МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ РЕСПУБЛИКИ БЕЛАРУСЬ

УЧРЕЖДЕНИЕ ОБРАЗОВАНИЯ
«ГОМЕЛЬСКИЙ ГОСУДАРСТВЕННЫЙ МЕДИЦИНСКИЙ УНИВЕРСИТЕТ»

Кафедра иностранных языков

ЛАТИНСКИЙ ЯЗЫК: ОСНОВЫ ГРАММАТИКИ И МЕДИЦИНСКОЙ ТЕРМИНОЛОГИИ

Учебно-методическое пособие
для студентов 1 курса
факультета иностранных студентов
учреждений высшего медицинского образования

LATIN LANGUAGE: BASICS OF GRAMMAR AND MEDICAL TERMINOLOGY

Practical workbook
for the 1st year students
of faculty for foreign students
of medical highest educational institutions

Гомель
ГомГМУ
2019

УДК 811.124’06:[61:001.4](072)=111
ББК 81.461я73:51.
Л 27

Авторы:
С. А. Лин, И. Н. Киселевич, А. Ф. Максименко, Н. В. Калюк

Рецензенты:
кандидат филологических наук, доцент,
заведующий кафедрой белорусского и иностранных языков
Гомельского государственного технического университета
имени П. О. Сухого
И. Н. Пузенко;
кандидат филологических наук,
доцент кафедры белорусского языка
Гомельского государственного университета имени Ф. Скорины
Н. П. Тимошенко

Латинский язык: основы грамматики и медицинской
Л 27 **терминологии:** учеб.-метод. пособие для студентов I курса факультета иностранных студентов учреждений высшего медицинского образования = Latin: basics of grammar and medical terminology: Practical workbook of faculty for foreign students of medical highest educational institutions / С. А. Лин [и др.]. — Гомель: ГомГМУ, 2019. — 184 с.
ISBN 978-985-588-160-6

Учебно-методическое пособие составлено в соответствии с программой по латинскому языку и основам медицинской терминологии. В пособии излагаются основные положения латинской грамматики, необходимые для правильного запоминания и самостоятельного конструирования анатомо-гистологических, клинических и фармацевтических терминов.

Предназначено для студентов 1 курса факультета иностранных студентов учреждений высшего медицинского образования, обучающихся на английском языке.

Утверждено и рекомендовано к изданию научно-методическим советом учреждения образования «Гомельский государственный медицинский университет» 18 декабря 2018 г., протокол № 7.

УДК 811.124’06:[61:001.4](072)=111
ББК 81.461я73:51.

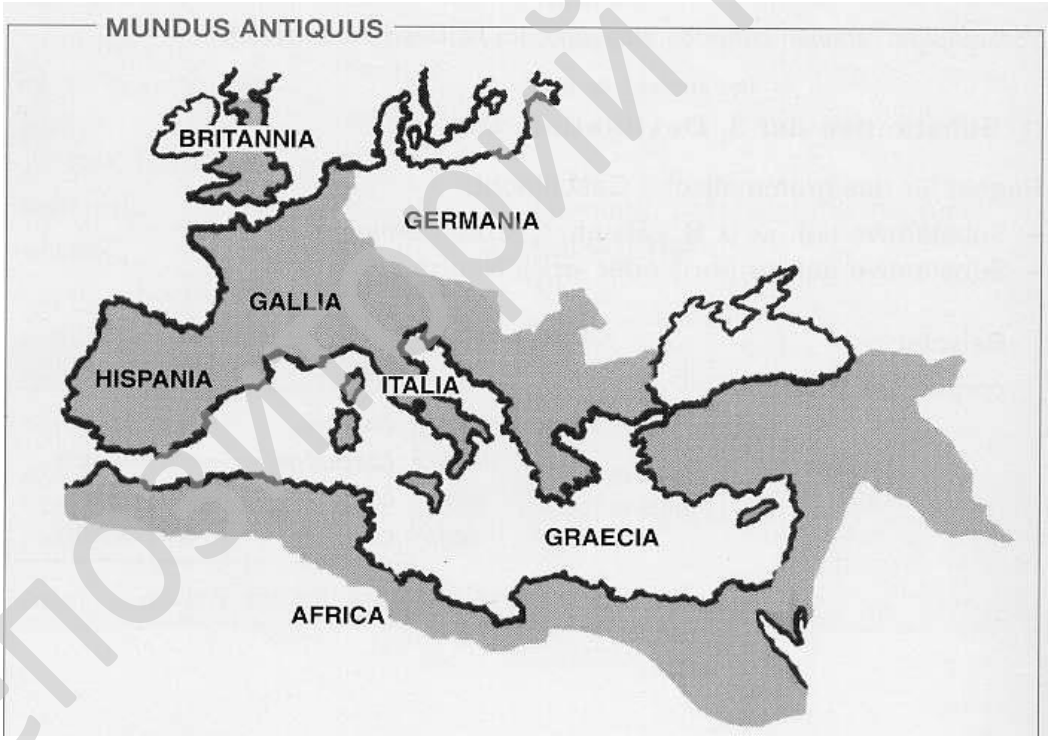
ISBN 978-985-588-160-6

ANATOMICAL TERMINOLOGY

§1. From the history of medical terminology

Training a doctor is impossible without studying special terminology. Speaking on a professional topic a doctor uses 50-80 per cent of words of Latin and Greek origin. All the spheres of medicine are based on Latin and Ancient Greek languages. There is a saying among doctors and pharmacists: **Invīa est in medicīna via sine lingua Latīna** (There is no way in medicine without Latin).

Latin is one of the dead languages. Its history goes back to the beginning of the first millennium B.C. Latin was the language of the tribe in a small region *Latium* situated in the middle part of the Apennine peninsula. The tribe called itself *Latīni* and their language was Latin *(Lingua Latīna)*. The Latini fought numerous aggressive wars. So by the beginning of the first century B.C. Latin had become the language of the Roman Empire (from modern Portugal to modern Romania). Since 753 B.C. Rome had been the capital of the Roman Empire.



In 476 A.D. the Roman Empire fell, and since the 6th century A.D. Latin has stopped functioning as a spoken language and now is considered dead. New European countries appeared on the territory of the former Roman Empire and they continued using Latin as a means of international communication, language of science and education. The role of literary Latin was extremely significant in the history of medieval Western Europe. All Western European languages borrowed Latin alphabet and nowadays it is spread all over the world.

Greece, the country with highly developed culture and science, was conquered by the Romans in 146 B.C. In the 5th century B.C., in the so-called classical epoch, Greece was marked by the development of sciences and medicine. In this period there lived a great ancient doctor Hippocrátēs (460–377 B.C.), "the father of scientific European medicine". The basis of scientific medical terminology was presented in his works. The following Greek terms were found in Hippocrátēs' works: *bronchus, urethra, herpes, coma, nephritis, polyp, cholera, epidemic* and others.

Romans' medical and biological knowledge was inferior to the achievements of the Greek medicine, therefore scientific knowledge and terminology were mainly borrowed from the Greek. In the period of the Roman Empire military medicine and doctoring were widely developing. Most doctors were Greek and they had to teach medicine in special schools. Initially, teaching was in Greek but meanwhile the role of Latin increased. There appeared the works of Roman scientists and doctors on scientific and medical questions. In the 1st century B.C. **Aulus Cornelius Celsus** created a medical encyclopedia where he presented special medical vocabulary. For example: *abdomen, anus, articulatio, caecum intestinum, cartilago, cervix, cubitus, digitus, femur, humerus, index* and others. He used terms mainly taken from the Greek but often used Latin terms as synonyms. Since then ancient doctors had to know two languages: Greek and Latin, and medical terminology started developing on bilingual Greek-Latin basis. This bilingualism became traditional in medical terminology of the subsequent epochs.

In the Middle Ages medicine in Europe had little development. Arabic medicine took the leading position. Many important ancient Greek works were translated into the Arabic language. Within five centuries – from 800 to 1300 — Arabic medical works by more than 70 authors became known. One of the most significant Arabic works is "The Canon of Medicine" written by **Avicenna**. This work was translated into Latin in the 12th century and was dominating in teaching medicine in Europe up to the end of the 16th century.

A fresh upsurge of Latin was in the Renaissance epoch (14th – 16th centuries). Great geographic discoveries, development of cities and trading, falling of church authority created favorable conditions for scientific investigations in medicine. Latin started taking its positions as the international language of science.

A great anatomy reformer **Vesalius** (1514–1564) lived in that epoch and he was the author of the prominent works "Anatomical tables" and "About the structure of human body". These works were of great importance for anatomy development as well as for improving Latin anatomical terminology. Like Celsus, Vesalius tried to make terminology unified.

The contribution of Renaissance anatomists in developing anatomical terminology was enormous: about 700 names were borrowed from Greek, and by the end of the 18th century there were about 30000 anatomical terms.

The greatest scientists of the Renaissance and New Time used Latin in their works. They are great philosophers and scientists Copernicus, Galileo, Newton, Leibniz. Defending theses, making discussions, writing scientific articles and works, making international correspondence – all this was in Latin.

Even in the 17th century many scientists continued writing in Latin. The great Swedish botanist Carolus Linnseus classified the vegetable kingdom in Latin.

Nowadays, Latin preserves its function of the international means of naming in anatomy, histology, embryology, microbiology, partly in pathological anatomy and clinical disciplines, and in pharmacology and pharmacotherapy.

PHONETICS

LESSON 1

The main objectives of the lesson are:

1) *to learn the Latin alphabet;*
2) *to be able to pronounce Latin vowels and diphthongs correctly;*
3) *to be able to pronounce Latin consonants and consonant groups correctly;*
4) *to train reading Latin anatomical terms correctly.*

§2. Latin alphabet

Letter	*Name*	*Pronunciation*	*Letter*	*Name*	*Pronunciation*
Aa	a	[a]	**Nn**	en	[n]
Bb	be	[b]	**Oo**	o	[o]
Cc	tse	[ts; k]	**Pp**	pe	[p]
Dd	de	[d]	**Qq**	ku	[k]
Ee	e	[e]	**Rr**	er	[r]
Ff	ef	[f]	**Ss**	es	[s; z]
Gg	ge	[g]	**Tt**	te	[t]
Hh	ha	[g/h]	**Uu**	u	[u; v]
Ii	i	[i]	**Vv**	ve	[v]
Jj	jota	[j]	**Xx**	iks	[ks]
Kk	ka	[k]	**Yy**	ipsilon	[i]
Ll	el	[l]	**Zz**	zeta	[z]
Mm	em	[m]			

§3. Pronunciation of vowels

A a	[a]	p**a**rs [párs] *part*
O o	[o]	fr**o**ns [frons] *forehead*
E e	[e]	p**e**s [pes] *foot*
	*All the consonants before **"e"** are pronounced hard.* ***But** "l" is pronounced soft:* levator [l'evator] *elevator muscle*	

Exercise 1. ***Read and pay attention to the pronunciation of the vowels*:** vértebra (vertebra), cérebrum (brain), olécranon (elbow tip), intermédius (intermedium), stérnum (breast bone), léctor (lecturer), procéssus (process), túber (tuber, large rounded swelling), forámen (opening), levátor (elevator muscle), fémur (thigh bone), médius (middle), intervertebrális (intervertebral), vénter (belly), nórma (norm), abdómen (abdomen), membrána (membrane), órbita (orbit), área (area), téndo (tendon), réte (network).

I i	1) [i]	*in most words*	**i**ndex [índeks] *index, forefinger*
	2) [j]	- *at the beginning of a word before another vowel;* - *in the middle of a word between vowels.* **But**: *in words of Greek origin i - [i]*	**i**ugulāris = **j**ugulāris [juguláris] *jugular* ma**i**or = ma**j**or [májor] *large* **I**ōdum [iódum] *iodine*

Exercise 2. ***Read and pay attention to the pronunciation of the vowel "i":*** iunctúra – junctúra (joining), intérnus (internal), iuguláris – juguláris (jugular), intestínum (intestine), iáter (*Greek*) (doctor), máior – májor (large), infratemporális (infratemporal), ieiúnum – jejúnum (jejunum), digitális (digital), páries (wall), iuvéntus – juvéntus (youth), mastoídeus (mastoidal), ilíacus (iliac).

U u	[u]	t**u**ber [túber] *tuber*
ngu	[ngv]	lin**gu**a [língva] *tongue*
qu	[kv] *before a vowel*	s**qu**ama [skváma] *squama, scale*
su	[sv]	s**u**avis [svávis] *sweet*

Exercise 3. ***Read and pay attention to the pronunciation of the vowel "u":*** sánguis (blood), tubérculum (tubercle), Quércus (oak), sublinguális (sublingual), tríquetrum (three-edged), língua (tongue), áqua (water), quíntus (the fifth), úngues (nail), ángulus (angle), quadrátus (square), squamósus (squamous, scaly), oblíquus (oblique), inguinális (inguinal), quádriceps (four-headed), unguéntum (ointment), língula (small tongue).

Y y	[i]	*appears only in Greek words*	g**y**rus [gírus] *gyrus, convolution*
Remember the most used Greek prefixes and root elements with the vowel "y": **dys-**[dis], **hypo-[**hipo]**, hyper**-[hiper]**, syn-[**sin]**, sym-[**sim], **myo-[**mio]**, phys-[**fiz]			

Exercise 4. ***Read and pay attention to the pronunciation of the vowel "y":*** cóndylus (condyle), tympánicus (tympanic), styloídeus (styloid, awl-shaped), hyoídeus (hyoid, sublingual), hypoglóssus (hyppoglossal), cytológia (study of cells), cýsta (cyst), dyspépsia (disturbance of digestion), systéma (system), pýramis (pyramid), pylórus (pylorus of the stomach), pterygoídeus (pterygoid, wing-like), syndactýlia (fusion of fingers), stylohyoídeus (stylohyoid), Hydrárgyrum (mercury).

§4. Diphthongs

Diphthong is a combination of two vowels pronounced like one sound or syllable. There are four diphthongs in Latin: **ae, oe, au, eu:**

ae	[e]	vertebr**ae** [vértebre] *ribs*
oe	[e]	**oe**sophăgus [ezófagus] *esophagus*
au	[au]	**au**ris [áuris] *ear*
eu	[eu]	pl**eu**ra [pléura] *pleura*
NB! If there is **ē** or **ë** in *ae* (*aë/aē*) or *oe* (*oë/oē*), each vowel is pronounced separately.		
aë / aē	[ae]	**aë**r [áer] *air*
oë / oē	[oe]	dipl**oē** [díploe] *diploe*

Exercise 5. ***Read and pay attention to the pronunciation of the***

diphthong: vértebrae (vertebrae), cóstae vérae (true ribs), áuris (ear), néutrum (neuter gender), diáeta (diet), pléura (pleura), aquaedúctus (water supply), cáuda (tail), roentgénum (X-ray examination), neurósis (disorder of nervous system), oedéma (oedema, hydrops), díploē (spongy substance), Alóë (aloe), uropoësis (formation of urine), leucopoësis (formation of white blood cells), haemopoësis (formation of blood).

§5. Pronunciation of consonants

C c	1) [ts]	*before* ***e***, ***i***, ***y***, ***ae***, ***oe***	pro**ce**ssus [protséssus] *process* fa**ci**es [fátsies] *face, surface* **c**aecum [tsékum] *cecum*
	2) [k]	*in other cases*	**c**aput [káput] *head* a**cc**essorius [aktsessórius] *accessory*

Exercise 6. Read and pay attention to the pronunciation of the consonant "c": canális (canal), occipitális (occipital), tubérculum (tubercle), acetábulum (acetabulum, cup-like cavity), accessórius (accessory), córpus (body), cíngulum (girdle), crísta (crest), procéssus (process), cránium (skull), fácies (face, surface), cáput (head), cérebrum (brain), cóllum (neck), cáecum (blind intestine), cadáver (dead body, corpse), coerúleus (blue), cósta (rib), coccygéus (coccygeal), fáscia (fascia, sheath of muscles), colúmna (column), cervicális (cervical).

G g	[g]	**g**aster [gáster] *stomach*
H h	[g/h]	**h**omo [hómo] *man*
Ƙ k	[k]	s**k**elĕton [skéleton] *skeleton*
L l	[l] (*is always pronounced softly*)	**l**amĭna [l'ámina] *thin plate, lamina* carti**l**āgo [kartil'ágo] *cartilage*

Exercise 7. Read and pay attention to the pronunciation of the consonant "l": cólon (large intestine), lúmbus (loin), átlas (atlas, first cervical vertebra), cartilágo (cartilage), cóllum (neck), clavícula (clavicle), lábium (lip), sélla (saddle), hámulus (hook), lóbus (lobe), glándula (gland), lámina (lamina, thin plate), ovális (oval), laterális (lateral), palátum (palate), fíbula (splint-bone), válvula (valve, flap), úlna (elbow bone), úlcus (ulcer), ála (wing), lóngus (long), ángŭlus (angle), pylórus (pylorus of the stomach), línea (line), plánus (plain), frontális (frontal), longitudinális (longitudinal, lengthwise), púlmo (lung), alvéolus (alveolus), líber (free), látus (wide), búlbus (bulb), móbilis (mobile), pélvis (pelvis), medúlla (medullary substance), abdominális (abdominal), mandíbula (lower jaw), flávus (yellow).

	1) [s]	*in most words*	o**s** [os] *bone*

S s			
	2) [z]	- *between two vowels;* - *between a vowel and the consonant "m" or "n".*	ba**s**is [bázis] *base* chia**s**ma [hiázma] *chiasm*
ss	[ss]		o**ss**a [óssa] *bones*

Exercise 8. Read and pay attention to the pronunciation of the consonant "s":

os (bone), óssa (bones), incisúra (notch), supérior (superior, upper), procéssus (process), sínus (sinus), spinósus (spinous), sacrális (sacral), fibrósus (fibrous), tuberósitas (tuberosity), básis (base), petrósus (petrous), impréssio (impression), fissúra (fissure, narrow split), séptum (dividing wall), recéssus (recess), transfúsio (transfusion), násus (nose), ósseus (bony), súlcus (groove), transvérsus (transverse), pars (part), dens (tooth), mucósus (mucous), nasolacrimális (nasolacrimal), stérnum (breast bone), venósus (venous), distális (distal), fáscia (fascia, sheath of muscles), hypoglóssus (hypoglossal), fóssa (shallow depression), tonsílla (tonsil).

T t	[t]	**t**endo [téndo] *tendon*
ti + *vowel*	[tsi]	substan**ti**a [substántsia] *substance*
sti; tti; xti	[ti]	os**ti**um [óstium] *orifice, ostium*

Exercise 9. Read and pay attention to the pronunciation of the combination "ti":

eminéntia (elevation), digéstio (digestion), protuberántia (projection), spátium (interval, space), ópticus (optic), tíbia (shin-bone), tértius (the third), perforátio (perforation), substántia (substance), articulátio (joint), óstium (orifice, mouth), distántia (distance), intestínum (intestine), evolútio (evolution), imitátio (imitation), palatínus (palatine), vestíbulum (vestibule, threshold), retína (retina).

X x	[ks]		ape**x** [ápeks] *apex, tip*
Z z	1) [z]	*in words of Greek origin*	**z**ygomatĭcus [zigomáticus] *zygomatic*
	2) [ts]	*in words of non-Greek origin*	influen**z**a [influéntsa] *influenza* **Z**incum [tsínkum] *zinc*

Exercise 10. Read correctly:

ápex (tip), áxis (axis, second cervical vertebra), extrémitas (extremity), extérnus (external), zygomáticus (zygomatic), lárynx (larynx, throat), zóna (zone), Zíncum (zinc), rádix (root), déxter (right), proximális (proximal), pléxus (plexus), appéndix (appendix), influénza (influenza), zygóma (zygoma, cheekbone), xerostómia (dryness of the mouth).

§6. Digraphs

Digraphs were brought from Greek and are mainly used in Greek words. There are four digraphs in Latin: **ch, ph, rh, th**.

ch	[h]	bra**ch**ium [bráhium] *shoulder*
ph	[f]	**ph**alanx [fálanks] *phalanx*
rh	[r]	rhaphe [ráfe] *raphe, suture*
th	[t]	thorax [tóraks] *chest, thorax*
sch	[skh]	ischium [ískhium] *ischium*

Exercise 11. Read correctly:

thórax (chest), thorácicus (thoracic), cóncha (concha), núcha (nucha), pharyngéus (pharyngeal), scaphoídeum (keel-shaped), sphenoidális (wedge-shaped), ethmoidális (sieve-shaped), labyrínthus (labyrinth), íschium (ischium), ischiádicus (ischiadic), Schizándra (magnolia-vine), rhizóma (rhizome), ráphe/rhaphe (suture), phárynx (pharynx), Glycyrrhíza (licorice), Chamomílla (camomile), Altháea (marshmallow), Heliánthus (sunflower), Galánthus (snow-drop), encéphalon (brain), sýmphysis (adhesion), synchondrósis (adhesion of bones), xerophthálmia (dryness of eye), xerochéilia (dryness of lips), achýlia (absence of gastric juice secretion), chylothórax (accumulation of lymph in the pleural cavity), ophthalmorrhágia (bleeding from the eye), ophthalmorrhéxis (rupture of the eye).

Training exercises for home reading

1. Cránium; colúmna vertebrális; clavícula; stérnum; húmerus; os sácrum; os cóxae; fémur; patélla; tíbia; fíbula; óssa pédis; óssa digitórum; óssa metatársi; óssa társi; óssa metacárpi; óssa cárpi; rádius; úlna; cóstae; scápula; os ethmoidále; os lóngum; os plánum; óssa brévia; os irreguláre; línea epiphysiális; substántia spongiósa; substántia compácta; cávitas medulláris; periósteum; laméllae circumferentáles intérnae; laméllae circumferentáles extérnae; trabéculae ósseae; canális nutrítius; vása sanguínea; lacúna óssea; cáput húmeri; cóllum anatómicum; cóllum chirúrgicum; tubérculum mínus; tubérculum május; diáphysis húmeri; fóssa olécrani; epicóndylus laterális; tróchlea húmeri; súlcus nérvi ulnáris; epicóndylus mediális; skéleton axiále; óssa thorácis; óssa mémbri superióris; óssa mémbri inferióris.

2. Párs cervicális colúmnae vertebrális; párs thorácica colúmnae vertebrális; párs lumbális colúmnae vertebrális; os sácrum; os coccýgis; promontórium; procéssus transvérsus; vértebra thorácica; átlas; áxis; córpus vértebrae; árcus vértebrae; pedúnculi árcus vértebrae; forámen vértebrae; procéssus spinósus; fóvea costális procéssus transvérsi; procéssus transvérsus; procéssus articuláris supérior; procéssus articuláris inférior; incisúra vertebrális inférior; vértebra cervicális; forámen procéssus transvérsi; súlcus artériae vertebrális; súl-

cus nérvi spinális; tubérculum antérius; tubérculum postérius; tubérculum caróticum; párs cervicális; párs thorácica; párs lumbális; vértebra próminens; forámina intervertebrália; vértebra lumbális; fóvea costális supérior; incisúra vertebrális supérior; árcus antérior; mássa laterális; fácies articúlaris postérior; fácies articuláris supérior; procéssus articuláris inférior; procéssus mamilláris; procéssus accessórius; básis óssis sácri; ápex óssis sácri; forámina sacrália anterióra; vértebrae sacráles; fácies pelvína; fácies dorsális; forámina pelvína; crísta sacrális mediána; crísta sacrális intermédia; crísta sacrális laterális; canális sacrális; tuberósitas sacrális; fácies auriculáris; hiátus sacrális; ála sacrális; córnu coccygéum; córnu sacrále.

3. Cáput cóstae; súlcus cóstae; cóllum cóstae; tubérculum cóstae; ángulus cóstae; córpus cóstae; fácies articuláris tubérculi cóstae; tubérculum músculi scaléni anterióris; súlcus vénae; artériae subcláviae; tubérculum músculi serráti anterióris; stérnum; manúbrium stérni; córpus stérni; procéssus xiphoídeus; incisúra juguláris; incisúra claviculáris; incisúrae costáles; apertúra thorácis supérior; acrómion; spátia intercostália; cartilágo costális; ángulus infrasternális; cóstae fluctuántes; cóstae spúriae; cóstae vérae; procéssus spinósus vértebrae thorácicae.

LESSON 2

The main objectives of the lesson are:
1) to learn the basic rules of stressing Latin anatomical terms;
2) to be able to distinguish long and short vowels in Latin anatomical terms;
3) to train in reading Latin anatomical terms correctly minding the stress.

§ 7. Accent rules. Word stressing

One of the syllables in a word is always more accentuated than the others. We say that this syllable is stressed.

To determine which syllable is stressed the word should be divided into syllables. Every Latin word has as many syllables as it has vowels or diphthongs:
la-mi-na; fo-ve-a; ar-cus; di-ae-ta; pleu-ra; pneu-ma; oe-so-pha-gus.

The main rules of stressing a word:

1. The final syllable of a word is never stressed.

2. In disyllabic words (consisting of two syllables) the first syllable is stressed: *ár-cus, búr-sa, fún-dus*.

3. In polysyllabic words (consisting of three and more syllables) the penultimate syllable (next to the last syllable) is stressed if it's long: *in-ci-sī´-vus, coccy-gé́-us, spi-nā´-lis*.

4. If the penultimate syllable is short the stress is shifted to the third syllable from the end: *mí-nĭ-mus, scá-pŭ-la, ór-gă-non*.

To stress the word correctly you should:

1) divide the word into syllables;

2) find the penultimate syllable;

3) determine if it is long or short.

4) If it is long, it is stressed. If the penultimate syllable is short the stress is shifted to the third syllable from the end.

Syllables may be long or short by nature and by its position in the word.

Long syllables by nature	**Short syllables by nature**
if it contains a long vowel (with a long mark above the vowel ¯): ā, ē, ī, ō, ū: ve-**sī**-ca(vesíca) *bladder* fo-**rā**-men (forámen) *opening* in-ci-**sū**-ra (incisúra) *notch*	if it contains a short vowel (with a short mark above the vowel ˘): ă, ĕ, ĭ, ŏ, ŭ: la-**mĭ**-na (lámina) *plate* tu-ber-**cŭ**-lum (tubérculum) *tubercle*
Long syllables by position	**Short syllable by position**
1) if the syllable has a diphthong: a-**moe**-ba (amóeba) *amoeba*	1) if the vowel of the syllable is followed by the vowel of the next syllable: fa-**ci**-es (fácies) *face*; cra-**ni**-um (cránium) *skull.*
2) if the vowel of the syllable is followed by two or more consonants or consonant **x**, **z**: co-**lum**-na (colúmna) *column*; pro-**fun**-dus (profúndus) *deep*; cir-cum-**fle**-xus (circumfléxus) *circumflex*; re-**fle**-xus (refléxus) *reflex*; Gly-cy-**rrhi**-za (Glycyrrhíza) *licorice.*	2) if the vowel of the syllable is followed by a consonant group **b, p, d, t, c, g + r, l** or by **ch, ph, th, rh:** ce-**re**-brum (cérebrum) *brain;* ver-**te**-bra (vértebra) *vertebra*; pal-**pe**-bra (pálpebra) *eyelid;* cho-le-**do**-chus (cholédochus) *bilious*; sto-**ma**-chus (stómachus) *stomach (Greek).*

Remember the following long and short suffixes

Long suffixes	**Short suffixes**
noun suffixes:	
-ūr- fissúra (*fissure);* iunctúra (*joining);* **-īn-** medicína (*medicine).*	**-ŏl-** fovéŏla *(small pit);* **-ŭl-** glándŭla (*gland);* tubércŭlum (*tubercle).*
adjective suffixes:	
-āl- lumbális *(lumbar);* **-ār-** articulāris *(articular);* **-āt-** digitátus *(like fingers);* hamátus *(like a hook);* **-īn-** pelvínus *(pelvic);* **-ōs-** spinósus *(spinous);* **-ē-** coccygéus (*coccygeal).*	**-ĭc-** gástrĭcus *(gastric)*; thorácĭcus (*thoracic);* óptĭcus (*optic);* **-ăc-** cardíăcus (*cardiac);* **-ĕ-** óssĕus *(bony);* tendínĕus (*tendinous).*

Training exercises

Ex. 1. Read the following disyllabic words:

ala, anus, arcus, apex, atlas, basis, bursa, biceps, caput, cavum, coccyx, dorsum, ductus, fossa, fornix, gaster, genu, hepar, humor, cornu, homo, incus, index, iris, larynx, latus, lobus, lumbus, manus, margo, mentum, naris, nasus, nucha, nodus, ossa, pelvis, phalanx, pilus, planus, plica, radix, ramus, rectum, rete, sacrum, spina, sternum, sulcus, teres, tegmen, textus, tractus, tuber, ulna, valva, vena, verus.

Ex. 2. Stress the following words minding long and short marks:

abdōmen, acetabŭlum, angŭlus, biliāris, calcanēus, cavĭtas, coccygēus, digĭtus, distālis, duodēnum, oesophăgus, flexūra, gastrĭcus, forāmen, glandŭla, hiātus, humĕrus, incisīvus, intercostālis, laryngēus, mediālis, meātus, minĭmus, orgănon, ossĕus, palātum, petrōsus, proxĭmus, radiālis, pyrămis, retinacŭlum, scapŭla, spinālis, superficiālis, utĕrus, urēter, vagīna, vesīca.

Ex. 3. Stress the words correctly minding long or short vowels:

acromion, anterior, arteria, articulatio, brachium, caverna, cerebellum, cilium, columna, compactus, externus, fovea, ganglion, griseus, hypoglossus, impressio, ischium, interosseus, labium, linea, manubrium, maxilla, medulla, metatarsus, nucleus, ostium, periosteum, processus, proprius, recessus, rotundus, spatium, tonsilla, urinarius.

Ex. 4. Accent the following words and give the necessary explanations:

processus, ala, squamōsus, externus, tubercŭlum, superior, laterālis, rotundum, carotĭcus, crista, posterius, maxillāris, aquaeductus, sutūra, internus, angŭlus, fovea, zygomatĭcus, spatium, spina, frontālis, medicīna, labyrinthus, maxilla, ulna, petrōsus, lamĭna, linea, pyrămis, palpĕbra, foramĭna, protuberantia, columna, canālis, profundus, incisūra, glandŭla, palatīnus, medius, humĕrus, oleum, cerĕbrum, pharyngēus, atlas, jugulāris, spinōsus, symphўsis, facies, epiphўsis, ischium, pelvīnus, forāmen, tuberosĭtas, tympănum, cartilāgo, hamātus.

Control reading and stressing

1. **Cranium**: cranium cerebrāle; neurocranium; sutūra frontālis; os nasāle; arcus superciliāris; forāmen supraorbitāle; os parietāle; facies orbitālis ossis frontālis; sutūra sphenofrontālis; sutūra frontozygomatĭca; facies orbitālis alae majōris ossis sphenoidālis; sutūra sphenozygomatĭca; forāmen zygomaticofaciāle; os zygomatĭcum; sutūra zygomaticomaxillāris; forāmen infraorbitāle; concha nasālis inferior; tuberosĭtas masseterĭca; lamĭna perpendiculāris ossis ethmoidālis; angŭlus mandibŭlae; spina nasālis anterior; juga alveolāria; protuberantia mentālis; forāmen mentāle; sutūra intermaxillāris; cavum nasi; fissūra orbitālis inferior; facies orbitālis maxillae; os lacrimāle; lamĭna orbitālis ossis ethmoidālis; squama temporālis; processus zygomatĭcus ossis frontālis; tuber

frontāle; septum nasi ossĕum; sinus maxillāris; dentes maxillae; mandibŭla; sutūra coronālis; sutūra sphenoparietālis; margo parietālis ossis temporālis; sutūra temporozygomatĭca; arcus zygomatĭcus; processus styloidĕus; porus acustĭcus externus; processus mastoidĕus; sutūra occipitomastoidĕa; sutūra lambdoidĕa; linea temporālis inferior; linea temporālis superior; squama temporālis; sutūra squamōsa.

