 8. Find component elements carrying information about pharmaceutical characteristics of the drug names, give their meaning:

1) Benzonalum-
2) Dipheninum-
3) Pyrimethaninum-
4) Erythromycinum-
5) Sulfathiazolum
6) Sulfamethoxazolum-
7) Vancomycinum-
8) Diphenhydraminum-
9) Cyclosporinum-
10) Cyanocobalaminum-
11) Methyluracilum-
12) Hydrolysin-
13) Nitroglycerinum-
14) Benzobarbitalum-
15) Methindionum-
16) Mycoseptinum-
17) Chlorochininum-
18) Cyclophosphamidum-
19) Cerebrolysinum-
20) Novosedum.

Exercise 9. Translate from English into Latin:

1) Solution of glucose-
2) tablets of analgin-
3) liquid extract of aloe-
4) coated tablets of tetracyclin-
5) tincture of matricary flowers-
6) decoction of oak cortex-
7) liniment of synthomycin-
8) ointment of oxolin-
9) syrup of althea-
10) spirituous solution of iodine-
11) granules of furazolidon-
12) dragee of phenoxymethylpenicillin-
13) solution of furacilin for external use-
14) oily solution of phenobolin-
15) tablets of pyrocetam-

Appendix

Numerals

Arabic numbers	Cardinal numbers	Ordinal numbers (declined as II class adj.)	Roman numbers
1	unus, a, um	primus, a, um	I
2	duo, duae, duo	secundus, a, um	II
3	tres, tria	tertius,a,um	III
4	quattuor	quartus,a,um	IV
5	quinque	quintus,a,um	V
6	sex	sextus,a,um	VI
7	septum	septimus,a,um	VII
8	octo	octavus,a,um	VIII
9	novem	nonus,a,um	IX
10	decem	decimus,a,um	X
11	undecim	undecimus,a,um	XI
12	duodecim	duodecimus,a,um	XII
13	tredecim	tertius (a,um) desimus,a,um	XIII
14	quattuordecim	quartus (a,um)decimus,a,um	XIV
15	quindecim	quintus (a,um)decimus,a,um	XV
16	sedecim	sextus (a,um)decimus,a,um	XVI
17	septendecim	septimus (a,um)decimus,a,um	XVII
18	duodeviginti	duodevicesimus,a,um	XVIII
19	undeviginti	undevicesimus,a,um	XIX
20	viginti	vicesimus,a,um	XX
21	viginti unus *or* unus et viginti	unus et vicesimus,a,um *or* vicesimus primus	XXI
30	triginta	tricesimus,a,um	XXX
40	quadraginta	quadragesimus,a,um	XL
50	quinquaginta	quinquagesimus,a,um	L
60	sexaginta	sexagesimus,a,um	LX
70	septuaginta	septuagesimus,a,um	LXX
80	octoginta	octogesimus,a,um	LXXX
90	nonaginta	nonagesimus,a,um	XC
100	centum	centesimus,a,um	C
200	ducenti,ae,a	ducentesimus,a,um	CE
1000	mille	millesimus,a,um	M
2000	duo milia	bis millesimus,a,um	MM

Correspondence between Cases in Latin and their Equivalents in English

Latin	English
Nominativus (Nom.)	**Nominative** is used when a noun is the subject of the sentence.
Genetivus (Gen.)	**Genitive** denotes possession. It is usually translated by "of" and a noun.
Dativus (Dat.)	**Dative** is usually translated by "to" or "for" and a noun.
Accusativus (Acc.)	**Accusative** is usually dependent on a verb. It is used to express a direct object.
Ablativus (Abl.)	**Ablative** is usually translated by "by", "with", "from", "on" or "in" and a noun.
Vocativus (Voc.)	**Vocative** is used to address a person

The Most Characteristic Endings of Nouns according to their Gender

Endings in Nominative Singular		
Feminine gender (f)	**Masculine gender (m)**	**Neuter gender (n)**
-a (I decl.): cost**a, ae f** I – rib pulp**a, ae f** I – pulp vertebr**a, ae f** I – vertebra lamin**a, ae f** I – plate	**-us (II, IV decl.)**. Dictionary forms are different depending on the declension: angul**us**, i, **m** II – angle sulc**us**, i **m** II – sulcus, groove arc**us**, us **m** IV – arch process**us**, us **m** IV – process **NB:** Ending **-us** belongs to some nouns of III declension. Memorise the most common ones: **corpus, oris n** and **crus, cruris n**.	**-um, -on (Gr.)(II decl.)** tubercul**um, i n** II – tubercle acromi**on, i n** II – acromion stern**um, i n** II – sternum skelet**on, i n** II - skeleton

Endings of Nouns of Five Declensions

Decl.	**I**	**II**		**III**			**IV**		**V**
Genders	**f**	**m**	**n**	**m**	**f**	**n**	**m**	**n**	**f**
e.g.	*ala,* ***ae f***	*lobus,* ***i m***	*cavum,* ***i n***	*pulmo,* ***onis m***	*ic****is f***	*it****is n***	*arcus,* ***us m***	*genu,* ***us n***	*facies,* ***ei f***
Nom. Sg.	**a**	**us, er**	**um, on**	**different**			**us**	**u**	**es**
Gen. Sg.	***ae***	***i***		***is***			***us***		***ei***
Dat. Sg.	**ae**	**o**	**o**	**i**	**i**	**i**	**ui**	**u**	**ei**
Acc. Sg.	**am**	**um**	**um**	**em**	**em**	**=Nom.**	**um**	**u**	**em**
Abl. Sg.	**a**	**o**	**o**	**e (i)**	**e (i)**	**e (i)**	**u**	**u**	**e**
Nom. Pl.	**ae**	**i**	**a**	**es**		**a (ia)**	**us**	**ua**	**es**
Gen. Pl.	**arum**	**orum**		**um (ium)**			**uum**		**erum**
Dat. Pl.	**is**	**is**	**is**	**ibus**	**ibus**	**ibus**	**ibus**	**ibus**	**ebus**
Acc. Pl.	**as**	**os**	**a**	**es**	**es**	**a(ia)**	**us**	**ua**	**es**
Abl. Pl.	**is**	**is**	**is**	**ibus**	**ibus**	**ibus**	**ibus**	**ibus**	**ebus**

Endings of Adjectives

Group	**I**			**II**		**Comparative Degree**	
Gender	**m**	**f**	**n**	**m f**	**n**	**m f**	**n**
e.g.	*thoracic****us, a, um***			*spinal****is, e***		*super****ior, ius***	
Nom. Sg.	**us, er**	**a**	**um**	**is**	**e**	**ior**	**ius**
Gen. Sg.	**i**	**ae**	**i**	**is**		(ior)**is**	
Dat. Sg.	**o**	**ae**	**o**	**i**	**i**	**iori**	**iori**
Acc. Sg.	**um**	**am**	**um**	**em**	**e**	**iorem**	**ius**
Abl. Sg.	**o**	**a**	**o**	**i**	**i**	**e**	**e**
Nom. Pl.	**i**	**ae**	**a**	**es**	**ia**	(ior)**es**	(ior)**a**
Gen. Pl.	**orum**	**arum**	**orum**	**ium**		(ior)**um**	
Dat. Pl.	**is**	**is**	**is**	**ĭbus**	**ĭbus**	**iorĭbus**	**iorĭbus**
Acc. Pl.	**os**	**as**	**a**	**es**	**ia**	**iores**	**iora**
Abl. Pl.	**is**	**is**	**is**	**ĭbus**	**ĭbus**	**iorĭbus**	**iorĭbus**

LATIN-ENGLISH VOCABULARY (anatomical terms)

A

abdomen, inis n- abdomen

abdominalis,e - abdominal

abducens,entis - abducens

abductor, oris m - abductor (muscle)

accessorius,a,um - accessory

acetabulum, i n - acetabulum

acromialis,e - acromial

acromion, i n- acromion

acusticus,a,um - acoustic, auditory

acutus,a,um - acute

adductor,oris m - adductor (muscle)

adductorius,a,um - adductor

adiposus,a,um - fatty

aditus, us m – aditus

ala, ae f - ala,wing

alae,arum pl/f - alae,wings

alaris,e - alar

albus,a,um - white

alveolaris,e -alveolar

alveoli,orum pl/m - alveoli, sockets

alveolus, i m - alveolus, socket

ampulla, ae f - ampulla

ampullae,arum pl/f - ampullae

ampullaris,e - ampullar

analis,e - anal

anastomoticus,a,um (Gr.)- anastomotic

anatomicus,a,um (Gr.)- anatomical

angularis,e - angular

angulus, i m -angle

ansa,ae f- loop

ansae,arum pl/f -loops

anserinus,a,um -anserine

antebrachium, i n -antebrachium

anterior, ius -anterior

anterobasalis,e -anterobasal

antrum, i n -antrum

anularis,e -anular

anuli, orum pl/m -rings

anulus, i m -ring

aorta,ae f (Gr.) -aorta

aorticus,a,um -aortic

apertura, ae f -aperture, opening

aperturae, arum pl/f - apertures, openings

apex, icis m -apex,head

aponeurosis, is f (Gr.) -aponeurosis

appendix, icis f -appendix

aqueductus, us m -aqueduct

arachnoidalis,e -arachnoidal

arcus, us m -arch

area, ae f- area

areae, arum pl/f -areas

arteria, ae f (Gr.) -artery

arteriae, arum pl/f -arteries

arteriola,ae f (Gr.) –arteriole

arteriolae, arum pl/f -arterioles

articularis,e -articular

articulatio, onis f -articulation, joint

articulationes/um pl/f -articulations, joints

arytenoideus,a,um (Gr.)- arytenoid

ascendens, entis -ascending

asper, era, erum -asper

atlas, antis m (Gr.) -atlas

atrioventricularis,e -atrioventricular

atrium, i n -atrium

auditivus,a,um -auditory

auricula, ae f -auricle

auricularis,e -auricular

auris, is f -ear

axilla, ae f -axilla

axillaris,e –axillary

axis, is m - axis

azygos (Gr.) azygos

B

barba, ae f - beard

basalis,e (Gr.) - basal

basilaris,e (Gr.) - basilar

basis, is f (Gr.) - base

biceps, ipitis - biceps

bicipitalis,e - bicipital

bicuspidalis,e - bicuspidal

bilateralis,e - bilateral

brachialis,e -brachial

brachium, i n (Gr.) - brachium

brevis,e - short

bronchi, orum pl/m (Gr.)- bronchi

bronchialis,e bronchial

bronchus, i m (Gr.) bronchus

bucca, ae f bucca, cheek

buccae, arum pl/f buccae,cheeks

buccalis,e buccal

buccinator, oris (musculus) m - buccinator

buccinatorius,a,um buccinator

bulbiformis,e bulbiform

bulbus, i m (Gr.) bulb

bursa, ae f (Gr.) bursa

bursae, arum pl/f bursae

C

calcaneocuboideus,a, um- calcaneocuboid

calcaneonavicularis,e calcaneonavicular

calcaneus, i m (os salcis)- calcaneus

calcar, is n calcar

calix,icis m calix

callosus,a,um callose

calvaria, ae f calvaria

camera, ae f (Gr.) camera

canales,um pl/m canals

canaliculi, orum pl/m canaliculi,small canals

canaliculus, i m canaliculus, small canal

canalis, is m canal

caninus,a,um canine

capillaris,e capillary

capitatus,a,um capitate

capitulum, i n capitulum,small head

capsula, ae f capsule

capsulae, arum pl/f capsules

caput, itis n head

cardiacus,a,um cardiac

cardiovascularis,e cardiovascular

caroticotympanicus,a,um

caroticotympanic

caroticus,a,um carotid

carotis, idis f (Gr.) carotis

carpalis,e (Gr.) carpal

carpeus,a,um (Gr.) carpal

carpometacarpeus,a, um - carpometacarpal

carpus, i m (Gr.) carpus,wrist

cartilagines, um pl/f cartilages

cartilagineus,a,um cartilaginous

cartilago, inis f cartilage

cauda, ae f cauda

caudalis,e caudal

caudatus,a,um caudate

cavernosus,a,um cavernous

cavitas, atis f cavity

cavum, i n cavum

cavus,a,um caval

cecalis,e cecal

cecum, i n cecum

cecus,a,um cecal

celia, ae f celia

celiacus,a,um celiac

cellula, ae f cellule

cellulae, arum pl/f cellules

centralis,e (Gr.) central

centrum, i n (Gr.) centre

cephalicus,a,um (Gr.) cephalic

cerebellaris,e cerebellar

cerebellum, i n cerebellum

cerebralis,e cerebral

cerebrum, i n cerebrum

cervicalis,e cervical

cervicothoracicus,a, um- cervicothoracic

cervix, icis f cervix

chiasma, atis n (Gr.) chiasm

chirurgicus,a,um (Gr.)- surgical

choledochus,a,um (Gr.)- choledochal

chorda, ae f (Gr.) cord

ciliaris,e ciliary

cilium, i n cilium

cinereus,a,um cinereal

cingulum, i n cingulum, girdle

circularis,e circular

circumferentia, ae f circumference

circumflexus,a,um circumflex

cisterna, ae f cistern

claustrum, i n claustrum

clavicula, ae f clavicle

clavicularis,e clavicular

clinoideus,a,um (Gr.) clinoid

clitoris, oridis f (Gr.) clitoris

clivus, i m clivus

coccygeus,a,um (Gr.) coccygeal

coccyx, ygis m (Gr.) coccyx

cochlea,ae f (Gr.) cochlea

cochlearis,e cochlear

colicus,a,um colic

collateralis,e collateral

collum, i n neck

colon, i n (Gr.) colon

columna, ae f column

columnae, arum pl/f columns

commissura, ae f commissure

commissurae, arum pl/f - commissures

communicans, antis communicating

communis,e common

concha, ae f (Gr.) concha

condylaris,e (Gr.) condylar

condylus, i m (Gr.) condylus

conoideus,a,um conoid

constrictor, oris (musculus) m- constrictor

cor, cordis n heart

coracoacromialis,e coracoacromial

coracobrachialis,e coracobrachial

coracoclavicularis,e coracoclavicular

cornea, ae f cornea

cornealis,e corneal

cornu, us n cornu (horn)

cornua, cornuum pl/n cornua (horns)

corona, ae f (Gr.) corona

coronalis,e (Gr.) coronal

coronarius,a,um (Gr.) coronary

coronoideus, a,um (Gr.) -coronoid

corpora, um pl/n corpora, bodies

corpus, oris n corpus, body

corpuscula, orum pl/n corpuscles

corpusculum, i n corpuscle

corrugator, oris (musculus) m - corrugator

cortex, icis m cortex

corticalis,e cortical

corticospinalis,e corticospinal

costa, ae f rib

costae, arum pl/f ribs

costalis,e;

costarius,a,um- costal

costotransversarius,a, um- costotransverse

costovertebralis,e costovertebral

costoxiphoideus,a,um costoxiphoid

coxa, ae f coxa

cranialis,e (Gr.) cranial

cranium, i n (Gr.) cranium, skull

cremaster, is (musculus) m - cremaster

cremastericus,a,um cremasteric

cribriformis,e cribriform

cribrosus,a,um cribrose

cricoideus,a,um (Gr.) cricoid

crista, ae f crest

cristae, arum pl/f crests

cruciatus,a,um cruciate

cruciformis,e cruciform

crura, um pl/n crura

crus, cruris n crus, limb

cubitus, i m cubitus, elbow

cuboideus,a,um (Gr.) cuboid

cuneatus,a,um;- cuniate

cuneiformis,e- cuneiform

curvatura, ae f curvature

cutaneus,a,um cutaneous

cutis, is f skin

D

dactylus, i m (Gr.) finger

deltoideus,a,um deltoid

dens, dentis m odontoid process

dentalis,e dental

dentes,ium pl/m odontoid processes

depressor, oris- (musculus) m depressor

descendens, entis descending

dexter, tra, trum right

diameter, tri f (Gr.) diameter

diaphragma, atis n (Gr.)- diaphragma

diaphragmaticus,a,um (Gr.)- diaphragmatic

digastricus,a,um digastric

digestorius,a,um digestive

digitalis,e digital

digiti, orum pl/m fingers

digitus, i m finger

dilatator,oris (musculus) m- dilatator

diploë,es f (Gr.) diploë

diploicus,a,um diploic

disci, orum pl/m discs

discus, i m disc

distalis,e distal

dorsalis,e dorsal

dorsum, i n dorsum

ductuli, orum pl/m ductules

ductulus, i m ductule

ductus, us m duct

duodenalis,e duodenal

duodenum, i n duodenum

durus,a,um dural

E

efferens, entis efferent

elevator, oris m elevator

eminentia, ae f eminence

encephalon, i n (Gr.) encephalon

epicondylus, i m (Gr.) epicondyle

epigastricus,a,um epigastric

episternalis,e episternal

erector, oris m erector

esophageus,a,um (Gr.)- esophageal

esophagus, i m (Gr.) esophagus

ethmoidalis,e (Gr.) ethmoid(al)

excretorius,a,um excretory

extensor, oris m extensor

extensorius,a,um extensory

externus,a,um external

extremitas, atis f extremity

F

facialis,e facial

facies, ei f surface

falciformis,e falciform

falx, falcis f falx

fascia, ae f fascia

fasciae, arum pl/f fasciae

fasciculi, orum pl/m fasciculi, bands

fasciculus, i m fasciculus, band

femoralis,e femoral

femur, oris n femur

fenestra, ae f window

fibra, ae f fiber

fibrae, arum pl/f fibers

fibrosus,a,um fibrous

fibula, ae f fibula

fibularis,e fibular

fissura, ae f fissure

fissurae,arum pl/f fissures

flavus,a,um yellow

flexor, oris m flexor

flexura, ae f flexure

folliculi, orum pl/m follicles

fulliculus, i m follicle

fonticuli, orum pl/m fontanelles

fonticulus, i m fontanelle

foramen, inis n foramen

foramina, um pl/n foramina

fornix, icis f fornix

fossa, ae f fossa

fossae, arum pl/f fossae

fossula, ae f fossette

fovea, ae f facet, fovea

foveae,arum pl/f facets, foveae

foveola, ae f foveola

foveolae, arum pl/f foveolae

frenulum, i n frenulum

frontalis,e frontal

frontoparietalis,e frontoparietal

fundus, i m fundus

fungiformis,e fungiform

funiculus, i m funicle

G

gallus, i m gallus

ganglia,orum pl/n (Gr.)- ganglia

ganglion, i n (Gr.) ganglion

gastricus,a,um gastric

geniculum, i n geniculum

genu, us n genu,knee

gingiva,ae f gingiva

gingivae,arum pl/f gingivae

glandula,ae f gland

glandulae, arum pl/f glands

glenoidalis,e (Gr.) glenoid

glomeruli, orum pl/m glomeruli

glomerulus, i m glomerulus

glossopharyngeus,a,um- glossopharyngeus, glossopharyngeal

gluteus,a,um (Gr.) gluteal

gyri, orum pl/m gyri

gyrus, i m (Gr.) gyrus

H

hallux,icis m hallux

hamatus,a,um hamate

hamulus, i m hamulus

hepar, atis n (Gr.) liver

hepaticus,a,um hepatic

hiatus,us m hiatus

hilus, i m hilus

horizontalis,e horizontal

humerus, i m humerus

hyoideus,a,um (Gr.) hyoid

I

iliacus,a,um iliac

impressio, onis f impression

impressiones, um pl/f impressions

incisivus,a,um incisive

incisivus, i m (dens) incisor (tooth)

incisura, ae f incisure, notch

incisurae, arum pl/f incisures, notches

index, icis m (digitus II)- index (second finger)