2. **Os frontāle**: squama frontālis; tuber frontāle; glabella; processus zygomatĭcus; margo parietālis; sulcus sinus sagittālis superiōris; facies cerebrālis; impressiōnes digitātae; forāmen caecum; canālis optĭcus; incisūra ethmoidālis; sinus sphenoidālis; canālis pterygoidĕus; processus pterygoidĕus; ala major; fossa glandŭlae lacrimālis; lamĭna orbitālis labyrinthi ethmoidālis; forāmen ethmoidāle anterius; cellŭlae ethmoidāles.

3. **Os sphenoidāle**: apertūra sinus sphenoidālis; dorsum sellae; concha sphenoidālis; fissūra orbitālis superior; ala minor; margo zygomatĭcus; sulcus pterygopalatīnus; lamĭna laterālis processus pterygoidĕi; hamŭlus pterygoidĕus; processus vaginālis; rostrum sphenoidāle; forāmen rotundum; facies orbitālis alae majōris; canālis optĭcus; processus clinoidĕus posterior; fossa scaphoidĕa; sulcus hamŭli pterygoidĕi; sulcus carotĭcus; tubercŭlum sellae; sulcus prechiasmātis; forāmen ovāle; forāmen spinōsum; forāmen magnum; squama occipitālis; clivus; fossa hypophysiālis.

4. **Os occipitāle**: protuberantia occipitālis externa; linea nuchae superior; linea nuchae inferior; linea nuchae suprēma; squama occipitālis; pars basilāris; tubercŭlum pharyngēum; eminentia cruciformis; condўlus occipitālis; canālis hypoglossus; fossa condylāris; processus jugulāris; processus intrajugulāris; margo lambdoidĕus; sulcus sinus sigmoidei; sulcus sinus petrōsi inferiōris; pars laterālis; fossa occipitālis superior.

5. **Os parietāle**: linea temporālis inferior; tuber parietāle; angŭlus sphenoidālis; angŭlus mastoidĕus; sulci arteriōsi; margo sagittālis; angŭlus occipitālis; foveŏlae granulāres.

MORPHOLOGY

LESSON 3

The main objectives of the lesson are:
1) to learn the main grammar categories of Latin nouns;
2) to be able to determine the declension of Latin nouns;
3) to train in making Genitive Singular form of Latin nouns.

§8. Latin noun

Latin anatomical terms involve mainly two parts of speech: a noun and an adjective.

***Example*:** deep muscle of the tongue
adjective noun noun

petrous part of the occipital bone
adjective noun adjective noun

Latin nouns have the following grammar categories:
1) gender *(genus)*;
2) number *(numĕrus)*;
3) case *(casus)*;
4) declension *(declinatio)*.

1. Latin nouns may be of **three genders**:
masculīnum – masculine – m;
femininum – feminine – f;
neutrum – neuter – n.

Gender of Latin nouns can not change and **must be memorized** together with the noun: *rib* – costa, ae **f**; *nose* – nasus, i **m**; *opening* – forāmen, ĭnis **n.**

The gender of Latin nouns is mostly determined by the primary form of the noun (the ending of Nominative Singular). Thus, most nouns having the following Nominative endings refer to the specific gender:

Nominative ending	*gender*	*example*
-a	feminine (f)	*lamĭn**a**, ae f (plate); vertĕbr**a**, ae f (vertebra).*
-us	masculine (m)	*muscŭl**us**, i m (muscle); arc**us**, us m (arch).*
-um; -en; -on; -u	neuter (n)	*ligament**um**, i n (ligament);* *forām**en**, ĭnis n (opening);* *ganglio**n**, ii n (nerve node);* *corn**u**, us n (horn).*

But there is a large group of nouns (mostly the third declension nouns) in which the gender can't be exactly guessed by the Nominative Singular ending. Therefore, the gender of these nouns should be learnt together with the noun form.

Example: os, ossis **n** *(bone);*
pars, partis **f** *(part);*
dens, dentis **m** *(tooth.)*

2. Latin nouns can be used in **two numbers**:
singulāris – singular (sing.);
plurālis – plural (plur.).

In English the plural is formed by the ending *–s* or *–es*. In Latin the ending of the plural varies depending on the concrete term and according to the gender and declension:

muscles (plural) of the eyes (plural) and nose (singular) – muscŭl*i* ocul*ōrum* et nas*i;*

parts (plural) of the body (singular) – part*es* corpŏr*is*.

3. Grammar catergory of **case** is defined as the change of the noun form according to its relation to other words in the term. There are six **cases** in Latin (in English there are only common case and possessive case). But only two cases are used in medical anatomical terminology: **Nominatīvus (**Nominative**)** and **Genetīvus (**Genitive**)**.

***Nota bene*!** To determine the case of the noun in the term you should find there preposition "of".

Nominative case includes all the words that stand **before "of"** and answer the questions "who, what".

Genitive case includes all the words that are placed **after "of"** and answer the questions "whose, of what".

Example: body (Nominative Singular) of the incus (Genetive Singular);

thoracic nerves (Nominative Plural) of the pterygoid canal (Genitive Singular).

If the term has no preposition "of" it means there is no Genitive part, so all the words in the term are Nominative Singular or Plural:

deep lymphatic vessels (Nominative Plural).

Nominative case is considered as the primary form of nouns and adjectives. In histological and anatomical Latin terms the first word is always the noun in Nominative case (Singular or Plural).

4. In dictionaries each Latin noun is written in its **lexical form** which consists of three elements *(patella, ae f).*

The **first** element is the primary form of the noun in **Nominative** Singular.
The **second** element is the **ending** of **Genitive** Singular.
The **third** element indicates the **gender** of the noun.

	1st element	*2nd element*	*3rd element*
	noun in Nominative Singular	ending of Genitive Singular	Gender
rib – costa, ae f	costa	ae (cost**ae**)	f (feminine)
eye – ocŭlus, i m	ocŭlus	i (ocŭl**i**)	m (masculine)
horn – cornu, us n	cornu	us (corn**us**)	n (neuter)

Nota bene! The full form of Genitive Singular is formed by substituting the ending of Nominative Singular (the 1st element of the lexical form) for the ending of Genitive Singular (the 2nd element of the lexical form). The part of the word without the ending is called the **stem**. Nominative and Genitive stems coincide in nouns of the first, second, fourth and fifth declensions:

vena, ae f: ven-**a** – ven-**ae** (I);
Nom. Sing. Gen. Sing.

septum, i n: sept-**um** – sept-**i** (II);
Nom. Sing. Gen. Sing.

arcus, us m: arc-**us** – arc-**us** (IV);
Nom. Sing. Gen. Sing.

facies, ēi f: faci-**es** – faci-**ēi** (V).
Nom. Sing. Gen. Sing.

For some nouns (mainly of the 3rd declension) the second element of the lexical form contains not only the ending of Genitive Singular but also a part of their stem. It takes place when there is alteration of vowels or consonants in the stem of a noun:

thorax, ācis m: thor**ax** – thor**āc-is;**
Nom. Sing. Gen. Sing.

margo, ĭnis m: marg**o** – marg**ĭn-is.**
Nom. Sing. Gen. Sing.

If a noun in Nominative Singular has only one syllable, the full form of Genitive Singular is given in its lexical form:

os, ossis n *(bone)*; os, oris n *(mouth)*; dens, dentis m *(tooth)*; pars, partis f *(part)*.

Therefore, it's necessary to memorize all the elements of the lexical form of a noun.

5)There are **five declensions** of Latin nouns. Each noun belongs to some declension and can't change it.

The **declension** of the **noun** is determined by the **ending of Genitive Singular** (the **second element of its lexical form)**.				
-ae	**-i**	**-is**	**-us**	**-ēi**
I	**II**	**III**	**IV**	**V**

Lexical Form	*Nominative Singular*	*Genitive Singular*	*Declension*
fovea, ae f	fove-**a**	fove-**ae**	I
nasus, i m	nas-**us**	nas-**i**	II
rectum, i n	rect-**um**	rect-**i**	II
index, ĭcis m	index	indĭc-**is**	III
cutis, is f	cut-**is**	cut-**is**	III
meātus, us m	meāt-**us**	meāt-**us**	IV
genu, us n	gen-**u**	gen-**us**	IV
superficies, ēi f	superfici-**es**	superfici-**ēi**	V

Lexical minimum № 1

I declension nouns

1) ala, ae f — *wing*
2) arteria, ae f — *artery*
3) costa, ae f — *rib*
4) crista, ae f — *crest*
5) incisūra, ae f — *notch*
6) lamĭna, ae f — *plate*
7) scapŭla, ae f — *shoulder blade*
8) vena, ae f — *vein*
9) vertĕbra, ae f — *vertebra*

II declension nouns

10) collum, i n — *neck*
11) sulcus, i m — *groove*
12) tubercŭlum, i n — *tubercle*

III declension nouns

13) atlas, atlantis m — *first cervical vertebra, atlas*
14) axis, is m — *second cervical vertebra, axis*
15) caput, ĭtis n — *head*
16) corpus, ŏris n — *body*
17) forāmen, ĭnis n — *opening*
18) os, ossis n — *bone*

IV declension nouns

19) arcus, us m — *arch*
20) processus, us m — *process*

V declension nouns

21) facies, ēi f — *1) surface;*
2) face.

Training Exercises

Ex. 1. Write the gender of the words:

tegmen - ____; olecrănon - ____; scapŭla - _____; nasus - ____; cornu - ____; aqua - ____; colon - ____; cranium - ____; digĭtus - _____; fractūra - _____; forāmen - _____; fascia - _____; intestīnum - _____; ganglion - _____; lumbus - _____; orbĭta - _____; genu - _____; oesophăgus - _____.

Ex. 2. Make the full form of Genitive Singular, underline the Genitive ending and determine the declension:

Pattern: costa – costae f – I

a) vertĕbra, ae f; corpus, ŏris n; dorsum, i n; arcus, us m; superficies, ēi f; basis, is f; collum, i n; apex, ĭcis m; cranium, ii n; ductus, us m; caput, ĭtis n; ganglion, ii n; cornu, us n; squama, ae f; zygōma, ătis n; processus, us m; tubercŭlum, i n; thorax, ācis m; tractus, us m; atlas, antis m; axis, is m; dorsum, i n; genu, us n;

b) fovea, ae f; arcus, us m; duodenum, i n; textus, us m; facies, ēi f; pancreas, ătis n; muscŭlus, i m; recessus, us m; canālis, is m; cornu, us n; tuberosĭtas, ātis f; ala, ae f; plexus, us m; ramus, i m; cerĕbrum, i n; incisūra, ae f; forāmen, ĭnis n; sulcus, i m; fossa, ae f; crista, ae f; dens, dentis m; chiasma, ātis n; os, ossis n; cavĭtas, ātis f; angŭlus, i m; costa, ae f.

Ex. 3. Add the Genitive singular ending according to the given declension and guess the gender of some nouns:

tubercŭlum, tubercŭl… (II) ____; nervus, nerv… (II) ____; caput, capĭt… (III) *n*; arcus, arc… (IV) ____; atlas, atlant… (III) *m*; forāmen, foramĭn… (III) ____; costa, cost… (I) ____; crista, crist… (I) _____; collum, coll… (II) ____; arteria, arteri… (I) ____; os, oss… (III) *n*; vertĕbra, vertĕbr... (I) ____; hiātus, hiāt… (IV) ____; os, or… (III) *n*; basis, bas… (III) *f*; facies, faci… (V) *f*; margo, margĭn… (III) *m*; tympănum, tympăn… (II) ____; apex, apĭc… (III) *m*; processus, process… (IV) ____; canālis, canāl… (III) *m*; meātus, meāt… (IV) ____; corpus, corpŏr… (III) *n*; pars, part… (III) *f*.

LESSON 4

The main objectives of the lesson are:

1) to learn the structure of Latin anatomical terms;

2) to train in translating anatomical terms "noun + noun" from English into Latin;

3) to train in translating anatomical terms "noun + noun" from Latin into English.

§9. Structure of anatomical terms

Anatomical terminology is the base medical terminology. It contains the terms naming all parts of the human body.

An anatomical term is a word or several words used to denote some anatomical structure of the human body. Anatomical terms may consist of one word, two words, three words, up to 8.

One-word terms consist of one noun in the Nominative Singular or Plural, e.g., atlas, *atlas, first cervical vertebra*; pes, *foot*; vasa, *vessels*; ossa, *bones*.

Two-word terms consist of two words and may be of two kinds:

a) noun + noun in Singular or Plural form:

arcus vertebrae (arch of the vertebra);

b) noun + adjective in Singular or Plural form:

incisura frontalis (frontal notch).

Multi-word terms start with the noun in Nominative Singular or Plural. Then it is followed the words which characterize this noun. They may be presented by another noun (or nouns) in Genitive Singular or Plural or an adjective (or adjectives). So multi-word terms may be presented by several kinds:

a)$noun_1$ + $noun_2$ + $noun_3$:

facies tuberculi costae (surface of the tubercle of the rib);

b)$noun_1$ + $adjective_1$ + $adjective_2$:

processus articularis superior (upper articular process);

c)$noun_1$ + $noun_2$ + $adjective_1$:

muscŭlus capĭtis longus (long muscle of the head);

d)$noun_1$+ $adjective_1$ + $noun_2$ + $adjective_2$:

lobus superior pulmonis dextri (upper lobe of the right lung).

§10. Anatomical terms "$Noun_1$ + $Noun_2$ + ($Noun_3$)"

While translating this type of terms you should follow the scheme.

Let's translate the term **"arch of the rib":**

1. Divide the term into Nominative and Genitive parts minding Singular or Plural.

The first noun (before "of") is always Nominative; the second noun (after "of") is always Genitive.

arch of the rib.
Nom. Sing. Gen. Sing.

2. Write the lexical form of each word; determine the declension, case and number.

Remember!!! We always start translating from the Nominative noun.

noun 1	arch	arcus, us m	IV; Nominative Singular	arc**us**
noun 2	rib	costa, ae f	I; Genitive Singular	cost**ae**

arch of the rib – arcus costae

If the term contains several Genitive nouns, they are placed according to the English sequence.

Let's translate the term **"surface of the tubercle of the rib":**

1) identify Nominative and Genitive minding Singular or Plural forms and make the correct order:

1 2 3
surface of the tubercle of the rib.
Nom. Sing. Gen. Sing. Gen. Sing.

2) write the lexical form of each word; determine the declension, case and number:

noun 1	surface	faci**es**, ēi f	V; Nominative Singular	faci**es**
noun 2	tubercle	tubercŭlum, **i** n	II; Genitive Singular	tubercŭl**i**
noun 3	rib	costa, **ae** f	I; Genitive Singular	cost**ae**

surface of the tubercle of the rib – facies tuberculi costae

Lexical minimum № 2

I declension nouns

1) columna, ae f *column*
2) fissūra, ae f *fissure, narrow split*
3) fossa, ae f *shallow depression*
4) fovea, ae f *small pit*
5) linea, ae f *line*
6) orbĭta, ae f *eye-pit*
7) spina, ae f *spine*
8) squama, ae f *squama, scale*
9) substantia, ae f *substance*
10) sutūra, ae f *suture*

II declension nouns

11) angŭlus, i m *angle*
12) cranium, i n *skull*
13) sacrum, i n *sacral bone*
14) sternum, i n *breastbone*

III declension nouns

15) apex, ĭcis m *top*
16) basis, is f *base*
17) canālis, is m *canal*
18) coccyx, ýgis m *coccygeal bone*
19) thorax, ācis m *chest*
20) zygōma, ătis n *cheek bone*

Training Exercises

In-class training

Ex. 1. Translate the following terms into Latin according to the model:

Pattern: [1] [2]

crest of the tubercle

Nom. Sing. Gen. Sing.

crest – crist**a**, ae f – noun, I, Nom. Sing. – crist**a**

tubercle - tubercŭlum, **i** n – noun, II, Gen. Sing. - tubercŭl**i**

1) arch of the vertebra; 2) body of the rib; 3) groove of the artery; 4) crest of the head of the rib; 5) opening of the rib; 6) bone of the shoulder blade; 7) plate of the arch of the rib; 8) body of the vertebra; 9) head of the bone; 10) process of the rib.

Home training

Ex. 2. Translate the anatomical terms into Latin

1) arch of the atlas; 2) angle of the breastbone; 3) head of the rib; 4) wing of the rib; 5) line of the body; 6) neck of the rib; 7) crest of the tubercle; 8) tubercle of the rib; 9) crest of the neck of the rib; 10) notch of the shoulder blade; 11) small pit of the head of the bone; 12) base of the skull; 13) bone of the coccygeal bone; 14) canal of the neck; 15) spine of the shoulder blade.

Ex. 3. Translate the following anatomical terms into English:

1) apex capĭtis; 2) caput costae; 3) fossa cranii; 4) angŭlus scapŭlae; 5) collum costae; 6) corpus costae; 7) forāmen vertebrae; 8) tubercŭlum costae; 9) sulcus venae; 10) incisūra scapŭlae; 11) facies tubercŭli costae; 12) corpus sterni; 13) os cranii; 14) linea corpŏris; 15) caput sterni.

Exercises for control reading

1. Os temporāle: processus zygomatĭcus; tubercŭlum articulāre; fissūra petrosquamōsa; fissūra petrotympanĭca; pars tympanĭca; porus acustĭcus externus; fissūra tympanomastoidĕa; spina suprameatĭca; sulcus nervi petrōsi minōris; sulcus nervi petrōsi majōris; hiātus canālis nervi petrōsi; eminentia arcuāta; sulcus sinus sigmoidĕi; impressio nervi trigemĭni; apex partis petrōsae; margo sphenoidālis; tegmen tympăni; apertūra externa aquaeductus vestibŭli; apertūra externa canalicŭli cochleae; meātus acustĭcus externus; fissūra tympanosquamōsa; tubercŭlum articulāre; fossŭla petrōsa; apertūra externa canalicŭli cochleae; forāmen stylomastoidĕum; cavum tympăni; promontorium; fenestra vestibŭli; fenestra cochleae; vagīna processus styloidĕi; canālis carotĭcus; prominentia canālis semicirculāris laterālis; genicŭlum canālis faciālis; semicanālis muscŭli tensōris tympăni; semicanālis tubae auditīvae; cellŭlae tympanĭcae; canalicŭlus chordae tympăni.

2. Os ethmoidāle: lamĭna perpendiculāris; concha nasālis media; crista galli; labyrinthus ethmoidālis; lamĭna cribrōsa; ala cristae galli; forāmen caecum; concha nasālis superior; meātus nasi superior; processus uncinātus; bulla ethmoidālis.

3. Maxilla: corpus maxillae; margo infraorbitālis; facies anterior; fossa canīna; incisūra nasālis; spina nasālis anterior; sulcus infraorbitālis; facies infratemporālis; tuber maxillae; canālis incisīvus; forāmen incisīvum; foramĭna alveolāria; canāles alveolāres; hiātus maxillāris; alveŏli dentāles; juga alveolāria; os incisīvum; sutūra palatīna mediāna; septa interradiculāria; processus sphenoidālis; processus pyramidālis; lamĭna horizontālis; incisūra sphenopalatīna; fossa pterygoidĕa; ala voměris; fossa sacci lacrimālis; hiātus lacrimālis; processus temporālis; forāmen zygomaticotemporāle.

4. Mandibŭla: basis mandibŭlae; processus coronoidĕus; processus condylāris; tuberosĭtas masseterĭca; sulcus mylohyoīdeus; septa interalveolāria; linea oblīqua; protuberantia mentālis; lingŭla mandibŭlae; fossa digastrĭca; fovea sublinguālis; os hyoideum; cornu majus; cornua majōra; cornu minus; cornua minōra.

5. Cranium: calvaria; basis; crista frontālis; foveŏlae granulāres; sella turcĭca; forāmen jugulāre; canālis hypoglossi; synchondrōsis sphenooccipitālis; vomer; lamĭna horizontālis ossis palatīni; processus pyramidālis ossis palatīni; palātum durum; choāna; cóndylus occipitālis; tubercŭlum pharyngēum; canālis condylāris; forāmen lacērum; fissūra tympanosquamōsa; sutūra sphenosquamōsa; forāmen palatīnum minus; clivus; eminentia cruciformis; orbĭta; adĭtus orbĭtae; canālis nasolacrimālis; fossa sacci lacrimālis; os sphenoidāle; forāmen ethmoidāle posterius; meātus nasi commūnis; apertūra piriformis; recessus sphenoethmoidālis; infundibŭlum ethmoidāle; hiātus semilunāris; lamĭna laterālis processus pterygoidĕi; processus palatīnus maxillae; os lacrimāle; fonticŭlus anterior; anŭlus tympanĭcus; squama occipitālis.

LESSON 5

The main objectives of the lesson are:
1) to learn the main grammar categories of Latin adjectives;
2) to be able to distinguish laxical forms of Latin adjectives of two groups;
3) to train in making an agreement of Latin adjectives with nouns.

§11. Latin adjectives

Adjectives are the words that qualify a noun and therefore they are always used with the noun.

Example: transverse ligament of the atlas
adjective → noun noun

Remember!!! In all Latin terms **adjectives** are placed **after the noun** which they refer to. *Compare*: in English adjectives are placed before the noun.

A Latin adjective has the grammar categories which are dependent on a Latin noun.

1) *number*: Singular, Plural;
2) *gender*: masculine, feminine;, neuter;
3) *case*: Nominative, Genitive, etc.

are related to the noun which the adjective qualifies

For example:

<u>wide</u> ligament of the uterus;
n, Nom. Sing.

wide muscles of the back.
m, Nom.Plur.

Remember!!! There are only **three declensions** of adjectives. *Compare*: nouns belong to five declensions.

Latin adjectives are written in the dictionary in their lexical form. **The lexical form** of the adjective presents the form of Nominative Singular of different genders and includes the following elements:

-the full form of the adjective in Nominative Singular with the masculine ending;

-ending of Nominative Singular of feminine gender;

-ending of Nominative Singular of neuter gender.

Lexical form	*masculine*	*feminine*	*neuter*	
latus, a, um *(wide)*	lat-us	lat-a	lat-um	*1st group*
dexter, tra, trum *(right)*	dext-er	dextr-a	dextr-um	
articulāris, e *(articular)*	articulār-is	articulār-is	articulār-e	*2nd group*
costālis, e *(costal)*	costāl-is	costāl-is	costāl-e	

According to the lexical form Latin adjectives are divided into **two groups**.

The 1st group adjectives have different forms for each gender. Therefore they have three endings in their lexical form (Nominative Singular endings): endings **–us / -er** are for **masculine** gender; ending **-a** is for **feminine** gender; ending **-um** is for **neuter** gender:

English	*Lexical form*	m	f	n
		-us / -er	**-a**	**-um**
long	longus, a, um	long-**us**	long-**a**	long-**um**
left	sinister, tra, trum	sinist-**er**	sinistr-**a**	sinistr-**um**

The choice of the adjective ending depends on the gender of the concrete noun which the adjective qualifies:

long muscle: muscŭlus, i **<u>m</u>** + long**<u>us</u>**, a, um = muscŭlus long**us;**

long head: caput, ĭtis **<u>n</u>** + longus, a, **<u>um</u>** = caput long**um;**

long artery: arteria, ae **<u>f</u>** + longus, **<u>a</u>**, um = arteria long**a.**

The **declension** of the **first group adjectives** is determined by the **gender** of the noun which it refers to: **feminine** (-a) – **I**
masculine (-us / -er) – **II**
neuter (-um) – **II**.

Example:
petrous part: pars, partis **f** + petrōsus, **a**, um = pars^{III} petrōsa^{I} (f);
deep vessel: vas, vasis **n** + profundus, a, **um** = vas^{III} profundum^{II} (n);
thoracic duct: ductus, us **m** + thoracĭc**us**, a, um = ductus^{IV} thoracĭcus^{II} (m).

The 2nd group adjectives have two endings in their lexical form (Nominative Singular endings): ending **-is** – for **masculine** and **feminine** genders; ending **-e** – for **neuter** gender:

English	*Lexical form*	m	f	n
		- is	**- is**	**- e**
lateral	laterālis, e	laterāl-**is**	laterāl-**is**	laterāl-**e**
renal	renālis, e	renāl-**is**	renāl-**is**	renāl-**e**

The choice of the adjective ending depends on the gender of the concrete noun which the adjective qualifies:
frontal suture: sutūra, ae **f** + frontāl**is**, e = sutūra frontāl**is;**
frontal angle: angŭlus, i **m** + frontāl**is**, e = angŭlus frontāl**is;**
vertebral tuber: tuber, ĕris **n** + vertebrālis, **e** = tuber vertebrā**le.**

The second group adjectives also include several adjectives frequently used in anatomical terms. These adjectives resemble the comparative degree of adjectives but are translated as positive adjectives:

anterior, ius *front, anterior;*	inferior, ius *lower;*
posterior, ius *back, posterior;*	major, jus *large;*
superior, ius *upper, superior;*	minor, us *small.*

These adjectives have the common ending for **masculine** and **feminine** gender –**ior (jor)**; and another ending for **neuter** gender –**ius (jus)**:

English	*Lexical form*	m	f	n
		- ior (-jor)	**- ior (-jor)**	**- ius (jus)**
front	anterior, ius	anter-**ior**	anter-**ior**	anter-**ius**
large	major, jus	ma-**jor**	ma-**jor**	ma-**jus**
small	minor, us	min-**or**	min-**or**	min-**us**

Example:
large wing: ala, ae **f** + ma**jor**, jus = ala ma**jor;**
lower process: processus, us **m** + infer**ior**, ius = processus infer**ior;**
upper ligament: ligamentum, i **n** + superior, **ius** = ligamentum super**ius.**

The **declension** of the **second group adjectives** is always the **III**-rd.

Example:
frontal suture: sutūra, ae **f** + frontāl**is**, e = sutūra[I] frontāl**is** [III];
upper arch: arcus, us **m** + super**ior**, ius = arcus [IV] super**ior** [III];
vertebral tuber: tuber, ĕris **n** + vertebrālis, **e** = tuber [III] vertebrā**le** [III].

	1st group			2nd group			Comparative degree		
gender	m	f	n	m	f	n	m	f	n
Nom.sing. endings	-us, -er	-a	-um	-is	-is	-e	-ior	-ior	-ius
Declension	II	I	II	III			III		

Remember!!! Adjectives agree with the noun they qualify in gender, number and case.

Lexical minimum № 3

1st group adjectives

1) coccygēus, a, um — *coccygeal*
2) dexter, tra, trum — *right*
3) externus, a, um — *external*
4) internus, a, um — *internal*
5) medius, a, um — *middle*
6) palatīnus, a, um — *palatine*
7) petrōsus, a, um — *stony*
8) sinister, tra, trum — *left*
9) thoracĭcus, a, um — *thoracic*
10) transversus, a, um — *transverse*

2nd group adjectives

11) articulāris, e — *articular, related to joints*
12) costālis, e — *costal, realted to ribs*
13) dorsālis, e — *dorsal*
14) frontālis, e — *frontal, related to the forehead*
15) horizontālis, e — *horizontal*
16) laterālis, e — *lateral*
17) mediālis, e — *medial*
18) occipitālis, e — *occipital*
19) spinālis, e — *spinal*
20) temporālis, e — *temporal*
21) vertebrālis, e — *vertebral*

Comparative adjectives

22) anterior, ius — *front, anterior*
23) inferior, ius — *lower*
24) major, jus — *large*
25) minor, minus — *small*
26) posterior, ius — *back, posterior*
27) superior, ius — *upper*

Training Exercises

In-class training

Ex. 1. Complete the lexical form of the following adjectives and identify the group:

coccygēus,_____; dorsālis,____; major,____; profundus,____; laterālis,____; dexter,____; vertebrālis,____; minor,____; sinister,____; mediānus,____; costālis,____; externus,_____; superior,____; lumbālis,____; internus,_____.

Ex. 2. Make the form of neuter gender of the following adjectives:

occipitālis, externus, spinōsus, inferior, profundus, dorsālis, posterior, laterālis, distālis, minor, sinister.

Ex. 3. Make the form of feminine gender of the following adjectives:

internus, minor, thoracĭcus, articulāris, major, coccygēus, dexter, superior, claviculāris, cribrōsus, costālis, transversus.

Ex. 4a. Agree adjectives with the nouns in gender:

Model: ala, ae f (minor, us) – ala minor (f).

incisūra, ae f (frontālis, e); os, ossis n (frontālis, e); arcus, us m (anterior, ius); tubercŭlum, i n (anterior, ius); canālis, is m (vertebrālis, e); forāmen, ĭnis n (vertebrālis, e); columna, ae f (vertebrālis, e); processus, us m (transversus, a, um); sinus, us m (transversus, a, um); linea, ae f (transversus, a, um); facies, ēi f (articulāris,e); ramus, i m (laterālis, e); nervus, i m (sensorius, a, um); arteria, ae f (anterior, ius); corpus, ŏris n (ciliāris, e).

Ex. 4b. Identify the declension of each word in the word combinations from Ex. 4a.

Home training

Ex. 5. Make the terms (noun+adjective) and identify the declension of each word:

Model: facies, ei f (articulāris, e) – facies^{V} articulāris^{III}.

ala, ae f (major, jus); os, ossis n (occipitālis, e); sinus, us m (occipitālis, e); protuberantia, ae f (internus, a, um); cornu, us n (coccygēus, a, um); pars, partis f (petrōsus, a, um); cornu, us n (inferior, ius); costa, ae f (primus, a, um); forāmen, ĭnis n (posterior, ius); forāmen, ĭnis n (magnus, a, um); vertĕbra, ae f (thoracĭcus, a, um); fovea, ae f (costālis, e); nervus, i m (spinālis, e); margo, ĭnis m (squamōsus, a, um); concha, ae f (superior, ius); cornu, us n (laterālis, e).

LESSON 6

The main objectives of the lesson are:

1) to learn the structure of Latin anatomical terms "noun + adjective";

2) to learn the position and agreement of adjectives in Latin anatomical terms;

3) to train in translating anatomical terms from English into Latin;

4) to train in translating anatomical terms from Latin into English;

5) to learn the suffixes used to make Latin adjectives;

6) to be able to understand the Latin adjectives basing on the meaning of the prefixes.

§12. Structure of anatomical terms "noun + adjective"

As you remember multi-word terms may occur in several variants:

a) noun+noun;

b) noun+adjective;

c) noun+noun+adjective.

Now let's see the anatomical terms of the types "noun+adjective" and "noun+noun+adjective".

Noun + adjective. In the term consisting of a noun and an adjective, the **adjective** takes the **second** position.

Let's translate the anatomical term *"palatine opening":*

1) make the correct order of the words (first goes the noun, the second goes the adjective):

2 1
palatine opening;
adj. Nom. Sing noun Nom. Sing.

2) write the lexical form of each word and their grammar categories:

English	*Lexical forms*	*Grammar categories*	*Translation*
opening	forāmen, ĭnis **n**	noun, III, Nom. Sing.	forāmen
palatine	palatīnus, a, **um**	adj., n, II, Nom. Sing.	palatīnum

palatine opening – forāmen palatīnum

In the term consisting of a noun and several adjectives, the noun occupies the first position. Then goes the adjective referring to an organ or part of the body *(articular, pulmonary, cerebral, ect.)*. Then goes the adjective determining the size *(large, small)*, form *(round, sphenoid, ect.)* and position *(upper, anterior, lower, etc.)*:

3 2 1
right temporal bone
adj. N.S. adj. N.S. noun, N.S.

bone	os, ossis **n**	noun, III, Nom. Sing.	os
temporal	temporālis, **e**	adj., n, III, Nom. Sing.	temporāle
right	dexter, tra, **trum**	adj., n, II, Nom. Sing.	dextrum

right temporal bone – os temporāle dextrum

Noun + noun + adjective. If the term contains two nouns and the adjective, first goes Nominative noun, the second place is taken by Genitive noun or the adjective:

3 1 2
transverse nerve of the neck
Nom. Sing. adj. Nom.Sing. noun Gen. Sing. noun

nerve	nervus, i **m**	noun, II, Nom. Sing.	nervus
neck	collum, i n	noun, II, Gen. Sing.	colli
transverse	transvers**us**, a, um	adj., m, II, Nom. Sing.	transversus

transverse nerve of the neck – nervus colli transversus

§13. Derivative adjectives

Most adjectives in anatomical terminology are derivatives, i.e. they are formed from the noun by means of some suffixes.

First class adjectives are formed by the following suffixes:

Suffix	*Meaning*	*Example*
-ĭc-, -in-, -ĕ-	relation to some anatomical structure	gastr-**ĭc**-us, a, um *gastric, related to the stomach*; pancreat-**ĭc**-us, a, um *pancreatic, related to the pancreas*; pelv-**in**-us, a, um *pelvic, related to the pelvis*; oss-**ĕ**-us, a, um *bony.*
-ōs-	plenty of some feature	squam-**ōs**-us, a, um *scaly, having plenty of scale;* fibr-**ōs**-us, a, um *fibrous, having plenty of fiber*; muc-**ōs**-us, a, um *mucous, having plenty of mucus.*
-idĕ-	likeness with something	pterygo-**idĕ**-us, a, um *pterygoid, like the wing*; lambdo-**idĕ**-us, a, um *lambdoid, like the Greek letter* **Λλ**; sigmo-**idĕ**-us, a, um *sigmoid, having the form of the Greek letter Σς*.
-āt-	supplied with something	ham-**āt**-us, a, um *supplied with hooks.*

Most **second group adjectives** are formed from appropriate nouns according to the following model:

[noun's stem + suffix **–āl** / **–ār**]:

frons, ntis f *(forehead)* – front-**āl**-is, e *(frontal);*
clavicŭla, ae f *(clavicle)* – clavicul-**ār**-is, e *(clavicular).*

§14. Compound adjectives

Compound adjectives are the adjectives consisting of two stems and used for denoting ligaments, vessels, nerves, canals etc. Such adjectives are formed by joining the root element of the first adjective to the stem of the second adjective with the help of the connective vowel **-o-**. The ending of the compound adjective is the same as the ending of the second adjective. In other words, we take the root element of the first adjective and add it to the full form of the second adjective: sphenoidālis *(sphenoid)* + frontālis *(frontal)* = sphen-o-frontālis, e *sphenofrontal*; sphenoidālis *(sphenoid)* + zygomatĭcus, a, um *(zygomatic)* = sphen-o-zygomatĭcus, a, um *sphenozygomatic*.

§15. Primary data about prefixes

Prefixes are used to denote the exact position of the anatomical structure. In anatomical terms prefixes of Latin origin are the most widely used.

Remember the meaning of the most widely used prefixes:

infra-, sub-	under, beneath	infraclaviculāris – infraclavicular *(situated under clavicle);*
inter-	between	intervertebrālis – intervertebral *(situated between vertebrae);*
intra-	inside	intravenōsus – intravenous *(lying inside the vein);*
pre- (prae-)	in front of	presacrālis – presacral *(situated in front of sacrum);*
semi-	half	semilunāris – semilunar *(looking like half of the moon);*
supra-	above	suprascapulāris – suprascapular *(situated above shoulder-blade).*

Lexical minimum № 4

	Prefixes
1) infra-, sub-	*under, beneath*
2) inter-	*between*
3) intra-	*inside*
4) pre- (prae-)	*in front of*
5) semi-	*half*
6) supra-	*above*

	Adjectives
7) carotĭcus, a, um	*carotic*
8) cribrōsus, a, um	*cribrate, sieve-shaped*
9) ethmoidālis, e	*ethmoid, sieve-shaped*
10) hyoideus, a, um	*hyoid (bone)*
11) hypoglossus,a,um	*hypoglossal (nerve)*
12) ischiadĭcus, a, um	ischiadic
13) jugulāris, e	jugular
14) mastoideus, a, um	*mastoidal, mammiform*
15) orbitālis, e	*orbital*
16) ossĕus, a, um	*bony*
17) parietālis, e	*parietal*
18) pterygoideus, a, um	pterygoid, wing-shaped
19) sacrālis, e	*sacral*
20) sphenoidālis, e	*sphenoidal, wedge-shaped*
21) spinōsus, a, um	*spinous*
22) squamōsus, a, um	*squamous, scaly*
23) sternalis, e	*sternal, related to the breast bone*
24) styloideus, a, um	*styloid, awl-shaped*
25) sublinguālis, e	*sublingual*
26) tympanĭcus, a, um	*tympanic*
27) zygomatĭcus, a, um	*zygomatic*

Training Exercises

In-class training

Ex. 1. Translate the following adjectives into English. Find the suffixes and nouns from which the adjectives are formed:

venōsus, nervōsus, arteriōsus, spinōsus, cribrōsus, squamōsus, cartilaginēus, gastrĭcus, hepatĭcus, pancreatĭcus, tympanĭcus, thoracĭcus, palatīnus, coccygēus, zygomatĭcus, pelvīnus, arcuātus**.**

(Nouns: arteria, ae f *artery*; vena, ae f *vein*; nervus, i m *nerve*; spina, ae f *spine*; cribrum, i n *sieve*; squama, ae f *scale*; cartilāgo, ĭnis f *cartilage*; gaster, tris f *stomach*; hepar, ătis n *liver*; pancreas, ătis n *pancreas*; tympănum, i n *tympanum;* thorax, ācis m *chest*; palātum, i n *palate*; coccyx, ygis m *coccyx*; zygōma, ătis n *cheek-bone*; pelvis, is f *pelvis*; arcus, us m *arch).*

Ex. 2. Translate the following adjectives; explain the meaning of the prefixes:

intercostālis, e; intervertebrālis, e; interarticulāris, e; infratemporālis, e; infraorbitālis, e; infrascapulāris, e; subarcuātus, a, um; subscapulāris, e; intraarticulāris, e; semicirculāris, e; supraorbitālis, e.

Ex. 3. Translate the following anatomical terms into Latin

a) noun+adjective:

thoracic artery; vertebral opening; lower costal pit; large palatine canal; transverse fissure; internal tubercle; lateral head.

b) noun+noun+adjective:

back arch of the atlas; costal depression of the process; external base of the skull; lateral head of the rib; horizontal plate of the bone; upper tubercle of the vertebra; lower angle of the shoulder-blade.

Home training

Ex. 4. Translate the following anatomical terms into Latin:

pterygoid process; jugular notch of the breast bone; back sieve-shaped opening; orbital surface of the wing; right cribrate plate; ethmoid groove of the bone; large palatine artery; middle depression of the skull; right frontal bone; back tubercle of the atlas; lower vertebral notch; upper orbital fissure; articular surface of the tubercle of the rib.

Ex. 5. Translate the following anatomical terms into English:

processus pterygoideus ossis; sutūra orbitālis inferior; fovea processus costālis; os ethmoidāle; forāmen palatīnum minus; facies alae frontālis; linea temporālis superior; lamina processus laterālis; crista occipitālis externa; facies articulāris capĭtis costae; sulcus palatīnus; processus spinōsus vertebrae; caput sterni; incisūra frontālis; facies articulāris superior.

LESSON 7

The main objectives of the lesson are:

1) to learn the grammar categories of nouns and adjectives referring to the first declension;

2) to learn the case endings of the first declension;

3) to be able to decline the word combination belonging to the first declension;

4) to train in translating Latin anatomical terms having the first declension nouns and adjectives from English into Latin and vice versa.

§16. First declension nouns and adjectives

First declension nouns are mostly of the **feminine** gender. They have the ending **-a** in Nominative Singular (the 1st element of the lexical form) and the ending **-ae** in Genitive Singular (the 2nd element of the lexical form).

Example: vertĕbra, ae f *vertebra*;
scapŭla, ae f *shoulder blade;*
squama, ae f *squama, scale.*

lexical form	*Nom. Sing.*	*Gen. Sing.*	*gender*
	-a	**-ae**	**f**
costa, ae f *(rib)*	cost-a	cost-ae	f
vena, ae f *(vein)*	ven-a	ven-ae	f

Exception: nouns of Greek origin ending in **–ma** are of the **neuter** gender and refer to the **III**-rd declension:

zygōma, ătis n *zygoma, cheek bone;*

glaucōma, ătis n *increase of intraocular pressure.*

First declension adjectives are the adjectives of the **first group** (-us/-er; -a; -um) if they agree with a noun of the **feminine** gender and get the ending **–a** in Nominative Singular:

lexical form	*gender*	
verus, a, um	f	ver-a
sinister, tra, trum	f	sinistr-a

First declension nouns and adjective have the same case endings. While declining nouns or adjectives we change case endings:

true rib		*costa*	*vera*
Nom. Sing.	**-a**	cost-**a**	ver-**a**
Gen. Sing.	**-ae**	cost-**ae**	ver-**ae**
Nom. Plur.	**-ae**	cost-**ae**	ver-**ae**
Gen. Plur.	**-ārum**	cost-**ārum**	ver-**ārum**

Decline the word combination *(noun+adjective)* means to change the endings of both words in Nom. Sing. – Gen. Sing. – Nom. Plur. – Gen. Plur. according to the identified declension.

Example: vena, ae **f** (palatinus, **a**, um)

vena ^{I} palatina ^{I}

Nom. Sing. – ven**a** palatin**a**

Gen Sing. – ven**ae** palatin**ae**

Nom. Plur. – ven**ae** palatin**ae**

Gen. Plur. – ven**ārum** palatin**ārum**

First declension nouns of Greek origin

The first Greek declension includes nouns of the feminine gender having the ending **-e** and nouns of the masculine gender having the ending **-es** in Nominative Singular.

For example: chole, es f *bile;* systŏle, es f *systole, rhythmical contraction of heart ventricles;* raphe, es f *suture, seam;* diabētes, ae m *diabetes*; ascītes, ae m *dropsy of abdominal cavity.*

	Sing.		Plur.	
Nom.	systŏl-e	ascīt-es	systŏl-ae	ascīt-ae
Gen.	systŏl-es	ascīt-ae	systol-ārum	ascīt-ārum

Translating the anatomical term into Latin you should follow this scheme:

1. Divide the term into Nominative part (before "of") and Genitive part (after "of"); define number (Singular or Plural);
2. Make the order:
   1 – Nominative noun;
   2 – Genitive noun;
   3 – adjective / adjectives;
3. Write the lexical forms of each word;
4. Write the grammar characteristics of each word:
   noun: declension;
   Nominative or Genitive;
   Singular or Plural.
   adjective: gender (=gender of the noun);
   declension;
   Nominative or Genitive;
   Singular or Plural.

*joining of the eyelids - comissūr**a** palpebr**ārum***

joining of the eyelids
Nom. Sing. Gen. Plur

1) the term has preposition "of", so *joining* is Nominative Singular and *eyelids* is Genitive Plural.

1 2
joining of the eyelids

2) making the order:
1 – Nominative noun (joining);
2 – Genitive noun (eyelids).

joining:
comissūra, ae f – noun; I; Nom. Sing.: comissūr**a**
eyelid:
palpebra, ae f – noun; I; Gen. Plur.: palpebr**ārum**

3) write the lexical forms of each noun;
noun: declension;
Nominative or Genitive;
Singular or Plural.

*palatine folds – plic**ae** palatīn**ae***

palatine folds
Nom. Plur.

1) the term has no preposition "of", so there is only Nominative part (Nom. Plur.).

2 1
palatine folds

2) make the order:
1 – Nominative noun (*folds*);
2 – adjective (*palatine*).

fold:
plica, ae f – noun; I; Nom. Plur.:
plic**ae**

palatine:
palatīnus, a, um – adj.; f; I; Nom. Plur.:
palatīn**ae**

3) write the lexical forms of each word:
noun: declension;
Nominative or Genitive;
Singular or Plural.

adjective: gender (=gender of the noun);
declension;
Nominative or Genitive;
Singular or Plural.

Lexical minimum №5

1) apertūra, ae f	*aperture*
2) bursa, ae f	*bag*
3) cavus, a, um	*hollow*
4) clavicŭla, ae f	*clavicle*
5) claviculāris, e	*clavicular*
6) commissūra, ae f	*joining, commissure*
7) columna, ae f	*column*
8) concha, ae f	*concha*
9) fascia, ae f	*fascia*
10) fibŭla, ae f	*splint-bone*
11) lingua, ae f	*tongue*
12) mandibŭla, ae f	*lower jaw*
13) mandibulāris, e	*mandibular, related to the lower jaw*
14) maxilla, ae f	*upper jaw*
15) maxillāris, e	*maxillary, related to the upper jaw*
16) mucōsa, ae f	*mucous membrane*
17) mucōsus, a, um	*mucous*
18) patella, ae f	*knee-pan*
19) plica, ae f	*fold*
20) palpĕbra, ae f	*eyelid*
21) profundus, a, um	*deep*
22) raphe, es f	*raphe*
23) tibia, ae f	*shin-bone*
24) tonsilla, ae f	*tonsil*
25) trachea, ae f	*trachea*
26) tunĭca, ae f	*covering, membrane*
27) ulna, ae f	*elbow bone*
28) verus, a, um	*true*
29) vesīca fellea, ae f	*gall bladder*

Training Exercises

In-class training

Ex. 1. Make up the word combinations. Underline the words of the 1st declension:

linea, ae f (posterior, ius); pars, partis f (petrōsus, a, um); vena, ae f (linguālis, e); facies, ēi f (externus, a, um); vertĕbra, ae f (cervicālis, e); manus, us f (dexter, tra, trum); auris, is f (internus, a, um); tunĭca, ae f (musculāris, e); articulatio, ōnis f (planus, a, um); arteria, ae f (inferior, ius); regio, ōnis f (zygomatĭcus, a, um)

Ex. 2. Make up the word combinations and decline them:

arteria, ae f (dexter, tra, trum); crista, ae f (palatīnus, a, um); incisūra, ae f (profundus, a, um); linea, ae f (transversus, a, um)

Ex. 3. Translate the terms into English:

vertĕbra thoracĭca; corpus vertebrae thoracĭcae; incisura scapŭlae profunda; lineae transversae; linea costārum inferior; clavicŭla dextra; processus styloideus ulnae; apertūra thorācis superior; fissūra palpebrārum.

Ex. 4. Translate the terms into Latin writing the lexical form of each word:

internal thoracic veins; fold of left hollow vein; neck of the gall-bladder; deep vein of the tongue; spinous process of the thoracic vertebra; head of the upper jaw; mucous membrane of the tongue.

Home training

Ex. 5. Make up the word combinations and decline them:

lamĭna, ae f (cribrōsus, a, um); tunĭca, ae f (mucōsus, a, um); fossa, ae f (sinister, tra, trum); fissūra, ae f (transversus, a, um)

Ex. 6. Translate the terms into English:

vena cava superior; corpus fibŭlae; lamĭna mucōsae; costae verae; comissūra palpebrārum; sulcus mediānus linguae; concha sphenoidālis; sinus venārum cavārum; lamĭna cribrōsa dextra; bursa mucōsa ischiadĭca; arteria claviculāris; vertebrae coccygēae.

Ex. 7. Translate the terms into Latin writing the lexical form of each word:

folds of the mucous membrane of the gall bladder; body of the upper jaw; folds of eyelids; articular surface of the head of the splint-bone; shallow depression of the gall-bladder; spinous process of the thocacic vertebra; fold of the left hollow vein; column of the vertebrae (plur.).

LESSON 8

The main objectives of the lesson are:

1) to learn the grammar categories of nouns and adjectives referring to the second declension;

2) to learn the case endings of the second declension;

3) to be able to decline the word combination belonging to the second declension;

4) to train in translating Latin anatomical terms having the second declension nouns and adjectives from English into Latin and vice versa.

§17. Second declension nouns and adjectives

Second declension nouns are the nouns of the **masculine** and **neuter** gender. They have endings **-us** for masculine gender and **-um** / **-on** for neuter gender in Nominative Singular and ending **-i** in Genitive Singular:

Lexical form	*Nom. Sing.*	*Gen. Sing.*	*gender*
	- us **- um / -on**	**- i**	***m*** ***n***
nervus, i m *(nerve)*	nerv-us	nerv-i	m
collum, i n *(neck)*	coll-um	coll-i	n
ganglion, ii n *(nerve node)*	gangli-on	gangli-i	n

Second declension adjectives are the adjectives of the **first group** (-us/-er; -a; -um) if they agree with nouns of the **masculine** gender getting endings **-us** or **-er** or nouns of the **neuter** gender getting the ending **–um** in Nominative Singular:

lexical form	*Gender*	*Nom. Sing.*
longus, a, um	m n	long-us long-um
dexter, tra, trum	m n	dext-er dextr-um

Example:

processus, us **m** (mastoide**us**, a, um) – processus (IV) mastoideus (II);

pulmo, ōnis **m** (dext**er**, tra, trum) – pulmo (III) dexter (II);

cornu, us **n** (coccygēus, a, **um**) – cornu (IV) coccygēum (II).

Second declension nouns and adjective have the following case endings:

	m	*n*
Nom. Sing.	**-us; -er**	**-um; -on**
Gen. Sing.	**-i**	**-i**
Nom. Plur.	**-i**	**-a**
Gen. Plur.	**-ōrum**	**-ōrum**

	right eye: *oculus, i m (dexter, tra, trum)*	*wide septum:* *septum, i n (latus, a, um)*
Nom. Sing.	*ocul-**us** dext-**er***	*sept-**um** lat-**um***
Gen. Sing.	*ocul-**i** dextr-**i***	*sept-**i** lat-**i***
Nom. Plur.	*ocul-**i** dextr-**i***	*sept-**a** lat-**a***
Gen. Plur.	*ocul-**ōrum** dextr-**ōrum***	*sept-**ōrum** lat-**ōrum***

Nota bene! Neuter nouns and adjectives in **Nom. Plur.** have the ending **-a**.

Exception:

In medical terminology the word *virus, i n microbial poison* refers to neuter gender.

Nouns ending in **-us** denoting names of **trees** are always of the feminine gender: Pinus, i f *pine;* Eucalyptus, i f *eucalyptus*.

Lexical minimum №6

1) acromion, ii n	*acromion, lateral end of the shoulder blade crest*
2) atrium, i n	*atrium (heart chamber)*
3) brachium, i n	*shoulder*
4) cavum, i n	*cavity*
5) cerĕbrum, i n	*brain*
6) digĭtus, i m	*finger*
7) encephălon, i n	*large brain*
8) humĕrus, i m	*upper arm*
9) latus, a, um	*wide, broad*
10) ligamentum, i n	*ligament*
11) lobus, i m	*lobe*
12) longus, a ,um	*long*
13) muscŭlus, i m	*muscle*
14) nervus, i m	*nerve*
15) nodus, i m	*node*
16) ocŭlus, i m	*eye*
17) ramus, i m	*branch*
18) rectus, a, um	*straight*
19) septum, i n	*dividing wall, septum*
20) ventricŭlus, i m	*ventricle (heart chamber)*

Training Exercises

In-class training

Ex. 1. Choose the correct Nominative ending for the adjective and underline the words of the IInd declension:

processus palatin(-us, -a, -um); tubercŭlum poster(-ior, -ius); ligamentum venōs(-us, -a, -um); sulcus temporāl(-is, -e) super(-ior, -ius); ramus transvers(-

us, -a, -um); foramen magn(-us, -a, -um); nervus ophthalmĭc(-us, -a, -um) profund(-us, -a, -um); facies intern(-us, -a, -um).

Ex. 2. Translate into Latin minding the agreement of nouns and adjectives:

transverse (groove, ligament, artery); wide (fascia, ligament, muscle); left (eye, atrium, small pit); external (membrane, groove); deep (vein, small pit, nerve); long (muscle, artery, neck); right (shoulder, ventricle, shoulder blade); carotic (tubercle, groove, artery); bony (substance, dividing wall).

Ex. 3. Translate the following terms into Latin. Define the declension of each word and decline the word combination:

transverse groove; deep artery; wide ligament; left lobe; thoracic vertebra; long neck.

Ex. 4. Translate the terms into Latin:

transverse nerve; articular surface of the acromion; angle of the left eye; transverse ligament of the first cervical vertebra; grooves of nerves; muscles of the tongue; posterior branch; small tubercle of the upper arm.

Ex. 5. Translate the terms into English:

atrium dextrum; crista tubercŭli; ligamenta digitōrum; angŭlus sterni; sulcus nervi; angŭlus scapŭlae laterālis; lobus dexter et sinister; septum atriōrum; caput humeri; nervi transversi.

Home training

Ex. 6. Combine the noun with the adjective and decline the word combination:

atrium, i n (sinister, tra, trum); tunica, ae f (mucosus, a, um); musculus, i m (longus, a, um); ligamentum, i n (latus, a, um).

Ex. 7. Translate the terms into Latin:

lower angle of the shoulder blade; deep branch of the transverse artery of the neck; ligaments of the skull; grooves of the large brain; dividing wall of the ventricles; branches of the internal thoracic artery; grooves of nerves; body of the breastbone; wide ligaments; posterior branch of the left ventricle; palatine process of the upper jaw; transverse muscle of the tongue; branch of the thoracic nerve.

Ex. 8. Translate the terms into English:

fovea costālis processus transversi; muscŭli dorsi recti; ligamenta cranii; ventricŭlus dexter; muscŭli thorācis; ligamentum sternoclaviculāre posterius; muscŭli colli; ligamentum capĭtis fibŭlae posterius; muscŭlus longus capĭtis; rami zygomatĭci; ramus lobi medii.

LESSON 9

The main objectives of the lesson are:

1) to revise the first and the second declension of nouns and adjectives;

2) to train in translating anatomical terms from Latin into English, and vice versa.

§18. I–II declension of nouns and adjectives: Revision

Nouns:

Lexical form	**-a, ae f**	**-us, i m**	**-um /-on, i n**
Declension	*Ist decl.*	*IInd decl.*	*IInd decl.*
Nom. Sing.	-a	-us	-um/-on
Gen. Sing.	-ae	-i	-i
Nom. Plur.	-ae	-i	-a
Gen. Plur.	-ārum	-ōrum	-ōrum

Adjectives:

Lexical form	-us, -a, -um / -er, -tra, -trum		
Nom. Sing.	**m** **-us / -er**	**f** **-a / -tra**	**n** **-um / -trum**
Declension	IInd decl.	Ist decl.	IInd decl.
Nom. Sing.	-us / -er	-a / -tra	-um/-trum
Gen. Sing.	-i / -tri	-ae / -trae	-i / -tri
Nom. Plur.	-i / -tri	-ae / -trae	-a / -tra
Gen. Plur.	-ōrum / -trōrum	-ārum / -trārum	-ōrum / -trōrum

Lexical minimum №7

1) acetabŭlum, i n — *cotyloid cavity, acetabulum*
2) antebrachium, i n — *forearm*
3) bronchus, i m — *bronchus*
4) bulbus, i m — *bulb*
5) bulbus ocŭli, bulbi ocŭli — *eyeball (bulb of the eye)*
6) carpus, i m — *wrist*
7) coronarius, a, um — *coronary*
8) dorsum, i n — *back*
9) labium, ii n — *lip*
10) membrum, i n — *limb, extremity*
11) nasus, i m — *nose*
12) nasālis, e — *nasal, related to the nose*
13) nucleus, i m — *nucleus*

14) oesophăgus, i m	*gullet, esophagus*
15) ophthalmĭcus, a, um	*ophthalmic, related to the eye*
16) optĭcus,a,um	*optic, visual*
17) palātum, i n	*palate*
18) radius, i m	*forearm bone, radius*
19) radiālis, e	*radial, related to the forearm bone*
20) utĕrus, i m	*womb, uterus*

Training Exercises

In-class training

Ex. 1. Make the combinations and decline only the words you're aware of:

Pattern: pars, partis f (squamōsus, a, um)

	pars III	squamōsa I
N.S.	pars	squamōsa
G.S.	partis	squamōsae
N.P.	???	squamōsae
G.P.	???	squamosārum

1) membrum, i n (inferior, ius); 2) facies, ēi f (internus, a, um); 3) arteria, ae f (coronarius, a, um); 4) margo, ĭnis m (dexter, tra, trum); 5) fossa, ae f (nasālis, e); 6) nervus, i m (optĭcus, a, um).

Ex. 2. Translate into English:

1) musculi bulbi oculi;
2) septum ventriculōrum;
3) tubercŭlum huměri minus;
4) ligamenta pterygoidea;
5) facies articulāris tubercŭli costae;
6) sulcus nervi petrōsi;
7) angŭlus scapŭlae inferior;
8) ramus posterior sulci laterālis;
9) fovea costālis processus transversi;
10) ligamentum atlantis latum.

Ex. 3. Translate into Latin writing the lexical form of each word:

1) bony dividing wall of the nose;
2) wide ligaments;
3) bags of the muscles;
4) deep veins of the shoulder;
5) lobes of the large brain;
6) inferior muscle of the tongue;
7) straight muscles of the back;
8) nerves of the eyes and the nose;
9) palatine process of the upper jaw;
10) deep branch of the transverse artery of the neck.

Home training

Ex. 4. Make the word combinations and decline them:

membrum, i n (sinister, tra, trum); bronchus, i m (dexter, tra, trum); concha, ae f (medius, a, um); septum, i n (ossĕus, a, um); nervus, i m (optĭcus, a, um); bursa, ae f (mucōsus, a, um).

Ex. 5. Translate into Latin writing the lexical form of each word:

transverse ligament of the wrist; angle of the lips; bony dividing wall of the nose; wide ligaments of the womb; deep muscles of the fingers; left bronchus; back of the tongue; upper nasal concha; shallow depression of the acetabulum; neck of the forearm bone; muscles of the eye ball; lateral branch of the forearm; ophthalmic nerves; coronary arteries.

Ex. 6. Translate into English:

nervus ophthalmĭcus profundus; septum nasi; muscŭli dorsi recti; nervi optĭci; muscŭli membri; septum nasāle; membrum superius; muscŭli thorācis; ramus nervi externus; muscŭli labiōrum; caput longum muscŭli brachii; tunĭca oesophăgi; crista nasālis anterior; muscŭlus dorsi latus.

LESSON 10

The main objectives of the lesson are:

1) to learn the grammar categories of the third declension nouns;

2) to be able to determine the practical stem and the type of declension;

3) to learn the case endings of the third declension;

4) to train in translating Latin anatomical terms having the third declension from English into Latin and vice versa.

§19. Third declension nouns

Third declension nouns have some specific features effecting their declining:

1. The third declension includes nouns of all **three genders**: masculine (m), feminine (f) and neuter (n). There are many different endings in Nominative Singular (more than 30). But all of them have the **common Genitive Singular ending -is**:

margo, ĭn**is** m *(border)*; pars, part**is** f *(part)*; tuber, ĕr**is** n *(tuber).*

Gender	*Nominative Singular*	*Genitive Singular*
m, f, n	various endings	-is

2. Third-declension nouns may have **three variants of their lexical form** according to the Genitive Singular form:

1. The second element of the lexical form (the ending of Genitive Singular) contains only the ending –is. These nouns have the same Nominative and Genitive stem. They have equal number of syllables in Nominative Singular and Genitive Singular. So they are known as equal nouns:

*cutis, **is** f (cu-tis – cu-tis); canalis, **is** m (ca-na-lis – ca-na-lis).*

2. The second element of the lexical form contains extra letters of the Genitive form and the ending –is. These nouns have one more syllable in Genitive Singular than in Nominative Singular and are known as unequal nouns:

*radix, **īcis** f (ra-dix – ra-dī-cis); forāmen, **ĭnis** n (fo-rā-men – fo-ra-mĭ-nis).*

3. The second element of the lexical form of monosyllabic nouns (nouns having one syllable) is presented by the full form of Genitive Singular. These nouns refer to unequal nouns as well:

*os, **ossis** n; pars, **partis** f.*

3. Third declension nouns having extra letters or the full form of Genitive Singular in their lexical form are marked by the changing of the Genitive stem which doesn't coincide with the Nominative stem. The Genitive stem is called the *practical stem*. It is used for making other case forms (for example plural forms):

margo, ĭnis m: margo – margĭnis.
Nom. stem Gen. stem

	pulmo, ōnis m	*radix, īcis f*	*forāmen, ĭnis n*
Nom. Sing.	pulmo	radix	foramen
Gen. Sing.	pulmōn-is	radīc-is	foramĭn-is
Nom. Plur.	pulmōn-es	radīc-es	foramĭn-a
Gen. Plur.	pulmōn-um	radīc-um	foramĭn-um

4. The third-declension nouns are divided into three types according to their practical stem: *consonant, vowel and mixed.* Each noun belongs to some type and is declined according to the corresponding pattern.

1) the **consonant type** includes unequal nouns of the masculine, feminine and neuter gender and their practical stem ends in one consonant:

corpus, corpŏr-is n *body*; forāmen, foramĭn-is n *opening*; crus, crur-is n *leg*; homo, homĭn-is m *man*; pes, ped-is m *foot*; regio, regiōn-is f *region.*

2) the **vowel type** includes nouns mainly of the neuter gender having endings **-e, -al, -ar** in Nominative Singular:

rete, is n *net*; anĭmal, ālis n *animal*; calcar, āris n *calcar, spur*.

3**)** the **mixed type** includes:

a) equal nouns having endings **-is, -es** in Nominative Singular: auris, is f *ear;* tabes, is f *tabes*;

b) unequal nouns with the practical stem ending in two or more consonants: dens, dent-is m *tooth*; pars, part-is f *part*; cor, cord-is n *heart*.

How to determine the type of the third-declension nouns:

1. First see the Nominative form:

-If it ends in -e; -al; -ar, the noun is of the vowel type (ret**e**, is n);

-If it ends in -is / -es and the number of syllables in Nom. Sing. and Gen. Sing. is equal, the noun is of the mixed type (cut**is**, is f).

	consonant type	*vowel type*	*mixed type*
gender	m, f, n	n	m, f, n
ending of Nom. Sing.		-e, -al, -ar	-es, -is (for nouns with equal number of syllables in Nom. Sing. and Gen. Sing.)
examples		ret**e**, is n calc**ar**, is n anĭm**al**, is n	canāl**is**, canālis m compāg**es**, is f

2. If the noun doesn't fit any of these types, make Genitive form and find the Genitive stem (practical stem):

-If the stem ends in one consonant, the noun is of the consonant type (corpus - corpŏ**r**is n);

-If the stem ends in two consonants, the noun is of the mixed type (os, o**ss**is n).

	consonant type	*vowel type*	*mixed type*
gender	m, f, n	n	m, f, n
stem of Gen. Sing.	ends in one consonant		ends in two consonants
examples	pulmo, pulmō**n**-is m radix, radī**c**-is f pectus, pectŏ**r**-is n		dens, de**nt**-is m os, o**ss**-is n pars, pa**rt**-is f

According to three types of declension there are three patterns of declining:

Consonant type

		regio, ōnis f	*forāmen, ĭnis n*
Nom. Sing.	**different**	*regio*	*foramen*
Gen. Sing.	**-is**	*regiōn-is*	*foramĭn-is*
Nom. Plur.	**-es** $^{m\,f}$ | **-a** ^{n}	*regiōn-es*	*foramĭn-a*
Gen. Plur.	**-um**	*regiōn-um*	*foramĭn-um*

Vowel Type

		rete, is n
Nom. Sing.	**-e; -al; -ar**	*ret-e*
Gen. Sing.	**-is**	*ret-is*
Nom. Plur.	**-ia**	*ret-ia*
Gen. Plur.	**-ium**	*ret-ium*

Mixed Type

		pars, partis f	*os, ossis n*
Nom. Sing.	**different**	*pars*	*os*
Gen. Sing.	**-is**	*part-is*	*oss-is*
Nom. Plur.	**-es** $^{m\,f}$ | **-a** ^{n}	*part-es*	*oss-a*
Gen. Plur.	**-ium**	*part-ium*	*oss-ium*

Nota Bene! In the plural the noun ***vas, vasis n (vessel)*** is declined acording to the second declension:

	vas, vasis n		
Nom. Sing.	*vas*	*Nom. Plur.*	*vas-a*
Gen. Sing.	*vas-is*	*Gen. Plur.*	*vas-ōrum*

Lexical minimum №8

Lexical form	***Nom.sing.***	***Gen.sing.***	***Translation***
1) abdōmen, ĭnis n	*abdōmen*	*abdomĭnis*	*abdomen*
2) accessorius, a, um			*accessory*
3) apex, ĭcis m	*apex*	*apĭcis*	*top*
4) articulatio, ōnis f	*articulatio*	*articulatiōnis*	*joint*
5) auris, is f	*auris*	*auris*	*ear*
6) coccyx, ýgis m	*coccyx*	*coccýgis*	*coccygeal bone*
7) dens, dentis m	*dens*	*dentis*	*tooth*
8) fibrosus, a, um			*fibrous*
9) hallux, ūcis m	*hallux*	*hallūcis*	*great toe*
10) index, ĭcis m	*index*	*indĭcis*	*forefinger, index*
11) lymphatĭcus, a, um			*lymphatic*
12) margo, ĭnis m	*margo*	*margĭnis*	*border*
13) nutricius, a, um			*nutricious*
14) os, oris n	*os*	*oris*	*mouth*
15) pars, partis f	*pars*	*partis*	*part*
16) pes, pedis m	*pes*	*pedis*	*foot*
17) phalanx, ngis f	*phalanx*	*phalangis*	*phalanx*
18) planus, a, um			*flat*
19) pollex, ĭcis m	*pollex*	*pollĭcis*	*thumb*
20) pulmo, ōnis m	*pulmo*	*pulmōnis*	*lung*
21) pyrămis, ĭdis f	*pyrămis*	*pyramĭdis*	*pyramid*
22) regio, ōnis f	*regio*	*regiōnis*	*region*
23) tendo, ĭnis m	*tendo*	*tendĭnis*	*tendon*
24) tuber, ĕris n	*tuber*	*tuběris*	*tuber*
25) tuberosĭtas, ātis f	*tuberosĭtas*	*tuberositātis*	*tuberosity*
26) vagīna, ae f	*vagīna*	*vagīnae*	*vagina*
27) vas, vasis n	*vas*	*vasis*	*vessel*

Training Exercises

In-class training

Ex. 1. Write the full form of Genitive Singular; determine the practical stem and type of declension of the following nouns:

abdōmen, ĭnis n; atlas, ntis m; auris, is f; caput, ĭtis n; cervix, īcis f; rete, is n; cartilāgo, ĭnis f; dens, dentis m; crus, cruris n; canālis, is m; extremĭtas, ātis f; gaster, tris f; hallux, ūcis m; iris, irĭdis f; calcar, āris n.