inferior, ius inferior

inferolateralis,e inferolateral

infraclavicularis,e infraclavicular

infracorticalis,e infracortical

infradiaphragmaticus,a,um- infradiaphragmatic

infraglenoidalis,e infraglenoid

infraorbitalis,e infraorbital

infraspinalis,e infraspinal

infraspinatus,a,um infraspinatus,infraspinous

infrasternalis,e infrasternal

infratemporalis,e infratemporal

inguinalis,e inguinal

insula, ae f island

intercostalis,e intercostal

intermuscularis,e intermuscular

internasalis,e internasal

internus,a,um internal

interosseus,a,um interosseous

interuretericus,a,um interureteric

intestinalis,e intestinal

intestinum, i n intestine

ischiadicus,a,um ischial

ischium, i n (Gr.) ischium

isthmus, i m (Gr.) isthmus

J

jejunum, i n jejunum

juga, orum pl/n juga

jugularis,e jugular

jugum, i n jugum

junctura, ae f junction

juncturae, arum pl/f junctions

K

kephalicus,a,um (cephalicus)- cephalic

L

labia, orum pl/n labia

labialis,e labial

labium, i n labium

labrum, i n labrum

labyrinthi, orum pl/m (Gr.)- labyrinthi

labyrinthus, i m (Gr.) labyrinthus

lacrimalis,e lacrimal

lamina, ae f lamina

laminae, arum pl/f laminae

laryngeus,a,um laryngeal

larynx,yngis m (Gr.) larynx

lateralis,e lateral

latissimus,a,um latissimus

levator, oris m (musculus)- levator

lien, enis m spleen

lienalis,e lienal

ligamenta, orum pl/n ligaments

ligamentum, i n ligament

linea, ae f linea

lineae, arum pl/f lineae

lingua, ae f tongue

lingualis,e lingual

lingula, ae f lingula

lingularis,e lingular

lobaris,e lobar

lobi, orum pl/m lobes

lobularis,e lobular

lobuli, orum pl/m lobules

lobulus, i m lobule

lobus, i m lobe

longissimus,a,um longissimus

longitudinalis,e longitudinal

longus,a,um longus

lumbalis,e lumbar

lumbocostalis,e lumbocostal

lumbosacralis,e lumbosacral

lymphaticus,a,um (Gr.)- lymphatic

lymphonodi, orum pl/m- lymph nodes

lymphonodus,i m lymph node

M

magnus,a,um large

major, majus greater

malleolaris,e malleolar

malleolus, i m malleolus

mammillaris,e mammillary

mandibula, ae f mandible

mandibularis,e mandibular

manubrium, i n manubrium

manus, us f hand

margo, inis m margin, border, edge

massa, ae f mass

massae, arum pl/f masses

massetericus,a,um masseteric

mastoideus,a,um mastoid

mater, tris f mater

maxilla, ae f maxilla, upper jaw bone

maxillaries,e maxillary

maximus,a,um greatest

meatus, us m meatus, passage

medialis,e medial

medianus,a,um median

mediastinalis,e mediastinal

mediastinum, i n mediastinum, middle septum

medius,a,um middle

medulla, a e f marrow

medullaris,e medullary

membrana, ae f membrane

membranaceus,a,um membranous

membranae, arum pl/f membranes

membranosus,a,um membranous

membrum, i n limb, member

meninx, ngis f (Gr.) meninx

menisci, orum pl/m (Gr.)- menisci

meniscus, i m (Gr.) meniscus

mentalis,e mental

mentum, i n mentum ,chin

mesentericus,a,um mesenteric

mesenterium, i n mesentery

metacarpalis,e metacarpal

metacarpeus,a,um metacarpeus

metacarpus, i m metacarpus

metaphysis, is f (Gr.) metaphysis

metatarsalis,e metatarsal

metatarseus,a,um metatarsus

metatarsus, i m metatarsus

minor, minus lesser

molaris,e (dens) molar

mollis,e soft

mucosus,a,um mucous

muscularis,e muscular

musculi, orum pl/m muscles

musculocutaneus,a,u m-musculocutaneous

musculus, i m muscle

mylohyoideus,a,um mylohyoid

N

naris, is f nostril

nasalis,e nasal

nasopharyngeus,a,um nasopharyngeal

nasofrontalis,e nasofrontal

nasolabialis,e nasolabial

nasolacrimalis,e nasolacrimal

nasopalatinus,a,um nasopalatine

nasus, i m nose

navicularis,e navicular

nephron, i n (Gr.) nephron

nephros, i m (Gr.) kidney

nervi, orum pl/m nerves

nervosus,a,um nervous

nervus, i m nerve

nodi, orum pl/m nodes

noduli, orum pl/m nodules

nodulus, i m nodule

nodus, i m node

nucha, ae f nucha

nucleus, i m nucleus

nutricius,a,um nutricial

O

obliquus,a,um oblique

oblongatus,a,um oblongate

obturator,oris m obturator (muscle)

obturatorius,a,um obturator

occipitalis,e occipital

occipitofrontalis,e occipitofrontal

occipitotemporalis,e occipitotemporal

occiput,itis n back of the head

oculomotorius,a,um oculomotor

oculus,i m eye

oesophagus,i m oesophagus

olecranon, i n (Gr.) olecranon

olfactorius,a,um olfactory

ophthalmicus,a,um (Gr.)- ophthalmic

opticus,a,um (Gr.) optic

oralis,e oral

orbicularis,e orbicular

orbita,ae f orbit

orbitae, arum pl/f orbits

orbitalis,e orbital

organon,i n organ

os,oris n mouth

os,ossis n bone

ossa, orum pl/n bones

osseus,a,um osseous, bony

osteon, i n (Gr.) bone

ostium,i n ostium

ovalis,e oval

P

palatinus,a,um palatine

palatum,i n palate

palma, ae f palm

palmaris,e palmar

palpebra,ae f eyelid

pancreas,atis n (Gr.) pancreas

pancreaticus,a,um pancreatic

papilla,ae f papilla

papillae, arum pl/f papillae

papillaris,e papillary

paries,etis m wall

parietalis,e parietal

parotideus,a,um parotid

parotis, otidis f (Gr.) parotis

pars,partis f part

partes, ium pl/f parts

parvus,a,um small

patella,ae f patella

patellaris,e patellar

pecten,inis n pecten

pectinatus,a,um;

pectinealis,e;

pectinate; pectineal

pectineus,a,um pectinate

pectoralis,e pectoralis

pectus, oris n chest

pediculus, i m pedicle

pedunculi, orum pl/m peduncles

pedunculus,i m peduncle

pelvinus,a,um pelvic

pelvis,is f pelvis

penis, is m penis

perforans, antis perforating

periosteum,i n periosteum

peripheric us,a,um peripheral

peritendineum, i n peritendineum

peritoneooperinealis,e peritoneooperineal

perpendicularis,e perpendicular

pes,pedis m foot

petrosquamosus,a,um petrosquamous

petrosus,a,um petrous

phalanges,ium pl/f (Gr.)- phalanges

phalanx, ngis f phalanx

phallus, i m (Gr.) penis

pharyngeus,a,um pharyngeal

pharynx,ngis m pharynx

pia mater pia mater

pigmentum, i n pigment

piriformis,e piriform

pisiformis,e pisiform

pius,a,um soft

planta, ae f planta

plantaris,e plantar

planus,a,um plane, flat

platysma, atis n (Gr.) platysma

pleura, ae f (Gr.) pleura

plexus,us m plexus

plica,ae f fold

plicae, arum pl/f folds

pollex, icis m (digitus I)- thumb (1st finger)

polus, i m pole

popliteus,a,um popliteal

porta, ae f hilum

porus,i m (Gr.) pore

posterior, ius posterior

prevertebralis,e prevertebral

primus,a,um 1st

princeps, ipis main

principalis,e principal

processus,us m process

profundus,a,um deep

prominentia,ae f prominence

promontorium,i n promontory

pronator,oris m pronator

proprius,a,um proper

protuberantia,ae f protuberance

proximalis,e proximal

psoa, as f (Gr.) psoa

psoas (musculus) psoas muscle

pterygoideus,a,um (Gr.)- pterygoid

pterygomandibularis, e- pterygomandibular

pterygomaxillaris,e pterygomaxillary

pterygopalatinus,a, um- pterygopalatine

pterygopharyngeus,a, um- pterygopharyngeal

pterygospinalis,e pterygospinal

pterygospinosus,a,um pterygospinous

pubicus,a,um pubic

pulmo, onis m lung

pulmonalis,e pulmonary

pulpa, ae f pulp

pupilla, ae f pupil

pyloricus,a,um pyloric

pylorus, i m (Gr.) pylorus

pyramidalis,e pyramidal

pyramis, idis f pyramid

Q

quadrangularis,e quadrangular

quadratus,a,um quadrate

quadriceps,cipitis quadriceps

R

radialis,e radialis

radiatus,a,um radiate

radices, um pl/f roots

radicularis,e radicular

radiocarpeus,a,um radiocarpal

radioulnaris,e radioulnar

radius, i m radius

radix, icis f root

rami, orum pl/m branches

ramus, i m branch

raphe,es f (Gr.) raphe

recessus,us m recess

rectalis,e rectal

rectum,i n rectum

rectus,a,um rectus

regio,onis f region

regiones,um pl/f regions

ren, renis m kidney

renalis,e renal

respiratorius,a,um respiratory

rete,is n network

retina,ae f retina

rhinalis,e rhinalis

rhomboideus,a,um rhomboid

rima, ae f rima

risorius (musculus) risorius (muscle)

rostrum, i n rostrum

rotator (musculus) rotator (muscle)

rotundus,a,um round

S

sacculus, i m saccule

saccus, i m sac

sacer, cra, crum sacral

sacralis,e sacral

sacrococcygeus,a,um sacrococcygeal

sacroiliacus,a,um sacroiliac

sacropelvinus,a,um sacropelvic

sacrospinalis,e sacrospinal

sacrotuberalis,e sacrotuberal

sacrum,i n sacrum

sagittalis,e sagittal

saliva, ae f saliva

sanguis,inis m blood

scalenus,a,um scalene

scaphoideus,a,um scaphoid

scapula, ae f scapula

scapularis,e scapular

sceleton (um), i n (Gr.)- skeleton

schiasma, atis n (Gr.) schiasm

sclera, ae f (Gr.) sclera

scrotum, i n scrotum

secretorius,a,um secretory

secretum, i n secrete

segmentalis,e segmental

segmentum,i n segment

sella, ae f sella,saddle

sellaris,e sellary

semicanalis, is m semicanal

semicircularis,e semicircular

semilunaris,e semilunar

semimembranosus,a,um- semimembranous

seminalis,e seminal

semispinalis,e semispinal

septum,i n septum

serosus,a,um seroserous

serotinus,a,um late

serratus,a,um serrate

sesamoides, is;

sesamoideus,a,um (Gr.)- sesamoid

seu (abbr. s.) or

sigmoideus,a,um sigmoid

simplex,icis simple

sinister,tra,trum left

sinus,us m sinus

sinus,uum pl/m sinuses

spatia, orum pl/n spaces

spatium,i n space

sphenoethmoidalis,e (Gr.)- sphenoethmoidal

sphenoidalis,e sphenoid(al)

sphenomandibularis,e sphenomandibular

sphenomaxillaris,e sphenomaxillary

sphenooccipitalis,e sphenooccipital

sphenopalatinus,a,um sphenopalatine

sphincter,eris m (Gr.) sphincter

spina, ae f spine

spinae, arum pl/f spines

spinalis,e spinal

spinosus,a,um spinous

spiralis,e (Gr.) spiral

spongiosus,a,um (Gr.)- spongy

spurius,a,um false

squama,ae f squama

squamosus,a,um squamous

sternalis,e sternal

sternoclavicularis,e sternoclavicular

sternum,i n (Gr.) sternum

stomachus,i m (Gr.) stomach

stratum,i n layer

subclavius,a,um subclavian

subcostalis,e subcostal

subcutaneus,a,um subcutaneous

subdeltoideus,a,um subdeltoid

sublingualis,e sublingual

submandibularis,e submandibular

submaxillaris,e submaxillary

submentalis,e submental

submuscularis,e submuscular

subscapularis,e subscapular

substantia,ae f substance

sulci, orum pl/m sulci, grooves

sulcus, i m sulcus, groove

supercilia, orum pl/n supercilia, eyebrows

supercilium, i n eyebrow

superciliaris,e superciliary

superficialis,e superficial

superior,ius superior

superus,a,um superus

supinator,oris m (musculus) supinator

supremus,a,um supreme

sura, ae f sura,calf

suralis,e sural

sutura,ae f suture

suturae, arum pl/f sutures

sympathicus,a,um (Gr.)- sympathetic

symphysialis,e symphysial

symphysis,is f(Gr.) symphysis

synovialis,e synovial

systema,atis n (Gr.) system

T

talocalcaneus,a,um talocalcaneal, talocalcanean

talocruralis,e talocrural

talofibularis,e talofibular

talonavicularis,e talonavicular

talus, i m talus

tarsometatarseus,a,um- tarsometatarsal

tarsus,i m (Gr.) tarsus, sole of the foot

tegmen, inis n tegmen ,roof

temporalis,e temporalis

temporomandibularis,e- temporomandibular

temporoparietalis,e temporoparietal

temporozygomaticus, a,um- temporozygomatic

tempus, oris n temple

tendineus,a,um tendinous

tendinosus,a, um tendinosus

tendo,inis m tendon

tensor, oris m tensor

teres,etis round

terminalis,e terminal

testis, is m testis

thalamus, i m (Gr.) thalamus

thoracicoacromialis,e thoracicoacromial

thoracicus,a,um thoracic

thoracodorsalis,e thoracodorsal

thorax,acis m (Gr.) thorax,chest

thymus, i m (Gr.) thymus

thyroideus,a,um thyroid

tibia,ae f tibia

tibialis,e tibial

tonsilla,ae f tonsil

tonsillaris,e tonsillar

trachea,ae f (Gr.) trachea

trachealis,e tracheal

tractus,us m tract, tractus

tractus, uum pl/m tracts, tractus

transversalis,e transversal

transversarius,a,um transverse

transversus,a,um transverse

trapezium,i n trapezium

trapezius,a,um;

trapezoideus,a,um- trapezoid

triangularis,e triangular

triceps, cipitis triceps

tricuspidalis,e tricuspid

trigeminus,a,um trigeminal

trigonum, i n trigone

trochanter,eris m (Gr.)- trochanter

trochantericus,a,um trochanteric

trochlea,ae f (Gr.) trochlea

trochlearis,e trochlear

trunci, orum pl/m trunks

truncus, i m trunk

tuba, ae f tube

tubarius,a,um tubal

tuber, eris n tuber

tubera, um pl/n tubers

tuberalis,e tuberal

tubercula, orum pl/n tubercles

tubercularis,e tubercular

tuberculum, i n tubercle

tuberositas,atis f tuberosity

tunica,ae f tunic

tunicae, arum pl/f tunics

turcicus,a,um Turkish

tympanicus,a,um tympanic

tympanum,i n tympanum

U

ulna, ae f ulna

ulnaris,e ulnar

umbilicalis,e umbilical

umbilicus, i m umbilicus, naval

unguis, is m nail

urogenitalis,e urogenital

uterinus,a,um uterine

uterus, i m (metra) uterus

uvula, ae f uvula

V

vagalis,e vagal

vagina, ae f Vagina,sheath

vaginae, arum pl/f vaginae

vaginalis,e vaginal

vagus,a,um vagus

valva, ae f valve

valvula, ae f valvule

vas, vasis n vessel

vascularis,e vascular

velum, i n velum

vena, ae f vein

venae, arum pl/f veins

venosus,a,um venous

venter, tris m belly

ventralis,e ventral

ventricularis,e ventricular

ventriculi, orum pl/m ventricles

ventriculus, i m (gaster)- ventricle

vermiformis,e vermiform

vertebra, ae f vertebra

vertebrae, arum pl/f vertebrae

vertebralis,e vertebral

verus,a,um true

vesica, ae f bladder

vesicalis,e vesical

vesicorectalis,e vesicorectal

vesicularis,e vesicular

vestibularis,e vestibular

vestibulum, i n vestibule

viscera, um pl/n viscera

visceralis,e visceral

viscus, eris n viscus

vita, ae f life

vitreus,a,um vitreitis

vocalis,e vocal

vomer, eris m vomer

X

xiphoideus,a,um (Gr.) xiphoid

Z

zona,ae f (Gr.) zone

zonula, ae f zonule

zonularis,e zonular

zygoma, atis n (Gr.) zygoma

zygomaticofacialis,e zygomaticofacial

zygomaticofrontalis,e zygomaticofrontal

zygomaticoorbitalis,e zygomaticoorbital

zygomaticotemporalis,e- zygomaticotemporal

zygomaticus,a,um zygomatic

Anatomical terms

A	
aditus laryngis	aditus of the larynx
aditus orbitae	opening of the orbit
ala major	greater wing
ala minor	lesser wing
ala minor ossis sphenoidalis	lesser wing of the sphenoid bone
ala nasi	wing of the nose
alae majores	greater wings
alae minores	lesser wings
alae vomeris	wings of the vomer
alveoli dentales	dental sockets
ampulla canaliculi lacrimalis	ampulla of the lacrimal canaliculus
ampulla membranacea anterior	anterior membranous ampulla
ampulla membranacea lateralis	lateral membranous ampulla
ampulla membranacea posterior	posterior membranous ampulla
ampulla ossea anterior	anterior osseous ampulla
ampulla ossea lateralis	lateral osseous ampulla
ampulla ossea posterior	posterior osseous ampulla
ampulla tubae uterinae	ampulla of the uterine tube
anastomosis arteriovenosa	arteriovenous anastomosis
angulus costae	costal angle
angulus frontalis	frontal angle
angulus infrasternalis	infrasternal angle
angulus mandibulae	angle of the mandible
angulus mastoideus	mastoid angle
angulus mastoideus ossis parietalis	mastoid angle of the parietal bone
angulus occipitalis	occipital angle
angulus oculi lateralis	lateral angle of the eye
angulus sphenoidalis	sphenoidal angle
angulus sterni	sternal angle
antrum mastoideum	mastoid antrum
antrum pyloricum	pyloric antrum
antrum tympanicum	tympanic antrum
anulus femoralis	femoral ring
anulus fibrosus	fibrous ring
anulus inguinalis profundus	deep inguinal ring
anulus umbilicalis	umbilical ring
aorta ascendens	ascending aorta
aorta thoracica descendens	descending thoracic aorta
apertura inferior	inferior aperture

apertura sinus frontalis	opening of the frontal sinus
apertura sinus maxillaris	opening of the maxillary sinus
apertura sinus sphenoidalis	opening of the sphenoid sinus
apertura superior	superior aperture
apex auriculae	apex of the auricle
apex capitis fibulae	apex of the head of the fibula
apex cordis	apex of the heart
apex linguae	apex of the tongue
apex ossis sacri	apex of the sacrum
apex partis petrosae	apex of the petrous part
apex patellae	apex of the patella
aponeurosis linguae	aponeurosis of the tongue
aponeurosis musculi bicipitis brachii	bicipital aponeurosis
aponeurosis palatina	palatine aponeurosis
aponeurosis palmaris	palmar aponeurosis
aponeurosis plantaris	plantar aponeurosis
appendix fibrosa hepatis	fibrous appendix of the liver
appendix vermiformis	vermiform appendix
arcus alveolaris	alveolar arch
arcus anterior atlantis	anterior arch of the atlas
arcus anterior et posterior	anterior and posterior arches
arcus costalis	costal arch
arcus dentalis inferior	inferior dental arch
arcus dentalis mandibularis	mandibular dental arch
arcus dentalis maxillaris	maxillary dental arch
arcus dentalis superior	superior dental arch
arcus iliopectineus	iliopectineus arch
arcus lumbocostalis lateralis	lateral lumbocostal arch
arcus palatoglossus	palatoglossal arch
arcus palatopharyngeus	palatopharyngeal arch
arcus superior and inferior	superior et inferior arches
arcus superciliaris	superciliary arch
arcus tendineus fasciae pelvis	tendinous arch of pelvic fascia
arcus vertebrae	vertebral arch
arcus zygomaticus	zygomatic arch
area acustica	acoustic area
area cribrosa	cribriform area
area intercondylaris anterior	anterior intercondylar area
area intercondylaris posterior	posterior intercondylar area
areae gastricae	gastric areas
arteria buccalis	buccal artery
arteria carotica interna	internal carotid artery