Ex. 2. Decline the following nouns:

caput, ĭtis n; dens, dentis m; pulmo, ōnis m; canālis, is m; os, ossis n.

Ex. 3. Agree the adjective with the noun, determine the declension of each word and decline the word combination:

articulatio, ōnis f (planus, a, um); margo, ĭnis m (mastoideus, a, um); forāmen, ĭnis n (nutricius, a, um); regio, ōnis f (zygomatĭcus, a, um); pulmo, ōnis m (dexter, tra, trum); auris, is f (medius a, um); pars, partis f (petrōsus, a, um).

Ex. 4. Translate the following terms into English:

apex partis petrōsae; articulatiōnes cranii; caput phalangis; foramĭna nutricia; ligamentum transversum atlantis; nervi vasōrum; os coccýgis; vasa lymphatĭca; vasa nervōrum; tuber ischiadĭcum; phalanges digitōrum.

Ex. 5. Translate the terms into Latin giving lexical forms of all the words:

regions of the body; tuber of the upper jaw; nerve of the pterygoid canal; joint of the head of the rib; sutures of the bones; body of the tongue; vessels of the internal ear; tuberosity of the distal phalanx; flat bone.

Home training

Ex. 6. Write the full form of Genitive Singular; determine the practical stem and type of declension of the following nouns:

diaphragma, ătis n; cutis, is f; forāmen, ĭnis n; fornix, ĭcis m; os, ossis n; hepar, ătis n; humor, ōris m; index, ĭcis m; lens, lentis f; larynx, ngis m; occĭput, ĭtis n; pelvis, is f; pancreas, ătis n; pes, pedis m; pars, partis f.

Ex. 7. Decline the following nouns:

articulatio, ōnis f; pars, partis f; tuber, ĕris n; forāmen, ĭnis n; tendo, ĭnis m; vas, vasis n.

Ex. 8. Agree the adjectives with the nouns, determine the declension of each word and decline the word combinations:

os, ossis n (planus, a, um); auris, is f (medius, a, um); canālis, is m (optĭcus, a, um); vas, vasis n (lymphatĭcus, a, um); pars, partis f (petrōsus, a, um); dens, dentis m (incisīvus, a, um); os, ossis n (zygomatĭcus, a, um).

Ex. 9. Translate the following terms into English:

regiōnes et partes corpŏris; vasa vasōrum; phalanx distālis (proximālis) indĭcis; processus styloideus ulnae; corpus phalangis; caput phalangis; basis cranii externa; os zygomatĭcum; angŭlus oris; apex pulmōnis; articulatio capĭtis costae; muscŭlus longus capĭtis.

Ex. 10. Translate the terms into Latin giving lexical forms of all the words:

base of the lung; left lung; regions of the abdomen; vessels of vessels; bones of the skull; apex of the head of the fibula; bones of the skull; phalanges of the fingers of the foot; ligament of the top of the tooth; straight muscle of the head; fibrous vagina of tendons; transverse muscles of the chest and abdomen; right border of the womb; upper lobe of the left lung.

LESSON 11

The main objectives of the lesson are:

1) to learn the Nominative Singular endings of the third declension nouns;

2) to be able to decline the word combinations having the first, second and third declension nouns;

3) to train in translating Latin anatomical terms from English into Latin and vice versa.

§20. Nominative Singular endings of the third declension nouns

Third declension nouns of the masculine gender

Nom. Sing.	*Gen. Sing.*	*Examples*	*Exceptions*
-os	-ōris	flos, flōris m *flower*	os, ossis n *bone;* os, oris n *mouth*
-or	-ōris	tumor, tumōris m *tumor*	cor, cordis n *heart;* arbor, ŏris f *tree*
-o	-ōnis	pulmo, ōnis m *lung*	nouns ending in -go, -do, -io are of the feminine gender
	-ĭnis	homo, ĭnis m *man*	
-er	-ēris	urēter, ēris m *ureter*	gaster, tris f *stomach;* mater, tris f *membrane of the brain or spinal cord;* tuber, ĕris n *tuber*
	-ris	venter, ventris m *belly*	
-ex	-ĭcis	apex, apĭcis m *apex, top*	-
-es	-ĕdis	pes, pedis m *foot*	equal nouns ending in -es are of the feminine gender
	-ĕtis	paries, ĕtis m *wall*	

The following nouns are also of the masculine gender: canālis, is m *canal;* dens, dentis m *tooth;* fornix, ĭcis m *vault;* hallux, ūcis m *great toe;* larynx, ngis m *larynx;* margo, ĭnis m *border;* tendo, ĭnis m *tendon;* pharynx, ngis m *pharynx;* unguis, is m *nail.*

Third declension nouns of the feminine gender

Nom. Sing.	*Gen. Sing.*	*Examples*	*Exceptions*
-as	-ātis	cavĭtas, ātis f *cavity*	vas, vasis n *vessel;* pancreas, ătis n *pancreas*
-us	-ūtis	salus, ūtis f *health*	-
	-ūdis	incus, ūdis f *incus, anvil*	
-es (equal)	-is	tabes, is f *tabes (tuberculosis)*	
-is (equal)	-is	auris, is f *ear*	axis, is m *axis, 2nd cervical vertebra;* canālis, is m *canal;* unguis, is m *nail*
-is (unequal)	-ĭdis	iris, ĭdis f *iris of the eye*	
-ns	-ntis	lens, lentis f *crystalline lens*	dens, dentis m *tooth*
-rs	-rtis	pars, partis f *part*	-
-ax	-ācis	pax, pacis f *peace*	thorax, ācis m *chest*
-ux	-ūcis	nux, nucis f *nut*	hallux, ūcis m *great toe*
- ix	-īcis	radix, īcis f *root*	fornix, ĭcis m *vault, fornix*
-nx	-ngis	phalanx, ngis f *phalanx*	larynx, ngis m *larynx;* pharynx, ngis m *pharynx*
-lx	-lcis	calx, calcis f *heel*	-
-do	-dĭnis	hirūdo, ĭnis f *leech*	tendo, ĭnis m *tendon*
-go	-gĭnis	cartilāgo, ĭnis f *cartilage*	margo, ĭnis m *border*
-io	-iōnis	articulatio, ōnis f *joint*	-

The following nouns are also of the feminine gender: arbor, ŏris f *tree;* gaster, tris f *stomach;* mater, tris f *membrane of the brain or spinal cord.*

Third declension nouns of the neuter gender

Nom. Sing.	*Gen. Sing.*	*Examples*	*Exceptions*
-en	-ĭnis	tegmen, ĭnis n *roof*	ren, renis m *kidney;* lien, ēnis m (or Greek splen, splēnis m) *spleen;* lichen, ēnis m *lichen, herpes*
-us	-ŏris	corpus, ŏris n *body*	-
	-ĕris	glomus, ĕris n *glome*	
	-ŭris	crus, cruris n *leg*	
-ur	-ŏris	femur, ŏris n *femur, thigh bone*	-
	-ŭris	guttur, ŭris n *throat*	
-ut	-ĭtis	caput, ĭtis n *head*	-
-ma	-ătis	chiasma, ătis n *chiasm*	-
-e	-is	rete, is n *net, network*	-
-ar	-āris	calcar, āris n *calcar, spur*	hepar, ătis n *liver* (r→t)
-(a)l	-(a)lis	animal, alis n *animal*	-
		fel, felis n *bile*	-

The following nouns are also of the neuter gender: cor, cordis n *heart;* os, oris n *mouth;* os, ossis n *bone;* pancreas, ătis n *pancreas;* tuber, ĕris n *tuber;* vas, vasis n *vessel.*

Lexical minimum №9

Lexical form	*Nom.sing.*	*Gen.sing.*	*Translation*
1) cartilāgo, ĭnis f	*cartilāgo*	*cartilagĭnis*	cartilage
2) cervix, īcis f	*cervix*	*cervīcis*	neck
3) cor, cordis n	*cor*	*cordis*	heart
4) crus, cruris n	*crus*	*cruris*	leg, shin
5) cutis, is f	*cutis*	*cutis*	skin
6) femur, ŏris n	*femur*	*femŏris*	thigh bone
7) frons, frontis f	*frons*	*frontis*	forehead
8) gaster, tris f	*gaster*	*gastris*	stomach
9) gastrĭcus, a, um			gastric, related to the stomach
10) hepar, ătis n	*hepar*	*hepătis*	liver
11) hepatĭcus, a, um			hepatic, related to the liver
12) impressio, ōnis f	*impressio*	*impressiōnis*	impression
13) larynx, ngis m	*larynx*	*laryngis*	larynx
14) laryngēus, a, um			laryngeal, related to the larynx
15) lien, liēnis m	*lien*	*liēnis*	spleen
16) occĭput, ĭtis n	*occĭput*	*occipĭtis*	occiput, back of the head
17) pancreas, ătis n	*pancreas*	*pancreătis*	pancreas
18) paries, ĕtis m	*paries*	*pariĕtis*	wall
19) pharynx, ngis m	*pharynx*	*pharyngis*	pharynx
20) pharyngēus, a, um			pharyngeal, related to the pharynx
21) ren, renis m	*ren*	*renis*	kidney
22) renālis, e			renal, related to the kidney
23) rete, is n	*rete*	*retis*	network
24) sanguis, ĭnis m	*sanguis*	*sanguĭnis*	blood
25) sanguineus, a, um			bloody, sanguineous
26) splen, splenis m	*splen*	*splenis*	spleen (Greek)
27) vomer, ĕris m	*vomer*	*voměris*	vomer

Training Exercises

In-class training

Ex. 1. Agree the following adjectives with the nouns and translate the terms into English:

pulmo (dexter, tra, trum); canālis (optĭcus, a, um); tuber (ischiadĭcus, a, um); crus (longus, a, um); forāmen (occipitālis, e); impressio (hepatĭcus, a, um); rete (sanguineus, a, um); os (ethmoidālis, e); caput (mediālis, e); vas (venōsus, a, um); pancreas (accessorius, a, um); paries (externus, a, um); pars (petrōsus, a, um); mater (durus, a, um).

Ex. 2. Translate the terms and decline them:

right leg; lymphatic vessel; external wall; squamous part; left ventricle; deep artery.

Ex. 3. Translate the following terms into English:

crus longum; tuberosĭtas pterygoidea; impressio hepatĭca pulmōnis; collum ossis femŏris; canālis cervīcis utĕri; arteria femŏris profunda; cervix dentis; incisūra apĭcis cordis; crura osseă; margo linguae; pars laryngēa pharyngis.

Ex. 4. Translate the following terms into Latin:

cartilage of the ear; deep lymphatic vessels; fossa of the head of the thigh bone; top of the heart; wing of the vomer; impression of the left lung; tuberosity of the shin-bone; deep artery of the thigh bone; ligaments of the liver; bony legs.

Home training

Ex. 5. Make up the word combinations and decline them:

vas (sanguineus, a, um); impressio (hepatĭcus, a, um); ren (dexter, tra, trum); regio (zygomatĭcus, a, um); crus (osseŭs, a, um).

Ex. 6. Translate the terms into Latin writing the lexical form of each word:

renal impression of the liver; head of the pancreas; mucous covering of the mouth; neck of the left thigh; zygomatic regions; cartilage of the dividing wall of the nose; crests of the skin; left lymphatic gastric nodes; bloody vessels; right ventricle of the heart; bloody network;

Ex. 7. Translate the terms into English:

cartilāgo septi nasi; margĭnes interni; ligamenta hepătis; paries gastris posterior; lobi pulmōnum; cartilagĭnes accessoriae; muscŭlus rectus femŏris; venae cordis; nervi vasōrum lymphaticōrum; tuberosĭtas ulnae; impressio gastrĭca; ligamentum hepatogastrĭcum; lobus hepătis dexter; margo utĕri dexter; muscŭli laryngis; nervus canalis ptrerygoidei.

LESSON 12

The main objectives of the lesson are:

1) to learn the grammar categories of the adjectives referring to the third declension;

2) to learn the case endings of the third declension adjectives;

3) to be able to decline the word combination having the third declension adjectives;

4) to train in translating Latin anatomical terms having the third declension adjectives from English into Latin and vice versa.

§21. Third declension adjectives

Third declension adjectives are divided into three groups according to their endings in Nominative Singular (the primary form):

(1) Adjectives of **three endings** have individual endings for each gender:

(**m**) **–er;** (**f**) **–is;** (**n**) **–e** (*cel**er**, ěr**is**, ěr**e** swift*).

There are no such adjectives in anatomical terminology.

(2) Adjectives of **two endings** (the most numerous group) have the same ending **-is** for **masculine** and **feminine** genders and the ending **-e** for **neuter** gender:

(**m / f**) **–is;** (**n**) **–e** (*frontāl**is**, **e** frontāl*).

(3) Adjectives of one ending have **common form for all three genders**. Their lexical form represents the ending of Nominative Singular and the ending of Genitive Singular (in the same way as nouns but without the gender):

***teres, ětis**: teres (Nom. Sing. m; f; n) – terětis (Gen. Sing.)*

	m	f	n	lexical form	
Adjectives of two endings	-is		-e	brevis, e *short* costālis, e *costal*	
Adjectives of one ending	-x, -s, -r			Nom. Sing.	Gen. Sing.
				simplex, teres, biceps, ascendens,	ĭcis (simplĭcis) *simple* ětis (terětis) *round* cipĭtis (bicipĭtis) *two-headed* ntis (ascendentis) *ascending*

Third declension adjectives of two endings

	m f	*n*	*frontalis, e*	
			m f	*n*
Nom. Sing.	-is	-e	*costāl-**is***	*costāl-**e***
Gen. Sing.	-is		*costāl-**is***	
Nom. Plur.	-es	-ia	*costāl-**es***	*costāl-**ia***
Gen. Plur.	-ium		*costāl-**ium***	

Third-declension adjectives of one ending

	m f	*n*	*teres, ětis*	
			m f	*n*
Nom. Sing.	-s; -x, -r		*teres*	*teres*
Gen. Sing.	-is		*terět-**is***	
Nom. Plur.	-es	-ia	*terět-**es***	*terět-**ia***
Gen. Plur.	-ium		*terět-**ium***	

Lexical minimum №10

1) abdominālis, e	*abdominal*
2) ascendens, ntis	*ascending, going upward*
3) auriculāris, e	*auricular, related to the ear*
4) biceps, cipĭtis	*two-headed*
5) brevis, e	*short*
6) cardiăcus, a, um	*hearty, cardiac*
7) cerebrālis, e	*cerebral, related to the brain*
8) cervicālis, e	*cervical, related to the neck*
9) communicans, ntis	*communicative*
10) commūnis, e	*common*
11) craniālis, e	*cranial, related to the skull*
12) descendens, ntis	*descending, going downward*
13) faciālis, e	*facial, related to the face*
14) linguālis, e	*lingual, related to the tongue*
15) lumbālis, e	*lumbar, related to the loin*
16) mentālis, e	*mental, related to the chin*
17) musculāris, e	*muscular*
18) nasālis, e	*nasal, related to the nose*
19) pulmonālis, e	*pulmonary, related to the lung*
20) quadrĭceps, cipĭtis	*four-headed*
21) radiālis, e	*radial, related to the forearm bone*
22) simplex, ĭcis	*simple*
23) superficiālis, e	*superficial*
24) teres, ĕtis	*round*
25) triceps, cipĭtis	*three-headed*

Training Exercises

In-class training

Ex. 1. Make the adjectives of two endings from the following nouns (using the Genitive stem and the suffixes -āl-, -ār-). Translate them into English:

dens, dentis m *(tooth)*; frons, frontis f *(forehead)*; latus, ĕris n *(side)*; dorsum, i n *(back)*; muscŭlus, i m *(muscle)*, orbĭta, ae f *(eye-socket)*; clavicŭla, ae f *(clavicle)*; costa, ae f *(rib)*; vertĕbra, ae f *(vertebra)*; fibŭla, ae f *(splint-bone)*; facies, ēi f *(face)*; occĭput, ĭtis n *(occiput, back of the head)*; ulna, ae f *(elbow bone)*; mandibŭla, ae f *(lower jaw)*; maxilla, ae f *(upper jaw)*; cranium, i n *(skull)*.

Ex. 2. Decline the following word combinations:

forāmen teres; muscŭlus biceps; vertĕbra cervicālis; vas capillāre.

Ex. 3. Translate the terms into English:

incisūra claviculāris sterni; ossa cranii cerebrālis; tuber frontāle; os parietāle; bursa muscŭli terĕtis; ligamentum teres acetabŭli; articulatio simplex;

muscŭlus biceps femŏris; nervi cardiăci thoracĭci; caput laterāle muscŭli tricipĭtis.

Ex. 4. Translate the following terms into Latin:

frontal region; large occipital opening; part of the occipital bone; round ligament of the uterus; four-headed muscle of the thigh bone; simple joint; simple bony legs; subtemporal crest.

Home training

Ex. 5. Agree adjectives with the nouns. Determine the declension of each word in the word combination. Make the word combinations Nom. Plur.:

fovea, ae f (costālis, e); ramus, i m (mediālis, e); arteria, ae f (communicans, ntis); tubercŭlum, i n (mediālis, e); forāmen, ĭnis n (ethmoidālis, e); articulatio, ōnis f (simplex, ĭcis).

Ex. 6. Agree the adjectives with the nouns and decline the word combintions:

margo, ĭnis m (frontālis, e); os, ossis n (temporālis, e); nervus, i m (faciālis, e); incisūra, ae f (radiālis, e); caput, ĭtis n (laterālis, e); ligamentum, i n (teres, ĕtis); muscŭlus, i m (biceps, cipĭtis).

Ex. 7. Agree the adjective with each noun. Translate the word combinations into Latin:

vertebral (canal; notch; opening); frontal (suture; tuber); two-headed (muscle; tuber); lumbar (fascia; region; vertebra); occipital (opening; artery; nerve).

Ex. 8. Translate the terms into English

muscŭlus semispinālis thorācis; sutūra intermaxillāris; crista infratemporālis; os hyoideum; fossa subscapulāris; fovea sublinguālis; angŭlus ocŭli laterālis; caput longum muscŭli bicipĭtis brachii; muscŭli faciāles; canāles laterāles; venae pulmonāles dextrae; spina nasālis ossis frontālis; vagīna musculōrum commūnis; ateriae communicantes; nervi faciales; tunica musculāris pharyngis.

Ex. 9. Translate the terms into Latin writing the lexical form of each word:

vessels of the internal ear; lateral sacral arteries; superficial lymphatic vessels; clavicular notch; openings of the pulmonary veins; lateral parts of the occipital bone; tendon of the four-headed muscle of the thigh; three-headed muscle of the shoulder; cranial nerves; sieve-shaped openings; round ligament of the uterus; pulmonary surface of the heart; deep cervical lymphatic nodes; thoracic hearty nerves.

LESSON 13

The main objectives of the lesson are:

1) to learn the grammar categories of nouns referring to the forth declension;

2) to learn the grammar categories of nouns referring to the fifth declension;

3) to learn the case endings of the forth and fifth declensions;

4) to be able to understand the basic abbreviations used in anatomy;

5) to train in translating Latin anatomical terms from English into Latin and vice versa.

§22. Fourth-declension nouns

Fourth-declension nouns are the nouns of the masculine and neuter genders which have endings **-us** for **masculine** and **-u** for **neuter** gender in Nominative Singular. In **Genitive Singular** they all have ending **-us** that is the indicator of the fourth declension:

arcus, us m (*arch*); ductus, us m (*duct*);

cornu, us n (*horn*); genu, us n (*knee*).

Remember!!! Some nouns of the **feminine** gender ending in **-us** refer to the fourth declension; but only **manus, us f** (*hand*) is used in the anatomical terminology.

gender	*Nominative Singular*	*Genitive Singular*	*example*
m	- us	- us	sinus, us m *(sinus)*
f			manus, us f *(hand)*
n	- u		cornu, us n *(horn)*

Nouns of the fourth declension are declined as follows:

	m f	***n***	*m*	*f*	*n*
Nom. Sing.	**- us**	**- u**	*sin-us*	*man-us*	*corn-u*
Gen. Sing.	**- us**		*sin-us*	*man-us*	*corn-us*
Nom. Plur.	**- us**	**- ua**	*sin-us*	*man-us*	*corn-ua*
Gen. Plur.	**- uum**		*sin-uum*	*man-uum*	*corn-uum*

§23. Fifth-declension nouns

Fifth-declension nouns are mostly nouns of the **feminine** gender. They have the ending **-es** in Nominative Singular and the ending **-ēi** in **Genitive Singular**:

facies, ēi f *(face, surface)*; superficies, ēi f *(surface).*

gender	*Nominative Singular*	*Genitive Singular*	*example*
f	-es	-ēi	facies, ēi f *(face)*

Nouns of the fifth declension are declined as follows:

	f	*facies, ēi f*
Nom. Sing.	**- es**	*faci-es*
Gen. Sing.	**- ēi**	*faci-ēi*
Nom. Plur.	**- es**	*faci-es*
Gen. Plur.	**- ērum**	*faci-ērum*

§24. Anatomical abbreviations

Sing.	**Plur**.
a. – arteria *artery*	aa. – arteriae *arteries*
b. – bursa *bag*	bb. – bursae *bags*
gl. – glandŭla *gland*	gll. – glandŭlae *glands*
for. – forāmen *opening*	forr. – foramĭna *openings*
lig. – ligamentum *ligament*	ligg. – ligamenta *ligaments*
m. – muscŭlus *muscle*	mm. – muscŭli *muscles*
n. – nervus *nerve*	nn. – nervi *nerves*
r. – ramus *branch*	rr. – rami *branches*
sul. – sulcus *groove*	sull. – sulci *grooves*
v. – vena *vein*	vv. – venae *veins*
vag. – vagīna *vagina, sheath*	vagg. – vagīnae *vaginae, sheaths*

Lexical minimum №11

1) bilis, is f	*bile*
2) bilifer, era, erum	*related to bile*
3) cornu, us n	*horn*
4) ductus,us m	*duct*
5) ductus biliferi, ductuum biliferōrum	*bile ducts (Plur.)*
6) dura mater, durae matris *(G.S.)*	*hard brain membrane*
7) flavus, a, um	*yellow*
8) genu, us n	*knee*
9) hiatus, us m	*crack, split, hiatus*
10) intercostālis, e	*intercostal*
11) manus, us f	*hand*

12) mater, tris f	*brain membrane*
13) meātus, us m	*passage*
14) medulla, ae f	*medullary substance, marrow*
15) medulla ossium, medullae ossium *(G.S.)*	*bone marrow*
16) medulla spinālis, medullae spinālis *(G.S.)*	*spinal marrow (cord)*
17) obliquus, a, um	*oblique*
18) pia mater, piae matris *(G.S.)*	*soft brain membrane*
19) plexus, us m	*network, plexus*
20) recessus, us m	*recess*
21) ruber, bra, brum	*red*
22) sinus, us m	*sinus*
23) sublinguālis, e	*sublingual*
24) tractus, us m	*tract*

Training Exercises

In-class training

Ex. 1. Agree each adjective with the noun. Determine the declension of each word in the word combination. Translate the word combinations into English:

cornu, us n *(coccygēus; anterior; laterālis)*; ductus, us m *(sinister; nasolacrimālis; posterior)*; processus, us m *(palatīnus; maxillāris; posterior)*; facies, ēi f *(temporālis; inferior; internus)*.

Ex. 2. Make the following word combinations Nom. Plur.:

plexus venōsus; plexus commūnis; processus palatīnus; processus mastoideus; sinus sphenoidālis; sinus frontālis; sinus petrōsus; cornu occipitāle; cornu dextrum; ductus sublinguālis.

Ex. 3. Translate the terms into English:

ductus sublinguāles; sinus coronarius cordis; processus pterygoidei; muscŭli faciāles; plexus faciālis; plexus cardiăci; arcus ductus thoracĭci; processus styloideus radii; cornu medullae spinālis; sinus liēnis.

Ex. 4. Translate the terms into Latin:

groove of the wedge-shaped sinus; sublingual ducts; lateral surface; frontal sinus; bulb of the occipital horn; medial plate of the pterygoid process; superficial temporal artery; right hepatic duct; medial upper artery of the knee; wedge-shaped sinus; dorsal surface of the hand.

Home training

Ex. 5. Agree the adjective with each noun and decline the word combinations:

common (leg, plexus, duct); palatine (groove, opening, process).

Ex. 6. Translate the terms into English:

sinus durae matris; medulla ossium rubra; medulla ossium flava; medulla renālis; apertūra sinus sphenoidālis; ossa digitōrum manus; ligamenta flava; regiōnes faciēi; ductus hepatĭcus commūnis; processus styloideus ulnae; arteria mediālis genus; sinus maxillāris; tractus optĭci; rami tractus optĭci; articulatiōnes interphalangeae manus; arcus palatopharyngēus; cornu sacrāle.

Ex. 7. Translate the terms into Latin writing the lexical form of each word:

facial nerve; lateral column of the spinal cord; short ligaments of the fingers of the hand; medial and lateral plates of the pterygoid processes; medial surface; common carotic plexus; process of the nasal concha; dividing wall of the frontal sinuses; sinuses of the hard brain membrane; lateral artery of the knee; articular muscle of the knee; middle nasal passage.

Ex. 8. Write the following terms without abbreviations; translate them into English:

gl. thyroidea; v. iugulāris interna; a. vertebrālis; m. longus capĭtis; rr. cardiăci inferiōres; rr. musculāres n. ischiadĭci; a. et v. thoracĭca interna; aa. et vv. intercostāles; nn. articulāres.

LESSON 14

The main objectives of the lesson are:

1) to learn the ways of making comparative and superlative degrees of Latin adjectives;

2) to learn the case endings of the comparative adjectives;

3) to train in translating Latin anatomical terms having the first declension nouns and adjectives from English into Latin and vice versa;

4) to learn how names of muscle according to their function are formed.

§25. Comparison of adjectives

There is a number of adjectives used in anatomical terminology and referring neither to the first group adjectives (-us; -a; -um) nor to the second group adjectives (-is; e). They are:

a) the forms of comparative degree of adjectives:

anterior, ius	*front, anterior;*	interior, ius	*inner;*
superior, ius	*upper; superior*	major, jus	*large;*
inferior, ius	*lower*; *inferior*	minor, us	*small*
posterior, ius	*back, posterior;*		

b) the forms of superlative degree of adjectives:

minĭmus, a, um *the smallest;* suprēmus, a, um *the highest.*

The lexical form of the comparative degree of adjectives includes the common form for **masculine** and **feminine** genders with the suffix **–ior** and the suffix **–ius** for the **neuter** gender:

Lexical form	*m; f*	*n*
anterior, ius *(front)*	anter-ior	anter-ius

Comparative forms are declined according to the consonant type of the third declension nouns:

	m f	*n*	*anterior (m; f)*	*anterius (n)*
Nom. Sing.	**-ior**	**-ius**	*anter-**ior***	*anter-**ius***
Gen. Sing.	**-iōris**		*anter-**iōris***	*anter-**iōris***
Nom. Plur.	**-iōres**	**-iōra**	*anter-**iōres***	*anter-**iōra***
Gen. Plur.	**-iōrum**		*anter-**iōrum***	*anter-**iōrum***

Comparative forms agree with the nouns they modify like positive forms in number, gender, and case:

	m	m
back arch	arcus	poster**ior;**
	f	f
back spine	spina	poster**ior;**
	n	n
back tubercle	tubercŭlum	poster**ius.**

The superlative form of adjectives is formed by the suffix –**issĭm-** and the endings **-us, -a, -um**. These adjectives have the same lexical form and the same pattern of declension as the first group adjectives:

longus, a, um – long-issim-us, a, um – *the longest;*

latus, a, um – lat-issim-us, a, um – *the widest.*

In anatomical terminology the form **magnus, a, um** is usually used for single structures having no pair and is translated as **"large, great"**:

forāmen occipitāle magnum *large occipital opening.*

The form **major, jus** is usually used for paired structures to compare their size and may be translated as **"larger, greater"**:

ala major et ala minor *larger and smaller wing*;

muscŭlus pectorālis major et minor *larger and smaller pectoral muscle.*

The deviation from this rule is noted in the terms:

vena saphēna *magna large subcutaneous vein;*

vena saphēna *parva small subcutaneous vein,*

as they belong to different regions of the lower extremity.

§26. Names of muscles

Names of muscles are presented by two words: the noun musc**ŭ**lus, i m + the name of the muscle by its function having the ending –or / -er:

musc**ŭ**lus, i m	the name of the muscle –or, oris m -er, eris m

musc**ŭ**lus abductor, ōris m *(abductor muscle).*

Mind that the first word (musc**ŭ**lus, i m) is the second-declension noun and the second word (abductor, ōris m) is the third-declension noun. After the name of the muscle there goes the noun in Genitive Singular or Plural:

musc**ŭ**lus levātor scap**ŭ**lae – *elevator muscle of the shoulder blade;*

musc**ŭ**lus flexor digitōrum manus – *flexor muscle of the fingers of the hand.*

Lexical minimum №12

1) caecum, i n	*blind intestine*
2) colon, i n	*colon*
3) duodēnum, i n	*duodenum*
4) ileum, i n	*ileum*
5) intestinālis, e	*intestinal*
6) intestīnum, i n	*intestine*
7) intestīnum crassum	*large intestine*
8) intestīnum tenue, intestini tenuis (G.S.)	*small intestine*
9) jejūnum, i n	*jejunum*
10) latissĭmus, a, um	*the widest*
11) longissĭmus, a, um	*the longest*
12) magnus, a, um	*large, great*
13) maxĭmus, a, um	*the largest*
14) minĭmus, a, um	*the smallest*
15) m. abductor, ōris m	*abductor muscle*
16) m. adductor, ōris m	*adductor muscle*
17) m. buccinātor, ōris m	*cheek muscle*
18) m. constrictor, ōris m	*constrictor muscle*
19) m. corrugātor, ōris m	*corrugator muscle*
20) m. depressor, ōris m	*depressor muscle*
21) m. dilatātor, ōris m	*dilator muscle*
22) m. extensor, ōris m	*extensor (muscle)*
23) m. flexor, ōris m	*flexor (muscle)*
24) m. levātor, ōris m	*levator, elevator muscle*
25) m. massēter, ēris m	*chewer muscle*
26) m. rotātor, ōris m	*rotator muscle*
27) m. sphincter, ēris m	*sphincter (muscle)*
28) m. tensor, ōris m	*tensor muscle*
29) rectum, i n	*rectum*
30) suprēmus, a, um	*the highest*

Training Exercises

In-class training

Ex. 1. Decline the following adjectives:

anterior, ius; inferior, ius; interior, ius; major, jus; minor, minus; posterior, ius; superior, ius.

Ex. 2. Decline the following word combinations:

facies articulāris superior; forāmen posterius; muscŭlus latissĭmus.

Ex. 3. Translate the terms into English:

arcus dentālis inferior (superior); arteria intercostālis suprēma; arteriae palatīnae minōres; cornu medullae spinālis posterius; crista nasālis anterior; facies articulāris superior; forāmen sacrāle anterius; foramĭna palatīna minōra; tubercŭlum posterius atlantis.

Ex. 4. Translate the terms into Latin:

lower angle of the shoulder blade; front gastric network; back process of the wedge-shaped bone; upper ligament of the shoulder blade; lower coronary sinus; front ligament of the atlas; crest of the smaller tubercle; front border of the lung; groove of the larger petrous nerve.

Home training

Ex. 5. Agree the adjectives with each noun and translate the word combinations:

front (muscle, surface, ligament, opening, lobe, tubercle, depression, crest); lower (muscle, vein, concha, lip, process, arch, spine); larger [major, jus] (horn, wing, canal, groove, head); smaller [minor, us] (horn, muscle, opening, notch, wing, tubercle, depression); back (arch, surface, ligament, tubercle, opening, spine).

Ex. 6. Translate the terms into English:

arteriae ethmoidāles posteriōres; cornua coccygēa majōra et minōra; foramĭna venārum minimārum; ligamentum tibioulnāre anterius; muscŭli intercostāles minimi; muscŭlus longissĭmus thorācis; muscŭlus teres minor; muscŭli oblīqui superiōres et inferiōres; muscŭlus latissĭmus dorsi; spina inferior; nodi lymphatĭci gastrĭci sinistri; ossa membri inferiōris; processus articulāres superiōres; vena ophthalmĭca inferior.

Ex. 7. Translate the terms into Latin writing the lexical form of each word:

large and small straight muscles of the head; lower occipital crest; large occipital opening; opening of the lower hollow vein; back tuber of the atlas; tem-

poral surface of the large wing; oblique ligaments of the fingers of the hand; deep lymphatic node; left gastric lymphatic nodes; back plate of the vagina of the straight muscle of the abdomen; back sinuses; front wall of the stomach; upper ophthalmic vein.

Ex. 8. Translate into Latin:

bulb of the duodenum; abductor muscle of the great toe; extensor muscle of the fingers; radial flexor muscle of the wrist; depressor muscle of the dividing wall; horizontal part of the duodenum; long extensor muscle of the thumb; depressor muscle of the lower lip; elevator muscle of the upper lip; superior oblique muscle of the head; transverse folds of the rectum.

LESSON 15

The main objectives of the lesson are:

1) to revise the declensions of Latin nouns and adjectives;

2) to practice in declining the word combinations;

3) to train in translating Latin anatomical terms from English into Latin and vice versa.

§ 27. Revision

Lexical minimum №13

1) cavĭtas, ātis f	*cavity*
2) cellŭla, ae f	*cell*
3) chiasma, ătis n	*chiasm*
4) cingŭlum, i n	*girdle*
5) extremĭtas, ātis f	*extremity*
6) fascia, ae f	*fascia, muscle coat*
7) flexūra, ae f	*flexure, curve, twist*
8) ganglion, ii n	*ganglion, nerve node*
9) glandŭla, ae f	*gland*
10) lacrimālis, e	*lacrimal, related to tears*
11) longitudinālis, e	*longitudinal, lengthwise*
12) oesophagēus, a, um	*esophageal, related to the oesophagus*
13) pelvinus, a, um	*pelvic*
14) pelvis, is f	*pelvis*
15) pelvis renalis, pelvis renalis	*renal pelvis*
16) radix, īcis f	*root*
17) retĭna, ae f	*retina*
18) sympathĭcus, a, um	*sympathetic*
19) thyroideus, a, um	*thyroid*
20) viscerālis, e	*visceral, related to inner organs*

Training Exercises

Ex. 1. Translate the words in Nom. Plur. into English:

venae; foramĭna; muscŭli; sinus; arteriae; sulci; crura; rami; canāles; nervi; cartilagĭnes; cornua; ligamenta; processus; lobi; ganglia; dentes; septa; vasa; regiōnes.

Ex. 2. Group the terms into two columns – terms in Nom. Sing. and terms in Nom. Plur. Translate them into English:

pyramĭdes renāles; muscŭli transversi; sinus frontālis; ductus lymphatĭci; ductus sublinguāles; sulcus inferior; sinus ethmoidāles; articulatiōnes costochondrāles (*Greek* chondros *cartilage*); ductus laterālis; arteria major; atrium dextrum; articulatiōnes sternocostāles; arteriae inferiōres; sulcus inferior; processus temporāles; tunĭca musculāris.

Ex. 3. Choose the correct ending. Give the lexical form of each word and translate the terms into English:

sutūrae oss (-ium; -um); vagīna tendĭn (-ium; -um); septum sinuum frontal(-ium; -um); ligamenta dent(-ium; -um); plexus nervōrum spināl(-ium; -um); chiasma tendĭn(-ium; -um); tubercŭlum anterius et posterius vertebrārum cervical (-ium; -um); nuclei nervōrum cranial (-ium; -um).

Ex. 4. Choose the correct ending. Give the lexical form of each word and translate the terms into English:

ligament (-a; -ia; -ua) hepătis; crur (-a; -ia; -ua) osse (-a; -ia; -ua); dur (-a; -ia; -ua) mater; crist (-a; -ia; -ua) anterior; ven (-a; -ia; -ua) cav (-a; -ia; -ua); foramĭn (-a; -ia; -ua) palatīn (-a; -ia; -ua) minōr (-a; -ia; -ua); ligament (-a; -ia; -ua) transvers (-a; -ia; -ua); lamĭn (-a; -ia; -ua) arcus vertĕbrae; oss (-a; -ia; -ua) cranii; valv (-a; -ia; -ua) lymphatĭc (-a; -ia; -ua); foramĭn (-a; -ia; -ua) sacrāl (-a; -ia; -ua) minor (-a; -ia; -ua); foramĭn (-a; -ia; -ua) ethmoidal (-a; -ia; -ua); ligament (-a; -ia; -ua) intercarpal (-a; -ia; -ua) interossĕ (-a; -ia; -ua); cornu (-a; -ia; -ua) majōr (-a; -ia; -ua) et minōr (-a; -ia; -ua); ven (-a; -ia; -ua) accessori (-a; -ia; -ua).

Ex. 5. Explain the use of the underlined endings, translate the terms into English:

vagīna tendĭnum musculōrum extensōrum radiālium carpi; sulcus temporālis inferior; caput laterāle muscŭli tricipĭtis; muscŭlus flexor hallūcis longus; flexūra coli sinistra; muscŭlus longus colli; plica longitudinālis duodēni; ligamentum transversum scapŭlae superius; articulatiōnes cranii; ligamenta interossĕa; plicae palatīnae transversae; lobus superior pulmōnis sinistri; plicae tunĭcae mucōsae; apex partis petrōsae; vasa auris internae; septum sinuum sphenoidalium; ganglia plexuum sympathicōrum; sulcus sinus sphenoidālis; sulci nervi petrōsi majoris; plicae recti; muscŭli dorsi recti; lingŭla pulmōnis sinistri.

Ex. 6. Translate into English:

angŭlus ocŭli laterālis; bursa muscŭli terĕtis; caput laterāle muscŭli tricipĭtis; caput longum muscŭli bicipĭtis brachii; crista nasālis anterior; forāmen

ovāle; foramĭna sacralia pelvīna; margo mastoideus ossis occipitālis; muscŭli faciāles; muscŭli oblīqui superior et inferior; muscŭlus biceps femŏris; muscŭlus teres minor; os parietāle; tuber frontāle; processus lacrimālis conchae nasālis inferiōris; muscŭli intercostāles; medulla ossium flava; medulla ossium rubra; medulla renālis; ossa membri inferiōris; cornu superius cartilagĭnis thyroideae; arteria hepatĭca; canālis radīcis dentis; ductus hepatĭcus commūnis; facies viscerālis; foramĭna sacralia pelvīna; ligamenta anteriōra durae matris; ligamentum teres hepătis; margo linguae; ossa membri inferiōris; tunĭca mucōsa oris; vasa sanguinea retīnae; pia mater spinālis; vagīnae fibrōsae tendĭnum digitōrum pedis; ligamentum hepatoduodenāle; articulatiōnes sternocostāles; muscŭlus bronchooesophagēus; muscŭlus rectus abdomĭnis; pars abdominālis (thoracĭca, cervicālis) oesophăgi; recesssus duodenāles superior et inferior; recessus ileocaecālis inferior; tunĭca musculāris oesophăgi; muscŭli oblīqui superior et inferior; cornu inferius cartilagĭnis thyroideae; processus articulāres superiōres; arteria superior mediālis genus; pelvis major et minor; r. externus n. laryngei superiōris; rr. cardiăci inferiōres; vv. cordis anteriōres; forr. palatīna minōra; cornu medullae spinālis posterius; muscŭlus latissĭmus dorsi; spina inferior.

Ex. 7. Translate into Latin:

wing of the vomer; straight muscle of the head; smaller sublingual ducts; smaller sacral openings; posterior margin of the petrous part; lower vertebral notches; bloody vessels of the retina; orbital part of the frontal bone; rotator muscles of the eyeball; nuclei (plur.) of the cranial nerves; openings of the smallest veins; dividing wall of the frontal sinuses; long elevator muscles; red and yellow bone marrow; body of the hyoid bone; accessory ligaments of the ribs; ligaments of the head of the splint-bone; tip of the posterior horn; large horn of the hyoid bone; upper horn of the thyroid cartilage.

§ 28. Sample of final test in Anatomical terminology

1. Combine the nouns with the adjectives and decline the combinations (Nom. Sing.; Gen. Sing.; Nom. Plur.; Gen. Plur.):

caput, ĭtis n (major, jus); os, ossis n (planus, a, um); arteria, ae f (occipitālis, e)

2. Translate the terms into Latin; write the lexical forms of all the words:

1) muscular tunica of the stomach;
2) surface of the tubercle of the rib;
3) lymphatic nodes of the neck;
4) palatal process of the upper jaw;
5) gastric folds;
6) inferior deep vein;
7) levator muscle of the nose;
8) muscles of the rectum.

3. Translate the terms into English:

1) caput ossis femŏris;
2) cornu uteri dextrum;
3) facies pulmonālis cordis;
4) muscŭlus longus;
5) muscŭlus flexor digiti;
6) arteria superior laterālis genus;
7) basis cordis;
8) forāmen sacrāle anterius.

LATIN – ENGLISH ANATOMICAL GLOSSARY

LATIN	ENGLISH
	A
a (ab) (*w. abl.*)	from
abdōmen, ĭnis n	abdomen
abdominālis, e	abdominal
accessorius, a, um	accessory
acetabŭlum, i n	cotyloid cavity, acetabulum
acromion, i n	acromion, lateral end of the shoulder blade crest
acustĭcus, a, um	acoustic
ad (*acc.*)	to
affĕrens, ntis	afferent
ala, ae f	wing
alāris, e	alar
albus, a, um	white
alveŏlus, i m	alveolus
angŭlus, i m	angle
ante (*w. acc.*)	before
antebrachium, i n	forearm
anterior, ius	front, anterior
anus, i m	anus
aorta, ae f	aorta
apertūra, ae f	aperture
apex, ĭcis m	apex, top
apicālis, e	apical, related to the top
appendix, īcis f	appendage
arcus, us m	arch
areŏla, ae f	areola
arteria, ae f	artery
arteriālis, e	arterial
arteriōsus, a, um	arterial
articulāris, e	articular
articulatio, ōnis f	joint
ascendens, ntis	ascending
asper, ĕra, ĕrum	rough
atlas, antis m	1st cervical vertebra, atlas
atrium, i n	atrium (heart chamber)
auricŭla, ae f	auricle, auricula
auriculāris, e	auricular
auris, is f	ear
axis, is m	2nd cervical vertebra, axis

B

basis, is f	base
biceps, cipĭtis	two-headed, bicipital
biliāris, e	biliary
bilis, is f	bile
brachium, i n	shoulder
brevis, e	short
bronchus, i m	bronchus
bulbus, i m	bulb
bulbus ocŭli	eyeball
bursa, ae f	bursa, bag

C

caecum, n	caecum, blind intestine
calcanēus, a, um	calcanel
calcar, āris n	calcar, spur
canālis, is m	canal
capillāris, e	capillary
capsula, ae f	capsule
caput, ĭtis n	head
cardiăcus, a, um	cardiac
carotĭcus, a, um	carotic
carōtis, ĭdis	carotid
carpus, i m	wrist
cartilaginēus, a, um	cartilaginous
cartilāgo, ĭnis f	cartilage
caverna, ae f	cavern
cavernōsus, a, um	cavernous
cavĭtas, ātis f	cavity
cavum, i n	cavity
cavus, a, um	hollow
cellŭla, ae f	cell
cellulāris, e	cellular
cerebellāris, e	cerebellar
cerebellum, i n	cerebellum
cerebrālis, e	cerebral, related to the brain
cerĕbrum, i n	cerebrum, brain
cervicālis, e	cervical, related to the neck
cervix, īcis f	neck, cervix
chiasma, ătis n	chiasm
cilium, i n	cilium, eyelash
cingŭlum, i n	girdle
circumflexus, a, um	circumflex
clavicŭla, ae f	clavicle
claviculāris, e	clavicular
coccygēus, a, um	coccygeal
coccyx, ygis m	coccyx, coccygeal bone
cochlea, ae f	cochlea

cochleāris, e	cochlear
collum, i n	neck
colon, i n	colon
columna, ae f	column
commissūra, ae f	joining, commissure
commūnis, e	common
compactus, a, um	dense
composĭtus, a, um	compounded
concha, ae f	concha
contra (*w. acc.*)	against
cor, cordis n	heart
cornu, us n	horn
coronarius, a, um	coronary
corpus, ŏris n	body
cortex, ĭcis m	cortex
corticālis, e	cortical
costa, ae f	rib
costālis, e	costal
craniālis, e	cranial
cranium, i n	skull
cribrōsus, a, um	cribrate, sieve-shaped
crista, ae f	crest
crus, cruris n	leg
cum (*w. abl.*)	with
curvatūra, ae f	curvature
cutis, is f	skin

D

de (*w. abl.*)	from, about
deltoideus, a, um	deltoid
dens, dentis m	tooth
dentālis, e	dental, related to the tooth
descendens, ntis	descending
dexter, tra, trum	right
diaphragma, ătis n	diaphragm
digĭtus, i m	finger
diploë, ës f	diploe
distālis, e	distal
dorsālis, e	dorsal
dorsum, i n	back
ductus, us m	duct
duodenālis, e	duodenal
duodēnum, i n	duodenum
dura mater	hard brain membrane
durus, a, um	hard

E

e (ex) (*w. abl.*)	out of, of, from
effĕrens, ntis	efferent

encephălon, i n	encephalon, brain
esophagēus, a, um	esophageal
esophăgus, i m (oesophăgus)	esophagus
et	and
ethmoidālis, e	ethmoid, sieve-shaped
externus, a um	external
extremĭtas, ātis f	extremity, limb

F

faciālis, e	facial
facies, ēi f	face, surface
fascia, ae f	fascia
femur, ŏris n	femur, thigh bone, thigh
fibra, ae f	fibra, fiber
fibrōsus, a, um	fibrous
fibŭla, ae f	fibula, splint-bone
fibulāris, e	fibular, related to the splint-bone
fissūra, ae f	fissure, narrow slit
flavus, a, um	yellow
flexūra, ae f	flexure, curve, twist
forāmen, ĭnis n	foramen, opening
fornix, ĭcis m	vault, fornix
fossa, ae f	fossa, shallow depression
fovea, ae f	fovea, small pit
frons, ntis f	forehead
frontālis, e	frontal
fundus, i m	fundus, bottom

G

ganglion, i n	ganglion, nerve node
gaster, tris f	stomach
gastrĭcus, a, um	gastric
generālis, e	general
genu, us n	knee
gingīva, ae f	gingiva, gum
glandŭla, ae f	gland
glandŭla thyr(e)oidea	thyroid gland
globus, i m	globe
glomus, i m	glome
griseus, a, um	gray
gyrus, i m	gyrus, convolution

H

hallux, ūcis m	great toe
hamŭlus, i m	hamulus, hook
hepar, ătis n	liver
hepatĭcus, a, um	hepatic, related to the liver

hiātus, us m	hiatus, crack, split
homo, ĭnis m	man
horisontālis, e	horizontal
humĕrus, i m	humerus, upper arm
humor, ōris m	humor
hyoideus, a, um	hyoid (bone)
hypogastrĭcus, a, um	hypogastric
hypoglossus, a, um	hypoglossal (nerve)

I

ileocaecālis, e	ileocecal
ileum, i n	ileum
iliăcus, a, um	iliac
impressio, ōnis f	impression
incisīvus, a, um	incisive (tooth)
incisūra, ae f	notch
incus, ūdis f	incus, anvil
index, ĭcis m	index, forefinger
inferior, ius	lower, inferior
infra	under, beneath
in (*w. acc., abl.*)	into, in
inter (*w. acc.*)	between
intercostālis, e	intercostal
interior, ius	inner
internus, a, um	internal
interosseus, a, um	interosseal
intestinālis, e	intestinal
intestīnum, i n	intestine
intestīnum crassum	large intestine
intestīnum (i) tenue (is)	small intestine
intravenōsus, a, um	intravenous
iris, irĭdis f	iris of the eye
ischiadĭcus, a, um ischiorectālis, e	ischiadic ischiorectal
ischium, i n	ischium

J

jejūnum, i n	jejunum
jugulāris, e	jugular

L

labium, i n	lip
lacrimālis, e	lacrimal, related to tears
lamĭna, ae f	plate, lamina
laryngēus, a, um	laryngeal, related to the larynx
larynx, yngis m	larynx
laterālis, e	lateral
latissĭmus, a, um	the widest
latus, a, um	broad, wide

latus, ĕris n	side, flank
lens, lentis f	crystalline lens
liber, ĕra, ĕrum	free
lien, liēnis m	spleen
ligamentum, i n	ligament
linea, ae f	line
lingua, ae f	tongue
linguālis, e	lingual, related to the tongue
lobus, i m	lobe
longissĭmus, a, um	the longest
longus, a, um	long
lumbālis, e	lumbar, related to the loin
lumbus, i m	loin
lymphatĭcus, a, um	lymphatic

M

magnus, a, um	large, great
major, jus	larger, greater
mandibŭla, ae f	lower jaw, mandible
mandibulāris, e	mandibular, related to the lower jaw
manubrium, i n	manubrium
manus, us f	hand
margo, ĭnis m	margin, border
mastoideus, a, um	mastoidal, mammiform
mater, tris f	membrane of the brain or spinal cord
maxilla, ae f	upper jaw, maxilla
maxillāris, e	maxillary, related to the upper jaw
maxĭmus, a, um	the largest, the greatest
meātus, us m	passage
mediālis, e	medial
mediānus, a, um	middle, median
medius, a, um	middle
medulla, ae f	marrow, medullary substance
medulla ossium	bone marrow
medulla spinālis	spinal cord, spinal marrow
membrāna, ae f	membrane, covering
membrum, i n	extremity, limb
meninx, ngis f	meninx
mentālis, e	mental, related to the chin
mentum, i n	chin
metacarpus, i m	metacarpus
metatarsus, i m	metatarsus
minĭmus, a, um	the smallest
minor, minus	smaller
mucōsa, ae f	mucous membrane
mucōsus, a, um	mucous
musculāris, e	muscular
muscŭlus, i m	muscle
m. abductor, ōris m	abductor muscle

m. adductor, ōris m	adductor muscle
m. buccinātor, ōris m	cheek muscle, buccinator
m. constrictor, ōris m	constrictor
m. corrugātor, ōris m	corrugator, muscle that wrinkles
m. depressor, ōris m	depressor muscle
m. dilatātor, ōris m	dilator muscle
m. extensor, ōris m	extensor (muscle)
m. flexor, ōris m	flexor (muscle)
m. levātor, ōris m	levator, elevator muscle
m. massēter, ēris m	chewer muscle
m. rotātor, ōris m	rotator muscle
m. sphincter, ēris m	sphincter (muscle)
m. tensor, ōris m	tensor muscle

N

naris, is f	nostril
nasālis, e	nasal, related to the nose
nasolacrimālis, e	nasolacrimal
nasus, i m	nose
nervōsus, a, um	nervous
nervus, i m	nerve
niger, gra, grum	black
nodus, i m	node
nucha, ae f	nucha, nape of neck
nucleus, i m	nucleus, centre
nutricius, a, um	nutricious

O

obliquus, a, um	oblique
oblongātus, a, um	oblong
occipitālis, e	occipital
occĭput, ĭtis n	back of the head, occiput
ocŭlus, i m	eye
oesophăgus, i m (esophăgus)	esophagus, gullet
olecrănon, i n	tip of the elbow
ophthalmĭcus, a, um	ophthalmic, related to the eye
optĭcus, a, um	optic, visual
orbĭta, ae f	orbit, eye-socket
orbitālis, e	orbital, related to the eye-socket
orgănon, i n	organ
os, oris n	mouth
os, ossis n	bone
os hyoideum	hyoid bone
ossĕus, a, um	osseous, bony
ostium, i n	opening, ostium
ovālis, e	oval

P

palatīnus, a, um	palatal, palatine
palatoglossus, a, um	palatoglossal
palātum, i n	palate
palpĕbra, ae f	eyelid
pancreas, ătis n	pancreas
pancreatĭcus, a, um	pancreatic, related to the pancreas
papilla, ae f	papilla, nipple
paries, ĕtis m	wall
parietālis, e	parietal
pars, partis f	part
patella, ae f	kneepan
pelvīnus, a, um	pelvic
pelvis, is f	pelvis
pelvis renālis	renal pelvis
per (*w. acc.*)	for, by
perin(a)eum, i n	perineum
periosteum, i n	periosteum
periton(a)eum, i n	peritoneum
pes, pedis m	foot
petrōsus, a, um	petrous, stony
phalanx, ngis f	phalanx
pharyngēus, a, um	pharyngeal, related to the pharynx
pharynx, ngis m	pharynx
pia mater	soft brain membrane
pilus, i m	hair
planus, a, um	plain
pleura, ae f	pleura
plexus, us m	plexus
plica, ae f	fold
pollex, ĭcis m	thumb
post (*w. acc.*)	after
posterior, ius	posterior, back
praemolāris, e	premolar (tooth)
primus, a, um	first
pro (*w. abl.*)	for
processus, us m	process
profundus, a, um	deep
proprius, a, um	proper
protuberantia, ae f	projection
proximālis, e	proximal
proxĭmus, a, um	nearest
pterygoideus, a, um	pterygoid, wing-shaped
pulmo, ōnis m	lung
pulmonālis, e	pulmonary, related to the lung
pylōrus, i m	pylorus
pyrămis, ĭdis f	pyramid

Q

quadriceps, cipĭtis	four-headed, quadriceps

R

radiālis, e	radial, related to the forearm bone
radius, i m	radius, forearm bone
radix, īcis f	root
ramus, i m	branch
raphe (rhaphe), es f	raphe
recessus, us m	recess
rectālis, e	rectal
rectum, i n	rectum
rectus, a, um	straight
regio, ōnis f	region
ren, renis m	kidney
renālis, e	renal, related to the kidney
rete, is n	net, network
retīna, ae f	retina
retinacŭlum, i n	retinaculum
rotundus, a, um	round
ruber, bra, brum	red

S

sacrālis, e	sacral
sacrum, i n	sacrum
sanguineus, a, um	bloody
sanguis, ĭnis m	blood
scapŭla, ae f	scapula, shoulder blade
secundus, a, um	second
semi-	half
septum, i n	septum, dividing wall
serōsus, a, um	serous
seu	or
simplex, ĭcis	simple
sine (*w. abl.*)	without
sinister, tra, trum	left
sinus, us m	sinus
skelĕton, i n	skeleton
spatium, i n	space
sphenoidālis, e	sphenoidal, wedge-shaped
spina, ae f	spine
spinālis, e	spinal
spinōsus, a, um	spinous
spleen, splenis m	spleen (Greek)
spongiōsus, a, um	spongy
squama, ae f	squama, scale

squamōsus, a, um	scaly, squamous
stapes, ĕdis m	stapes
sternālis, e	sternal, related to the breast bone
sternocostālis e	sternocostal
sternum, i n	sternum, breast bone
stratum, i n	layer
stroma, ătis n	stroma, framework
structūra, ae f	structure
styloideus, a, um	styloid, awl-shaped
sub (*w. acc., abl.*)	under
sublinguālis, e	sublingual
substantia, ae f	substance
sulcus, i m	groove
supercilium, i n	eyebrow
superficiālis, e	superficial
superficies, ēi f	surface
superior, ius	upper, superior
supra-	above
suprarenālis, e	suprarenal
suprēmus, a, um	the highest
sutūra, ae f	seam, suture
sympathĭcus, a, um	sympathetic, sympathic
symphysis, is f	symphysis
synchondrōsis, is f	synchondrosis
systēma, ătis n	system

T

tegmen, ĭnis n	tegmen, roof
temporālis, e	temporal
tempus, ŏris n	temple
tendo, ĭnis m	tendon
teres, ĕtis	round
textus, us m	tissue
thalămus, i m	thalamus
thoracĭcus, a, um	thoracic
thorax, ācis m	chest, thorax
thymus, i m	thymus gland
thyr(e)oideus, a, um	thyroid
tibia, ae f	tibia, shinbone
tonsilla, ae f	tonsil
tonsillāris, e	tonsillar, tonsillary
trachēa, ae f	trachea, windpipe
tractus, us m	tract
transversālis, e	transverse
transversus, a, um	transverse
trapezoideus, a, um	trapezoid

triceps, cipĭtis	three-headed, tricipital
trigemĭnus, a, um	trigeminal
truncus, i m	trunk
tuba, ae f	tube
tuber, ĕris n	tuber
tubercŭlum, i n	tubercle
tuberosĭtas, ātis f	tuberosity
tunĭca, ae f	covering, membrane
tympanĭcus, a, um	tympanic

U

ulna, ae f	ulna, elbow bone
urēter, ēris m	ureter
urethra, ae f	urethra
urinarius, a, um	urinary
utĕrus, i m	uterus, womb

V

vagīna, ae f	vagina, sheath
vaginālis, e	vaginal
valva, ae f	valve
valvŭla, ae f	valve, valvule
vas, vasis n	vessel
vena, ae f	vein
vena portae	portal vein
venōsus, a, um	venous
venter, ntris m	belly
ventrālis, e	ventral
venrtricŭlus, i m	ventricle (heart chamber)
vertĕbra, ae f	vertebra
vertebrālis, e	vertebral
vertex, ĭcis m	vertex
verus, a, um	true
vesīca, ae f	bladder
vesīca fellea	gallbladder
vesīca urinaria	urinary bladder
vestibŭlum, i n	vestibule
viscĕra, um n (*pl.*)	viscera
viscerālis, e	visceral, related to inner organs
vitreus, a, um	vitreous
vomer, ĕris m	vomer

Z

zygōma, ătis n	zygoma, cheek-bone
zygomatĭcus, a, um	zygomatic

ENGLISH – LATIN ANATOMICAL GLOSSARY

ENGLISH	LATIN
	A
abdomen	abdōmen, ĭnis n
abdominal	abdominālis, e
abductor muscle	m. abductor, ōris m
adductor muscle	m. adductor, ōris m
above	supra-
accessory	accessorius, a, um
acetabulum, cotyloid cavity	acetabŭlum, i n
acoustic	acustĭcus, a, um
acromion, acromial process	acromion, i n
afferent	affĕrens, ntis
after	post (w. acc.)
against	contra (w. acc.)
alar	alāris, e
alveolus	alveŏlus, i m
and	et
angle	angŭlus, i m
anterior, front	anterior, ius
anus	anus, i m
anvil, incus	incus, ūdis f
aorta	aorta, ae f
aperture	apertūra, ae f
apex, top	apex, ĭcis m
apical	apicālis, e
appendage	appendix, īcis f
arch	arcus, us m
areola	areŏla, ae f
arterial	arteriōsus, a, um; arteriālis, e
artery	arteria, ae f
articular	articulāris, e
ascending	ascendens, ntis
atlas, 1st cervical vertebra	atlas, antis m
atrium (heart chamber)	atrium, i n
auricle, auricula	auricŭla, ae f
auricular	auriculāris, e
awl-shaped, styloid	styloideus, a, um
axis, 2nd cervical vertebra	axis, is m

	B
back	dorsum, i n
back, posterior	posterior, ius
back of the head, occiput	occĭput, ĭtis n
bag, bursa	bursa, ae f
base	basis, is f
before	ante-
belly	venter, ntris m
beneath, under	infra-
between	inter-
bicipital	biceps, cipĭtis
bile	bilis, is f
biliary, bilious	biliāris, e
black	niger, gra, grum
bladder	vesīca, ae f
blind intestine, caecum	caecum, i n
blood	sanguis, ĭnis m
bloody	sanguineus, a, um
body	corpus, ŏris n
bone	os, ossis n
bone marrow	medulla ossium
bony, osseous	osseus, a, um
border, margin	margo, ĭnis m
bottom, fundus	fundus, i m
brain	encephălon, i n; cerĕbrum, i n
branch	ramus, i m
breast bone, sternum	sternum, i n
broad, wide	latus, a, um
bronchus	bronchus, i m
buccinator, cheek muscle	m. buccinātor, ōris m
bulb	bulbus, i m
bursa, bag	bursa, ae f
	C
calcanel	calcanēus, a, um
calcar, spur	calcar, āris n
fibula, splint-bone	fibŭla, ae f
canal	canālis, is m
capillary	capillāris, e
capsule	capsula, ae f
cardiac	cardiăcus, a, um
carotic	carotĭcus, a, um
carotid	carōtis, ĭdis
cartilage	cartilāgo, ĭnis f
cartilaginous	cartilaginēus, a, um
cavern	caverna, ae f
cavernous	cavernōsus, a, um

cavity	cavum, i n, cavĭtas, ātis f
caecum, blind intestine	caecum, i n
cell	cellŭla, ae f
cellular	cellulāris, e
cerebellar	cerebellāris, e
cerebellum	cerebellum, i n
cerebral, related to the brain	cerebrālis, e
cerebrum, brain	cerĕbrum, i n
cervical, related to the neck	cervicālis, e
cervix, neck	cervix, īcis f
cheek muscle, buccinator	m. buccinātor, ōris m
chest, thorax	thorax, ācis m
chewer	m. massēter, ēris m
chiasm	chiasma, ătis n
chin	mentum, i n
cilium, eyelash	cilium, i n
circumflex	circumflexus, a, um
clavicle	clavicŭla, ae f
clavicular	claviculāris, e
fiisure, naroow slit	fissūra, ae f
covering, membrane	tunĭca, ae f
coccygeal	coccygēus, a, um
coccygeal bone, coccyx	coccyx, ygis m
cochlea	cochlea, ae f
cochlear	cochleāris, e
colon	colon, i n
column	columna, ae f
commissure, joining	commissūra, ae f
common	commūnis, e
compounded	composĭtus, a, um
concha	concha, ae f
constrictor muscle	m. constrictor, ōris m
convolution, gyrus	gyrus, i m
coronary	coronarius, a, um
corrugator muscle, that wrinkles	m. corrugātor, ōris m
cortex	cortex, ĭcis m
cortical	corticālis, e
costal	costālis, e
cotyloid cavity	acetabŭlum, i n
crack, split, hiatus	hiātus, us m
cranial	craniālis, e
cranium, skull	cranium, i n
crest	crista, ae f
cribrate, sieve-shaped	cribrōsus, a, um
curvature	curvatūra, ae f
curve, twist, flexure	flexūra, ae f