arteria cervicalis ascendens	ascending cervical artery
arteria communicans posterior	posterior communicating artery
arteria coronaria dextra	right coronary artery
arteria coronaria sinistra	left coronary artery
arteria ethmoidalis anterior	anterior ethmoidal artery
arteria ethmoidalis posterior	posterior ethmoidal artery
arteria gastrica dextra	right gastric artery
arteria gastrica sinistra	left gastric artery
arteria intercostalis	intercostal artery
arteria lingualis	lingual artery
arteria lobi caudati	artery of the caudate lobe
arteria lumbalis	lumbar artery
arteria mesenterica superior	superior mesenteric artery
arteria radialis indicis	radialis indicis artery
arteria recurrens radialis	radial recurrent artery
arteria recurrens tibialis posterior	posterior tibial recurrent artery
arteria subclavia	subclavian artery
arteria temporalis media	middle temporal artery
arteria transversa faciei	transverse artery of the face
arteriae auriculares	auricular arteries
arteriae communicantes	communicating arteries
arteriae intercostales superiores	superior intercostal arteries
arteriae labiales superior et inferior	superior and inferior labial arteries
arteriae palatinae minores	lesser palatine arteries
arteriae sacrales laterales	lateral sacral arteries
arteriae sigmoideae	sigmoid arteries
arteriae temporales profundae	deep temporal arteries
articulatio acromioclavicularis	acromioclavicular joint
articulatio atlantoaxialis	atlantoaxial joint
articulatio atlantoaxialis lateralis	lateral atlantoaxial joint
articulatio atlantoaxialis mediana	median atlantoaxial joint
articulatio atlantooccipitalis	atlantooccipital joint
articulatio composita	compound joint
articulatio complexa	complex joint
articulatio costotransversaria	costotransverse joint
articulatio ellipsoidea	ellipsoid joint
articulatio genus	knee joint
articulatio mediocarpea	mediocarpal joint
articulatio plana	plane joint
articulatio radiocarpea	radiocarpal articulation
articulatio radioulnaris distalis	distal radioulnar articulation
articulatio sacrococcygea	sacrococcygeal joint

articulatio sacroiliaca	sacroiliac joint
articulatio spheroidea	spheroid articulation
articulatio sternoclavicularis	sternoclavicular joint
articulationes costovertebrales	costovertebral joints
articulationes intercarpeae	intercarpal articulations
articulationes intermetatarseae	intermetatarsal joints
articulationes sternocostales	sternocostal joints
auris externa	external ear
auris interna	internal ear
auris media	middle ear
axis bulbi externus	external axis of the eye
axis bulbi internus	internal axis of the eye
axis opticus	optic axis
axis transversus	transverse axis
B	
basis cartilaginis arytenoideae	base of the arytenoid cartilage
basis cochleae	base of the cochlea
basis cranii externa	external cranial base
basis cranii interna	internal cranial base
basis mandibulae	base of the mandible
basis ossis sacri	base of the sacrum
basis patellae	base of the patella
basis phalangis	base of the phalanx
basis prostatae	base of the prostate
basis pulmonis	base of the lung
bronchi lobares	lobar bronchi
bronchioli respiratorii	respiratory bronchioles
bronchus principalis dexter	right main bronchus
bronchus segmentalis lateralis	lateral segmental bronchus
bulbus olfactorius	olfactory bulb
bursa anserina	anserine bursa
bursa calcanea subcutanea	subcutaneous calcaneal bursa
bursa mucosa	mucous bursa
bursa musculi piriformis	bursa of the piriformis muscle
bursa subcutanea trochanterica	subcutaneous trochanteric bursa
bursa subtendinea iliaca	subtendinous iliac bursa
bursa suprapatellaris	suprapatellar bursa
bursae subtendineae	subtendinous bursae
bursae synoviales	synovial bursae
bursae trochantericae musculorum gluteorum	trochanteric bursae of the gluteus muscles
C	
canales alveolares	alveolar canals

canales laterales	lateral canals
canales palatini	palatine canals
canales optici	optic canals
canales palatini minores	lesser palatine canals
canaliculi caroticotympanici	caroticotympanic canaliculi
canaliculus chordae tympani	canaliculus for the chorda tympani
canaliculus dentalis	dental canaliculus
canaliculus lacrimalis	lacrimal canaliculus
canaliculus mastoideus	mastoid canaliculus
canaliculus tympanicus	tympanic canaliculus
canalis adductorius	adductor canal
canalis caroticus	carotid canal
canalis carpi	carpal canal
canalis condylaris	condylar canal
canalis femoralis	femoral canal
canalis incisivus	incisive canal
canalis infraorbitalis	infraorbital canal
canalis inguinalis	inguinal canal
canalis mandibulae	mandibular canal
canalis musculotubarius	musculotubal canal
canalis nasolacrimalis	nasolacrimal canal
canalis nervi facialis	canal of the facial nerve
canalis nervi radialis	canal of the radial nerve
canalis nutricius	nutrient canal
canalis obturatorius	obturator canal
canalis opticus	optic canal
canalis palatinus major	greater palatine canal
canalis pterygoideus	pterygoid canal
canalis pyloricus	pyloric canal
canalis radicis dentis	root canal of the tooth
canalis sacralis	sacral canal
canalis vertebralis	vertebral canal
capsula articularis	articular capsule
capsula tonsillae	tonsillar capsule
caput breve	short head
caput costae	head of a rib
caput fibulae	head of the fibula
caput humeri	head of the humerus
caput infraorbitale	infraorbital head
caput laterale	lateral head
caput longum	long head
caput mandibulae	head of the mandible

caput mediale	medial head
caput nuclei caudati	head of the caudate nucleus
caput obliquum	oblique head
caput profundum	deep head
caput radiale	radial head
caput radii	head of the radius
caput tali	head of the talus
caput transversum	transverse head
caput ulnae	head of the ulna
caput zygomaticum	zygomatic head
cartilagines alares minores	lesser alar cartilages
cartilagines arytenoideae	arytenoid cartilages
cartilagines cuneiformes	cuneiform cartilages
cartilagines laryngis	cartilages of the larynx
cartilagines nasales accessoriae	accessory nasal cartilages
cartilagines nasi	nasal cartilages
cartilagines tracheales	tracheal cartilages
cartilago arytenoidea	arytenoid cartilage
cartilago alaris major	greater alar cartilage
cartilago alaris minor	lesser alar cartilage
cartilago articularis	articular cartilage
cartilago costalis	costal cartilage
cartilago cricoidea	cricoid cartilage
cartilago cuneiformis	cuneiform cartilage
cartilago epiglottica	epiglottic cartilage
cartilago meatus acustici	cartilage of the acoustic meatus
cartilago nasalis accessoria	accessory nasal cartilage
cartilago nasi lateralis	lateral nasal cartilage
cartilago sesamoidea	sesamoid cartilage
cartilago thyroidea	thyroid cartilage
cartilago tubae auditivae	cartilage of the auditory tube
cavitas abdominis	abdominal cavity
cavitas articularis	articular cavity
cavitas glenoidalis	glenoid cavity
cavitas glenoidalis scapulae	glenoid cavity of the scapula
cavitas medullaris	medullar cavity
cavitas oris propria	oral cavity proper
cavitas pharyngis	cavity of the pharynx
cellulae mastoideae	mastoid cells
cellulae tympanicae	tympanic cells
centrum tendineum	central tendon
chiasma opticum	optic chiasm

chiasma tendinum	tendinous chiasm
chorda dorsalis	dorsal chord
chorda tympani	tympanic chord
collum anatomicum	anatomical neck
collum chirurgicum	surgical neck
collum costae	neck of a rib
collum femoris	neck of the femur
collum fibulae	neck of the fibula
collum mandibulae	neck of the mandible
collum radii	neck of the radius
collum scapulae	neck of the scapula
collum vesicae felleae	neck of the gallbladder
colon ascendens	ascending colon
colon descendens	descending colon
colon sigmoideum	sigmoid colon
colon transversum	transverse colon
columnae griseae	grey columns
concha nasalis inferior	inferior nasal concha
concha nasalis superior	superior nasal concha
concha sphenoidalis	sphenoidal concha
conchae sphenoidales	sphenoidal conchae
condylus humeri	condyle of the humerus
condylus lateralis	lateral condyle
condylus medialis	medial condyle
condylus occipitalis	occipital condyle
cornu coccygeum	coccygeal horn
cornu inferius	inferior horn
cornu majus	greater horn
cornu sacrale	sacral horn
cornua coccygea	coccygeal horns
cornua majora	greater horns
cornua minora	lesser horns
corpora interrenalia accessoria	accessory interrenal bodies
corpora mamillaria	mamillary bodies
corpora paraaortica	paraaortic bodies
corpus adiposum orbitae	fat body of the orbit
corpus callosum	corpus callosum
corpus adiposum buccae	fat body of the cheek
corpus ciliare	ciliary body
corpus claviculae	body of the clavicle
corpus coccygeum	coccygeal body
corpus costae	body of the rib

corpus femoris	body of the femur
corpus geniculatum	geniculate body
corpus geniculatum laterale	lateral geniculate body
corpus linguae	body of the tongue
corpus mamillare	mamillary body
corpus mandibulae	body of the mandible
corpus mediale	medial body
corpus ossis hyoidei	body of the hyoid bone
corpus ossis ilii	body of the ilium
corpus ossis ischii	body of the ischium
corpus sterni	body of the sternum
corpus trapezoideum	trapezoid body
corpus vesicae felleae	body of the gallbladder
costae fluctuantes	floating ribs
costae spuriae	false ribs
costae verae	true ribs
cranium cerebrale	cerebral cranium
cranium viscerale	visceral cranium
crista capitis costae	crest of the head of a rib
crista ethmoidalis	ethmoidal crest
crista galli	crista galli
crista iliaca	iliac crest
crista intertrochanterica	intertrochanteric crest
crista lacrimalis anterior	anterior lacrimal crest
crista lacrimalis posterior	posterior lacrimal crest
crista occipitalis externa	external occipital crest
crista sacralis intermedia	intermediate sacral crest
crista sphenoidalis	sphenoid crest
crista tuberculi majoris	crest of the greater tubercle
crista tuberculi minoris	crest of the lesser tubercle
cristae acusticae	acoustic crests
crura ampullaria	ampullary crura
crura dextrum et sinistrum	right and left crura
crura membranacea	membranous crura
crura ossea	bony crura
crus ampullare	ampullary crus
crus dextrum	right crus
crus laterale	lateral crus
crus mediale	medial crus
crus osseum	bony crus
crus sinistrum	left crus
D	

dens serotinus	late tooth
dentes canini	canine teeth
dentes decidui	milk teeth
dentes incisivi	incisive teeth
dentes molares	molar (teeth)
dentes premolares	premolar (teeth)
diameter obliqua	oblique diameter
diameter transversa	transverse diameter
diaphragma oris	oral diaphragm
diaphragma pelvis	pelvic diaphragm
diaphragma urogenitale	urogenital diaphragm
digiti pedis	toes
digitus minimus	little finger
disci intervertebrales	intervertebral discs
discus articularis	articular disc
discus intervertebralis	intervertebral disc
dorsum linguae	dorsum of the tongue
dorsum sellae	dorsum sellae
ductus cochlearis	cochlear duct
ductus lymphaticus dexter	right lymph duct
ductus nasolacrimalis	nasolacrimal duct
ductus parotideus	parotid duct
ductus sublinguales minores	lesser sublingual ducts
ductus sublingualis major	greater sublingual duct
ductus submandibularis	submandibular duct
E	
eminentia arcuata	arcuate eminence
eminentia cruciformis	cruciform eminence
epicondylus medialis	medial epicondyle
extremitas acromialis (claviculae)	acromial extremity (of the clavicle)
extremitas anterior	anterior extremity
extremitas sternalis (claviculae)	sternal extremity (of the clavicle)
extremitas tubaria	tubal extremity
extremitas uterina	uterine extremity
F	
facies articularis	articular surface
facies articularis capitis costae	articular surface of the head of a rib
facies articularis capitis fibulae	articular surface of the head of the fibula
facies articularis carpea	carpal articular surface
facies articularis cuboidea	cuboid articular surface
facies articularis fibularis	fibular articular surface
facies articularis posterior	posterior articular surface

facies articularis superior	superior articular surface
facies articularis tuberculi costae	articular surface of the tubercle of a rib
facies auricularis	auricular surface
facies buccalis dentis facies glutea	buccal surface of the tooth gluteal surface
facies inferior	inferior surface
facies inferior linguae	inferior surface of the tongue
facies lateralis	lateral surface
facies lingualis dentis	lingual surface of the tooth
facies medialis	medial surface
fascia antebrachii	antebrachial fascia
fascia brachii	brachial fascia
fascia cribrosa	cribriform fascia
fascia cruris	fascia of the leg
fascia deltoidea	deltoid fascia
fascia dorsalis pedis	dorsal fascia of the foot
fascia lata femoris	fascia lata of the thigh
fascia masseterica	masseteric fascia
fascia pectoralis	pectoral fascia
fascia superficialis	superficial fascia
fibrae musculares	muscular fibers
fibrae obliquae	oblique fibers
fissura orbitalis inferior	inferior orbital fissure
fissura orbitalis superior	superior orbital fissure
fissura petrosquamosa	petrosquamous fissure
fissura sphenopetrosa	sphenopetrous fissure
flexura coli dextra	right colic flexure
fonticulus anterior	anterior fontanel
fonticulus mastoideus	mastoid fontanel
fonticulus posterior	posterior fontanel
fonticulus posterior (occipitalis)	posterior (occipital) fontanel
fonticulus sphenoidalis	sphenoidal fontanel
foramen cecum linguae	foramen cecum of the tongue
foramen frontale	frontal foramen
foramen incisivum	incisive foramen
foramen infraorbitale	infraorbital foramen
foramen intervertebrale	intervertebral foramen
foramen ischiadicum majus	greater sciatic foramen
foramen jugulare	jugular foramen
foramen lacerum	foramen lacerum
foramen magnum (foramen occipitale magnum)	foramen magnum (greater occipital foramen)
foramen mandibulae	mandibular foramen

foramen mastoideum	mastoid foramen
foramen mentale	mental foramen
foramen obturatum	obturatory foramen
foramen ovale	oval foramen
foramen palatinum majus	greater palatine foramen
foramen palatinum minus	lesser palatine foramen
foramen parietale	parietal foramen
foramen rotundum	round foramen
foramen sacrale anterius	anterior sacral foramen
foramen sphenopalatinum	sphenopalatine foramen
foramen spinosum	spinous foramen
foramen stylomastoideum	stylomastoid foramen
foramen supraorbitale	supraorbital foramen
foramen vertebrale	vertebral foramen
foramina intervertebralia	intervertebral foramina
foramina palatina minora	lesser palatine foramina
foramina sacralia anteriora	anterior sacral foramina
foramina sacralia dorsalia 16	dorsal sacral foramina
foramina sacralia pelvina	pelvic sacral foramina
fossa acetabuli	acetabular fossa
fossa condylaris	condylar fossa
fossa cranii anterior	anterior cranial fossa
fossa cranii media	midddle cranial fossa
fossa digastrica	digastric fossa
fossa glandulae lacrimalis	fossa of the lacrimal gland
fossa intercondylaris	intercondylar fossa
fossa olecrani	olecranon fossa
fossa pterygoidea	pterygoid fossa
fossa temporalis	temporal fossa
fovea capitis femoris	fovea of the head of the femur
fovea costalis superior	superior costal fovea
foveae costales superior et inferior	superior and inferior costal foveae
frenulum labii inferioris	frenulum of the inferior lip
frenulum labii superioris	frenulum of the superior lip
G	
ganglia sacralia	sacral ganglia
ganglia thoracica	thoracic ganglia
ganglia trunci sympathici	sympathetic trunk ganglia
ganglion acusticum	acoustic ganglion
ganglion cervicale superius	superior cervical ganglion
ganglion oticum	otic ganglion
geniculum canalis facialis	geniculum of the facial canal

genu capsulae internae	genu of the internal capsule
glandula lacrimalis	lacrimal gland
glandula lingualis anterior	anterior lingual gland
glandula mucosa	mucous gland
glandula sublingualis	sublingual gland
glandulae linguales	lingual glands
glandulae palatinae	palatine glands
gyri cerebri	cerebral gyri
gyrus frontalis inferior	inferior frontal gyrus
gyrus temporalis medius	middle temporal gyrus
H	
hamulus pterygoideus	pterygoid hamulus
hiatus aorticus	aortic opening (hiatus)
hiatus canalis nervi petrosi majoris	hiatus of canal of the greater petrosal nerve
hiatus maxillaris	maxillary hiatus
hiatus sacralis	sacral hiatus
hiatus semilunaris	semilunar hiatus
hilus lienis	hilus of the spleen
hilus pulmonis	hilus of the lung
hypophysis cerebri	cerebral hypophysis
I	
impressio cardiaca	cardiac impression
impressio esophagea	esophageal impression
impressio gastrica	gastric impression
impressio renalis	renal impression
impressiones digitatae	digitate impressions
incisura acetabuli	acetabular notch
incisura apicis cordis	notch of the apex of the heart
incisura costalis	costal notch
incisura fibularis	fibular notch
incisura ischiadica major	greater sciatic notch
incisura ischiadica minor	lesser sciatic notch
incisura jugularis	jugular notch
incisura pterygoidea	pterygoid notch
incisura scapulae	notch of the scapula
incisura supraorbitalis	supraorbital notch
incisura vertebralis inferior	inferior vertebral notch
incisurae costales	costal notches
J	
jugum alveolare	alveolar yoke
juncturae fibrosae	fibrous joints
L	

labia oris	lips of the mouth
labium inferius	inferior lip
labium laterale	lateral lip
labium mediale	medial lip
labium superius	superior lip
labrum acetabulare	acetabular labrum
labrum glenoidale	glenoid labrum
labyrinthus ethmoidalis	ethmoidal labyrinth
labyrinthus membranaceus	membranous labyrinth
labyrinthus osseus	osseous labyrinth
lamina alaris	alar lamina
lamina cribrosa	cribriform plate
lamina externa	external lamina
lamina horizontalis ossis palatini	horizontal plate of the palatine bone
lamina interna	internal lamina
lamina medialis	medial lamina
lamina perpendicularis	perpendicular plate
lamina posterior	posterior lamina
lamina spiralis ossea	osseous spiral lamina
laminae medullares	medullary laminae
lien accessorius	accessory spleen
ligamenta accessoria	accessory ligaments
ligamenta alaria	alar ligaments
ligamenta collateralia	collateral ligaments
ligamenta costotransversaria	costotransverse ligaments
ligamenta flava	yellow ligaments (ligamenta flava)
ligamenta interossea	interosseous ligaments
ligamenta interspinalia	interspinal ligaments
ligamenta metacarpea interossea	interosseous metacarpal ligaments
ligamenta palmaria	palmar ligaments
ligamenta plantaria	plantar ligaments
ligamenta sacrococcygea posterius et anterius	posterior and anterior sacrococcygeal ligaments
ligamenta sacroiliaca anteriora	anterior sacroiliac ligaments
ligamenta sacroiliaca posteriora	posterior sacroiliac ligaments
ligamentum anulare radii	anular ligament of the radius
ligamentum apicis dentis	apical ligament of the tooth
ligamentum arcuatum laterale	lateral arcuate ligament
ligamentum arcuatum mediale	medial arcuate ligament
ligamentum arcuatum medianum	median arcuate ligament
ligamentum capitis costae radiatum	radiate ligament of the costal head
ligamentum carpi radiatum	radiate carpal ligament
ligamentum collaterale fibulare	fibular collateral ligament

ligamentum collaterale mediale	medial collateral ligament
ligamentum collaterale ulnare	ulnar collateral ligament
ligamentum cruciatum anterius	anterior cruciate ligament
ligamentum cruciatum posterius	posterior cruciate ligament
ligamentum gastrocolicum	gastrocolic ligament
ligamentum interclaviculare	interclavicular ligament
ligamentum laterale	lateral ligament
ligamentum longitudinale anterius	anterior longitudinal ligament
ligamentum longitudinale posterius	posterior longitudinal ligament
ligamentum metacarpeum interosseum	interosseous metacarpal ligament
ligamentum patellae	patellar ligament
ligamentum popliteum obliquum	oblique popliteal ligament
ligamentum sacrospinale	sacrospinous ligament
ligamentum supraspinale	supraspinal ligament
ligamentum transversum acetabuli	transverse acetabular ligament
ligamentum transversum atlantis	transverse ligament of the atlas
ligamentum transversum scapulae superius	superior transverse ligament of the scapula
linea arcuata	arcuate line
linea ethmoidalis posterior	posterior ethmoidal line
linea mediana anterior	anterior median line
linea mediana posterior	posterior median line
linea nuchae superior	superior nuchal line
linea obliqua	oblique line
linea scapularis	scapular line
linea temporalis inferior	inferior temporal line
linea transversa	transverse line
linea trapezoidea	trapezoid line
lineae transversae	transverse lines
lingula mandibulae	lingula of the mandible
lobus caudatus	caudate lobe
lobus medius	middle lobe
M	
malleolus lateralis	lateral malleolus
manubrium mallei	manubrium of the malleus
manubrium sterni	manubrium of the sternum
margo anterior	anterior border
margo anterior partis petrosae	anterior border of the petrous part
margo dexter	right margin
margo falciformis	falciform margin
margo frontalis	frontal border
margo infraorbitalis	infraorbital margin
margo interosseus	interosseous margin

margo lambdoideus	lambdoid border
margo linguae dexter	right margin of the tongue
margo linguae sinister	left margin of the tongue
margo mastoideus	mastoid margin
margo medialis	medial margin
margo occipitalis	occipital border
margo posterior	posterior margin
margo posterior patris petrosae	posterior border of the petrous part
margo sagittalis	sagittal border
margo squamosus	squamous margin
margo superior	superior margin
margo superior partis petrosae	superior border of the petrous part
margo supraorbitalis	supraorbital border
margo uteri dexter	right margin of the uterus
margo uteri sinister	left margin of the uterus
margo zygomaticus	zygomatic margin
meatus acusticus externus	external acoustic meatus
meatus nasi inferior	inferior nasal meatus
meatus nasi medius	middle nasal meatus
medulla spinalis	spinal medulla
membrana fibrosa	fibrous membrane
membrana atlantooccipitalis anterior	anterior atlantooccipital membrane
membrana intercostalis externa	external intercostal membrane
membrana interossea antebrachii	interosseous membrane of the forearm
membrum inferius	lower limb
meniscus articularis	articular meniscus
meniscus medialis	medial meniscus
musculi arytenoidei obliqui	oblique arytenoid muscles
musculi auriculares	auricular muscles
musculi faciei	facial muscles
musculi infrahyoidei	infrahyoid muscles
musculi intercostales externi	external intercostal muscles
musculi intercostales interni	internal intercostal muscles
musculi interossei dorsales	dorsal interosseous muscles
musculi interossei palmares	palmar interosseous muscles
musculi interossei plantares	plantar interosseous muscles
musculi interspinales	interspinales muscles
musculi interspinales cervicis	interspinales muscles of the neck
musculi intertransversarii	intertransverse muscles
musculi intertransversarii posteriores cervicis	posterior intertransverse muscles of the neck
musculi levatores costarum	levatores costarum muscles
musculi orbiculares	orbiculares muscles

musculi rotatores	rotatores muscles
musculi scaleni	scalene muscles
musculi subcostales	subcostal muscles
musculi suboccipitales	suboccipital muscles
musculus abductor digiti minimi	abductor digiti minimi muscle
musculus abductor pollicis brevis	abductor pollicis brevis muscle
musculus adductor longus	adductor longus muscle
musculus adductor magnus	adductor magnus muscle
musculus anconeus	anconeus muscle
musculus auricularis anterior	anterior auricular muscle
musculus auricularis posterior	posterior auricular muscle
musculus brachialis	brachialis muscle
musculus buccinator	buccinator muscle
musculus corrugator supercilii	corrugator supercilii muscle
musculus deltoideus	deltoid muscle
musculus depressor anguli oris	depressor anguli oris muscle
musculus depressor labii inferioris	depressor labii inferioris muscle
musculus depressor septi nasi	depressor septi nasi muscle
musculus digastricus	digastric muscle
musculus erector spinae	erector spinae muscle
musculus extensor carpi radialis	extensor carpi radialis muscle
musculus extensor digiti minimi	extensor digiti minimi muscle
musculus flexor carpi radialis	flexor carpi radialis muscle
musculus flexor digitorum brevis	flexor digitorum brevis muscle
musculus gluteus medius	gluteus medius muscle
musculus infrahyoideus	infrahyoid muscle
musculus infraspinatus	infraspinatus muscle
musculus intercostalis externus	external intercostal muscle
musculus latissimus dorsi	latissimus dorsi muscle
musculus levator anguli oris	levator anguli oris muscle
musculus levator costae	levator costae muscle
musculus levator labii superioris	levator labii superioris muscle
musculus levator scapulae	levator scapulae muscle
musculus longitudinalis inferior (linguae)	inferior longitudinal muscle (of the tongue)
musculus longus capitis	longus capitis muscle
musculus longus colli	longus colli muscle
musculus masseter	masseter muscle
musculus mentalis	mentalis muscle
musculus obliquus capitis superior	superior oblique muscle of the head
musculus obturatorius internus	obturator internus muscle
musculus opponens digiti minimi	opponens digiti minimi muscle
musculus opponens pollicis	opponens pollicis muscle

musculus orbicularis oculi	orbicularis oculi muscle
musculus pectineus	pectineus muscle
musculus pectoralis major	pectoralis major muscle
musculus piriformis	piriformis muscle
musculus pterygoideus lateralis	lateral pterygoid muscle
musculus pterygoideus medialis	medial pterygoid muscle
musculus pyramidalis	pyramidalis muscle
musculus rectus capitis anterior	rectus capitis anterior muscle
musculus scalenus anterior	anterior scalene muscle
musculus sphincter pupillae	sphincter pupillae muscle
musculus spinalis thoracis, cervicis et capitis	spinalis thoracis, cervicis and capitis muscle
musculus subclavius	subclavian muscle
musculus supinator	supinator muscle
musculus supraspinatus	supraspinatus muscle
musculus tensor fasciae latae	tensor fasciae latae muscle
musculus tensor tympani	tensor tympani muscle
musculus tibialis posterior	tibialis posterior muscle
musculus uvulae	muscle of the uvula
musculus zygomaticus major	zygomaticus major muscle
N	
nervi palatini major et minor	greater and lesser palatine nerves
nervus abducens	abducens nerve
nervus facialis	facial nerve
nervus hypoglossus	hypoglossal nerve
nervus laryngeus recurrens	recurrent laryngeal nerve
nervus mandibularis	mandibular nerve
nervus maxillaris	maxillary nerve
nervus sublingualis	sublingual nerve
nervus transversus colli	transverse cervical nerve
nodi lymphatici	lymph nodes
nodi lymphatici lumbales	lumbar lymph nodes
nodi lymphatici submandibulares	submandibular lymph nodes
nodi lymphatici submentales	submental lymph nodes
nodus lymphaticus tibialis anterior	anterior tibial lymph node
nucleus accessorius	accessory nucleus
nucleus accessorius nervi oculomotorii	accessory oculomotor nucleus
nucleus cuneatus accessorius	accessory cuneate nucleus
nucleus inferior	inferior nucleus
nucleus nervi facialis	nucleus of the facial nerve
nucleus posterior	posterior nucleus
nucleus thoracicus	thoracic nucleus
nucleus trochlearis	trochlear nucleus

O	
os capitatum	capitate bone
os centrale	central bone
os cuboideum	cuboid bone
os cuneiforme intermedium	intermediate cuneiform bone
os cuneiforme laterale	lateral cuneiform bone
os cuneiforme mediale	medial cuneiform bone
os ethmoidale	ethmoid bone
os hamatum	hamate bone
os hyoideum	hyoid bone
os ilium	ilium
os incisivum	incisive bone
os lacrimale	lacrimal bone
os lunatum	lunate bone
os nasale	nasal bone
os naviculare	navicular bone
os occipitale	occipital bone
os parietale	parietal bone
os scaphoideum	scaphoid bone
os sphenoidale	sphenoid bone
os temporale	temporal bone
os trapezoideum	trapezoid bone
os zygomaticum	zygomatic bone
ossa antebrachii	antebrachial bones
ossa carpi	carpal bones
ossa cuneiformia	cuneiform bones
ossa membri inferioris	bones of the inferior limb
ossa metacarpalia	metacarpal bones
ossa metatarsalia	metatarsal bones
ossa nasalia	nasal bones
ossa sesamoidea	sesamoid bones
ossa suprasternalia	suprasternal bones
ostium appendicis vermiformis	opening of the vermiform appendix
ostium cardiacum	cardiac opening
ostium pharyngeum tubae auditivae	pharyngeal opening of the auditory tube
ostium trunci pulmonalis	opening of the pulmonary trunk
P	
palatum durum	hard palate
palatum molle	soft palate
palatum osseum	bony palate
papilla duodeni major	major duodenal papilla
papilla incisiva	incisive papilla

paries anterior	anterior wall
paries lateralis	lateral wall
paries medialis	medial wall
pars abdominalis	abdominal part
pars alaris	alar part
pars alveolaris	alveolar part
pars cardiaca	cardiac part
pars cervicalis	cervical part
pars clavicularis	clavicular part
pars costalis	costal part
pars cruciformis vaginae fibrosae	cruciform part of the fibrous sheath
pars dextra	right part
pars intermedia	intermediate part
pars laryngea pharyngis	laryngeal part of the pharynx
pars orbitalis	orbital part
pars petrosa (pyramis)	petrous part (pyramid)
pars profunda	deep part
pars pylorica	pyloric part
pars squamosa	squamous part
pars superficialis	superficial part
pars thoracica	thoracic part
pars transversa	transverse part
pars tympanica (ossis temporalis)	tympanic part (of the temporal bone)
partes laterales ossis occipitalis	lateral parts of the occipital bone
partes laterales ossis sacri	lateral parts of the sacrum
pediculus arcus vertebrae	pedicle of the arch of a vertebra
pelvis major	greater pelvis
pelvis minor	lesser pelvis
pelvis renalis	renal pelvis
pes anserinus profundus	deep pes anserinus
pes anserinus superficialis	superficial pes anserinus
phalanx distalis	distal phalanx
phalanx media	middle phalanx
phalanx proximalis	proximal phalanx
pia mater encephali	cranial pia mater
pia mater spinalis	spinal pia mater
plexus cardiaci	cardiac plexuses
plexus pharyngeus	pharyngeal plexus
plexus pterygoideus	pterygoid plexus
plexus rectales inferiores	inferior rectal plexuses
plexus submucosus	submucous plexus
plica longitudinalis duodeni	longitudinal fold of the duodenum

plicae circulares	circular folds
plicae semilunares coli	semilunar folds
processus accessorius	accessory process
processus articularis inferior	inferior articular process
processus articularis superior	superior articular process
processus ciliares	ciliary processes
processus clinoidei anteriores	anterior clinoid processes
processus clinoideus anterior	anterior clinoid process
processus coracoideus	coracoid process
processus coronoideus	coronoid process
processus jugularis	jugular process
processus lateralis tuberis calcanei	lateral process of tuberosity of the calcaneus
processus mastoideus	mastoid process
processus palatinus	palatine process
processus posterior tali	posterior process of the talus
processus pterygoideus	pterygoid process
processus pyramidalis	pyramidal process
processus spinosus	spinous process
processus temporalis	temporal process
processus transversus	transverse process
processus vertebrae	vertebral process
processus xiphoideus	xiphoid process
processus zygomaticus	zygomatic process
protuberantia mentalis	mental protuberance
protuberantia occipitalis externa	external occipital protuberance
pulpa dentis	dental pulp
punctum fixum	fixed end
punctum mobile	mobile end
R	
radix clinica	clinic root
radix cochlearis inferior	inferior cochlear root
radix dorsalis	dorsal root
radix lateralis	lateral root
radix linguae	root of the tongue
radix medialis	medial root
radix motoria	motor root
radix oculomotoria	oculomotor root
radix sensoria	sensory root
rami mastoidei	mastoid branches
rami musculares	muscular branches
rami perforantes	perforating branches
rami pharyngei	pharyngeal branches

rami pterygoidei	pterygoid branches
ramus anterior ascendens	anterior ascending branch
ramus cutaneus	cutaneous branch
ramus descendens arteriae occipitalis	descending branch of the occipital artery
ramus lobi medii	branch of the middle lobe
ramus mandibulae	ramus of the mandible
ramus perforans	perforating branch
recessus piriformis	piriform recess
regio axillaris	axillary region
regio cervicalis posterior	posterior cervical region
regio colli lateralis	lateral cervical region
regio deltoidea	deltoid region
regio epigastrica	epigastric region
regio facialis	facial region
regio frontalis	frontal region
regio hypochondriaca	hypochondriac region
regio hypochondriaca dextra	right hypochondriac region
regio hypochondriaca sinistra	left hypochondriac region
regio inguinalis dextra	right inguinal region
regio lateralis dextra	right lateral region
regio lateralis sinistra	left lateral region
regio lumbalis lateralis	lateral lumbar region
regio lumbalis medialis	medial lumbar region
regio mastoidea	mastoid region
regio occipitalis	occipital region
regio sacralis	sacral region
regio temporalis	temporal region
regio umbilicalis	umbilical region
regio vertebralis	vertebral region
regio zygomatica	zygomatic region
regiones abdominales laterales	lateral abdominal regions
regiones colli	regions of the neck
regiones hypochondriacae	hypochondriac regions
ren dexter	right kidney
renes dexter et sinister	right and left kidneys
rete acromiale	acromial rete
rete arteriosum	arterial rete
rete calcaneum	calceneal rete
rete malleolare laterale	lateral malleolar network
rete venosum	venous rete
rete venosum dorsale pedis	dorsal venous rete of the foot
rostrum sphenoidale	sphenoidal rostrum

S	
septa interalveolaria	interalveolar septa
septa intermuscularia	intermuscular septa
septum cervicale intermedium	intermediate cervical septum
septum femorale	femoral septum
septum fibrosum	fibrous septum
septum intermusculare brachii laterale	lateral intermuscular septum of the arm
septum intermusculare brachii mediale	medial intermuscular septum of the arm
septum intermusculare cruris anterius	anterior crural intermuscular septum
septum intermusculare cruris posterius	posterior crural intermuscular septum
septum intermusculare femoris mediale	medial intermuscular septum of the femur
septum linguae	lingual septum
septum nasi osseum	bony nasal septum
septum orbitale	orbital septum
sinus frontalis	frontal sinus
sinus maxillaris (Higmori)	maxillary sinus
sinus sagittalis inferior	inferior sagittal sinus
sinus sphenoidalis	sphenoidal sinus
sinus transversus	transverse sinus
skeleton membri superioris	skeleton of the superior limb
spatia intercostalia	intercostal spaces
spatia interossea metacarpi	interosseous spaces of the metacarpus
spatium suprasternale	suprasternal space
spina iliaca anterior inferior	inferior anterior iliac spine
spina iliaca anterior superior	superior anterior iliac spine
spina iliaca inferior posterior	posterior inferior iliac spine
spina ischiadica	sciatic spine
spina mentalis	mental spine
spina nasalis	nasal spine
spina nasalis anterior	anterior nasal spine
spina nasalis posterior	posterior nasal spine
spina scapulae	spine of the scapula
spina trochlearis	trochlear spine
spinae mentales	mental spines
squama occipitalis	occipital squama
stratum longitudinale	longitudinal layer
stratum circulare	circular layer
substantia compacta	compact substance
substantia spongiosa	spongy substance
sulci carpi	carpal groove
sulci pulmonales	pulmonary grooves
sulci temporales transversi	transverse temporal sulci

sulcus arteriae caroticae internae	groove for the internal carotid artery
sulcus arteriae occipitalis	groove for the occipital artery
sulcus arteriae subclaviae	groove for the subclavian artery
sulcus arteriae temporalis mediae	groove for the middle temporal artery
sulcus arteriae vertebralis	groove for the vertebral artery
sulcus caroticus	carotid groove
sulcus costae	costal groove
sulcus frontalis superior	superior frontal sulcus
sulcus hamuli pterygoidei	groove for the pterygoid hamulus
sulcus infraorbitalis	infraorbital groove
sulcus lacrimalis	lacrimal groove
sulcus lateralis dorsalis	dorsal lateral sulcus
sulcus medianus	median sulcus
sulcus medianus linguae	median sulcus of the tongue
sulcus nervi petrosi minoris	groove for the greater petrosal nerve
sulcus nervi radialis	groove for the radial nerve
sulcus nervi ulnaris	groove for the ulnar nerve
sulcus obturatorius	obturator groove
sulcus palatinus major	greater palatine sulcus
sulcus plantaris lateralis	lateral plantar sulcus
sulcus plantaris medialis	medial plantar sulcus
sulcus terminalis linguae	terminal sulcus of the tongue
sulcus venae cavae superioris	groove for the superior vena cava
sulcus venae subclaviae	groove for the subclavian vein
sutura coronalis	coronal suture
sutura lambdoidea	lambdoid suture
sutura palatina mediana	median palatine suture
sutura palatina transversa	transverse palatine suture
sutura plana	plane suture
sutura sagittalis	sagittal suture
sutura serrata	serrate suture
sutura squamosa	squamous suture
symphysis mandibulae	symphysis of the mandible
synchondrosis petrooccipitalis	petrooccipital synchondrosis
synchondrosis sphenooccipitalis	sphenooccipital synchondrosis
synchondrosis sphenopetrosa	sphenopetrous synchondrosis
systema digestorium	digestive system
systema lymphaticum	lymphatic system
systema nervosum	nervous system
systema nervosum peripheric um	peripheral nervous system
systema nervosum autonomicum	autonomic nervous system
systema respiratorium	respiratory system

systema urogenitale	urogenital system
T	
tendo calcaneus (Achillis)	calcaneal tendon
tonsilla lingualis	lingual tonsil
tractus olfactorius	olfactory tract
tractus pyramidales	pyramidal tracts
trigonum caroticum	carotid trigone
trigonum collaterale	collateral trigone
trigonum colli laterale	lateral trigone of the neck
trigonum femorale	femoral trigone
trigonum lumbocostale	lumbocostal trigone
trigonum pectorale	pectoral trigone
trigonum sternocostale	sternocostal trigone
trigonum submandibulare	submandibular trigone
trigonum submentale	submental trigone
trochanter major	greater trochanter
trochanter minor	lesser trochanter
truncus jugularis dexter	right jugular trunk
truncus jugularis sinister	left jugular trunk
truncus pulmonalis	pulmonary trunk
tuba auditiva	auditory tube
tuber calcanei	calcaneal tuber
tuber cinereum	tuber cinereum
tuber frontale	frontal tuber
tuber ischiadicum	sciatic tuber
tuber parietale	parietal tuber
tubera frontalia	frontal tubers
tubercula mentalia	mental tubercles
tuberculum anterius	anterior tubercle
tuberculum articulare	articular tubercle
tuberculum caroticum	carotid tubercle
tuberculum conoideum	conoid tubercle
tuberculum costae	tubercle of a rib
tuberculum infraglenoidale	infraglenoid tubercle
tuberculum intercondylare laterale	lateral intercondylar tubercle
tuberculum intercondylare mediale	medial intercondylar tubercle
tuberculum majus	greater tubercle
tuberculum mentale	mental tubercle
tuberculum minus	lesser tubercle
tuberculum nuclei cuneati	tubercle of the cuneate nucleus
tuberculum pharyngeum	pharyngeal tubercle
tuberculum posterius	posterior tubercle