	D
deep	profundus, a, um
deltoid	deltoideus, a, um
dense	compactus, a, um
dental, related to the tooth	dentālis, e
depressor muscle	m. depressor, ōris m
descending	descendens, ntis
diaphragm	diaphragma, ătis n
dilator muscle	m. dilatātor, ōris m
diploe	diploë, ës f
distal	distālis, e
dividing wall, septum	septum, i n
dorsal	dorsālis, e
duct	ductus, us m
duodenal	duodenālis, e
duodenum	duodēnum, i n
	E
ear	auris, is f
efferent	effĕrens, ntis
elbow bone, ulna	ulna, ae f
elevator muscle	m. levātor, ōris m
encephalon, brain	encephălon, i n
esophageal	esophagēus, a, um
esophagus, gullet	oe(e)sophăgus, i m
ethmoid, sieve-shaped	ethmoidālis, e
extensor (muscle)	m. extensor, ōris m
external	externus, a um
extremity, limb	membrum, i n; extremĭtas, ātis f
eye	ocŭlus, i m
eyeball	bulbus ocŭli
eyebrow	supercilium, i n
eyelash, cilium	cilium, i n
eyelid	palpĕbra, ae f
eye-socket, orbit	orbĭta, ae f
	F
face, surface	facies, ēi f
facial	faciālis, e
fascia	fascia, ae f
femur, thigh bone	femur, ŏris n
fiber, fibra	fibra, ae f
fibrous	fibrōsus, a, um
fibula, splint-bone	fibŭla, ae f
fibular, related to the splint-bone	fibulāris, e
finger	digĭtus, i m

first	primus, a, um
fissure, narrow slit	fissūra, ae f
flank, side	latus, ĕris n
flexor (muscle)	m. flexor, ōris m
flexure, curve, twist	flexūra, ae f
fold	plica, ae f
foot	pes, pedis m
foramen, opening	forāmen, ĭnis n
forearm	antebrachium, i n
forearm bone, radius	radius, i m
forefinger, index	index, ĭcis m
forehead	frons, ntis f
fornix, vault	fornix, ĭcis m
fossa, shallow depression	fossa, ae f
four-headed, quadriceps	quadriceps, cipĭtis
fovea, small pit	fovea, ae f
framework	stroma, ătis n
free	liber, ĕra, ĕrum
front, anterior	anterior, ius
frontal	frontālis, e
fundus, bottom	fundus, i m

G

gallbladder	vesīca fellea
ganglion, nerve node	ganglion, i n
gastric	gastrĭcus, a, um
general	generālis, e
gingiva, gum	gingīva, ae f
girdle	cingŭlum, i n
gland	glandŭla, ae f
globe	globus, i m
glome	glomus, i m
gray	griseus, a, um
great, large	magnus, a, um
greater, larger	major, jus
great toe	hallux, ūcis m
the greatest, the largest	maxĭmus, a, um
groove	sulcus, i m
gullet, esophagus	oe(e)sophăgus, i m
gum, gingiva	gingīva, ae f
gyrus, convolution	gyrus, i m

H

hair	pilus, i m
half	semi-
hamulus, hook	hamŭlus, i m

hand	manus, us f
hard	durus, a, um
hard brain membrane	dura mater
head	caput, ĭtis n
heart	cor, cordis n
hepatic, related to the liver	hepatĭcus, a, um
hiatus, crack, split	hiātus, us m
the highest	suprēmus, a, um
hollow	cavus, a, um
horizontal	horisontālis, e
horn	cornu, us n
humerus, upper arm	humĕrus, i m
humor	humor, ōris m
hyoid (bone)	hyoideus, a, um
hyoid bone	os hyoideum
hypogastric	hypogastrĭcus, a, um
hypoglossal (nerve)	hypoglossus, a, um

I

ileocecal	ileocaecālis, e
ileum	ileum, i n
iliac	iliăcus, a, um
impression	impressio, ōnis f
incisive (tooth)	incisīvus, a, um
index, forefinger	index, ĭcis m
inferior, lower	inferior, ius
inner	internus, a, um
intercostal	intercostālis, e
internal	internus, a, um
interosseal	interosseus, a, um
intestinal	intestinālis, e
intestine	intestīnum, i n
intravenous	intravenōsus, a, um
iris of the eye	iris, irĭdis f
ischiadic	ischiadĭcus, a, um
ischiorectal	ischiorectālis, e
ischium	ischium, i n

J

jejunum	jejūnum, i n
joining, comissure	commissūra, ae f
joint	articulatio, ōnis f
jugular	jugulāris, e

K

kidney	ren, renis m
knee	genu, us n
kneepan	patella, ae f

L

lacrimal, related to tears	lacrimālis, e
lamina, plate	lamĭna, ae f
large, great	magnus, a, um
larger, greater	major, jus
large intestine	intestīnum crassum
the largest, the greatest	maxĭmus, a, um
laryngeal, related to the larynx	laryngēus, a, um
larynx	larynx, yngis m
lateral	laterālis, e
layer	stratum, i n
left	sinister, tra, trum
leg, shin	crus, cruris n
lens	lens, lentis f
levator muscle	m. levātor, ōris m
ligament	ligamentum, i n
limb, extremity	membrum, i n; extremĭtas, ātis f
line	linea, ae f
lingual, related to the tongue	linguālis, e
lip	labium, i n
liver	hepar, ătis n
lobe	lobus, i m
loin	lumbus, i m
long	longus, a, um
the longest	longissĭmus, a, um
lower, inferior	inferior, ius
lower jaw, mandible	mandibŭla, ae f
lumbar, related to the loin	lumbālis, e
lung	pulmo, ōnis m
lymphatic	lymphatĭcus, a, um

M

man	homo, ĭnis m
mandible, lower jaw	mandibŭla, ae f
mandibular, related to the lower jaw	mandibulāris, e
manubrium	manubrium, i n
margin, border	margo, ĭnis m
marrow, medullary substance	medulla, ae f
mastoidal, mammiform	mastoideus, a, um
maxilla, upper jaw	maxilla, ae f
maxillary, related to the upper jaw	maxillāris, e
meatus, passage	meātus, us m
medial	mediālis, e
median, middle	mediānus, a, um
membrane, covering	membrāna, ae f
membrane of the brain or spinal cord	mater, tris f

meninx	meninx, ngis f
mental, related to the chin	mentālis, e
metacarpus	metacarpus, i m
metatarsus	metatarsus, i m
middle	medius, a, um; mediānus, a, um
mouth	os, oris n
mucous	mucōsus, a, um
mucous membrane	mucōsa, ae f
muscle	muscŭlus, i m
muscular	musculāris, e

N

nape of neck, nucha	nucha, ae f
narrow slit, fissure	fissūra, ae f
nasal, related to the nose	nasālis, e
nasolacrimal	nasolacrimālis, e
the nearest	proxĭmus, a, um
neck	collum, i n; cervix, īcis f
nerve	nervus, i m
nerve node	ganglion, ii n
nervous	nervōsus, a, um
net, network	rete, is n
nipple, papilla	papilla, ae f
node	nodus, i m
nose	nasus, i m
nostril	naris, is f
notch	incisūra, ae f
nucha, nape of neck	nucha, ae f
nucleus, centre	nucleus, i m
nutricious	nutricius, a, um

O

oblique	obliquus, a, um
oblong	oblongātus, a, um
occiput, back of the head	occĭput, ĭtis n
occipital	occipitālis, e
opening, foramen	forāmen, ĭnis n
ophthalmic, related to the eye	ophthalmĭcus, a, um
optic, visual	optĭcus, a, um
or	seu
orbit, eye-socket	orbĭta, ae f
orbital, related to the eye-socket	orbitālis, e
organ	orgănon, i n
osseous, bony	ossĕus, a, um
ostium, opening	ostium, i n
oval	ovālis, e

P

palatal, palatine	palatīnus, a, um
palate	palātum, i n
palatoglossal	palatoglossus, a, um
pancreas	pancreas, ătis n
pancreatic, related to the pancreas	pancreatĭcus, a, um
papilla, nipple	papilla, ae f
parietal	parietālis, e
part	pars, partis f
passage, meatus	meātus, us m
pelvic	pelvīnus, a, um
pelvis	pelvis, is f
perineum	perin(a)eum, i n
periosteum	periosteum, i n
peritoneum	periton(a)eum, i n
petrous, stony	petrōsus, a, um
phalanx	phalanx, ngis f
pharyngeal, related to the pharynx	pharyngēus, a, um
pharynx	pharynx, ngis m
plain	planus, a, um
plate, lamina	lamĭna, ae f
pleura	pleura, ae f
plexus	plexus, us m
portal vein	vena portae
posterior, back	posterior, ius
premolar (tooth)	praemolāris, e
process	processus, us m
projection	protuberantia, ae f
proper	proprius, a, um
proximal	proximālis, e
pterigoid, wing-shaped	pterygoideus, a, um
pulmonary, related to the lung	pulmonālis, e
pylorus	pylōrus, i m
pyramid	pyrămis, ĭdis f

Q

quadriceps, four-headed	quadriceps, cipĭtis

R

radial, related to the forearm bone	radiālis, e
radius, forearm bone	radius, i m
raphe	raphe (rhaphe), es f
recess	recessus, us m
rectal	rectālis, e
rectum	rectum, i n
red	ruber, bra, brum

region	regio, ōnis f
renal, related to the kidney	renālis, e
renal pelvis	pelvis renālis
retina	retīna, ae f
retinaculum	retinacŭlum, i n
rib	costa, ae f
right	dexter, tra, trum
root	radix, īcis f
rotator muscle	m. rotātor, ōris m
rough	asper, ĕra, ĕrum
round	rotundus, a, um; teres, ĕtis

S

sacral	sacrālis, e
sacrum	sacrum, i n
scapula, shoulder blade	scapŭla, ae f
second	secundus, a, um
septum, dividing wall	septum, i n
serous	serōsus, a, um
shallow depression, fossa	fossa, ae f
sheath, vagina	vagīna, ae f
shin, leg	crus, cruris n
shinbone, tibia	tibia, ae f
short	brevis, e
shoulder	brachium, i n
shoulder blade, scapula	scapŭla, ae f
side, flank	latus, ĕris n
sieve-shaped, cribrate	cribrōsus, a, um
sieve-shaped, ethmoid	ethmoidālis, e
simple	simplex, ĭcis
sinus	sinus, us m
skeleton	skelĕton, i n
skin	cutis, is f
skull, cranium	cranium, i n
small intestine	intestīnum (i) tenue (is)
smaller	minor, minus
the smallest	minĭmus, a, um
small pit, fovea	fovea, ae f
soft brain membrain	pia mater
space	spatium, i n
sphenoidal, wedge-shaped	sphenoidālis, e
sphincter (muscle)	m. sphincter, ēris m
spinal	spinālis, e
spinal cord, spinal marrow	medulla spinālis
spine	spina, ae f
spinous	spinōsus, a, um
spleen	lien, liēnis m; splen, splenis m
splint-bone, fibula	fibŭla, ae f

split, crack, hiatus	hiātus, us m
spongy	spongiōsus, a, um
spur, calcar	calcar, āris n
squama, scale	squama, ae f
squamous, scaly	squamōsus, a, um
stapes	stapes, ĕdis m
sternal, related to the breast bone	sternālis, e
sternocostal	sternocostālis e
sternum, breast bone	sternum, i n
stomach	gaster, tris f
stony, petrous	petrōsus, a, um
straight	rectus, a, um
stroma, framework	stroma, ătis n
structure	structūra, ae f
sublingual	sublingualis, e
substance	substantia, ae f
superficial	superficiālis, e
surface	superficies, ēi f
superior, upper	superior, ius
suprarenal	suprarenālis, e
surface, face	facies, ēi f
suture, seam	sutūra, ae f
sympathetic, sympathic	sympathĭcus, a, um
symphysis	symphysis, is f
synchondrosis	synchondrōsis, is f
system	systēma, ătis n

T

tegmen, roof	tegmen, ĭnis n
temple	tempus, ŏris n
temporal	temporālis, e
tendon	tendo, ĭnis m
tensor muscle	m. tensor, ōris m
thalamus	thalămus, i m
thigh, thigh bone, femur	femur, ŏris n
thoracic	thoracĭcus, a, um
thorax, chest	thorax, ācis m
three-headed, tricipital	triceps, cipĭtis
thumb	pollex, ĭcis m
thymus gland	thymus, i m
thyroid	thyr(e)oideus, a, um
thyroid gland	glandŭla thyr(e)oidea
tibia, shin bone	tibia, ae f
top, apex	apex, ĭcis m
tip of the elbow	olecrănon, i n
tissue	textus, us m
tongue	lingua, ae f
tonsil	tonsilla, ae f

tonsillar, tonsillary	tonsillāris, e
tooth	dens, dentis m
top, apex	apex, ĭcis m
trachea, windpipe	trachēa, ae f
tract	tractus, us m
transverse	transversālis, e; transversus, a, um
trapezoid	trapezoideus, a, um
tricipital, three-headed	triceps, cipĭtis
trigeminal	trigemĭnus, a, um
true	verus, a, um
trunk	truncus, i m
tube	tuba, ae f
tuber	tuber, ĕris n
tubercle	tubercŭlum, i n
tuberosity	tuberosĭtas, ātis f
two-headed, bicipital	biceps, cipĭtis
tympanic	tympanĭcus, a, um

U

ulna, elbow bone	ulna, ae f
under, beneath	infra-; sub-
upper, superior	superior, ius
upper arm	humĕrus, i m
upper jaw, maxilla	maxilla, ae f
ureter	urēter, ēris m
urethra	urethra, ae f
urinary	urinarius, a, um
urinary bladder	vesīca urinaria
uterus, womb	utĕrus, i m

V

vagina, sheath	vagīna, ae f
vaginal	vaginālis, e
valve	valva, ae f; valvŭla, ae f
vault, fornix	fornix, ĭcis m
vein	vena, ae f
venous	venōsus, a, um
ventral	ventrālis, e
ventricle (heart chamber)	venrtricŭlus, i m
vertebra	vertĕbra, ae f
vertebral	vertebrālis, e
vertex	vertex, ĭcis m
vessel	vas, vasis n
vestibule	vestibŭlum, i n
viscera	viscĕra, um n (pl.)
viscerālis, e	visceral, realted to the inner organs

visual	optĭcus, a, um
vitreous	vitreus, a, um
vomer	vomer, ĕris m

W

wall	paries, ĕtis m
wedge-shaped, sphenoidal	sphenoidālis, e
white	albus, a, um
wide, broad	latus, a, um
the widest	latissĭmus, a, um
windpipe, trachea	trachēa, ae f
wing	ala, ae f
wing-shaped, pterigoid	pterygoideus, a, um
womb, uterus	utĕrus, i m
wrist	carpus, i m

Y

yellow	flavus, a, um

Z

zygoma	zygōma, ătis n
zygomatic	zygomatĭcus, a, um

CLINICAL TERMINOLOGY

LESSON 1

INTRODUCTION TO THE CLINICAL TERMINOLOGY

The main objectives of the lesson are:
1) to learn the basic theoretical information about clinical terminology;
2) to learn the specifics of stressing some clinical terms;
3) to train in forming compound Latin clinical terms;
4) to train in translating clinical terms from Latin into English, and vice versa.

The material of "Clinical terminology" division prepares students to study professionally oriented disciplines at a medical university and introduces special word-terms to be used actively. Taking care of bedridden patients, treatment, is *'klinike techne'* in Greek. Therefore, terminology of this field of medicine is called clinical.

Clinical terminology deals with various subjects, processes, phenomena associated with prophylaxis, diseases diagnostics, means of examination and treatment of patients. Clinical terminology also includes names of operations, methods of examination and treatment, medical devices, instruments, equipment and so on.

§1. Basic languages of clinical terminology

Medicine as a science was formed in ancient Greece in V century B. C. Hippocrates was an outstanding representative of this classical period field of science. It is considered that he was the first to generalize his great medical experience in the form of medical works: he described manifestations of pleuritis, intestinal bleeding, intestinal obstruction, mumps, tetanus, kidney lesions; he worked out a theory about treatment of fractures, dislocations and injuries of various kinds. His works have first information about anatomy of female genital system, data about abnormal fetal positions which required surgical intervention, and also ideas about women's diseases and their treatment. Hippocrates paid great attention to matters of diagnostics of various diseases and described their general manifestations and localization.

Works of Hippocrates and his followers were later joined into the so-called "Hippocrates' collection» – «Corpus Hippocraticum». In this collection, the au-

thors rather logically employ for special use a definite group of words singled out from the living spoken language and this group includes questions of **physiology, pathology, symptomatology and nosology**[1]. Thus, we can speak about the beginning of scientific medical terminology formation. Up to our days doctors use as special terms many names first given in «Hippocrates' collection»: *bronchus, urethra, herpes, carcinoma, kyphosis, coma, nephritis, paresis, polyp, symphysis, typhus, cholera, epidemic* and many others.

Alexandrian scientists developing lexicon of medical science began to introduce neologisms into it — artificially formed words which had not existed in the language before to denote special concepts. They are *prostate, diastole, systole, parenchyma* and others. For the first time the term *pathology* was used regarding various kinds of diseases. They also edited scientific works of predecessors and sorted out the existing professional vocabulary. Since then medical terminology began to form as a definite system.

Rome contributed little into the development of medicine, it was the center where mostly Greek doctors worked. However, it is necessary to mention the role of Cornelius Celsus in working out Latin scientific medical terminology. The special vocabulary used by the ancient Roman author almost completely got into the vocabulary of scientific medicine. For example, *abdomen, anus, articŭlus, caecum intestīnum, cartilāgo, cervix, cubĭtus, digĭtus, femur, humĕrus, index* and so on. Celsus widely used authoritative and precise Greek names, giving them as equivalents of Latin words. This parallelism, doublet denotation of the same medical concepts by Greek and Latin words or their stems became a characteristic feature of medical terminology. In further term formation process Greek words were preferably used in the field of pathology (pathos *disease* + logos *science*). Words of Latin origin prevailed indescriptive anatomy.

Thus, beginning from antiquity medical terminology began to form on bilingual Greek-Latin basis. Latin and Greek words and term-elements are basic for terminology of all sciences, and first of all medicine, they are used in everlasting process of neologisms formation.

Content and laconicism of the Latin and Greek languagesmake it possibleto combine in one word information which has to be translated into English by some words, for example *stomatitis, itidis f* — inflammation of mucous lining of the oral cavity, *cholecystoscopia, ae f* — examination of the gall-bladder inner walls.

Learning the term-elements given in this manual will expand vocabulary of students and will give them possibility to understand many medical terms easily. Thus, about 50 terms are formed from the term-element *arteri-*, more than 150 terms are formed from the term-elements *haem-* and *-aemia*. The term-element *oste-* is a part of 100 terms (Шпак А. М. Методика изучения медицинской терминологии. — Винница, 1961). Along with words of Greek origin clinical terminology has terms of Latin origin, for example, resectio, ōnis f —

[1]Greek. nosos *disease*+ logia *study, science – different particular diseases with their own names*

removal of a part of an organ, ulcus, ĕris n — *ulcer*, tuberculōsis, is f — *tuberculosis*, cancer, cri m — *cancer* and others. Besides, there are term-hybrids those are words which consist of Latin and Greek term-elements, for example dysfunctio, ōnis f — *impairment of afunction,* tonsillītis, itĭdis f — *inflammation ofpalatine tonsils*.

The purpose of the new division is to study not individual meaning of each word but common, recurrent constituents which are in the structure and meaning of a wide range of similarly formed words.

§2. Structure of clinical terms

Clinical terms vary in their structure. They are divided into one-word and multiword terms. In its turn, one-word terms may be simple, compound and derivative.

Simple clinical terms are words of Latin or Greek origin which cannot be divided morphologically within the limits of modern terminology: stupor – *numbness*; trauma – *damage in tissuesintegrity under the influence of external factors*; infarction – *limited areaof necrotizing tissue mortified as a result of blood supply stop*; contusion – *general affection of the organismas a result of instantaneous mechanical lesion* and others. More often they are not translated, but transliterated by means of national languages and are international:

Latin	*Russian*	*Belorussian*	*English*	*French*	*German*
infarctus	инфаркт	інфаркт	infarction	Infarctus	Infarct
contusion	контузия	кантузія	contusion	Contusion	Kontusion
pneumonia	пневмония	пнеўманія	pneumonia	Pneumonie	Pneumonie
stupor	ступор	ступар	stupor	Stupeur	Stupor
trauma	травма	траўма	trauma	Traumatisme	Trauma

Compound clinical terms are formed by combining two or some roots. Greek roots are usually combined with the vowel **-o-** in compound words. For example: *gastr-o-scopia, cyst-o-plegia, vas-o-gramma.* The interfix **-i-** is used in words of Latin origin: *viv-i-ficatio (revivification)*. But in artificial neologisms this linguistic regularity has not been followed any more, and the combining vowel -o- is preferably used to form new words: *cardi-o-lysis*, *nas-o-lacrimalis* and so on. Stems of compound words may be also combined without the combining vowel, if the first component finishes with a vowel or the second one begins with a vowel: *brad<u>y</u>-cardia*, *hem<u>i</u>-plegia*, *neur-<u>a</u>lgia*, *hyster-<u>e</u>ctomia* and so on.

Derivative terms consist of:

-a root and a prefix: dia+*agnōsis – diagnosis, recognition*;

-a prefix, a root and a suffix: para-+nephr-+-itis – *paranephritis, inflammation of paranephric cellular tissue*, peri-+nephr-+-itis – *perinephritis, inflammation of kidney fibrous capsule*;

-a root and a suffix: nephr-+-itis – *nephritis, kidney inflammation*,nephr-+-osis – *nephrosis, general nameof kidney diseases with the lesion of renal tubules.*

Multiword clinical terms are formed according to principles of Latin grammar and are word combinations with agreed or non-agreed attributes. For example, mastopathia fibrosa – *fibrous mastopathy*; gastrorrhagia profūsa – *profuse gastric bleeding*; vitium cordis – *heart disease*; tuberculōsis pulmōnum – *tuberculosis of the lungs*; cancer cervīcis utĕri – *cancer of the neck of the womb*. As you see from examples the models of the multiword clinical terms are the same that the anatomical ones:

noun in the Nom. sing. (or plur.) + noun in the Gen. sing. (or plur.):

cysta pancreatis – cyst of the pancreas;

noun in the Nom. sing. (or plur.) + adjective:

morbus ulcerosus acutus – acute ulcerative disease;

noun in the Nom. sing. (or plur.) + noun in the Gen. sing. (or plur.) + adjective:

fractura pedis transversa – transverse fracture of the foot.

§3. Concept «term-element». Independent words as TEs

Ancient Greek and Latin words make up the basis of international clinical terms. In many cases words of Greek origin are used only as a constituent part of compound words expressing widespread medical definitions and concepts. For example, the term *pathologia* – a field of medicine studying morbid processes in the organism – dates back to the Greek words *pathos* – 'suffering, disease' and *logos* – 'study' (Eng. – pathology; Fr. – pathologie; Germ. – Pathologie; Russ. – патология). The first part of the word *path-* is also present in the words *pathogenus, pathogenesis, pathophysiologia* and some others. The second part *-logia* is found much more often and not only in medical terms: *biologia, histologia, gynaecologia, morphologia, antropologia* and so on. But in every case we can state that these parts preserve the original meaning of the language-basis.

Thus, there exists practice to learn clinical terms not as a separate word, compared to anatomical vocabulary according to their constituent parts grouping new words on the basis of identical structural elements which will be further called term-elements (TEs).

Term-element is any word part (a prefix, a root, a suffix) which has one and the same meaning in different words.

According to the place in a word TEs may be first and final. First TEs are given in tables with a little line after the last letter: *bio-; ophthalm-; ot-* and so on. Final TEs begin with such a line: *-logia; -scopia; -iatria* and so on. Final term-elements have grammatical ending by which we can determine gender and declension of a term. Although most TEs are of Greek origin, their endings are

Latinized and coincide with the declension of Latin nouns according to grammatical signs: *pathologia, aef; leucocytus, i m* and so on. In some cases TEs have two variants of use: as the first one with the little line at the end and as the final one beginning with the line and having the ending of masculine or feminine gender: *path-; -pathia*. The place of a term-element in a term does not change its meaning.

Some words having independent meaning may be used as final term-elements:

carcinōma, ătis n – *malignant tumor developing from scaly or glandular epithelium*	adenocarcinōma, ătis n – *malignant tumor from glandular epithelium*
diagnostica, ae f *1.science about diseases recognition; 2. process of a patient examination*	iridodiagnostica, ae f *diagnostics of diseases by the eye iris*
therapia, ae f – *science of internal diseases treatment*	hydrotherapia, ae f – *treatment with water*

Meaning of compound terms is determined by the meanings of their component TEs. Sometimes general meaning of a term is formed from separate TEs meanings, but in most words a TE is the only semantic help necessary for term understanding. Usually general meaning is wider or narrower than the word components meanings. For example, let's determine meaning of the terms *biologia, ophthalmologia* and learn the meaning of the term-elements composing these words: *bio- -–* life; *ophthalm-* – eye; *-logia* – science, field of science, field of medicine.

The last term element has several variants of meaning that is why it is necessary to think over which of them is more appropriate for each word. First variant 'science' is more appropriate for the word *biologia* as we know that biology is a theoretical non-medical discipline. Ophthalmology is a medical speciality. Therefore, it is correct to say that it is a field of medicine. We also know that eye structure is studied by anatomy, so such definitions – as ophthalmology is a field of medicine dealing with eye diseases treatment, and biology is a science about life, living organisms – are correct.

Characteristic feature of Greek-Latin origin clinical terms is to give complex meanings in a short way. It explains why they are so actively used in modern medicine.

Methods of clinical terminology study presuppose learning the meaning of separate TEs and ways of forming derivative and multiword terms.

§4. Doublets ─ characteristic feature of medical terminology

Term-elements of Latin origin may be used along with Greek term-elements in clinical terminology. As a result of this the so-called doublet pairs have been formed. For example:

Greek term-element	Latin word	Translation
cyst-	vesīca urinaria	urinary bladder
proct-	rectum, i n	rectum
colp-	vagīna, ae f	vagina

Latin and Greek names of anatomical formations having absolutely identical meaning are called Greek-Latin doublets (from Latin *duplex* doubled). Doublet character of roots in terms formation sometimes leads to occurrence of doublet terms: *cystographia, vesicographia* – X-ray examination of the urinary bladder; *proctoscopia, rectoscopia* – rectum examination with the help of a special device; *colpitis, vaginitis* – inflammation of the vagina and so on. In these cases substitution of the derivating stem does not change the meaning of the derivative term.

§5. Stress in clinical terms

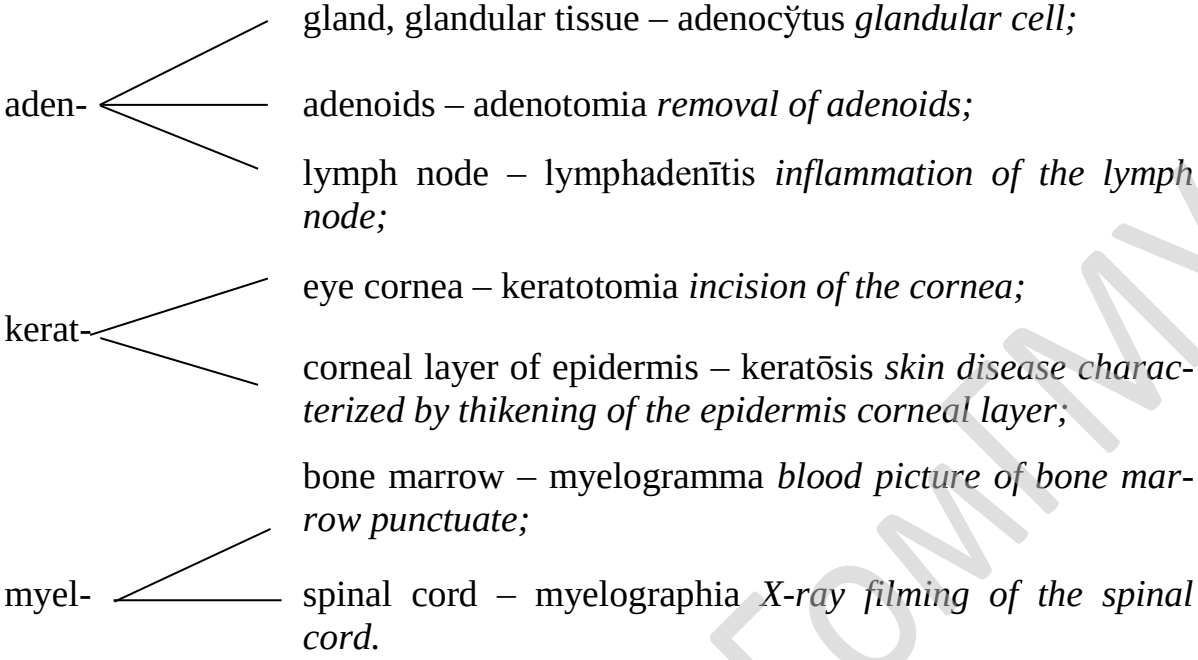
To stress medical terms may be difficult in many cases. On reading latinized Greek words ending with *-ia*, the words with the final TE *-lógia* as well as *apáthia, sympáthia, agónia, artéria, anatómia, hérnia* are read according to the rule of the Latin language «a vowel before a vowel is short», that is the stress falls on the third from the end syllable. In other cases the second from the end syllable is stressed: *nephrectomía, hemiplegía, tachyphagía* and others.

The third from the end syllable must be stressed in terms with the final TEs *-cўtus, -genĕsis, -gĕnus, -lithiăsis, - lĭthus, - lŏgus, - lўsis, -stăsis, -stŏma*.

§6. Term-elements with multiple meaning, variation and many components

In most cases TEs are monosemantic, but some of them may have two or more meanings which cannot be divided into main and secondary and all of them must be learnt.

For example:



We should distinguish between multiple meanings and cases of TEs homonymy, when they are formed from different stems but coincided in spelling and reading. For example, the TE **arthr**- is the stem of the Greek noun *'arthr-on' – joint.* It is a constituent part of the terms: haem-arthr-osis – *accumulation of blood in the joint cavity;* arthr-algia – *pain in the joints;* arthr-osis – *chronic disease of a joint of distrophic character with articular cartilage lesion;* dys-arthr-osis – *amalformed joint, a false jointand others.* In the following terms the TE **arthr-** is the stem of the Greek verb *'arthroo'– to pronounce distinct sounds, to articulate*: dys-arthr-ia – *articulate speech disorder;* an-arthr-ia – *inability of distinct articulate speech, the gravest degree of dysarthria*. As we see, root TEs are identical in both cases.

In the terms metrographia – *X-ray examination of the uterine cavity after instillation of contrast medium*; metroptosis – *falling of uterus*; metrorrhagia – *acyclicuterine bleeding*; metrorrhexis – *rupture of the pregnant uterus*, the TE **metr**- dates from the Greek noun *'metr-a' – uterus*. But in the term hypermetropia – *farsightedness, anomaly of refraction characterized by focusing of the got into the eye parallel beams behind the retina*, the TE **metr-** is the stem of the Greek noun *'metr-on' – measure of distance*.

Some TEs have variants depending on the case form of the initial word of the language-basis. For example, the TEs *haem-*, *pneum-*, *derm-*, *stom-* originate from the form of Nominative case and their variants *haemat-*, *pneumat-*, *dermat-*, *stomat* –from the stem of Genitive case.

LESSON 2

§7. Term-elements used in the formation of names of medical specialities and related disciplines, specialists, methods of primary diagnostic control, appliances and instruments

The main objectives of the lesson are:

1) to learn the term-elements used in names of medical specialities and related disciplines, specialists, methods of primary diagnostic control, appliances and instruments;

2) to be able to analyze compound Latin clinical terms;

3) to train in forming compound Latin clinical terms;

4) to train in translating clinical terms from Latin into English, and vice versa.