tuberculum sellae	tuberculum sellae
tuberculum supraglenoidale	supraglenoid tubercle
tuberositas deltoidea	deltoid tuberosity
tuberositas masseterica	masseteric tuberosity
tuberositas phalangis distalis	tuberosity of the distal phalanx
tuberositas pterygoidea	pterygoid tuberosity
tuberositas sacralis	sacral tuberosity
tuberositas ulnae	tuberosity of the ulna
tunica mucosa	mucous layer (coat)
tunica muscularis	muscular layer (coat)
tunica muscularis pharyngis	muscular coat of the pharynx
V	
vas afferens	afferent vessel
vas anastomoticum	anastomotic vessel
vas capillare	capillary vessel
vas collaterale	collateral vessel
vas efferens	efferent vessel
vas lymphaticum	lymph vessel
vas spirale	spiral vessel
vasa nutricia	nutricient vessels
vasa lymphatica	lymph vessels
velum palatinum	palatine velum
vena accessoria	accessory vein
vena angularis	angular vein
vena cava ascendens	ascending vena cava
vena cava superior	superior vena cava
vena lingualis	lingual vein
vena mesenterica superior	superior mesenteric vein
venae angulares	angular veins
venae cerebri mediae	middle cerebral veins
venae dorsales linguae	dorsal lingual veins
venae lumbales ascendentes	ascending lumbar veins
venae maxillares	maxillary veins
venae occipitales	occipital veins
venae ophthalmicae	ophthalmic veins
venae palatinae	palatine veins
venae temporales laterales	lateral temporal veins
venter frontalis	frontal belly
venter occipitalis	occipital belly
ventriculus lateralis	lateral ventricle
ventriculus tertius	third ventricle
vertebra cervicalis	cervical vertebra

vertebra cervicalis prima	first cervical vertebra
vertebra coccygea	coccygeal vertebra
vertebra lumbalis	lumbar vertebra
vertebra sacralis	sacral vertebra
vertebrae cervicales	cervical vertebrae
vertebrae coccygeae	coccygeal vertebrae
vertebrae lumbales	lumbar vertebrae
vertebrae sacrales	sacral vertebrae
vertebrae thoracicae	thoracic vertebrae
vesica fellea	gallbladder
vesica urinaria	urinary bladder
Z	
zona orbicularis (Weberi)	orbicular zone

Greek and Latin prefixes, the initial and the ending combining forms used in medical terminology

Initial Combining Forms

acr(o)-	extremity, topmost, highest or farthest	**geus-**	taste
adeno-	gland	**glyco-; glyk-**	sugar, glucose, sweet
aesthes-	sence	**gyn(aec)o-, gyn(ec)o-**	woman
alg-	pain, painful condition	**haemo-,haemato**	blood
allo-	denoting something as different, another, other	**helminth-**	parasitic helminths
angio-	vessel	**hepat-**	liver
arterio-	artery	**herni-**	hernia
arthro-	joint	**hetero-**	other or different
auto-	self, same	**histo-**	tissue
bio-	life, vital process	**homo-**	the same or like; equal, of the same origin
blasto-	germinal cell at an early emryonal stage	**hormono -**	hormone
brady-	slow	**hydro-**	water
bronch-	bronchus	**iatro-**	physician
carcino-	cancer	**kerato-**	cornea
cardio-	heart	**laparo-**	abdomen, abdominal cavity
cephalo- (kephalo-)	head	**laryng-**	larynx
cheil-	lip	**leucocyt-**	leucocyte
chloro-	1. green. 2. containing Chlorine	**lipo-**	fat
chole-	bile	**lith(o)-**	stone, calculus
chondro-	cartilage	**log-**	**CF** relating to speech or words
cholecysto-	gallbladder	**macro-**	large, great
chrom(ato)-	color	**masto-**	the breast,mammary gland
colo-, colono-,	large intestine	**mega-; megalo-;**	large, increased
colpo-	vagine	**melano-**	1. black, dark; 2.containing Melanine
cyano-	dark-blue,cyanotic	**meningo-**	meninx (membrane of the brain and spinal cord
cysto-	bladder	**metro-, hystero-**	uterus
cyto-	cell	**micro-**	small, reduced
dactyl-	finger, digit	**mono-**	single
dermo-; dermato-	skin	**morpho-**	form
embryo-	embryo	**myco-**	parasitic fungus
encephalo-	brain	**myelo-**	spinal cord
entero-	intestine, small intestine	**myo-, myos-**	muscle
erythro-	red	**necr(o)-**	death
fibr-	fiber	**nephro-**	kidney
gastro-	stomach	**neuro-**	nerve, nervous system
ger-, geront-	old age		

noso-	disease	**pyelo-**	renal pelvis
odonto-	tooth	**pylor-**	pylorus (of the stomach)
onco-	tumor	**pyo-**	pus
onycho-	nail	**rhino-**	nose
oophor-	ovary	**salpingo-**	uterine tube
ophthalmo-	eye	**sarc-**	meat
osteo-	bone	**seb-**	cutaneous fatty secretion
ot(o)-	of or pertaining to the ear	**sial-**	saliva
pan-	all, entire	**somato-**	body
path-	a disease	**splanchno-**	inner organs
pelvio-	pelvis	**spleno-**	spleen
pharmaco-	medicine	**spondylo-**	vertebra
phleb(o)-	of or pertaining to the (blood) veins, a vein	**stomat-**	mouth, mouth cavity
phono-	sounding	**strum-**	struma, goiter
phot(o)-	of or pertaining to light	**tachy-**	denoting something as fast, irregularly fast
phthis-	tuberculosis	**teno-**	tendon
phob(o)-	exaggerated fear, sensitivity	**terato-**	monstrosity, malformation; [G. *teras,* pl. *terata,]*.
pneumo-(pneumono-)	lung	**thermo**	heat, heating
polio-	1.grey colour; 2.relating to the grey substance of the brain	**thrombocyt**	thrombocyte
pollac-	frequent	**thyreo-**	thyroid gland
poly-	denotes a 'plurality' of something	**tomo-**	relating to a layer
procto-	rectum	**topo-**	place
pseudo-	denotes something false or fake	**tox-(toxic-)**	poison, toxin
psycho-	soul, spirit, mind	**typhlo-**	caecum
		uro-	uren, uria
		xantho-	yellow
		xero-	dry

Ending Combining Forms

-aemia	blood as a medium	**-ectasia,ectasis**	dilation or expansion
- colon	large intestine	**-ectomia**	surgical operation of removing any organ or tissue
-algesia	painful sensitivity, sence of pain	**-fobia**	fear
-algia	pain or painful condition	**-gastria**	stomach
-asthenia	lack of strength	**-genes (genus)**	causing smth or caused by smth. (-genous)
-blastus	germinal cell at an early embrional (embryomic) stage	**-genesis**	an origin or beginning process;development of some processes
-cele	hernia	**-geusia**	taste
-cephalia	head	**-gnosis**	knowledge
-cheilia	lip	**-gramma**	1. The result of graphic registration on record; 2. X-ray picture
-cholia	disharge of the bile	**-graphia**	1. graphic registration of
-chromia	1. colour. 2.relating to Chrome		

	signals *(to write);* 2. X-ray examination

-iatria	science of treatment
-kinesia	motion, moving activity
-lith	stone
-lithiasis	pathological formation of the concrements in the organs
-lysis	1. destruction 2. an operation for breaking up the adhessions in an organ
-logia	science,study
-malacia	pathologic softening or loss of consistency in any of the organs or tissues
-mastia	the breast,mammary gland
-megalia	large, increased; enlargement of an organ
-metria	measurement (quantitative) *(to measure)*
-metrium	uterus
-mnesia	memory
-necrosis	death of organ
-odontia	relating to teeth
-odynia	pain
-olig	little, few
-onychia	nail
-opia; -opsia	vision, eyesight
-paedia	relating to children
-pathia	a disease
-penia	deficiency
-pexia	surgical fixation
-phagia	eating, swallowing
-philia	attraction for
-phobia	exaggerated fear, sensitivity
-phonia	sounding
-plasia	formation, development
-plastica	surgical (restorative) plastic operation
-plegia	paralysis
-poesis-	production, formation (of some cells)
-ptosis	a falling or downward displacement of an organ
-rrhaphia	surgical suturing
-rrhexis	rupture (crack)
-schisis	crack, fissure
-sclerosis	pathological hardness of organs and tissues
-scopia	examination of inner walls and surfaces of organs with special insrument (instrumental examination)
-sialia	saliva
-stenosis	narrowing, constriction, stricture
-sthenia	a condition of activity and apparant strength
-stomia	operation of making up artificial or surgical opening
-therapia	1.treatment of diseases by various methods
-thermia	heat, heating
-tomia	surgical incision, a cutting operation
-topia	place
-trophia	nourishment, development

GLOSSARY

A

a- an- G.negating prefix denoting *absence or deficiency*

ab- L.prefix meaning *away, from*

abdominoplasty [*abdomino* + G. *plastos,* formed]. An operation performed on the abdominal wall for esthetic purposes.

ablepharia [G.a- priv. + *blepharon,* eyelid]. Congenital absence, partial or complete, of the eyelids

abscessus [Lat. *abscessus, a going away]* 1. A circumscribed collection of pus appearing in an acute or chronic localized infection and associated with tissue destruction and frequently swelling. 2. A cavity formed by liquafactive necrosis within solid tissue.

acephalia [a+G.*kephale,* head]. Congenital absence of the head.

acheilia [G.a- priv. + *cheiolos,* lip]. Congenital absence of the lips.

achromoderma- an absence of pigment, partial or total, in the skin.

acid- 1. A combining form yielding a hydrogen ion

acidaemia [acid + G. haima, *blood]*. abnormally acid blood, i.e. lower that normal pH

acidosis [acid + G. *-osis,* condition]. acidosis; increase of acid substances in the blood and tissues

acquisitus,a,um acquired; denoting a disease, predisposition, abnormality, etc., that is not inherited.

acro- [G. *akron,* extremity; *akros,* extreme]. Combining form meaning: 1. Extremity, tip, end, peak, topmost. 2. Extreme.

acrocyanosis a circulatory disorder in which the hands, and less commonly the feet, are persistently cold and blue

acroarthritis [acro **+** G. *arthron,+ joint, + itis*, inflammation]. Inflammation of the joints of the hands or feet

acroaesthesia [acro- + G. *aisthesis,* sensation]. 1. an extreme degree of hypersthesia; 2. Hypershtesia of one or more of the extremities.3 increased sensitivity of distal portions of the body

acrodermatits [acro+G.*derma,* skin+ G.*itis,* inflammation]. Inflammation of the skin of the extremities

acrogeria [acro+G.*geron,*old]. Congenital reduction or loss of subcutaneous fat and collagen of the hands and feet, giving the appearance of senility.

acrodermatitis [akro + G. *derma,* skin, + *itis,* inflammation]. Inflammation of the skin of the extremities.

acromegalia [acro+G.*megas,* large]. A disorder marked by progressive enlargement of peripheral parts of the body, especially the head, face, hands and feet

acromyotonia [acro + G. *mys,* muscle, + *tonos,* tension]. *m*yotonia affecting the extremities only, resulting in spasmodic deformity of the hand and foot

acrophobia [acro+G. *phobos,* fear] Morbid fear of heights

acutus acute *.acutus,* sharp]. 1. Of short and sharp course, not chronic; said of a disease.

ad- L.prefix meaning *to, toward, near*

adactylia [G.a+*daktylos***,** digit**].** Congenital condition characterised by the absence of digits (fingers or toes)

adeno-, aden- G.*aden,* gland]. Combining form denoting relation to a gland.

adenectopia [aden + G. *ek,* out of + *topos,* place]. Presence of a gland other than in its normal anatomical position
adenitis [aden + G. *itis,* inflammation]. Inflammation of lymph nodes (glands)
adenotonsillectomia Operative removal of tonsils and adenoids
adenocarcinoma Glandular cancer or carcinoma; a malignant neoplasm of epithelial cells in glandular or glandlike pattern.
adenogenesis [adeno + G. *genesis,* production]. Development of a gland
adenolipoma A benign neoplasm composed of glandular and adipose tissues
adenolipomatosis A condition characterized by a development of multiple adenolipomas
adenolysis destruction or dissolution of glandular tissue
adenomatosis A condition characterized by multiple glandular overgrowth
adenomyoma A benign neoplasm of muscle (usually smooth muscle) with glandular elements; occurs most frequently in uterus and uterine ligaments.
adenotomia [adeno+ G. *tome,* a cutting]. Incision of a gland.
adeps, gen. **adipis, adipes** [L. *lard,* fat]. 1. Denoting fat or adipose tissue. 2. The rendered fat of swine, lard used in the preparation of ointments.
adermia [G.a-periv + *derma,* skin]. Congenital absence of skin
adip-, adipo- [L. *adeps,* fat]. Combining form relating to fat
adiponecrosis Necrosis of fat, as in hemorrhagic pancreatitis
adynamia [G. *a-* priv. + *dynamis,* power]. 1. Asthenia. 2. Lack of motor activity or strength.
aerobicus using air (oxygen) for living
aerophagia [G.*phagen* , to eat] Excessive swallowing of air
aegophobia *[aero,* air, + G. *phobos,* fear]. Morbid dread of fresh air or of air in motion
aerotherapia Treatment of disease by fresh air, by air of different degrees of pressure or rarity, or by air medicated in various ways
aesthesia [G. *aisthesis,* sensation]. 1. Perception. 2. Sensitivity.
ageusia [G. *a-* priv. + *geusis,* test] Ageustia; gustatory anesthesia; loss of the sense of taste.
agnosia [G. ignorance; from *a-* priv. + *gnosis,* knowledge] lack of sensory-perceptual ability to recognize objects
akinesia [G. *a-* priv. + *kinesis,* movement] Akinesis. 1. Absence or loss of the power of voluntary motion
albinismus [L. *albus,* white]. Congenital leukoderma or leukopathia; an inherited deficiency or absence of pigment in the skin, hair, and eyes, or eyes only, due to an abnormality in production of melanin
ulcerosus,a,um ulcerous (relating to, affected with, or containing an ulcer)
-algesia [G. *algesis,* a sense of pain]
-algia [G. *algos,* pain]. Suffix meaning pain or painful condition
algogenesis the production or origin of pain
algospasm [G. *algos,* pain + *spasmos,* convulsion]. Spasm produced by pain
allergia - [G.*allos,* other+*ergon,* work] allergy- 1. acquired or induced sensitivity; 2. an acquired hypersensitivity to certain drugs and biologic preparations
allergosis [allergy + G. *-osis,* condition]. Any abnormal condition characterized by allergy
allo- [G. *allos,* other]. 1. Prefix meaning "other" or differing from the normal or usual
alloarthroplastica [allo + G.*arthron,* joint, + *plastos,* formed]. Formation of another or a new joint, using material not from the human body; *e.g.,* total joint replacement with prostheses

allokeratoplasty Replacement of opaque corneal tissue with a transparent prosthesis, usually plastic

allopat Allopathist. 1. One who is a practitioner of allopathy. 2. Erroneously, a traditional medical physician, as distinguished from eclectic or homeopathic practitioners

allopathia [allo + G. *pathos,* suffering]. Substitutive therapy; a therapeutic system in which a disease is treated by producing a second condition that is incompatible with or antagonistic to the first. (Cf. homeopathy).

allophasis [allo + G.*phasis,* speech]. Speech that is incoherent, disordered

allorrhythmia [allo + G.*rhythmos,* rhythm]. An irregularity in the cardiac rhythm that repeats itself again and again.

ambi-; ambo- L.prefix meaning round; all (both) sides.

ambiodextrosus able to use both hands with equal skill

amenorrhoea **[**G. a- priv. + *men,* month, + *rhoea,* flow]. Absence or abnormal cessation of the menses.

amnesia **[G.** *amnesia,* forgetfulness]. A disturbance in the memory of information stored in long-term memory, in contrast to short-term memory, manifested by total or partial inability to recall past experiences.

amputatio [L. *amputatio,* to cut around, prune]. 1. The cutting off a limb or part of a limb, the breast, or other projecting part. 2. In dentistry, removal of the root or a tooth, or of the pulp, or of a nerve root or ganglion; a modifying adjective is therefore used (pulp a.; root a.)

amyl-, amylo [G. *amylon,* starch]. Combining form indicating starch, or polysaccharide nature or origin.

amyocardia [G. a- priv. + *mys,* muscle, + *kardia,* heart]. Myasthenia cordis; weakness of the hearth muscle.

ana- G.prefix meaning *up, towards, apart;* distinguished from *an-,* which is a- privative with *n* before a vowel.

anaesthesia [G. *anaesthesia, fr. an-priv. + aisthesis, sensation]*. **1.** a state characterized by loss of sensation.

analgeticus,a,um analgetic; associated with decreased pain perception.

anamnesis [G. recollection]. 1. The act of remembering. 2. The medical history of a patient. 1. the act of resembling. 2. The medical history of a patient

anastomosis [G.*anastomosis,* from *anastomo,* to furnish with a mouth]. Inosculation.

1. A natural communication, direct or indirect between two blood vessels or other tubular structures.

Also incorrectly applied to nerves. 2. An operative union of two hollow or tubular structures.

3. An opening created by surgery, trauma, or disease, between two or more normally separate spaces or organs.

anatomia [G. *anatome,* dissection, from *ana,* apart, + *tome,* a cutting]. 1. The morphologic structure of an organism. 2. The science of the morphology or strucutre of organisms.

3. Dissection.

andro- [G.male]. Combining form meaning masculine; pertaining to the male of the species.

andrologia andrology. The branch of medicine concerned with diseases peculiar to the male sex, particullaly infertility and sexual dysfunction.

andropathia [andro +G. *pathos,* suffering]. Any disease, such as prostatitis, peculiar to the male sex

androphobia [andro + G. *phobos,* fear] Morbid fear of men, or of the male sex, resulting

in avoidance of situations where men are present

anergia [*ergia*-energy, from *ergon*-work*]*- Anergia; lack of energy

anaemia **[**an-priv. + G.*haima,* blood Any condition in which the number of red blood cells per cu mm, the amount of hemoglobin in 100 ml of blood, and the volume of packed blood cells per 100 ml of blood are less than normal.

anaesthesia **[**an-priv.+ G. *aisthesis,* sensation]. A state characterized by loss of sensation, the result of pharmacologic depression of nerve or of neurological disease.

anesthesiologia speciality. the medical speciality concerned with the basis of anesthesia.

aneurysma **[G.***neurysma,* a dialtion., fr. *eurys,* wide]. Dilation of a blood vessel (usually an artery).

angi-, angio- **[G.** vessel]

angiectasia **[[G.** vessel+ G. *ektasis, a* stretching]. Dilation of lumen of the blood and lymphatic vessel.

angiitis inflammation of the blood blood vessel (arteriitis, phlebitis) or of a lymphatic vessel (lymphangitis).

angiocardiogramma **[***angio*-, vessel + G. + *graph,* to write]. an X-ray imaging of the heart and great vessels (obtained after injecting radio-opaque solution into the circulation)

angiocholecystitis [**[***angio*-, vessel + G.*chole,* bile, + *kystis,* bladder, + *-itis,* inflammation]. Inflammation of the bile vessel and gallbladder.

angiogramma angiogram; **[***angio*-, vessel + G.*gramma,* a writting]. Radiograph obtained in angiography.

angiographia angiography radiography of vessels after the injection of a radiopaque material .

angioma angioma; **[***angio*-, vessel + G. *oma,*tumor] A swelling or tumour due to proliferation, with or without dilation of the blood vessels (haemangioma) or lymphatics (lymphangioma).

angiomatosis angiomatosis; a condition characterized by multiple angiomas.

angiomegalia angiomegaly [**[***angio*-, vessel + G.*megas,* large]. Enlargement of blood vessels or lymphatics.

angioneurosisangioneurosis; vasoneurosis; a disorder due to a disease or injury of the vasomotor nerves or center.

angiorrhaphia **[G.** *angio,* vessel+G.*rhaphe,*a seam]. Suture repair of any vessel, especially of a blood vessel.

angioplastica angioplasty; **[G.** *angio,* vessel+G.*plastos,* formed]. Reconstruction of a blood vessel.

angiorrhexis **[G.** *angio,* vessel+G.*rrhexis,* rupture] Rupture of any vessel, especially of a blood vessel.

angiostenosis **[G.** *angio,* vessel+G.*stenosis,* a narrowing] narrowing of one or more blood vessels.

angiotomia **[G.** *angio,* vessel+G. *tome,* cutting]. Sectioning of blood vessel, or the creation of an opening into a vessel prior to its repair.

anomalia **[**G. a*nomalia,* irregularity]. Deviation from the average or norm; anything structurally unusual or contrary to a general rule.

anonychia (G.*an -priv. + onych,*nail].Absence of the nails

anophthalmia [G. *an*-, priv. + *ophthalmos,* eye]. Congenital absence of all tissues of the eyes.

anoxaemia anoxaemia; [G. *an*-, priv. + *oxygen + haima,* blood]. Absence of oxygen in arterial blood; formerly often used to include moderate decrease in oxygen now properly distinguished as hypoxemia.

ant-, anti- [G. *anti,* against]. 1. Prefix signifeing against, opposing, or, in relation to a symptoms and disease, curative. 2. Prefix, denoting an antibody (immunoglobulin) specific

for the thing indicated; *e.g.,* antitoxin (antibody specific for a toxin)

ante- L.prefix meaning *before*

ante mortum before death

antenatalis [ante + L. *natus,* birth]. Prenatal; before birth

anthropometria The branch of anthropology concerned with comparative measurements of the human body.

antihypertensive the drug hat reduces the blood pressure of hypertensive individuals

anuria anuria; absence of urine formation

aphagia aphagia; failure to eat or swallow because it causes pain.

aphasia aphasia; inability to articulate words and/or to understand spoken words

aphonia (G.*an -priv. + phone,* voice] loss of the voice as a result of disease or injury of the organ of speech.

apnoea absence of breathing.

arrhythmia Loss of rhythm; denoting especially an irregularity of heartbeat

arthralgia arthralgia*; pain in joints.*

arthritis arthritis; inflammation of a joint.

arthrosis arthrosis*; degenerative joint disease*

arthropathia arthropathy; *disorder affecting bones and joints*

ascites,ae m ascites, hydroperitoneum, abdominal dropsy; accumulation of serous fluid in the peritoneal cavity.

asthenia *lack of strength (an "aesthetic" person is characteristically tall and slender)*

asthenopia [G. *asthenia,* weakness + *ops,* eye]. Subjective symptoms of ocular fatigue, discomfort, lacrimation, and headaches arising from use of the eyes.

asthma, atis n Originally, a term used to mean "difficult breathing" (attacks of asphyxia **(** *asphyxia* – impaired or absent exchange of oxygen and carbon dioxide on a vantilatory basis .

asynergia [*syn*-with+*ergon*- work*]* - lack of cooperation or working together of parts that normally act in unison asynergia; lack of coordination of activity (in muscle groups which normally work together).

atonia absence of tone

athrophia atrophy; wasting or part (often but not always due to local nutritional deficiency)

auscultatio auscultation; examination by listening

auto- Prefix meaning self, same

autogenes self produced; originating within the body, applied to vaccines prepared from bacteria obtained from the affected person

autohaemotherapia treatment of disease by withdrawal and reinjection of the patient's own blood

automnesia spontaneous revival of memories of an earlier condition of life

autotransplantatio autotransplantation; transplantation of the own tissues

B

bacteriolysis bacteriolysis; dissolution of bacteria

balneotherapia balneotherapy; treatment with bathes

baroceptor baroceptor; pressure receptor

benignus,a,um benign. Denoting the mild character of an illness or the non malignant character of neoplasm

bi- L.prefix meaning *double*

bilaminaris double-layered

bilateralis bilateral; on two sides

bio- **[G.** *bios,* life]. Combining form denoting life

bioenergetica study of energy changes involved in the chemical reactions within living tissues

biokinetica the study of the growth changes and movements that developing organisms undergo

biologia biology; the study or science of life and living organism

biolysis desintegration of organic matter through the chemical action of living organisms

biopsia [bio- + G.*opsis,* vision]. 1. Process of removing tissue from living patients for diagnostic examination. 2. A specimen obtained by bipsy.

blephar-, blepharo- [G.*blepharon,* eyelid]. Combining forms meaning eyelid.

blepharectomy **[**blepharo + G.*ektome,* excision]. Excision of all or part of an eyelid.

blepharitis blepharitis; **[**blepharo + G. *-itis,* inflammation]. Inflammation of the lid.

blepharoadenoma **[**blepharo + G.*aden,*gland + *-oma,* tumor]. A tumor or adenoma of a gland of the eyelid.

blepharoplastica blepharoplasty; [blepharo + G.*plasso,* to form]. Any operation for the correction of a defect in the eyelids.

blepharoplegia blepharoplegia; [blepharo + G.*plege,*stroke]. Paralysis of an eyelid.

blepharoptosis [blepharo + G.*ptosis,* a falling]. Ptosis (2); drooping of the upper eyelid

brachy- combining form meaning short

brachypnoe shortness of breath, a subjective difficulty or distress in breathing

brady- [G.*bradys,* slow]. Combining form meaning slow.

bradyarhythmia [*brady* + a- priv.+ G. *rhythmos,* rhythm]. Any disturbance of the heart's rhythm resulting in a rate under 60 beats per minute.

bradycardia bradycardia; [brady + G.*kardia,* heart]. Sloweness of the heartbeat, usually defined as a rate under 60 beats per minite.

bradykinesia [*brady* + G.*kinesis,* movement]. Extreme slowness in movement

bradypnoea bradipnoe; slow breathing

bradyglossia [*brady* + G.*glossa,* tongue]. Slow or difficult tongue movement.

broncho-, bronch, bronchi- [G.*bronchos,* windpipe]. Combining form denoting bronchus, and, in ancient usage, the trachea.

bronchitis bronchitis; inflammation of mucous membrane of the bronchial tubes

bronchocele **[**broncho + G. *kele,* hernia]. A circumscribed dilation of a bronchus

bronchoectasia bronchoectasis; dilatation of the bronchi

bronchomycosis -any fungus disease of bronchial tubes of bronchi

bronchorrhoea excessive secretion of mucus from the bronchial mucous membrane

bronchostenosis bronchostenosis; narrowing of bronchus.

C

cancer cancer; cancerous tumour

cancerophobia a morbid fear of acquiring a malignant growth

cardio-, cardi [G. *kardia,* heart]
cardialgia cardialgia; pain in the heart.
cardiogramma [cardio + G. *gramma,* a diagram]. Result of graphic registration of the heart movements.
cardiographia cardiography; graphic registration of the heart movements - recording graphically the movements of the heart.
cardiologia cardiology; the study or science of the heart.
cardiolysis an operation for breaking up adhesions in the heart .
cardiopathia cardiopathy; any disease of the heart
cardiophobia morbid fear of heart disease
cardioplegia cardioplegia; heart paralysis
cardiorrhexis [rhexis (rupture)] - rupture of the heart wall
cata- G.prefix meaning *down, thoroughly or completely*
catamnesis - complex of information concerning the disease and obtained after its treatment with the data of clinical and laboratory examination. The medical history of a patient after an illness; the follow-up history
catarrh inflammation of mucous membrane
cephalgia cephalgia; headache
cephalographia cephalography; cephalometric roentgenogram
cephalomalacia softening of the brain
cephalometria cephalometry; *scientific measurement of the bones of the scull and face*
cheilitis cheilitis; inflammation of the lip
cheiloschisis cleft lip
cholangiographia cholangiography; *roentgenologic examination of the bile ducts.*
cholangioma cholangioma; *a neoplasm of bile duct origin.*
cholangitis inflammation of the bile duct or the entire billary tree
cholecystitis cholecystitis; inflammation of gall bladder
cholecystographia cholecystography; X-ray of gall bladder
cholecystopathia disease of gallbladder -
cholecystopexia suture of the gallbladder to the abdominal wall.
cholecystostomia establishment of a fistula into the gallbladder
cholecystotomia incision into the gallbladder
cholelithiasis presence of concretions in the gallbladder or bile ducts
cholaemia the presence of bile salts in the circulating blood
cholestasis an arrest in the flow of bile
chondralgia chondralgia; *pain in cartilage*
chondritis chondritis; inflammation of a cartilage
chondroblastus [chondro+G.*blastos* (germ) a dividing cell of growing cartilage tissue.
chondrogenesis formation of a cartilage.
chondrodystrophia [*chondro*+G.*dys*.bad, + *trophe,* nourishment*]*, a disturbance in the development of the cartilage (due to malnutrition)
chondroma a benign neoplasm derived from mesidermal cells that form cartilage.
chondromalacia chondromalacia; *softening of any cartilage*
chromatoduodenoscopia instrumental examination of duodenum filled with contrast medium.
chromophobia chromophobia; *a morbid dislike of colour*
chromaturia abnormal coloration of the urine

chronicus,a,um chronic. Of long duration; denoting a disease of slow progress and long continuance

claustrophobia [L. claustrum - an enclosed space] a morbid fear of being in a confined place

colo- combining form relating to the colon.

colopexia colopexia; *surgical fixation of the colon*

colonopexia surgical fixation of colon

colpitis colpitis; inflammation of the mucous membrane of uterus

colpo- Combining form, denoting the vagina.

colporrhaphia repair of a rupture of the vagina by excision and suturing of the edges of the tear.

colporrhexis tearing of the vaginal wall

colotomia colotomia; *dissection of the colon*

colpocele a hernia projecting into the vagina

commissural commissure; a connecting pathway (generally across the midline in the central nervous system)

congenitus congenital [Lat.congenitus, *born with.*. Existing at birth, referring to certain mental and physical traits, anomalies, malformations, diseases, etc. which may be either hereditary or due to an influence occurring during gestation up to the moment of birth.

contusio,onis f contusion, bruise [bru:z], injury

con- (com-) L.prefix meaning ***with***

contagiosus contagious; spreading by contact

contra- L.prefix meaning *against, opposite*

cryochirurgia cryosurgery; surgery performed with the aid of extreme cold

cyano- Combining form meaning blue.

cysto-, cyst- Combining forms relating to: 1. The bladder. 2. The cystic duct. 3. A cyst.

cystalgia cystalgia; *pain in the urinary bladder*

cystectomia; removal of the urinary bladder

cystectasia cystectasia; *dilatation of the bladder*

cystitis- inflammation of a bladder, especially the urinary bladder

cystolithiasis [cysto + G.*lithos*, stone, + *iasis*, condition]. The presence of vesical calculus.

cystoeneterocele cystoenterocele; *hernial protrusion of portions of the bladder and intestine*

cystogramma X-ray demonstration of the bladder filled with contrast medium.

cystolithiasis presence of a vesical calculus

cystoplegia cystoplegia; *paralysis of the bladder.*

cystoscopia cystoscopy; the inspection of the interior of the bladder by means of a cystoscope

cystostomia creation of an opening into the urinary bladder

D

de- L.prefix meaning *down from, away from*

dermatitis dermatitis; *inflammation of the skin*

dermatologia dermatology; the study or science of skin (normal and abnormal)

dermatoma dermatome; a clearly demarked area of skin (supplied by a single spinal nerve)

dermatorrhagia haemorrhage from or into the skin.

dermectasia widening (stretch)of the skin;
desmurgia [G.desmos-*a band,* combining forms meaning *fibrous, connection or ligament]*
dextro- G.pref meaning *right (*as opposed to left)
dia- G.prefix connoting through, or thoroughness
diagnosis *diagnose; thorough knowledge and identification of a medical condition*
diarrhoea an abnormally frequent discharge of semisolid or fluid fecal matter from the bowel .
diathermia [dia (through)+therme (heat)- local elevation of temperature within the tissues, produced by high frequency current, ultrasonic waves, or microwave radiation
diffusus,a,um diffuse disseminated; spread about; not restricted
duodenitis- inflammation of the duodenum
duodenum duodenum; *part of the small intestine which is about twelve widths in length*
duodenoscopia duodenoscopy; *inspection of the interior of the duodenum through an endoscope*
dys- G.prefix implying *difficulty, being wrong or favourable*
dysbacteriosis impairment of the normal function of intestinal flora-
dysenteria dysentery; *inflammation of large intestine*
dysergia lack of harmonious action between the muscles concerned in executing any definite voluntary movements
dyskinesia **[**G.dys ((bad or difficult)+G.kinesis (movement) difficulty in performing voluntary movements
dysopsia disturbance of the vision- **[**G.dys (bad or difficult)+opsia (vision)
dysphagia dysphagia;*difficulty in swallowing*
dysphonia dysphony; *difficulty in speaking*
dysplasia dysplasia; *abnormal tissue formation*
dyspnoe dyspnea; *difficulty, discomfort and distress in breathing*
dysthyreosis dysthereosis; *generative changes of thyroid gland function*
dystonia - a state of abnormal (either hypo- or hyper) tonicity in any of the tissues
dystrophia distrophy; *degenerative changes of an organ or tissue (*associated with local nutritional defects)
dystopia dystopia; *faaulty or abnormal position of a part of organ.*

E

e- (or **ex-)** L.prefix meaning *out of, from*
ec- (or **ex-)** L.pref meaning *out of, from*
ecbolicus ecbolic; *expelling (*applied to the secretary function of gland cells or the expulsive action of the uterus or the foetus).
ecto- G. Prefix meaning *outside*
ectoderma ectoderma; *outer skin (*applied to outer embryonic germinal layer)
ectopicus ectopic; *in an abnormal place*
electrocardiogramma electrocardiogram; *a record of the electrical activity of the heart.*
embryo - an organism in the early stages of development
embryogenesis development of the organ since impregnation to the birth - (the origin and growth of the embryo)
emphysema,atis n emphysema (expansibility by air), flatulence, swelling. 1. Presence

of air in the interstices of the connective tissue of a part.

en- (or **em-)** G.prefix meaning *in*

encephalitis - inflammation of the brain

endo- G.prefix meaning *inside*

endocarditis endocarditis; *inflammation, within the heart, of the lining membrane (*the endocardium)

endoderma endoderm; *inner (*embryonic germinal) *layer*

endogenus endogenous; - originating or produced within the organism or one of its part.

endometrium endometrium; *the inner lining of the uterus*

endophlebitis inflammation of intima of a vein

enteritis inflammation of the intestine, especially of the small intestine

entero- G.prefix meaning *intestine*

enterotoxinum enterotoxin; toxin specifically *affecting the intestinal lining cells.*

epi- G.prefix meaning *upon*

epidemicus epidemic; *a widespread infectious disease.*

epidermicus epidermis; *outer layer of the skin.*

epithelioma epithelioma; *an epithelial neoplasm.*

erythema erythema; *redness of the skin.*

erythrocytopenia erythrocytopenia; *lack of or deficiency in red corpuscles.*

erytrodermia - intense and usually widespread reddening of the skin, often preceding, or associated with exfoliation.

erythropenia [G.penia- *poverty]*-deficiency in the number of red blood cells.

erythropoesis erythropoiesis; *the formation of red corpuscles.*

extiratio - [L. extirpo- *to root out.]* Partial or complete removal of an organ or diseased tissue. exirpation; *a total remove of an organ.*

extra- L.prefix meaning *outside.*

extractio- [L.ex-traho to draw out] 1. Luxation and removal of a tooth from its alveolus. (also: removal of the fetus from the uterus etc.)

extravascularis extravacular; *outside a vessel*

F

febrilis,e feblrile; *like or associated with a fever.*

fibrogenesis . the production or development of fibers.

fibroma . a benign neoplasm derived from fibrous connective tissue.

fibromatosis a condition characterised by the occurrence of multiple fibromas, with a relatively large distribution.

fibrositis inflammation of the fiber tissue.

fibrosarcoma a malignant neoplasm derived from deep fibrous tissue

fractura,ae f fracture (a break, especially the breaking of a bone or cartilage).