Final term-elements

Term-element	Meaning	English equivalent
-logia	science, field of science, field of medicine	*-logy*
-lŏgus	specialist (in the field of some science), doctor	*-logist*
-metria	measuring, determining (according to size, quantity)	*-metry*
-paedia	teaching, correction of defects	*-pedia*
-scopia	examination, investigation by special instruments	*-scopy*
-scopium	special instrument	*-scope*
-iater	doctor, specialist	*-atrician, -atrist*
-iatria	science of diseases treatment	*-iatry, -atrics*
-therapia	treatment with the use of methods, treatment by means	*-therapy*

Root term-elements

Greek term-element	Latin term	Meaning	English equivalent
bio-	vita, ae *f*	life	*bi-*
dactyl-	digĭtus, i *m*	finger	*dactyl-*
derm-; dermat- (-dermia)	cutis, is *f*	skin	*derm-, dermat-*

Greek term-element	Latin term	Meaning	English equivalent
embry-	1) embryo, ōnis *m* 2) fetus, us *m*	1) embryo (a living organism from the fertilized ovum to the first 8 weeks of intrauterine life) 2) fetus (a living organism after first 8 weeks of intrauterine life)	*embry-*
geri-; geront-	senex, senis *m, f*	old man, old woman (process of aging)	*ger-, geront-*
gynaec-	femĭna, ae *f*	woman, female	*gynec-*
laryng-	larynx, ngis *m*	throat, larynx	*laryng-*
morph-	forma, ae *f*	appearance, form	*morph-*
noso-*	morbus, i *m*	disease	*noso-*
onc-	tumor, ōris *m*	tumor	*onc-*
ophthalm-	ocŭlus, i *m*	eye	*ophthalm-*
ot-	auris, is *f*	ear	*ot-*
paed-	infans, ntis *m, f*	child, baby	*ped-*
phon- (-phonia)	vox, vocis *f*	voice	*phon- (-phonia)*
phthisi-	tuberculōsis, is *f*	tuberculosis	*phthisi-*
physi-	natūra, ae *f*	- nature; - normal vital processes in the organism	*physi-*
psych-	anĭmus, i *m*	soul, consciousness, psyche	*psych-*
rhin-	nasus, i *m*	nose	*rhin-*
stomat- (-stomia)	os, oris *n*	mouth, oral cavity	*stomat-*

Prefix term-element

endo-	inside

nosologia – study about forms and classification of diseases.

Simple medical terms:

Latin simple term	English equivalent	Meaning
aetiologia, ae *f*	etiology	*study about causes of a disease*
anamnēsis, is *f*	anamnesis	*the information about the beginning and development of a disease received by questioning the patient or his relatives*
diagnōsis, is *f*	diagnosis	*recognition, determining of a disease on the basis of anamnesis and investigation*
diagnostica, ae *f*	diagnostics	*1. science about diseases recognition; 2. process of a patient's examination*
epicrĭsis, is*f*	epicrisis	*a conclusion containing explanation about possible causes of a disease, description of its course, treatment and outcome*
infarctus, us *m*	infarction, infarct	*a limited area of the tissue mortification in blood supply stop*
insultus, us *m*	stroke	*acute disturbance of blood supply in some part of brain (sometime causing inability to move a part of the body)*
necrōsis, is *f*	necrosis	*mortification (death) of tissues*
sclerōsis, is *f*	sclerosis	*hardening of tissues*
stenōsis, is *f*	stenosis	*narrowing of canals or openings*
symptōma, ătis *n*	symptom	*a sign, characteristic manifestation of a disease*
syndrŏmum, i *n*	syndrome	*combination of symptoms which make up a certain clinical presentation*
therapia, ae *f*	therapy	*a science about treatment of internal diseases*
ulcus, ĕris *n*	ulcer	*local destruction of the main skin layer or mucous lining, usually healing slowly and infected with pyogenic microorganisms*

EXERCISES

Ex. 1. Give the lexical form of Latin equivalents corresponding to the following Greek roots:

phthisi-, rhin-, dermat-, gynaec-, ophthalm-, embry-, morph-, ot-, physi-, stomat-, psych-

Ex. 2. Give Greek equivalents to the Latin ones:

femĭna, ae f; nasus, i m; embryo, ōnis m; ocŭlus, i m; cutis, is f; inside; natūra, ae f; os, oris n, forma, ae f; tuberculōsis, is f.

Ex. 3. Give definitions to the following words:

-lŏgus	-iater	-lŏgus; -iater
oncolŏgus	paediater	psycholŏgus
otorhinolaryngolŏgus	phthisiater	psychiater
gynaecolŏgus	phoniater	gerontolŏgus
ophthalmolŏgus		geriater
biolŏgus		
embryolŏgus		
stomatolŏgus		
physiolŏgus		
dermatolŏgus		

Ex. 4. Make up terms with the following term-elements, explain their meaning:

1) dermat(o) -logia; (-lŏgus);
2) ophthalm(o) -logia; (-lŏgus; -metria; -scopia; -scopium);
3) physi(o) -logia; (-lŏgus; -therapia);
4) psych(o) -logia; (-lŏgus; -iatria; -iater; -therapia);
5) stomat(o) -logia; (-lŏgus; -scopia);
6) paed- -iatria; (-iater);
7) phthisi- -iatria; (-iater).

Ex. 5. Make up and write down Latin terms with the following meaning:

1) scientific study about:

a) life; b) normal vital processes in the organism; c) man's psyche; d) embryo development; e) process of aging; f) external shape and inner structure of the human body; g) forms and classification of diseases.

2) field of medicine dealing with treatment of:

a) eye diseases; b) diseases of a female genital system; c) skin diseases; d) diseases of the oral cavity; e) old age diseases; f) psyche diseases (mental diseases); g) children diseases.

3) treatment with the help of:

a) influence on psyche; b) physical natural and artificial factors.

4) examination of:

a) the oral cavity; b) nose; c) fundus of the eye; d) ear; e) interior of the hollow organs or tubular formations.

5) a doctor who treats:

a) tuberculosis; b) ear, throat, nose; c) psychiatric diseases; d) eye diseases; e) skin diseases; f) oral cavity diseases.

Ex. 6. Explain the meaning of the following terms:

nosologia; morphologia; dermatologia; dermatolŏgus; geriatria; gerodermia; gerontologia; dactyloscopia; ophthalmolŏgus; otolaryngolŏgus; otorhinolaryngologia; otoscopia; phonendoscopium; phthisiater; physiologia; physiolŏgus; psychiater; rhinoscopia; rhinoscopium; stethoscopium; stomatoscopia.

*** Stethoscopium** (from Greek στηθοσκόπιο, στήθος (stéthos) - chest and σκοπή (skopé) - examination) – stethoscope – a medical instrument for listening to the action of someone's heart or breathing, having a small disc that is placed against the chest and two tubes connected to earpieces.

*** Phonendoscopium** (from Greek φωνενδοσκόπιο, from **φωνή** (phone) – sound, **ἔνδον** (endo) -inner; internal andσκοπή (skopé) - examination) – phonendoscope – a form of stethoscope that intensifies the auscultatory sounds by means of two parallel resonating plates, one resting on the patient's chest or attached to a stethoscope tube, the other vibrating in unison with it.

Ex. 7. Explain the meaning of the following terms:

1**) -iatria:** psychiatria, phthisiatria, paediatria, geriatria, phoniatria.

2) **-logia:** nosologia, dermatologia, gerontologia, oncologia, embryologia, otorhinolaryngologia.

3) **-scopia:** ophthalmoscopia, otoscopia, rhinoscopia, endoscopia.

4) **-lŏgus:** dermatolŏgus, ophthalmolŏgus, physiolŏgus, otolaryngolŏgus.

5) **-therapia:** physiotherapia, psychotherapia.

Ex. 8. Give the Latin lexical form and the full definition of each term in English:

otorhinolaryngology, biologist, geriatrics, ophthalmology, phoniatrics, physiotherapy, psychiatrics (psychiatry), physiology, stomatology, paediatrics, gerontology, ophthalmoscopy, otolaryngologist, psychologist, rhinoscopy, pediatrician, gynaecologist, rhinoscope.

Ex. 9. Learn the following professional expressions:

1) Anamnēsis morbi. *Information about a disease.*

2) Anamnēsis vitae. *Information about life.*

3) Diagnōsis certa. *Definite diagnosis.*

4) Diagnōsis dubia. *Doubtful diagnosis.*

5) Diagnōsis probabĭlis. *Probable, preliminary diagnosis.*

6) Diagnōsis ex juvantĭbus. *Diagnosis on the basis of adjuvant means effect.*

7) Diagnōsis ex observatiōne. *Diagnosis on the basis of observation.*

LESSON 3

§8. Terms denoting various psychosomatic pathologies, methods of electro- and roentgenographic control

The main objectives of the lesson are:

1) to learn the term-elements denoting various psychosomatic pathologies, methods of electro- and roentgenographic control;

2) to be able to analyze compound Latin clinical terms;

3) to train in forming compound Latin clinical terms;

4) to train in translating clinical terms from Latin into English, and vice versa.

Final term-elements

Term-element	Meaning	English equivalent
-pathia	general name of diseases	*-pathy*
-graphia	1) X-ray examination; 2) examination of electrical activity *(of the heart or brain)*	*-graphy*
-gramma	result of examination or X-ray picture	*-gram*
-algia	pain (ache)	*-algia (-algy)*
-odynia		*-odynia*
-phobia	obsessive fear	*-phobia*
-mania	abnormal addiction to something	*-mania*
Suffix term-elements		
-ītis, itĭdis *f*	inflammation	*-itis*
-ōsis, is *f*	non-inflammatory disease	*-osis*

Root term-elements

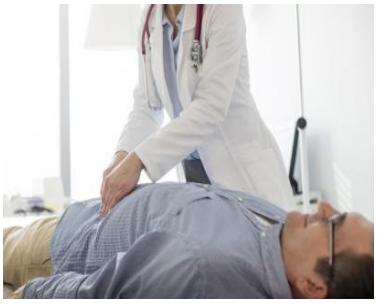
Greek term-element	Latin term	Meaning	English equivalent
angi-	vas, vasis *n*	vessel	*angi-*
arthr-	articulatio, ōnis *f*	joint	*arthr-*
cardi- (-cardia)	cor, cordis *n*	heart	*cardi- (-cardia)*
cephal-; -cephalia	caput, ĭtis *n*	head	*cephal-*
cholecyst-	vesīca fellea	gall-bladder	*cholecyst-*
cyst-	vesīca urinaria	urinary bladder	*cyst-*
encephal-	cerĕbrum, i *n*	brain	*encephal-*
gloss-	lingua, ae *f*	tongue	*gloss-*

Greek term-element	Latin term	Meaning	English equivalent
hydr-	aqua, ae *f*	water	*hydr-*
my-, myos-	muscŭlus, i *m*	muscle	*my-*
myel- (myelia)	medulla spinālis	spinal cord	*myel- (-myelia)*
neur-	nervus, i *m*	nerve	*neur-*
odont-	dens, dentis *m*	tooth	*odont-*
oste-	os, ossis *n*	bone	*oste-*
osteomyel-	medulla ossium	bone marrow	*osteomyel-*
path-	morbus, i *m*	disease, disorder	*path-*
phleb-	vena, ae *f*	vein, venous network	*phleb-*
pyr-	febris, is *f*	1. fire 2. fever	*pyr-*
somat-	corpus, ŏris *n*	body	*somat-*
spondyl-	vertĕbra, ae *f*	vertebra, backbone	*spondyl-*
tox-, toxic-	venēnum, i *n*	poison	*tox-, toxic-*

Simple medical terms:

Latin simple term	English equivalent	Meaning
angīna, ae *f*	quinsy	*acute infectious disease of pharyngeal lymphadenoid ring*
ascītes, ae *m*	ascites	*accumulation of fluid in the abdominal cavity*
asthenia, ae *f*	asthenia	*general weakness, characterized by exhaustion of nervous and mental processes in the organism*
auscultatio, ōnis *f*	auscultation (1)	*listening to the internal sounds of the body, usually using a stethoscope (performed for the purposes of examining the circulatory, respiratory and gastrointestinal systems)*
curatio, ōnis *f*	curing	*care, taking care of the patient, treatment*
cysta, ae *f*	cyst	*hollow tumor with liquid or semi-liquid contents*
habitus, us *m*	habitus	*combination of external signs, body-build*
hydrops, ōpis *m*	hydrops	*accumulation of fluid in some body cavity*
oedema, atis *n*	oedema	*accumulation of fluid in tissue spaces*
palpatio, ōnis *f*	palpation (2)	*medical diagnostic examination with the hands to discover internal abnormalities*
pathologia, ae *f*	pathology	*1) deviation from norm;* *2) field of medicine, studying regularities of morbid processes arising*
percussio, ōnis *f*	percussion (3)	*a method of tapping body parts with fingers, hands, or small instruments*
toxicosis, is *f*	toxicosis	*any diseased condition due to poisoning*

(1)



(2)

(3)

EXERCISES:

Ex. 1. Give the lexical form of Latin equivalents corresponding to the following Greek roots:

encephal-, spondyl-, cholecyst-, phleb-, hydr-, toxic-, cephal-, somat-, arthr-, cardi-, path-, my-, oste-, angi-, odont-.

Ex. 2. Give Greek equivalents to the Latin ones:

medulla ossium; corpus, ŏris n; lingua, ae f; vesīca fellea; os, ossis n; aqua, ae f; venēnum, i n; cerĕbrum, i n; vertĕbra, ae f; vas, vasis n; morbus, i m; muscŭlus, i m; articulatio, ōnis f; vena, ae f; nervus, i m; dens, dentis m.

Ex. 3. Make up terms with the following term-elements, explain their meaning:

1) angi-(o) -gramma; (-logia);
2) arthr-(o) -pathia; (-gramma; -logia; -algia);
3) cardi-(o) -pathia; (-gramma; -logia; -lŏgus);
4) cholecyst-(o) -pathia; (-gramma; -ītis);
5) cyst-(o) -pathia; (-gramma; -ītis);
6) encephal-(o) -pathia; (-gramma; -ītis);
7) my-(o), myos- -algia; (-odynia; -logia; -pathia; -ītis);
8) myel-(o) -pathia; (-ītis; -gramma);
9) neur-(o) -algia; (-ītis; -logia; -pathia; -osis);
10) odont(o) -algia; (-logia);
11) phleb-(o) -graphia; (-gramma; -ītis);
12) spondyl-(o) -ītis; (-ōsis; -pathia);
13) toxic- (o) -ōsis; (-logia; -phobia; -mania);
14) hydr-(o) -arthrōsis; (-cephalia; -phobia; -ophthalmus; -therapia).

Ex. 4. Explain the meaning of the following terms:

1) **-pathia:** cystopathia; cardiopathia; cholecystopathia; ophthalmopathia; rhinopathia; otopathia; osteopathia; angiopathia; neuropathia; myelopathia; arthropathia; encephalopathia.

2) **-graphia:** cardiographia; cystographia; phlebographia; spondylographia; cholecystographia; myelographia; angiographia.

3) **-gramma:** encephalogramma; angiogramma; phlebogramma.

4) **-algia:** cephalgia; odontalgia; glossalgia; arthralgia; neuralgia; myalgia.

5) **-phobia:** pyrophobia; toxicophobia; gynaecophobia; hydrophobia, nosophobia; phthisiophobia; iatrophobia.

6) **-ītis:** encephalītis; myocardītis; glossītis; cholecystītis; otītis; arthrītis; spondylitis. phlebītis; cystītis; rhinītis; peritonītis; dermatītis; neurītis; myositis.

7) **-ōsis:** dermatōsis; spondylōsis; arthrōsis; psychōsis; neurōsis; toxicōsis.

Ex. 5. Make up and write down in Latin terms with the following meaning:

1) general name of the diseases of:

a) the eyes; b) gall-bladder; c) bones; d) nervous system; e) nose; f) backbone; g) psyche; h) heart; i) brain; j) vessels; k) spinal cord; l) joints.

2) examination (by X-rays or electric current) of:

a) the venous network; b) gall-bladder; c) urinary bladder; d) heart; e) vessels; f) spinal cord.

3) inflammation of:

a) the gall-bladder; b) urinary bladder; c) skin; d) nose; e) oral cavity; f) tongue; g) joint; h) brain; i) peritoneum.

4) non-inflammatory disease of:

a) joints; b) skin; c) psyche; d) nervous system; e) backbone.

5) obsessive fear of:

a) women; b) poisoning with toxins; c) water; d) fire.

6) pathological addiction to:

a) poisonous substances and drugs; b) setting fire.

7) a) pain in joints; b) toothache; c) headache; d) muscle pain; e) tongue pain; f) pain in the chest; g) pain in the muscles of the chest.

Ex. 6. Explain the meaning of the following terms:

angiocardiographia; cholecystītis; angiologia; cephalgia; encephalītis; encephalomyelītis; myocardītis; glossalgia; myosītis; neurodermītis; neurolŏgus; osteoarthrītis; osteoarthropathia; osteoarthrōsis; osteomyelītis; osteologia; pathologia; peritonītis; phlebogramma; thoracodynia; thoracomyodynia; thrombophlebītis; neurasthenia; toxicōsis; psychōsis; psychopathia, myologia.

Ex. 7. Give the Latin lexical form and the full definition of each term in English:

arthropathy, stenosis, dermatosis, phlebography, cystitis, etiology, neuralgia, cardiogram, toxicomania, spondylopathy, diagnosis, angiology, cystography, rhinopathy, necrosis, osteitis, encephalogram, tonsillitis, arthralgia, psychosis, infarct, cardiopathy, therapy, odontalgia, rhinogram, myelitis, hydrarthrosis, sclerosis, cephalgia, toxicosis, angiopathy, arthritis, ulcer, glossalgia, epicrisis, pathophysiology.

Ex. 8. Learn the following professional expressions:

1) Diagnōsis bona — curatio bona. *Correct diagnosis — correct treatment.*

2) Habĭtus aegroti. *Patient's appearance.*

3) Ubi pus, ibi evacua. *Evacuate, if there is pus.*

4) Ubi pus, ibi incisio. *If there is pus, there is an incision.*

LESSON 4

§9. Term-elements used in the formation of terms denoting surgical manipulations, ways of surgical aid

The main objectives of the lesson are:

1) to learn the term-elements used in the formation of terms denoting surgical manipulations, ways of surgical aid;

2) to be able to analyze compound Latin clinical terms;

3) to train in forming compound Latin clinical terms;

4) to train in translating clinical terms from Latin into English, and vice versa.

Final term-elements

Term-element	Meaning	English equivalent
-cele	hernia, evagination, cyst	*-cele*
-centēsis	puncture	*-centesis*
-ectomia	complete removal (of an organ or tissue), excision	*-ectomy*
-pexia	fixation, attachment of some inner organ	*-pexis, -pexy*
-plastĭca	plastic surgical operation, operative restoring of organ form or functions	*-plasty*
-ptōsis	descending	*-ptosis*

Term-element	Meaning	English equivalent
-rrhagia	bleeding	*-rrhagia, -rrhage*
-rrhēxis	tissue rupture	*-rrhexis*
-rrhaphia	suturing	*-rrhaphy*
-schĭsis	congenital splitting, dividing into two parts	*-schisis*
-stŏma	artificial opening (fistula)	*-stoma*
-stomia	operation of making a fistula or anastomosis	*-stomy*
-tomia	dissection, making an incision	*-tomy*
Suffix term-element		
-ōma, ătis n	mainly benign tumor from some kind of tissue	*-oma*
-carcinōma, ătis *n*	malignant tumor from some kind of tissue	*-carcinoma*

Prefix term-elements

endo-	inner (mucous) lining	*endo-*
para-	cellular tissue around the organ	*para-*
peri-	outer covering (capsule, fibrous tissue, peritoneum covering an organ)	*peri-*

Root term-elements

Greek term-element	Latin term	Meaning	English equivalent
aden-	1) glandŭla, ae *f* 2) adenoĭdes, um *f* 3) nodus lymphatĭcus	1) glandular epithelium; 2) adenoids; 3) lymph node	*aden-*
cheil- (-cheilia)	labium, i *n*	lip	*cheil- (-cheilia)*
chondr-	cartilāgo, ĭnis *f*	cartilage	*chondr-*
col-, -colon	1) crassum, i *n* 2) colon, i *n*	1) large intestine; 2) colon	*col-, -colon*
colp-	vagīna, ae *f*	vagina	*colp-*
enter-	intestīnum, i *n*	intestine (mainly small intestine)	*enter-*
gastr-	ventricŭlus, i *m*	stomach	*gastr-*
hepat-	jecur, ŏris *n*	liver	*hepat-*

Greek term-element	Latin term	Meaning	English equivalent
kerat-	cornea, ae *f*	1) cornea; 2) corneal layer of epi-derm[2]	*kerat-*
lapar-	abdomen, ĭnis *n*	abdomen	*lapar-*
mast- (-mastia), mamm-	mamma, ae *f*	mammary gland	*mast-, mamm-*
1) metr-, hyster- **2) -metra**	utĕrus, i *m*	1)uterus; 2)in the uterus	*metr-, hys-ter-*
nephr-	ren, renis *m*	kidney	*nephr-*
proct-	rectum, i *n*	rectum	*proct-*
pyel-	pelvis renālis	renal pelvis	*pyel-*
salping- (-salpinx)	tuba uterīna	uterine tube	*salping-*
splen- (-splenia)	lien, liēnis *m*	spleen	*splen-*
typhl-	caecum, i *n*	blind intestine (caecum)	*typhl-*

Simple medical terms:

Latin simple term	English equivalent	Meaning
adenotomia, ae *f*	adenotomy	*removal of adenoids*
amputatio, ōnis *f*	amputation	*operation of cutting off an extremity, its part or some organs*
cancer, cri *m*	cancer	*group of diseases involving abnormal cell growth with the potential to spread to other body parts*
carcinōma, ătis *n*	carcinoma	*malignant tumor developing from scaly or glandular epithelium*
cirrhōsis, is *f*	cirrhosis	*replacement of the liver or lung parenchyma for fibrous tissue*
exstirpatio, ōnis *f*	extirpation	*complete removal of an organ*
hernia, ae *f*	hernia	*evagination of an organ or its part through openings in the anatomical formations*
herniotomia, ae *f*	herniotomy	*hernia repair*

[2] *kerat- also indicates processes of skin keratinization:* ***keratoma, atis n*** *— keratoma, benign skin new growth with excessive keratinization;* ***keratōsis, is f*** *— an area of skin marked by overgrowth of horny tissue*

Latin simple term	English equivalent	Meaning
prolapsus, us *m*	prolapse	*falling, displacement of an inner organ through a natural opening*
resectio, ōnis *f*	resection	*partial removal of an organ, usually connecting of its preserved parts*
sarcōma, ătis n	sarcoma	*malignant tumor consisting of immature connective tissue*

EXERCISES:

Ex. 1. Give the lexical form of Latin equivalents corresponding to the following Greek roots:

aden-; lapar-; mast-; chondr-; typhl-; nephr-; colp-; hyster-; kerat-; salping-; enter-; splen-; cheil-; hepat-; gastr; proct-; col-; metr-; pyel-.

Ex. 2. Give Greek equivalents to the Latin ones:

tuba uterīna; ventricŭlus, i m; vagīna, ae f; intestīnum, i n; crassum, i n; cornea, ae f; utĕrus, i m; adenoĭdes, um f; ren, renis m; pelvis renālis; abdomen, ĭnis n; labium, ii n; rectum, i n; caecum, i n; glandula, ae f; mamma, ae f; cartilāgo, ĭnis f; lien, liēnis m.

Ex. 3. Make up terms with the following term-elements, explain their meaning:

1) aden(o) -tomia; (-itis; -oma; -pathia; -carcinoma);
2) cheil(o) -itis; (-osis; -schisis; -plastica);
3) col(o) -tomia; (-ptosis; -stomia; -itis; -pexia);
4) colp(o) -itis; (-ptosis; -scopia; -rrhaphia);
5) enter(o) -itis; (-pexia; -ptosis; -rrhagia; -rrhaphia; -plastica; -colitis; -pathia);
6) gastr(o) -algia; (-itis; -ectomia; -cele; -ptosis; -rrhagia; -rrhaphia; -scopia; -tomia);
7) mast(o) -itis, (-pathia; -ectomia);
8) hyster(o) -ectomia; (-rrhaphia; -pexia; -ptosis; -tomia);
9) kerat(o) -itis; (-ectomia; -tomia; -osis; -plastica);
10) lapar(o) -centesis; (-scopia; -tomia);
11) metr(o) -pathia; (-ptosis; -rrhagia; -tomia);
12) salping(o) -ectomia; (-tomia; -itis; -graphia);
13) nephr(o) -pathia; (-pexia; -ptosis; -rrhagia; -osis; -tomia);
14) pyel(o) -nephritis; (-cystitis; -graphia; -tomia);
15) proct(o) -algia; (-itis; -logus; -logia; -ptosis; -scopia; -rrhagia; -ectomia; -pexia);
16) splen(o) -itis; (-ptosis; -tomia; -pexia; -rrhagia; -ectomia);
17) typhl (o) (-itis; -tomia);

18) hepat (o) -itis; (-pathia; -pexia; -ptosis);
19) ot (o) -itis; (-rrhagia; -scopia);
20) oste(o) -logia (-ectomia; -oma; -pathia; -tomia; -itis).

Ex. 4. Determine term-elements common to each word row. Explain the meaning of the terms:

1) gastrocēle; rectocēle; laryngocēle;
2) glossalgia; glossītis; glossoplastica; glossoptosis; glossorrhagia; glossorrhaphia;
3) cardiocentesis; laparocentesis; thoracocentesis;
4) cheiloschisis; palatoschisis; onychoschisis *(onych - nail)*;
5) appendectomia; tonsillectomia, keratectomia; mastectomia; cystectomia;
6) enterocolītis; gastroduodenītis; gastroenterītis; gastroenterocolītis; lymphadenītis;
7) myōma; odontōma; osteōma; neurōma;
8) gastroptōsis; hepatoptōsis; hysteroptōsis; colpoptōsis; nephroptōsis;
9) adenotomia; embryotomia; myelotomia; phlebotomia; osteotomia.

Ex. 5. Explain the meaning of the terms:

colpohysterotomia, colpohysteropexia; palatoschĭsis; cardiorrhexis; gastroenterologia; lymphadenōma; myotomia; nephroptōsis; cheiloschĭsis; metro(hystero)salpingographia; hydrosalpinx; chondrosarcōma; embryotomia; ophthalmorrhexis; chondrītis; septoplastĭca; endometrītis; parametrītis; perimetrītis; endocardītis; endophthalmītis; pericardītis; perinephrītis; paranephrītis; pyelonephrītis; paracolītis; paraproctītis; periadenītis; periarteriītis; periarthrītis; perichondrītis; periduodenītis; peritonītis; periostītis; perisalpingītis.

Ex. 6. Make up and write down in Latin terms with the following meaning:

1) complete removal of:

a) the stomach; b) mammary gland; c) kidney; d) rectum; e) spleen; f) uterus.

2) dissection of:

a) colon; b) vagina; c) stomach; d) eye cornea; e) uterus; f) rectum; g) abdominal wall.

3) fixation, attaching of:

a) pathologically floating uterus; b) small intestine; c) colon; d) rectum.

4) bleeding from:

a) the eye; b) the nose; c) the lip; d) the tooth socket after removing a tooth; e) the ear; f) the uterus; g) the rectum.

5) suturing of:

a) the small intestine; b) the uterus; c) the ruptured nerve; d) a vessel.

6) benign tumor from:

a) bone tissue; b) vascular tissue; c) muscular tissue; d) fibrous tissue; e) muscular and fibrous tissue; f) glandular epithelium; g) cartilaginous tissue.

7) plastic repair (surgery) of:

a) the small intestine; b) the tongue; c) the nose; d) the dividing wall (septum); e) the lip; f) the stomach.

Ex. 7. Tell in what cases the TE "-stomia" means "making a fistula" and in what cases "making anastomosis":

gastrostomia, gastroenterostomia, gastroduodenostomia, enterostomia, gastrooesophagostomia, nephropyelostomia, colostomia, laryngostomia, cholecystoenterostomia, cholecystocolostomia, proctostomia.

Ex. 8. Give the Latin lexical form and the full definition of each term in English:

hepatitis, embryotomy, salpingopexy, arthrocentesis, metrorrhexis, colpohysteropexy, ascites, gastroptosis, cystoschisis, keratoplasty, adenotomia, oesophagostoma, gastrocele, proctoscopy, angiorrhagia, enterocolitis, auscultation, mammogram, salpingectomy, typhlocele, ophthalmorrhexis, asthenia, pyelitis, nephropathy, proctologist, angioma, palpation, splenoptosis, infarct, nephritis, hydrops, colonorrhagia, enterogastritis, hydrosalpinx, cystorrhagia, myocele,osteoma,colpocystotomy, cheiloschisis, percussion, salpingogram, laparoscopy, neurorrhaphy, oedema, cardiorrhexis.

Ex. 9. Learn the following professional expressions:

1) Situs viscĕrum inversus. *Abnormal position of viscera.*

2) Facies Hippocratĭca. *Hippocrates' face (face of a dying man).*

3) Rubor, tumor, calor, dolor et functio laesa. *Redness, tumor, fever, pain and impaired function (classic signs of inflammation).*

LESSON 5

§10. REVISION Lessons 1–4

The main objectives of the lesson are:

1) to know the term-elements used in names of medical specialities and related disciplines, specialists, methods of primary diagnostic control, appliances, and instruments;

2) to know the term-elements used in names of various psychosomatic pathologies, methods of electro- and roentgenographic control;

3) to know the term-elements used in names of surgical manipulations, ways of surgical aid;

4) to know and to be able to use simple medical terms;

5) to be able to analyze compound Latin clinical terms;

6) to train in forming compound Latin clinical terms;

7) to train in translating clinical terms from Latin into English, and vice versa.

Ex. 1. Give Greek equivalents to the following words:

abdomen; lymph node; vein; head; ear; vessel; large intestine; water; vertebra; old age; small intestine; uterine tube; stomach; lip; eye; gall-bladder; child; heart; life; disease; fire; spinal cord; skin; kidney; woman; muscle; renal pelvis; nose; voice; cornea; bone marrow; vagina; mind; tuberculosis; uterus; spleen; external shape; tooth; nature; blind intestine; mouth; mammary gland; joint; urinary bladder; nerve; bone; body; rectum; poison.

Ex. 2. Explain the meaning of the terms:

adenalgia, phthisiāter, stomatoscopia, osteītis, encephalogramma, psychōsis, thoracocentēsis, gastrostŏma, cystorrhagia, diagnōsis, salpingectomia, physiologia, angiopathia, myelītis, cancerophobia, rhinogramma, colpotomia, osteopathia, toxicōsis, neurolŏgus, adenocarcinōma, keratotomia, dermatōsis, gynaecolŏgus, myasthenia, oncolŏgus, enterocolītis, psychiatria, aetiologia, osteōma, biologia, cardiolŏgus, physiotherapia, otorhinolaryngologia, hydrarthrōsis, spondylītis, laparoscopia, cystoschĭsis, myocēle, embryologia, geriāter, cholecystītis, gastrocēle, neuralgia, pyelītis, osteonecrōsis, lymphangiōma, mastogramma, ophthalmoscopia, proctolŏgus, somatologia, toxicomania, odontalgia, nephrographia, paediatria, mammogramma, arthropathia, hepatītis, gastroenteritis, osteosclerōsis, metrorrhexis, splenoptōsis, herniotomia

Ex. 3. Make up the Latin one-word terms with the following meaning:

1) the science of the blood vessels;
2) a specialist treating ear, nose and larynx diseases;
3) inflammation of the stomach, the small and large intestines;
4) record of heart investigation;
5) branch of clinical medicine treating rectum diseases;
6) pain in the head;
7) general name of the mammary gland diseases;
8) non-inflammatory disease of skin;
9) X-ray examination of veins;
10) benign tumor from vascular tissue;
11) an area of skin marked by overgrowth of horny tissue;
12) inflammation of the renal pelvis and the urinary bladder;
13) puncturing a joint;
14) a specialist treating tumorous diseases;
15) bleeding from the colon;

16) the surgical removal of the embryo;
17) rupture of the eyeball;
18) inflammation of the liver;
19) the operative fixation of the uterus through the vagina;
20) any kind of pain affecting a joint;
21) a doctor treating tuberculosis;
22) branch of medicine treating children diseases;
23) inflammation of the bronchi;
24) examination of the brain activity with electrical current;
25) inflammation of the urinary bladder;
26) accumulation of water in a joint;
27) plastic surgery of the cornea;
28) specialist studying mental activities of a human personality;
29) instrumental examination of the rectum;
30) inflammation of the uterus inner lining;
31) benign skin new growth with excessive keratinization;
32) general name of the kidney disease;
33) instrumental examination of the eye;
34) any plastic operation for repairing or reconstructing urinary bladder;
35) puncture of the abdomen;
36) hardening of the bone tissue;
37) surgical fixation of the uterine tube;
38) a scientist studying normal vital processes in human organism.