G

gangraena - mortification; necrosis due to obstruction, loss, or diminution of blood supply

senile gangrene occurring in the aged in consequence of occlusion of an artery, particularly affecting the extremities.

gasterectomia removal of the stomach

gastroduodenoscopia visualization of the interior of the stomach and duodenum by a gastroscope

gastroduodenostomia gastroduodenostomia; establishment of a new opening between the stomach and intestine.

gastroenterocolitis inflammation of mucosal membrane of the stomach, large intestine and small intestine.
gastralgia stomach ache
gastrocele gastrocele; hernia of a portion of the stomach
gastroenteritis inflammation of mucous membrane of both the stomach and intestine.
gastroenterologia gastroenterology; *the study or science of the stomach and intestine.*
gastrorrhagia gastric hemorrhage; hemorrhage from the stomach
gastrorrhaphia gastrorrhaphia; suture of perforation of the stomach.
geriatria geriatry; treatment of senile diseases.
geroderma the atrophic skin of the aged.
gerontologia gerontology; *the study or science of old age*
glycogenesis [G.genesis- *production]*- formation of glycogen from glucose .
glykaemia [G.glykys- *sweet]* - the presence of glucose in the blood.
glycogenolysis glycogenolysis; *breakdown of glycogen (*a sugar-producing substance).
granuloma granuloma; *collection of various cells in a swelling tumour*
-gram, -graph Eng.suffixes denoting, respectively, *that which is recorded and an instrument which records*
gynecologia gynecology; *the study or science of normal and abnormal function in females.*

H

haem- (or **haemat-)** used in compound words connected with blood.
haemangioma hamangioma**;** *a growth originating in blood vessels.*
haematologia science related to the blood and blood-forming tissues haematology; *the study or science of the blood*
haematoma haematoma; *a swelling containing blood.*
haemopoesis the process of formation and development of the various types of blood cells and other formed elements.
haematuria any condition in which the urine contains blood or red blood cells
haemolysis destruction of red blood cells.
haemopoesis haemopoiesis; *blood formation.*
haemorrhagia hammorrhage; *blood loss.*
haemostasis haemostasis; an *arrest of blood flow.*
haemotherapia -treatment of disease by the use of blood or blood derivatives **.**
helminthosis - disease caused by parasitic wombs.
hemi- G.prefix meaning *half*
hemiatrophia hemiatrophy; *one-sided atrophy*
hemiparanesthesia anesthesia of one lower extremity, or of the lower part of one side of the body
hemiplegia hemiplegia; *paralysis of one side of the both*
hemophilia hemophilia; *an inherited disorder in blood coagulation characterised by a permanent tendency to hemorrhages*
hepatitis inflammation of the liver
hepatocele hernia of the liver
hepatholithiasis [hepato+ G. *lithiasis,* presence of calculus]. Presence of calculi in the liver.
hepatomegalia hepatomegalia; *enlargement of the liver*

hepatonecrosis death of liver cells

hepatopexia enchoring of the liver to the abdominal wall.

hepatoptosis downward displacement of the liver.

heterogenes heterogeneous; *differing, not originating from the same kind or population.*

histologia histology; *the study or science of tissues*

histolysis desintegration of tissue

homo-/hom(o)eo- G.prefix meaning *the same*

homeoplasia the formation of new tissue of the same character

hom(o)eostasis *homeostasis; equilibrium, constancy (*of which a stable body temperature, blood sugar level, etc.

homogenes of the same origin; <u>of uniform structure of composition throughout</u>

homolateralis homolateral; *on the same side.*

hormonotherapia treatment with hormones.

hydrocele hydrocele; *a swelling containing a water (serous) fluid.*

hydropenia hydropenia; *any deficiency in the amount of fluid (water) in the blood.*

hydrops, opis m hydrops (an excessive accumulation of fluid in any of the tissues or cavities of the body; synonymous according to its character and localisation, with *ascites, anasarca, edema etc.*

hydrophobia ***[****phobos fear****]*** rabies [reibi:z] in humans; a coinage based on exaggerated folklore depictions.

hydrotherapia treatment with water (therapeutic use of water by external application, either for its pressure effect or as a means of applying physical energy to the tissues) .

hyper- G.prefix meaning *above, too much, too great*

hyperaemia hyperaemia; *greater than normal blood flow*

hyperaesthesia hyperaesthesia; *raised sensitivity*

hyperergia exaggerated response by the body to the stimulus of a foreign agent

hyperfunctio hyperfunction; *higher than normal function*

hyperglykaemia hyperglycaemia; *higher than normal blood sugar level*

hyperkeratosis hyperkeratosis**;** *corniformation (keratinization) of epiderm*

hyperkinesia [G.kinesis (motion)] <u>1. supermotility 2. excessive muscular activity</u>

hyperplasia hyperplasia; *increased number of cells in a tissue or organ causing an increase in size*

hypertonia extreme tension of the muscles or arteries

hypertonicus,a,um hypertonic 1. Spastic; having a greater degree of tension.

hyperthyreosis hyperthyreosis; *higher than normal function of thyroid gland*

hypertrophia hypertrophy; *increased size of constituent cells*

hypnosis hypnosis; *altered consciousness, resembling sleep*

hypo- G.prefix meaning *below, beneath, deficient*

hypomnesia - impaired memory

hypoplasia - **1.** underdevelopment of tissue or an organ, usually due to a decrease in the number of cells; 2. atrophy due to a destruction of some of the elements and not merely to their general reduction in size

hypotermia hypotermia; *below normal body temperature*

hypotonia - **1.** reduced tension in any part, as in the eyeball. 2. relaxation of the arteries. 3. a condition in which there is a diminution or loss of muscular tonicity, in consequence of which the muscles may be stretched beyond their normal limits.

hypothyreosis hypothyreosis; *hyperfunction of thyroid gland*

hypotonia hypotonia; *less than normal tension*

hysterectomia hysterectomy; *removal of the uterus*

hysterolysis hysterolysis; *breaking up of adhesions between the uterus and neighbouring parts.*

hysteropexia fixation of a misplaced or abnormally movable uterus.

I

-ia suffix used in the formation of names of abdormal or pathological conditions

-iasis suffix denoting a condition or state, particularly morbid; in medical neologisms it has the same value as, and is sometimes interchangeble with **G. -osis**

iatricus *relating a physician or the practice of medicine.*

iatrogenes caused by the doctor's mistake- (Engl. iatrogenic - an unfavourable response to medical or surgical treatment, induced by the treatment itself).

iatrogenicus Iatrogenic; *referring to disorders arising during, and in some way attributable to, treatment of a diseases (*literally *produced by a doctor).*

idiopathia idiopathy; *disease or disorder of spontaneous origin (*as far as we

ileus,i m ileus, intestinal obstruction

immunologia immunology; *the study or science of protective mechanisms.*

transmuralis,e **(**through any wall, as of the body or of a cyst or any hollow structure).

infarctus myocardii transmuralis involving all walls of the heart.

inflammatio,onis f inflammation (tissue-vascular response of the organism to pathogenic stimulus).

inflammatio acuta - that has a fairly rapid onset, quickly becomes severe, and has a relatively clear and distinct termination; usually manifested for only a few days, but may persist for several days or even a few months.

inflammatio serosa- an exudative **i.** in which the exudate is predominantly fluid (i.e. exuded from the blood vessels), with the protein, electrolytes, and other material contained therein; relatively few (if any) cells are observed.

infra- L.prefix meaning *below*

insufficientia,ae f insufficiency (functional failure)

inter- L.prefix meaning *between*

intra- L.prefix meaning *within*

intro- L.prefix meaning *within*

ischemia Local anaemia due to mechanical obstruction (mainly arterial narrowing) of the blood supply.

ischemic relating to or affected by ischemia.

itis- suffix used in the formation of names of diseases involving inflammation

keratoplastica keratoplasty; *surgical plastic operation of cornea.*

keratitis keratitis; *inflammation of cornea.*

keratosis keratosis; *abnormal horny growth,* e.g. a wart.

kinesiologia kinesiologia; *the study or science of movement.*

kinesitherapia [G.kinesis-*motion]*- treatment by means of movement regimen.

L

laparotomia surgical incision of abdomen (1. incision into the loin. 2. celiotomy) *an incision through the flank (*abdominal wall).

laryngopathia any disease of the larynx.

laryngophthisis tuberculosis of the larynx.

laryngoplastica reparative or plastic surgery of the larynx.

laryngoptosis . an abnormally low position of the larynx at birth (which may be congenital or acquired).

laryngostenosis stricture or narrowing of the lumen of the larynx.

laryngostomia the establishment of a permanent opening from the neck into the larynx.

laryngotomia a surgical incision of the larynx.

Laryngostenosis stricture or narrowing of the lumen of the larynx

leucocytosis an abnormally large number of leucocytes, as observed in acute infections.

leukaemia leucocytic sarcoma; progressive proliferation of abnormal leaukocytes found in hemopoietic tissues, other organs, and usually in the blood in increased numbers.

leucocytosis enlargement of the number of leococytes in the blood .

leukoderma - achromoderma- an absence of pigment, partial or total, in the skin.

leucolysis destruction of white blood cells.

leucopenia leucopenia; *low concentration of white cells in the blood.*

leucoplakia leucoplakia; *inflammatory condition characterised by white patches (*seen on the tongue, oral or genital mucosa).

leukaemia leucocytic sarcoma; progressive proliferation of abnormal leaukocytes found in hemopoietic tissues, other organs, and usually in the blood in increased numbers.

lipaemia lipaemia; *greater than normal fat level in the blood*

lipoma lipoma; *tumour of fat tissue*

lipuria lipuria; *discharge of fats with urine*

lithotomia lithotomy; *an incision (*into the bladder) *to remove a stone*

lipomatosis excessive local or general accumulation of fat in the body

-logy suffix from G.**logos,** *word, speech, reason;* in Engl.compounds, *study, science*

lymphangiitis lymphangitis; *inflammation of a lymphatic vessel*

lymphopoesis the formation of lymphocytes or lymphatic tissue.

lymphorrhoea an escape of lymph on the surface from ruptured, torn, or cut lymphatic vessels.

-lysis, -lytic suffix meaning *breaking down.*

M

macrocephalia pathological enlargement of the head.

macroglossia enlargement of the tongue.

malignus,a, um malignant 1. Resistent to treatment; occurring in severe form, and frequently fatal; tending to become worse and lead to an ingravescent course. 2. In reference to a neoplasm, having the property of locally invasive and destructive growth and metastasis (the spread of disease process from one part of the body to another.

mastitis **[**G.masto (breast) inflammation of the breast.

mastopathia [masto+ G.pathos (suffering). **A**ny disease of the breasts.

mastoptosis [masto+G.ptosis (a falling)- downward displacement of the mammary gland.
megacolon a condition of extreme dilation and hypertrophy of the colon
megaloblastus megaloblast; *large immature cell*
megarectum extreme dilation of the rectum
megalosplenia **splenomegalia** - enlargement of the spleen
melan-, melano [G. *melas,* black]. Combining forms meaning black or extreme darkness
melanoderma an abnormal darkening of the skin by deposition of excess melanin, or of metallic substances such as silver and iron.
melanoma malignant tumour from cells producing melanine.
melanuria discharge of melanine with urine.
meningitis inflammation of the membranes of the brain or spinal cord.
meningocephalitis an inflammation of the brain and its membrains
meta- G.prefix connoting *change or sequence*
metamorphosis metamorphosis; *change in the form (*with special significance in biology and pathology).
metaplasia - *(metaplasis* - transformation) abnormal transformation of an adult, fully differentiated tissue of one kind into a differentiated tissue of another kind.
metastasis metastasis; *dispersion of cells (*generally diseased cells) *from one site to another via blood or lymph.*
microbiologia the science concerned with microscopic and ultramicroscopic organisms
microchirurgia surgery on little anatomical structures
microgastria - smallness of the stomach.
microscopia investigation of minute objects by means of a microscope.
microsplenia microsplenia; *abdormal smallness of the spleen.*
monocytopenia [G.*mono*- single] diminution in the number of monocytes in the circulating blood **(monocyte -** a relatively large mononuclear leukocyte**).**
mononeuritis inflammation of a single nerve.
morphologia the science concerned with the configuration or the structure of animals and plants
monoplegia paralysis of one limb **.**
morsus,a,um bited (made with teeth) **Engl. morsulus.**
myalgia myalgia; *muscle pain*
myasthenia **[**G.mys (muscle)+G.asthenia (weakness) Muscular weakness
myocardiorrhaphia suture of the heart muscle.
mycosis (any disease caused by a fungus or yeast).
myelographia myelography; *X-ray examination of the spinal cord*

myelorrhagia myelorrhagia; *haemorrhage into the substance of the spinal cord.*
myocardiodystropia generative changes of myocardium (associated with local nutritional defects).
myologia myology; *the science or study of muscular system.*
myelopathia a disease of a spinal cord
myoma a benign muscle tumour
myopathia myopathy; *disease of muscle*

N

narcosis general (as opposed to local) *anesthesia*

nausea nausea; *the feeling which precedes and accompanies vomiting*

necrosis,is f necrosis (pathological death of one or more cells, or of a portion of tissue or organ, resulting from irreversible damage;

necrotomia [G.nekros- *corpse*- combining form relating to death or to necrosis*]* 1. Deissection. 2. Operation for removal of a necrosed portion of bone

neonatalis neonatal; *relating to the newborn*

nephritis nephritis; *inflammation of the kidney* .

nephrolysis destruction of renal cells

nephromegalia extreme hypertrophy of one or both kidneys

neurectomia neuroectomy; *removal of a nerve or a part of a nerve.*

neurogenes (neurogenus) of nervous origin - neurogenous; originatng in, starting from, or caused by, the nervous system or nerve impulses.

neurologia neurology; *the study or science of nerves and the nervous system*

neuropathia nuropathy; *disease in nerves and the nervous system*

neurosis - 1. a psychological or behavioral disorder in which anxiety is the primary characteristic; disease mechnaisms or any of the phobias. 2. a functional nervous disease, or one for which there is no evident lesion. 3. a peculiar state of tension or irritability of the nervous system; any form of nervousness.

neurotomia surgical incision of the nerve

nosologia [G.noso (disease) the science of classification of diseases

nosomycosis any disease caused by a fungus,

nosophobia an inordiate dread and fear of disease

O

odontoma tumor of tissues surrounding the tooth

odontorrhagia profuse bleeding from the socket after the extraction of a tooth

oedema oedema; *an accumulation of watery fluid (*not blood) *in the tissues (*frequently causing swelling)

-oideus suffix derived from G.**eidos,** *form,* and connoting *formed like*

olfactoricus olfactory; *related to the sense of smell*

oligo-,olig- few, little

oligaemia [olig +G.*haima,*blood]. Olighemia; a deficiency in the amount of blood in the body.

oligocholia [*oligo*+G.*chole,* bile]. A deficient secretion of bile.

oligodactilia [olig+G.*daktylos,* finger or toe]. Presence of fewer than five digitis on one or more extremities.

oligosialia a scanty secretion of saliva

oligotrophia deficient nutrition

oliguria scanty urination

-oma *suffix used in the formation of names of tumors or other morbid growths*

oncologia- science of tumors (the study or science dealing with the physical, chemical, and biologic properties and features of neoplasm, including causation, pathogenesis, and treatment)

odontalgia odontalgia; *toothache*

odontographia X-ray examination of tooth

oligotrophia deficient nourishment

oligosialia a scanty secrition of saliva

oliguria **[**olig+G.*ouron*, urine]. Scanty urination

oncogenesis process of origin and development of tumor - (origin and growth of neoplasm)

onychomycosis [G.*onych* (nail)+*myc* (fungus) +*osis* (condition).A fungus infection of the nail, causing thickening, roughness, and splitting.

onychodystrophia dystrophic changes in the nails occuring as a congenital defect or due to any illness or injury that may cause a malformed nail

onychoheterotopia abnormal placement of nails.

onycholysis loosening of the nails, beginning at the free border, and usually incomplete

onychoma a tumor arising from the nail bed.

onychomalacia abnormal softness of the nails

onychopathologia Study of diseases of the nails

onychopathia [G.*onych* (nail)+G.*pathos*, suffering]. Any disease of the nails.

onychoplastica [G.*onych* (nail)+G.*plastos*, formed, shaped]. A corrective or plastic operation on the nail matrix.

onychoptosis [G.*onych* (nail)+G. *ptosis*, a falling]. Falling off of the nails.

onychorrhexis [G.onych (nail)+rrhexis (breaking)]. Abnormal brittleness of the nails with abnormal brittleness of the nails with splitting of the free edge

onychoschisis splitting of the nails in layers

oophoralgia pain in the ovary - **[**ophor (ovarium) - ovarialgia

oophorectomia [oophor (ovary)+ectomia (excision)- ovariectomy

ophthalmomalacia abnormal softening of the eyeball

ophthalmologia ophthalmology; *the study or science of the eyes and vision* denoting a tumor or neoplasm. (**Omata -** plural from -oma)

ophthalmomycosis ophthalmomycosis; *any disease of the eye caused by fungus.*

ophthalmoplegia paralysis of the eye ball

ophthalmoscopia instrumental examination of the eye; examination of the fundus of the eye by means of the ophthalmoscope .

opticus optic; *pertaining to sight*

oralis oral; *pertaining to the mouth*

ortho- G.prefix meaning *upright, straight, correct*

orthopaedia orthopaedic; *connected with the correction of deformities (*literally *in children*, but in people generally*)*

-osis suffix found in a wide range of words, often indicating a pathological condition

osteoblastus osteoblast; *a bone-forming cell.*

osteodysplasia a generalized skeletal defective formation

osteogenesis development of the bony tissue - (the formation of bones)

osteologia the science concerned with the study of the bones

osteolysis osteolysis; *bone absorption (*dissolution)

osteoma- a benign slowgrowing mass of mature, predominantly lamellar bone

osteomalacia osteomalacia; *softening of the bone*

osteomyelitis inflammation of the bone marrow

osteonecrosis - [G.necrosis-*death]* - the death of bone in mass, as distinguished from caries or relatively small foci of necrosis in bone

osteoplastica - restorative plastic operations on the bones (plastic surgery of bones)

osteoporosis osteoporosis; *loss of calcifies content of bone*

ophthalmoscopia ophthalmoscopy; *examination of the eyes to determine the presence of vision problems and eye disorders*

ostheomyelitis ostheomyelitis; *inflammation of the bone marrow*

otitis inflammation of the ear

otopyorrhoea discharge of pus from the tear

otorhinolaryngologia the combined specialities of diseases of the ear, nose and larynx

otorrhagia bleeding from the ear

P

paediatria (Engl. **pediatrics -** the medical specialty concerned with the study and treatment of children in health and disease during development from birth through adolescence).

panacea panacea; *a remedy for all diseases*

pancreatodynia pain in the pancreas

pandemia pandemic; *a widespread disease*

para- G.prefix whose chief meaning in Eng. compounds are *by side and amiss wrong*

paraesthesia - an abnormal sensation, such as of burning, pricking, tickling, or tingling

paracystitis - Inflammation of the connective tissue and other structures about the urinary bladder.

paralysis 1. Loss of power of voluntary movement in a muscle through injury to or disease of its nerve supply. 2. Loss of any function, as sensation, secretion, or mental ability.

progressive going forward, advancing

paramnesia - [para+G.*amnesia,* forgetfulness]False recollection, as of events that have never occurred.

parotitis inflammation of parotid glands

pathogenesis development of the disease (the pathologic, physiologic, or biochemical mechanism resulting in the development of a disease or morbid process)

-pathia *disease,* from G. **pathos,** *experience, feeling, emotion*

pathogenes pathogenic, pathogenetic causing a disease - (- causing a disease or abnormality)

pathologia pathology; *the medical science and specialty practice, concerned with all aspects of disease, but with special reference to essential nature, causes, and development of abnormal conditions, as well as the structural and functional changes that result from the disease process)*

pelviometria measurements of diameters of the pelvis

percussion **1.** A diagnostic procedure designed to determine the density of a part by the sound produced by tapping *the surface with the fingers or a plexor;* performed primarily over the chest to

determine presence of normal air content in the lungs and over the abdomen to evaluate air in the loops

of intestine. 2. A form of massage, consisting of repeated blows or taps of varying force.

perforans,antis perforated Pierced with one or more holes

perforatio,onis f perforation (origin of through foramen in the wall of the hollow organ). Abnormal opening in a hollow organ of viscus (sing. from viscera)

peri- G.prefix meaning *around, about*

perimetritis (metroperitonitis) - inflammation of the uterus involving the peritoneal covering

periodontologia periodontology; *the study or science of the tissues surrounding the teeth*

perivascularis perivascular; *around a vessel.*
pharmacologia pharmacology; *the study or science of drugs*
pharmacotherapia pharmacotherapy; *treatment of diseases with medicines*
phlebographia (X-ray examination) (the recording) of the venous pulse
phleborrhexis [phleb (bein)+rrhexix (rupture) - rupture of a vein
phlebostenosis phlebostenosis; *abnormally slow motion of blood in veins.*
phlegmone,es f phlegmon (diffused purulent inflammation of subcutaneous fat). An acute suppurative inflammation of the subcutaneous connective tissue.
phonopathia phonopathy; [G.*phono-,phon-* sond,voice+G.*pathos,* suffering]. Any disease of the vocal organs affecting speech.
photophobia 1. abnormal sensitivity to light, especially of the eyes**.** 2. morbid dread and avoidance of light.
phthisiatria science of treating tuberculosis
physiologia physiology; *the study or science of function (*as opposed to structures) *of living things*
pneumonia pneumonia; *inflammation of the lung*
pneumonosclerosis pathological hardness of the lung
pneumotorax -collection of air in the thorax (the presence of air or gas in the pleural cavity)
podalgia podalgia; *pain in the foot*
poliencephalitis inflammation of the gray matter of the brain
poliomyelitis inflammation of the grey matter of the spinal cord.
polyaesthesia a disorder of sensation in which a single touch or other stimulus is felt as several
polyangiits inflammation of multiple blood vessels involving more than one type of vessel.
polyarthritis [G.arthron-*joint]* - simultaneous inflammation of several joints
polydysplasia tissue development abnormal in several respects
polyrrhoea profuse discharge of serous or other tissue
polysplenia a condition in which splenic tissue is divided into two or more nearly equal masses.

polycytaemia polycythaemia; *a condition characterized by abnormally high concentration of red blood corpuscles* .
polyneuropathia a disease process involving a number of peripheral nerver **.**
polychondritis a widespread disease of cartilage
polymorphicus polymorphyc; *having many shapes*
polymyositis inflammation of many muscles
polyneuritis inflammation of many nerves
polypus pathological formation, prominent over the surface of an organ and conneting with it by the crus
polyuria excessive excretion of urine resulting in a profuse micturition
post- **L.prefix** meaning *behind or after*
postnatalis postnatal; *after birth*
post-ocularis post-ocular; *behind the eye*
pre- L.prefix meaning *before, in front of*
precordium precordium; *the region in front of the heart*
proctalgia proctalgia; *pain in the anus or rectum*
proctitis inflammation of the mucous membrane of the rectum

proctoscopia instrumental examination of rectum (visual examination of the rectum and anus, as with a proctoscope)

proctodynia pain in the rectum

proctorrhagia bleeding from the rectum

proctostenosis - narrowing (stricture) of rectum or anus

prognosis a forecast of the probable course and/or outcome of a disease

prosthesis prosthesis; (G.noun meaning *addition, attachment) an artificial replacement for a limb or other part of the body*

psychiatria [G.psycha (soul)+G.iatria (medical treatment)- the medial specialty concerned with the diagnosis and treatmet of mental illness. 2. the diagnosis and treatment of mental illness.

psychogenes [psycho (the mind). 1. of mental origin or causation. 2. relating to emotional development or to psychogenesis.

psychogenesis [G.genesis (origin)]. The origin and development of the psychic processes including mental, behavioral, personality, and related psychological processes .

psychokinesia impulsive behavior

psychoneurosis a mental or behavioral disorder of mild or moderate severity.

psychopharmacologia the use of drugs to treat mental disorders.

psychotherapia treatment by the methods of psychic influence.

pulmonotomia dissecting of the lung tissue - pulmonotomia

puncture 1. To make a hole with a small pointed object, such as a needle. 2. A prick or a small hole made with a pointed instrument.

punctus,a,um punctured, stabled, pricked

purulentus,a,um purulent *(*containing, consisting of, or forming pus).

putridus,a,um putrid 1. In a state of putrifaction. 2. Denoting putrefaction.

pyaemia pyemia; *presence of pus in urine*

pyelitis inflammation of the renal pelvis

pylorostenosis narroving of pylorus (of the stomach) (stricture or narrowing of the orifice of the pylorus)

pyogenes *causing suppuration*

pyonephrolithiasis [G. *pyon,* pus + G. *nephros, kidney* + *lithos,* stone + *-iasis,* condition]. Presence in the kidney of pus and calculi

pyorrhoea pyorrhoea; *flow of pus, generally referring to periodontal tissues*

pyothorax *accumulation of pus in the pleural cavity*

Q

quadri- L.prefix deriving from **quattuor,** *four,* and meaning *four*

quadriplegia quadriplegia; *paralysis of all four limbs*

R

reradiotherapia radiotherapy; *treatment using radiation*

reanimatio - resusctiration (revival from potential or apparent death). [L.resuscitatio- to raise up again, revive].

regeneratio **[L.*re- genero* -** to reproduce, fr.*genus (gener-), birth, race]*. To renew; to reproduce.

r**ehabilitatio** Reproduction or reconstitution of a lost or injured part. (restoration, following disease, illness, or injury, of the ability to function in a normal or near normal manner)

retro- L.prefix meaning *backwards*

retropositio backward displacement of a structure or organ

rhinitis inflammation of the nasal mucous membrane

rhinopathia rhinopathy; *disease of the nose*

rhinomycosis rhinomycosis; *fungus infection of the nasal mucous membranes*

rhinoplastica surgical restoration of the nose - (1. repair of a defect of a nose with tissue taken from elsewhere. 2. plastic surgery to change the shape or size of the nose)

rhinorrhagia bleeding from the nose; epistaxis of nosebleed, especially if profuse

ruptura,ae f rupture; a break of any organ or other of the soft parts.

S

salpingitis salpingitis; *inflammation of a tube, generally uterine, sometimes auditor*

salpingoophoritis [salping (trumplet (tube))+oophor (ovary)- tubo-ovaritis; inflammation of both fallopian tube and ovary

salpingorrhexis [G.salping (trumplet)(tube)+G.rrhexix (rupture, breaking)

sarcoma - sarcoma a connective tissue neoplasm usually highly malignant, formed by proliferation of mesodermal cells

schizophrenia schizophrenia; *split mind (*a mental disorder with characteristic signs and symptoms)

sclerosis sclerosis; *pathological hardening of tissue*

seborrhoea seborea; *a profuse discharge of skin fat*

sectio,onis f incision, dissection. 1. The act of cutting. 2. A cut or division. 3. A segment or part of any organ or structure delimited from the remainder. 4. A cut surface. 5. A thin slice of tissue, cells, microorganisms, or any material for examination under the microscope.

sepsis,is f sepsis (blood poisoning with pyogenic microbes). The presence of various pus- forming and other pathogenic organisms, or their toxins, in the blood or tissues

sialo- [G.*sialo,*saliva]

sialoadenectomia excision of a salivary gland.

sialoangiectasia [G.*sialo,*saliva+G. *angeion,*vessel, + *ektasis,* a stretching]. Dilation of salivary ducts.

sialolith- [G.*sialo,*saliva+G.*lithos,* stone]. Ptyalolith; a salivary calculus.

sialolithiasis [G.*sialolith*+G. *–iasis,* condition]. The formation or presence of a salivary calculus.

sialorrhoea [sial (saliva) + rrhoea (a flow). Sialism. An excess secretion of saliva.

sialostenosis [sialo-,+ G.*stenosis,* a narrowing]. Stricture of a salivary duct.

siderosis an excess of iron in the circulating blood-

somatodynia somatodynia; *any pain in the body*

somatoscopia somatoscopy; *instrumental examination of the body*

spasmus,i m spasm (an involuntary muscular contraction).

struma,ae f Goiter or struma (enlargement of thyroid gland due to deficiency of Iodum.

syndromum,i n syndrome (the complex of symptoms,united with common pathogenesis). A concurrence of symptoms, *fr. syn, together+ dromos, a running[.* The aggregate of signs and symptoms associated with any morbid process, and constituting togethr the picture of the disease.

splanchnologia branch of medical science dealing with the viscera

splanchnomegalia abnormal enlargement of the viscera, such as may be seen in acromegaly and other disorders

spondylodynia spondylodinia; *pain in the spine (vertebra)*

spondylopathia any disease of the vertebrae or the spinal column
spondylosis any lesion of the vertebra of a degenerative nature spondylosis; *any lession of the vertebra o a denerative nature*
splenectomia splenectomy; *removal of the spleen*
splenomegalia splenomegaly; *enlargement of the spleen*
stethoscope stethoscope; *an instrument originally devised by Laenec for aid in hearing the respiratory and cardiac sounds in the chest, but now modified in various ways and used in auscultation of any of vascular or othe sounds anywhere in the body*
stomatitis stomatitis; *inflammation of the mucous membrane of the mouth*
stomatologia stomatology; *the study or science of the mouth*
stomatomalacia pathologic softening of any of the structures of the mouth.
stomatomycosis disease of the mouth due to the presence of a microscopic fungus
struma struma; *inflammation of thyroid gland due to Iodum*
strumectomia strumectomy; *operation of goiter (struma) remove*
sub- L. prefix meaning *under, or moderately, partially, incompletely*
supra- L.prefix meaning *above*
symbyosis Any intimate assosiation between two species.
symphisis symphysis; *a growing together or union (e.g.* of two bones)
symptoma symptom; *a feature of a disease experienced by the patient, e.g.* giddiness (as opposed to a sign, which is what an observer sees or records – e.g. spots)
syndesmosis connection of bones with connective tissue
syndromum syndrome; *the complex of symptoms united with common pathogenesis)*
synergia coordinated or correlated action or two or more structures, agents, or physiologic processes so that the combined action is greater than that of each acting separately.
synostosis - osseous union between the bones forming a joint

T

tachycardia tachycardia; *rapid heart rate*
tenorrhaphia tendorrhaphia; *suture of the divided ends of a tendon*
teratophobia [terato - combining form denoting a teras. **Teras -** fetus with deficient, redudntant misplaced, or grossly misshapen parts] morbid fear of carrying and giving birth to a malformed infant
thermoanesthesia loss of the temperature sense or of the ability to distinguish between heart and cold; insensibility to heat or to temperature changes
thermographia **[**G.*thermo* (heat)+G.*grapho* (to write) - a process for measuring the regional temperature of a body part or organ
thermohyperesthesia very acute sensitivity to the heat
thermolysis loss of body heat by evaporation, radiation, etc.
thermoneurosis elevation of the temperature of the body due to an emotional influence
thermoplegia sunstroke
thermotherapia [*termo* (heat)+*therapia* (treatment) - treatment of disease by therapeutic application of_ heat
tomo- realting to a layer
tomographia layer by layer X-ray examination (sectional roentgenography)
thrombocytosis - increase in the number of platelets in the circulating blood
thyroideus thyroid; *loke a shield; the thyroid cartillage is shield-like*

topalgia [G.*topos*,place] pain localized in one spot; a symptom occuring in neuroses localized pain; without evident organic basism is experienced

topographia topography; *study of the position of parts of the body*

topophobia a neurotic dread of or related to a particular place or locality

toxaemia toxaemia; *clinical syndrome caused by toxic substances in the blood*

toxicologia toxicology; *the study or science of poisons*

toxicophobia *an objective unfounded fear of poisoning*

toxicosis a disease caused by poisons (toxins);

trans- L.prefix meaning *across*

transfusio transfusion; [**L.**trans-**fundo, pp.-fusus***, to pour from one vessel to another]***.** 1. Transfer of blood or blood component of an individual (donor) to another individual (receptor). 2. Intravascular injecton of physiologic saline solution.

transmural **(**through any wall, as of the body or of a cyst or any hollow structure)

transplantatio *[L. trans* - through, across***].*** To transplant - **[***trans*-+L.*planto*, to plant**]**. 1. To transfer from one part to another.

transpositio removal from one place to another.

-trophic,-trophia suffix from G. trophe, nourishment, meaning respectively, *pertaining to nourishment and a state relating to nourishment*

tumor,oris m tumor. 1. Any swelling or tumorfaction 2. Neoplasm

typhlostenosis [G .*typhl*, cecum]. Narrowing of cecum.

U

ulcerosus,a,um ulcerous (relating to, affected with, or containing an ulcer)

umbilicalis,e umbilical, Omphalic, relating to the *umbilicus*

uraemia 1. an axcess of uria and other nitrogenous waste in the blood; 2. the complex of symptoms due to severe persisting renal failure that can be relieved by dialysis.

uropenia uropenia; *scanty urination*

uropoesis [poesis, making] The production or excretion of urine;

V

vasoconstrictor vasoconstrictor; *causing (*blood-)*vessel constriction*

vitium,i n defect.

vulnus,eris n wound, injury.

X

xanthochromia [G.*xanto-yellow+G. color]*. The occurrence of patches of yellow color in the skin, resembling xantoma, but without the nodules or plates.

xanthoma - [G.*xanto-yellow+G.oma*-tumor] a yellow nodule or plaque especially of the skin, composed of lipid-laden histocytes.

xanthoderma [G.*xanto*-yellow+*G. derma,* skin]. Yellow skin. Any yellow coloration of the skin

xanthomatosis Widespread xantomas, especially on the elbows and knees, that sometimes affects mucous membranes and are sometimes associated with ,metabolic disturbances

xanthopsia [G.*xanto-yellow*+ G. *opsia,* vision]. Yellow vision; a condition in which objects appear yellow; may occur in picric acid and santonin poisoning, in jaundice, and in digitalis intoxication

xanthosis [G.*xanto-yellow+G. –osis,* condition] A yellowish discoloration of degenerating tissues, especially seen in malignant neoplasm

xeno- **[**G. *xenos,* quest, host, stranger, foreign]. Combining form denoting strange or relationship to foreign material.

xenophobia	xenophoby; *fear of foreigner*
xerochilia	xerochilia; *dryness of the skin*
xerostomia	xerostomia; *dryness of the mouth*

Dictionary

A

Absinthium,i n wormwood
acidum, i n acid
a.aceticum acetic acid
a. arsernicosum arsenious acid
a.ascorbinicum ascorbic acid
activatus,a,um activated
ad usum externum or
pro usu externo for internal use
adiposus,a,um adipose
Adonis,idis f adonis
aër,aëris air
Aether,eris,m ether
aethereus,a,um ethereal
aethylicus,a,um ethylic
albus,a,um white
alcoholicus,a,um alcoholic
Aloe,es f aloe
amarus,a,um bitter
ampulla,ae,f ampule
Amygdala,ae f *almond (fruit)*
amylum amylum, starch
Anisum,i n anise
amylaceus,a,um amylaceus, starchy
ana equal quantities
anaestheticus,a,um anaesthetic
antipyreticus,a,um antipyretic
aqua,ae,f water
aquosus,a,um watery, aqueous
arsenis, itis m arsenite

B

bacca,se f berry
Belladonna,ae f belladonna
benzoas,atis m benzoate
biliaris,e (felleus,a,um) biliary
bilis, is bile,gall, fel
bis repetatur! Repeat twice!
Bismunthi subnitras (atis) bismuth subnitrate
bolus,i f bole
bolus alba white clay
Bromcamphora,ae f bromcamphor

C

Calendula,ae f marigold
calvaria,ae f calvaria
Misceatur. Let it be mixed. Mix.
misceo, mixtum, ēre to mix
mixture, ae f mixture
morbus, i n morbus, disease
mucilago,inis f mucilage

N

narcosis,is f narcosis **(pro narcosi – for narcosis)**
nasalis, e nasal
Natrii arsenas (-atis, m) crystallisatus (-i) crystallized sodium arsenate
Natrii bromĭdum sodium bromide
Natrii chloridum (-i) sodium chloride
Natrii fluoras (-atis m) sodium fluorate
Natrii tetrabōras sodium tetraborate
nitras, atis m nitrate
nitris, it is m nitrite
numerus, i m number

O

obductus,a,um coated
oblongatus,a,um oblongated
oleosus,a,um oily
oleum,u n oil
o.Cacao cocoanut oil
o.Camphorae camphor oil
o.Mentae piperitae peppermint oil
o.Persicorum peach oil
o.Terebĭnthinae turpentine oil
Oliva,ae f olive

P

pasta,ae f paste
Pepsinum,i n pepsin
per se in pure form
perŏxydum,i n peroxide
Persicum,i n peach
pilŭla,ae f pill
piperitus,a,um pepper
pix (-icis f) liquĭda tar, wood-tar
planta,ae f plant
pro die- for one day
purgativus,a,um purgative
purificatus,a,um purified (water vaccine, serum)
purus,a,um pure

calyx,ycis calyx
Chamomilla,ae f chamomile
Camphora trita triturated camphor
capsula,ae f capsule
Carbo,onis m charcoat, carbon
ceratus,a,um cerated, waxed
charta,ae f paper
charta cerata waxed paper
chloridum,i n chloride
Chloroformium,i n chloroform
cholagogus,a,um cholagoge, cholagogic
chole,es bile
cito quickly
citras,atis m citrate
citus,a,um quick, fast
Codeini phosphas (-atis m) codeine phosphate
combustio,onis f burn, combustion
communis,e common
compositus,a,um compound
conservatus,a,um conservated
Convallaria,ae f lily of the valley
cortex,icis m bark**,**cortex
Crataegus, i f hawthorn
crystallus, i f crystal
cum with (Abl.)

D

depuratus,a,um purified
destillatus,a,um distilled
dilutus,a,um diluted
divisus,a,um divided
dosis, is f dose
dragee dragee
dulcis, e sweet
durus, a,,um hard, firm

E

emplastrum Plumbi lead plaster
emplastrum,-"Salipod"- corn plaster "Salipod"
emulsio, onis f emulsion
extractum Frangulae- extract of buckthorn
Euphyllinum, i n euphiline
externus, a, um external
extractum Crataegi siccum- dry extract of hawthorn

F

Foeniculum,i n fennel
pro for
pulveratus,a,um powdery
pulvis, eris m powder

Q

quantum satis as much as required
Quercus,us f oak-tree

R

radix,icis f radix, root
rectalis, e rectal
rectificatus,a,um rectified
reductus,a,um reduced
remedium,i n remedy
renalis,e renal
Repetātur! Let it be repeated. Repeat.
Repěte bis! Repeat twice!
repěto, itum, ĕre to repeat
Resorcinum,i n resorcin
Rheum,i n rhubarb
Rhizoma, atis n rhizome (the subterraneous rootstock of a plant), rootstock)
Ricinus,i m castor-oil plant
Rubus (i) idaeus (i) m raspberry
Rosa,ae f *rose (dog rose)*

S

Saccharum,i n sugar
salicylas,atis m salicylate
Salvia,ae f sage
scatula,ae f box
sedativus,a,um sedative
semen,inis n seed
semina Lini linseeds
serum,in serum
siccus,a,um dry
Signetur. Let it be designated. To designate.
signo, atum, āre to sign, to designate
simplex, icis simple
sirŭpus,i m syrup
sirŭpus Aloës Aloe syrup
sirŭpus Cerăsi cherry syrup
solutio,onis f solution
spirituosus,a,u alcoholic
spiritus, us m spirit, alcohol
Statim! Immediately!
status,us m status**,** state, condition
Sterilisetur! Let it be sterilized!

Ferri lactas (-atis) iron lactate
Ferrum, i n iron
Ferrum reductum reduced iron
flavus,a,um golden yellow, yellow
flos, floris m flower
fluidus,a,um fluid
folium,i n leaf

G

gelatinosus,a,um gelatinous
gemma,ae f gemma
globulus,im globule
Glucosum,i n glucose
Glycyrrhiza,ae f licorice
gutta,ae f drop

H

Helianthus, i m sunflower
herba,ae f herb
Hydrargyri amidochloridum (-i) mercury ammonium chloride
Hydrargyrum, i n mercury

I

infusum, i n infusion
infusum foliorum Rhei infusion of the rhubarb leaves
injection, onis f injection
Iodoformium,in iodoform
Iodum, i n iodine

L

Lanolinum (- i n) lanolin
linimentum, i n liniment
liquor, oris m liquid, fluid
luteus, a,um yellow

M

Magnesii carbonas (-atis) magnesium carbonate
massa pilulārum mass of the pills
medicamentum,i n medication
medicus, i m physician
mel, mellis n honey
Mentha,a f mint
Mentholum,in menthol
Misce, ut fiat pulvis (pasta) mix to get powder (paste)
Strychnini nitras (-atis) strychnine nitrate
Strychninum,i n strychnine
subcutaneous,a,um subcutaneous
sublingualis, e sublingual
subtilis, e subtle, fine
subtilissimus, a, um the finest
succus,i m juice
sulfas, atis m sulfate
sulfīdum, i n sulfide
sulfur, uris n sulfur, sulphur
suppositoria cum Glycerino suppositories with glycerin
suppositorium, i n suppository
suspensio, onis f suspension

T

tabuletta, ae, f tablet
Talcum,i n talc, talcum
talis such
Terebinthina,ae f turpentine
tinctura, ae f tincture
tinctura Digitalis digitalis tincture; tincture of foxglove
tinctura Leonuri leonurus tincture; tincture of motherwort
tinctura Menthae mint tincture; menthe tincture
tinctura Valerianae valerian tincture; tincture
tritus, a, um triturated

U

unguentum, i n ointment
ustus,a,um burnt, calcined, roasted
utīlis, e useful

V

Valeriana,ae f valeriana
vaginalis,e vaginal
Vaselinum,i n vaseline
venenum, i n poison, venom, toxin

X

Xeroformium, i n xeroform
Zinci oxydum (-i n) zinc oxide