Ex. 4. Make up terms with the following term-elements:

-itis: 1) inflammation of the gall-bladder; 2) inflammation of urinary bladder; 3) inflammation of skin; 4) inflammation of nose; 5) inflammation of oral cavity; 6) inflammation of joint; 7) inflammation of brain; 8) inflammation of peritoneum.

-rrhagia: 1) bleeding from the eye; 2) bleeding from nose; 3) bleeding from lip; 4) bleeding from tooth socket after removal of a tooth; 5) bleeding from ear; 6) bleeding from uterus; 7) bleeding from rectum.

-**phobia:** 1) obsessive fear of women; 2) obsessive fear of poisoning with toxins; 3) obsessive fear of water; 4) obsessive fear of fire; 5) obsessive fear of cancer.

-**pathia:** 1) general name of the diseases of the eyes; 2) general name of the diseases of the gall-bladder; 3) general name of the diseases of the bones; 4) general name of the diseases of the nervous system; 5) general name of the diseases of the nose; 6) general name of the diseases of the backbone; 7) general name of the diseases of the psyche; 8) general name of the diseases of the heart; 9) general name of the diseases of the brain; 10) general name of the diseases of the vessels; 11) general name of the diseases of the spinal cord; 12) general name of the diseases of the joints.

-graphia: 1) X-ray examination of the venous network; 2) X-ray examination of the gall-bladder; 3) X-ray examination of the urinary bladder; 4) X-ray examination of the vessels; 5) X-ray examination of the spinal cord; 6) examination of the heart activity with electrical current.

-oma: 1) benign tumor from glandular epithelium; 2) benign tumor from bone tissue; 3) benign tumor from vascular tissue; 4) benign tumor from muscular tissue; 5) benign tumor from muscular and fibrous tissue; 6) benign tumor from cartilaginous tissue; 7) benign tumor from nerve tissue.

-iatria: 1) field of medicine dealing with treatment of old age diseases; 2) field of medicine dealing with treatment of psyche diseases (mental diseases); 3) field of medicine dealing with treatment of children diseases; 4) field of medicine dealing with treatment of tuberculosis.

-logia: 1) science which studies life; 2) science which studies normal vital processes in the organism; 3) science which studies man's psyche; 4) science which studies embryo development; 5) science which studies process of aging; 6) science which studies external shape and inner structure of the human body; 7) studies about forms and classification of diseases; 8) field of medicine dealing with treatment of eye diseases; 9) field of medicine dealing with treatment of diseases of a female genital system; 10) field of medicine dealing with treatment of skin diseases; 11) field of medicine dealing with treatment of gastrointestinal tract.

enter-: 1) fixation of the small intestine; 2) inflammation of the small intestine; 3) suturing of the intestine; 4) descending of the small intestine; 5) bleeding from the small intestine; 6) general name of the diseases of the small intestine; 7) plastic surgery of the small intestine; 8) inflammation of the large and small intestine.

thorac-, -thorax: 1) a diagnostic puncture of the wall of the thorax; 2) pain in the chest; 3) pain in the muscles of the chest; 4) plastic surgery of the chest.

typhl-: 1) a hernia involving the cecum; 2) inflammation of the cecum; 3) incision of the cecum.

LESSON 6

§11. Term-elements used in the formation of the names of laboratory-diagnostic definitions

The main objectives of the lesson are:

1) to learn the term-elements used in names of laboratory-diagnostic definitions;

2) to be able to analyze compound Latin clinical terms;

3) to train in forming compound Latin clinical terms;

4) to train in translating clinical terms from Latin into English, and vice versa.

Final term-elements

Term-element	Meaning	English equivalent
-lўsis	1) breakdown, dissolution, destruction; 2) freeing from adhesions by surgical way *(heart, lung, uterine tube, brain membrane)*	*-lysis*
-aemia	presence of something in the blood	*-aemia*
-ectăsis (-ectasia)	pathological widening	*-ectasia*
-genĕsis	process of development	*-genesis*
-lithus (lith-)	stone	*-lith*
-lithiăsis	stone disease, stone formation	*-lithiasis*
-penia	decreasednumber of some blood cells	*-penia*
-philia	tendency to something	*-philia*
-poësis	formation	*-poesis, -poiesis*
-rrhoea	1) outflow of secretion, mucus; 2) loss *(hair)*	*-rrhea*
-menorrhoea	monthly uterine bleeding (menstruation)	*-menorrhea*
-stăsis	flow stop; congestion of physiological fluid	*-stasis*
-uria	presence of something in the urine	*-uria*
Suffix term-elements		
-ōsis, is *f*	increased amount of blood cells; multiplicity of manifestation	*-osis*

Root term-elements

Greek term-element	Latin term	Meaning	English equivalent
chole- (-cholia)	1) fel, fellis *n* 2) bilis, is *f*	bile	*chole- (-cholia)*
chyl-, lymph-*	lympha, ae *f*	lymph	*chyl-, lymph-*
cyt- (-cytus)*	cellŭla, ae *f*	cell, blood corpuscle	*cyt- (-cyte)*
erythr-	ruber, bra, brum	red, related to erythrocytes	*erythr-*
glyk-, glucos-	dulcis, e	sweet, presence of sugar, glucose	*glyc-*
galact-, -galactia	lac, lactis *n*	milk	*galact-, -galactia*
haem-, haemat-	sanguis, inis *m*	blood	*hem-, hemat-*
hidr-	sudor, ōris *m*	sweat	*hidr-*
hygr-	humor, ōris *m*	moisture, humor, fluid	*hygr-*
leuc-	albus, a, um	white, related to leucocytes	*leuc-*

Greek term-element	Latin term	Meaning	English equivalent
lip-, seb-	1) adeps, ĭpis *m* 2) sebum, i *n*	1) fatty tissue of the body; 2) fatty secretion of the sebaceous glands	*lip-, seb-*
mening-	meninx, ngis *f*	brain membrane	*mening-*
pneum-, pneumat-	aër, aëris *m*	air or gas in the organ or cavity	*pneum-, pneumat-*
pneum-, pneumon-	pulmo, ōnis *m*	lung	*pneum-, pneumon-*
py-	pus, puris *n*	pus	*py-*
sero-	serum, i *n*	blood serum	*sero-*
thyr-	glandŭla thyr(e)oidea	thyroid gland	*thyro-*
trich-(-trichia)	pilus, i *m* capillus, i *m*	hair	*trich-*
thorac-, -thōrax	thorax, pleural cavity		*thorac-, -thōrax*
thromb-	thrombus, i *m*	blood clot	*thromb-*
ur-	urīna, ae *f*	1) urine; 2) urinary organs; 3) nitrous substance	*ur-*

The meaning "lymph" is denoted by the initial roots **chyl- and **lymph-**.*
The root **chyl-** is used if lymph is present in a cavity, in the blood or urine:
chylothōrax, ācis m — a condition in which there is an effusion of lymph into the thoracic cavity, chylothorax;
chyluria, ae f — a condition in which the urine contains lymph, chyluria.
The root **lymph-** is used if lymph is considered as a part of lymphatic cells, glands and vessels:
lymphangiītis, itĭdis f — an inflammation of lymphatic vessels, lymphangiitis.
*****Myelocytu****s, i m –myelocyte – bone marrow cell.*

Simple medical terms:

Latin simple term	English equivalent	Meaning
asthma, ătis *n*	asthma	*suffocation attacks of different origin*
exsudātum, i *n*	exudate	*inflammatory fluid coming out from small vessel walls in inflammation*
glaucōma, ătis *n*	glaucoma	*eye disease characterized by elevated intraocular pressure*
(haemo)dialўsis, is *f*	(haemo)dialysis	*method of treating renal failure by means of the apparatus "artificial kidney"*
hidrōsis, is *f*	hidrosis	*process of sweating, perspiration*
hygrōma, ătis *n*	hygroma	*an accumulation of fluid in a sac, cyst or bursa causing swelling*

Latin simple term	English equivalent	Meaning
leucōsis, is *f*	leucosis	*general name of tumors arising from blood cells (blood cancer)*
panaritium, i *n*	panaritium	*acute purulent inflammation of the tissue around the nail*
polўpus, i *m*	polyp	*pathologic formation protruding above the organ surface and connected to it with a pedicle*
sepsis, is *f*	sepsis	*infection with pyogenic microorganisms*
struma, ae *f*	goiter	*enlarged thyroid gland as a result of iodine deficiency*
thrombōsis, is *f*	thrombosis	*formation of a blood clot inside a blood vessel, obstructing the blood flow through the circulatory system*

EXERCISES:

Ex. 1. Give the lexical form of Latin equivalents corresponding to the following Greek roots:

chyl-, haemat-, onc-, erythr-, glyk-, pneumon-, thorac-, cyt-, mening-, thyr-, py-, leuc-, ur-, glucos-, hidr-, trich-, chole-, sero-.

Ex. 2. Give Greek equivalents to the Latin ones:

cellŭla, ae f; albus, a, um; pulmo, ōnis m; sanguis, ĭnis m; pus, puris n; serum, i n; lympha, ae f; urīna, ae f; glandŭla thyr(e)oidea; tumor, ōris m; thorax, ācis m; thrombus, i m; ruber, bra, brum; bilis, is f.

Ex. 3. Make up terms with the following term-elements, explain their meaning:

1) chol(e)- -aemia; (-stăsis; -lithiăsis; -cystītis; -cystogramma; -angītis);
2) chyl(o)- -stăsis; (-thōrax; -uria);
3) cyt(o)- -logia; (-gramma; -diagnōsis);
4) erythr(o)- -cўtus; (-dermia; -poēsis; -cytōsis);
5) haem(o)- -rrhagia; (-lўsis; -philia; -thōrax);
6) haemat(o)- -ōma; (-lŏgus; -uria);
7) hidr(o)- -adenītis; (-adenōma, -cystōma; -ōsis);
8) leuc(o)- -cўtus; (-cytōsis; -ōsis; -derma; -lўsis; -poēsis);
9) myel(o)- -ītis; (-cўtus; -graphia; -pathia; -tomia);
10) onc(o)- -logia; (-lŏgus; -genĕsis);
11) thromb(o)- -cўtus; (-phlebītis; -philia; -cytōsis; -ōsis);
12) py(o)- -dermia; (-metra; -salpinx; -thōrax; -uria);

13) sero- -diagnōsis; (-logia; -therapia);

14) ur(o)- -logia; (-aemia; -graphia; -lithiăsis; -lithus; -lŏgus; -poēsis; -sepsis);

15) pneum(o)- -tomia; (-lўsis; -thōrax; -peritoneum);

16) lip- -ōma; (-aemia);

17) thorac(o)- -algia; (-centēsis; -scopia; -odynia; -tomia; -plastĭca);

18) trich(o)- -rrhoea; (-logia; -logus; -pathia; -osis; -algia).

Ex. 4. Determine term-elements common to each word row. Explain the meaning of the terms:

1) rhinorrhoea; trichorrhoea; otorrhoea;

2) cardiolўsis; pneumolўsis; meningolўsis; osteolўsis; hydrolўsis;

3) uropoësis; erythropoësis; leucopoësis; haemopoësis;

4) haemorrhagia; haemolўsis; haemophilia; haemothōrax; haematolŏgus;

5) glucosuria; glykaemia;

6) hydrothōrax; hydropneumothōrax; pneumothōrax; haemothōrax;

7) phlebolithus; urolithus; rhinolithus; nephrolithus; enterolithus; hepatolithus; odontolithus;

8) cholelithiăsis; hepatolithiăsis; urolithiăsis; enterolithiăsis.

Ex. 5. Explain the meaning of the terms:

strumectomia; haematosalpinx; typhlectasia; chondrogenĕsis; galactostăsis; pneumohaemothōrax; leucocyturia; salpingolўsis; adiponecrōsis; thyreotoxicōsis; albuminuria; hidradenītis; hidradenōma; hygrōma; lipuria; pathogenĕsis; thyreoidectomia; thyreoidītis; odontogenĕsis; thrombōsis; cholecystolithotomia; leucōsis; leucocytōsis; myelogenĕsis; dacryorrhoea *(dacry- tears)*; urolithiăsis; strumītis.

Ex. 6. Make up and write down in Latin terms with the following meaning:

1) surgical freeing from adhesions with surrounding tissues of:

a) heart; b) lung; c) brain membranes.

2) presence of……..in the blood:

a) urea and other nitrous substances; b) poisonous substances; c) bile; d) fatty substances; e) sugar.

3) presence of……in the urine:

a) glucose; b) pus; c) lymph; d) blood; e) protein *(albumin-)*; f) leucocytes above norm; g) fat.

4) decreased number of:

a) leucocytes; b) lymphocytes; c) monocytes; d) thrombocytes (platelets); e) blood cells; f) erythrocytes.

5) increased number of:

a) red blood cells; b) platelets; c) white blood cells.

6) process of …… development:

a) tumor; b) disease; c) cartilage; d) bone.

7) formation of:

a) erythrocytes; b) monocytes; c) leucocytes; d) blood; e) urine.

8) tendency to:

a) bleeding; b) clots formation.

9) puncture for diagnostics of:

a) the chest; b) heart; c) abdominal wall.

10) a) venous stone; b) urinary stone; c) nose stone; d) intestinal stone; e) liver stone; f) kidney stone.

Ex. 7. Give the Latin lexical form and the full definition of each term in English:

typhlectasia, hidradenitis, ascites, pneumocentesis, cytology, glycaemia, chylothorax, uraemia, monocytopoesis, adenotomy, galactostasis, thyrotoxicosis, hemophilia, erythropenia, lymphangiitis, trichorrhea, cholecystolithiasis, hematometra, osteochondrosis, pneumorrhaphy, dialysis, thoracometry, meningolysis, hematology, pathogenesis, pyorrhea, leucosis, oesophagostenosis, hematuria, chondroma, gastrectasia, thrombosis, sarcoma, lymphostasis, chyluria, pyosalpinx, extirpation, hemogram, resection, enterolithiasis, pyopneumothorax, bronchiectasis, odontolith, chondropathy, hidrosis, thrombocytopoiesis, hematologist, sepsis, leucocytosis, thoracocentesis, pyuria, goiter.

Ex. 8. Learn the following professional expressions:

1) Non est via in medicīna sine lingua Latina. *There is no way in medicine without latin.*

2) Contra vim mortis non est medicamen in hortis. *There is no remedy against power of death in gardens.*

3) In vivo. *On a living organism.*

4) In vitro. *In laboratory conditions.*

5) In situ. *On site, locally, in place.*

LESSON 7

§12. Final term-elements used in the formation of names of biochemical, physiological processes in the human body

The main objectives of the lesson are:

1) to learn final term-elements used in names of biochemical and physiological processes in the human body; to learn Latin and Greek prefixes used in clinical terms;

2) to be able to analyze compound Latin clinical terms;

3) to train in forming compound Latin clinical terms;

4) to train in translating clinical terms from Latin into English, and vice versa.

Final term-elements

Term-element	Meaning
-arthria	ability to pronounce distinctly
-aesthesia	sensitivity
-chlorhydria	hydrochloric acid (HCl)
-chylia	gastric juice
-ergia; -urgia	reactivity, activity, work
-kinesia	movement
-mnesia (mnem)	memory
-pepsia	digestion
-phagia (phag-)	1) swallowing; 2) eating up
-plasia	formation of an organ or tissue
-plegia	paralysis of muscles group
-tensio	pressure in the vessels or hollow organs
-thermia	temperature, heating
-tonia	tonus (of muscles, vessels)
-trophia	nutrition of tissues and organs
optic-; -opia, -opsia	1) related to eyesight; 2) diagnostic investigation

§13. Latin and Greek prefixes in clinical term formation

There are many terms in medical terminology, biology which are formed by prefixal means. Latin prefixes prevail in anatomical nomenclature and prefixes of Greek origin prevail in terminology of pathologic anatomy, physiology, clinical disciplines. As a rule, Latin prefixes are added to Latin roots and Greek ones are added to Greek roots.

In anatomical terminology Latin and Greek doublet prefixes indicate organs location in anatomical space: inside, higher, lower, in front of, behind.

Clinical terminology uses more abstract concepts and employs more often secondary, figurative meanings of prefixes which developed on the basis of their direct meanings.

Prefix		Meaning	Examples
a-, an- (before a vowel)	Latin	absence	**adentia** – *absence of some or all teeth*
		deprivation	**anaesthesia** – *method of blocking pains in surgical operations*
		inability	**aphagia** – *inability to swallow*
dia-	Greek	through	**diathermia –** *heating of deep lying body tissues by high-frequency and great strength currents*
dys-	Greek	disorder, impairment	**dysplasia** – *disorder of organs or tissues development during embryogenesis*
		difficulty	**dysphagia** – *difficulty in swallowing*
		disturbance	**dysphonia** – *disturbance of voice formation*
ec-	Greek	out (of)	**ectopia** = ec- + topos *place (literally 'out of place') congenital organ displacement*
in-	Latin	in, into	**invasio** – *invasion of the disease causative agents, parasites into an organism*
im- before b, m			**implantation** – *implantation, inserting materials foreign to the organism (plastic, metals and others) and implants of living nature (cartilages, bones and others) into the body*
ir-			**irradiatio**– *radial spreading of pain to nearby body parts*
endo-	Greek	inner lining of a hollow organ	**endometrium** – *mucous tunic of the uterus*
hyper-	Greek	increase, elevation	**hyperaesthesia** – *increased sensitivity*
hypo-	Greek	decrease	**hypotensio** – *decreased arterial pressure*
		reduction	**hypoplasia** – *underdevelopment of an organ or body part*
		weakening of the main concept	**hypomnesia** – *weakening of memory*
meta-	Greek	transition from one place or state into another	**metaplasia** – *transformation of one tissue kind into another one;* **metastăsis** – *spreading of pathological material from one organism place to another*
para-	Greek	1.cellular tissue near or around the organ;	**parametrium** – *cellular tissue around uterus;*
		2. false;	**paramnesia** – *pseudorecollections, «recollection» of events which never occurred;*
		3. from both sides	**paraplegia** – *paralysis of the same extremities*

Prefix		Meaning	Examples
peri-	Greek	outer covering	**perimetrium** – *serous uterus covering;* **periosteum** – *external covering of bones*
pro-	Greek	forward, in advance	**prognōsis**= pro *forward*+ agnos *recognition,cognition– foreseeing; scientificallywell-grounded supposition about further disease course;* **progeria –** *untimely organism aging*
re-	Latin	recurrence, restoration	**recidivum** *recidivation– relapse, recurrence of a disease in its typical or not fully manifestated form;* **replantatio** *replantation – operation of reattachment of the amputated in trauma part of an organ or extremity*
		reverse action	**refluxus** *reflux– reverse flow*
sub-	Latin	less, in a lesser degree	**subacūtus**– *subacute (about a disease which has no acute and no chronic course);* **subictĕrus** – *the slightest degree of jaundice*
super-	Latin	more, excess	**superacūtus** – *extremely acute (about a disease)* **superinfectio** – *new, repeated contamination while the primary infection still persists*
syn-, sym-	Greek	connection	**syndactylia** – *fusion of fingers or toes*
		joint action	**synergismus** – *joint activity of organs in the same direction*
Greek numerals as prefixes			
hemi-		half-, one-sided	**hemiplegia –** *hemiplegia, paralysis of muscles of one body side*
mono-		one-, one, single	**monoplegia –** *monoplegia, paralysis of one extremity*
di-		two-, double	**diplegia –** *diplegia, bilateral paralysisof the same body parts (both legs, both halves of the face)*

Simple medical terms:

Latin simple term	English equivalent	Meaning
allergia, ae *f*	allergy	*reaction by person's immune system to harmless substances (food, plant pollen, dust, etc.)*
apathia, ae *f*	apathy	*state of indifference or the suppression of emotions*
autopsia, ae *f*	autopsy	*a medical procedure involving the examination of a dead body*
biopsia, ae *f*	biopsy	*the removal of tissue from any body part to examine it for disease*

Latin simple term	English equivalent	Meaning
consilium, i *n*	consultation	*council of some physicians to reveal the character of the disease*
hypermetropia, ae *f*	hypermetropia	*farsightedness or longsightedness*
myopia, ae *f*	myopia	*nearsightedness or shortsightedness*
implantatio, ōnis *f*	implantation	*inserting materials foreign to the organism (plastic, metals and others) and implants of living nature (cartilages, bones, valves and others) into the body*
invasio, ōnis *f*	invasion	*1. penetration of pathogenic agents into the organism;* *2. contamination with animal parasites*
irradiatio, ōnis *f*	irradiation	*radial spread of pain to nearby body parts*
metabolismus, i *m*	metabolism	*exchange of substances: combination of chemical transformations taking place in a living organism;*
paralysis, is *f*	paralysis	*total absence of voluntary movements*
recidivum, i *n*	recidivation	*relapse of a disease in its typical or non-typical form*
refluxus, us *m*	reflux	*reverse flow*
rehabilitatio, ōnis *f*	rehabilitation	*period of restoring for working activities*
remissio, onis *f*	remission	*temporal relief of a disease*
replantatio, ōnis *f*	replantation	*operation of reattaching the amputated extremity back to its place*
subfebrilis, e	subfebrile	*slightly elevated temperature (subfebrile temperature – 37.1 – 38°C)*
sympathia, ae *f*	sympathy	*an expression of understanding and care for someone else's suffering*
transplantatio, ōnis *f*	transplantation	*grafting of organs or tissues*

EXERCISES:

Ex. 1. Make up terms with the following term-elements, explain their meaning:

1) **a- (an-)**

-aesthesia; -aesthesiologus; -chylia; -pathia; -phagia; -plasia; -tonia; -chlorhydria; -trophia; -arthria; -phonia; -vitaminosis; -trichosis; -menorrhoea;

2) **dys-**

-arthria; -kinesia; -phagia; -plasia; -tonia; -trophia; -arthrosis; -enteria; -ostosis; -phonia; -hidrosis; -menorrhoea;

3) **hyper-**

-aesthesia; -chlorhydria; -kinesia; -plasia; -thermia; -tonia; -chylia; -trophia; -keratosis; -thyreosis; -hidrosis; -ergia;

4) **hypo-**

-plasia; -aesthesia; -chylia; -kinesia; -thermia; -tonia; -thyreosis; -hidrosis; -ergia; -vitaminosis; -chlorhydria;

5) **sym- (syn-)**

-biosis; -pathia; -chondrosis; -ostosis; -desmosis; -ergismus;

6) **para-**

-metritis; -nephritis; -proctitis; -mnesia; -plegia; -spasmus;

7) **peri-**

-arthritis; -carditis; -chondritis; -metritis; -nephritis; -ostitis;

8) **endo-**

-scopia; -metritis; -cervicitis; -carditis; -ophthalmitis;

9) **hydr(o)-**

-arthrosis; -lysis; -phobia; -ophthalmus; -salpinx; -therapia; -thorax.

Ex. 2. Determine term-elements common to each word row. Explain the meaning of the terms:

1) glucosuria; glykaemia; hyperglykaemia; hypoglykaemia;

2) hyperaesthesia; anaesthesia; anaesthesiologia; anaesthesiologus; hypaesthesia;

3) hemialgia; hemianopsia; hemiatrophia; hemicrania; hemiplegia;

4) monoplegia; monophobia; mononeuritis; monodactylia; monocytus;

5) glossoplegia; ophthalmoplegia; diplegia; cystoplegia; hemiplegia.

Ex. 3. Make up and write down in Latin terms with the following meaning:

1) inflammation of cellular tissue near colon: _____*colitis*;

2) inflammation of serous membrane covering the uterus: _____*metritis*;

3) inflammation of mucous tunic of the uterus: _____*metritis*;

4) eversion of the eyelids out: _____*tropion*;

5) changed reactivity of the organism: *all*_____;

6) disturbance of quantity and composition of normal microflora of the organism: _____*bacteriosis*;

7) abnormality of organs or tissues development during embryogenesis: _____*plasia*;

8) organism overheating: _____*thermia*;

9) organism supercooling: _____*thermia*;

10) increased function of the thyroid gland: _____*thyreosis*;

11) decreased function of the thyroid gland: _____*thyreosis*;

12) decreased arterial pressure: _____*tensio*;

13) transformation of one kind of tissue into another: _____*plasia*;

14) untimely organism aging: _____*geria*;

15) heating of deep lying body tissues by high-frequency and great strength currents: _____*thermia*;

16) field of medicine dealing with operative and manual treatment of diseases: *chir* _____;

17) disturbance of voice formation: _____*phonia*;

18) disturbance of digestion: _____*pepsia*;

19) disorder of muscles and vessels tonus: _____*tonia*;

20) lower jaw and chin sharply protruding forward: _____*genia*;

21) living of various organisms together: _____*biosis*;

22) fusion of fingers or toes: _____*dactylia*;

23) enhanced formation of some tissues cellular elements: _____*plasia*;

24) partial or complete memory loss: _____*mnesia*;

25) excessive thickening of epidermis corneal layer: _____*keratosis*.

Ex. 4. Make up the Latin dictionary form of one-word terms with the following meaning:

1) inability to swallow;
2) abnormal slowness and weakness of the process of digestion;
3) inflammation of cellular tissue near urinary bladder;
4) paralysis of similar parts on both sides of the body;
5) mucous tunic of the uterus;
6) loss of half the vision in each eye;
7) fusion of fingers or toes;
8) inflammation of the cellular tissue around the kidney;
9) an excess of blood in any part of the body;
10) impairment of any voice;
11) paralysis of one side of the body;
12) inflammation of outer (serous membrane) covering the uterus;
13) increased amount of sugar in the blood;
14) examination for purposes of diagnosis of issue cut from the living body;
15) high arterial blood pressure;
16) inflammation of cellular tissue near rectum;
17) loss of memory;
18) very high body temperature (overheating).

Ex. 5. Give the Latin lexical form and the full definition of each term in English:

atrichia, dysphonia, hypermetropia, etiology, parametritis, aphagia, hypogalactia, thyrotoxicosis, monophobia, extirpation, sympathy, adentia, diagnosis, paracystitis, ophthalmoplegia, hypomnesia, anuria, infarction, dysuria, hyperkinesia, atrophy, hypothermia, epicrisis, anaesthesiologist, metaplasia, biopsy, myoplegia, anhidrosis, hypopepsia, apathy, dystonia, glaucoma, hypertension, dysthyreosis, thermotherapia, amputation, dysarthrosis, hypergia, autopsy, amnesia, diathermia, syndactylia, myopia.

Ex. 6. Learn the following professional expressions:

1) Per os. *Through mouth, perorally.*

2) Per rectum. *Through rectum.*

3) Per se. *As it is.*

4) Per vagīnam. *Through vagina.*

5) Per vias naturāles. *Through natural ways.*

LESSON 8

§14. Term-elements used in the formation of terms denoting properties, qualities, relations, various signs

The main objectives of the lesson are:

1) to learn the term-elements used in the formation of terms denoting properties, qualities, relations, various signs;

2) to be able to analyze compound Latin clinical terms;

3) to train in forming compound Latin clinical terms;

4) to train in translating clinical terms from Latin into English, and vice versa.

Final term-elements

Term-element	Meaning	English equivalent
-gĕnus, a, um	having some origin; causing something, being caused by something; arising from – in something	*-genic,* *-genous*
-phrenia, ae f	spirit, mind, intellect (‘phren’ – diaphragm, «location of the soul»)	*-phrenia*
-prīvus, a, um	conditioned by absence of some organ	*-privic*
-trōpus, a, um	selectively directed to something, affecting something	*-tropic*

Root term-elements

Term-element	Meaning
acr-	distal body parts; height
aetio-	cause, reason
auto-	self-
brady-	slow
chlor(o)-	green; yellow-green

Term-element	Meaning
chrom(o)-; chromat(o)-; -chromia	color; coloration
cyan(o)-	blue
heter(o)-	different
hom(o)-	identical, the same
iso-	identical, equal
macr(o)-	large (in size)
mega-, megal-, -megalia	large, enlarged
melan(o)-	black, melanin
micr(o)-	small (in size)
noo(s)-	thinking processes
olig(o)-	scanty, small (in quantity)
orth(o)-	straight, correct, corresponding to normal position
pan-	all, whole
poli(o)-	gray, related to gray substance of the brain
poly-	many (in quantity); large amount of
tachy-	fast, rapid
xanth(o)-	yellow
xen(o)-	another's, foreign
xer-	dry, dryness

Simple medical terms:

Latin simple term	English equivalent	Meaning
transplantatio, ōnis f	transplantation	*a medical procedure in which an organ is removed from one body and placed in the body of a recipient, to replace a damaged or missing organ*
allotransplantatio, ōnis *f*	allotransplantation	*transplantation of organs or tissues from a human being to a human being*
autotransplantatio, ōnis *f*	autotransplantation	*transplantation of man's own tissues or organs*
endogĕnus, a, um	endogenic	*arising inside the organism*
exogĕnus, a, um	exogenic	*arising under the influence of external effects*
iatrogenia, ae *f*	iatrogenia, iatrogenic disease	*psychogenic disease or neurosis arising as a result of imprudent remark of a doctor about the diagnosis*
isotransplantatio, ōnis *f*	isotransplantation	*transplantation of organs or tissues from the genetically identical organisms*

Latin simple term	English equivalent	Meaning
megalomania, ae *f*	megalomania	*a mental state characterized by delusions of self-importance and greatness*
paroxysmus, i *m*	paroxysm	*bad attack, bad fit*
oligophrenia, ae *f*	oligophrenia	*mental retardation*
orthodontia, ae *f*	orthodontics	*field of medicine dealing with correction of the teeth and jaws deformities*
orthopaedia, ae *f*	orthopedics	*field of medicine dealing with correction of bones deformities*
orthoptica, ae *f*	orthoptics	*field of medicine dealing with correction of eyes deformities and cross-sightedness*
orthostasis, is *f*	orthostasis	*vertical position of the body*
schizophrenia, ae *f*	schizophrenia	*a mental disorder marked by hallucinations and delusions, and a decreased ability to understand reality*
xanthochromia, ae *f*	xanthochromia	*yellow coloration of the cerebrospinal fluid*
xanthopsia, ae *f*	xanthopsia	*condition in which all objects seem to be yellow*
xenotransplantatio, ōnis *f*	xenotransplantation	*transplantation of organs or tissues from an animal to a human being (xenos – another's) or from an animal to an animal*

EXERCISES:

Ex. 1. Make up terms with the following term-elements, explain their meaning:

1) brady- (-arthria; -cardia; -kinesia; -phagia);
2) tachy- (-cardia; -phagia);
3) hetero- (-genus; -morphus; -chromia);
4) macr- (-cheilia; -glossia; -mastia);
5) micr- (-gastria; -scopia; -chirurgia);
6) acr- (o) -aesthesia; (-phobia; -odynia);
7) olig- (-uria; -cytaemia; -dactylia; -dentia; -kinesia; -phrenia; -menorrhoea);
8) orth(o)- (-paedia; -odontia; -optĭca; -stasis);
9) poly- (-neuritis; -avitaminosis; -uria);
10) xero- (-dermia; -ophthalmia; -stomia);
11) melano- (-dermia; -oma; -uria);
12) xantho- (-opsia; -dermia; -chromia);

13) xeno- (-transplantatio; -phobia);
14) pan- (vasculitis; -hysterectomia; -carditis; -algia).

Ex. 2. Make up and write down in Latin terms with the following meaning:

1) selectively directed to (affecting):

a) the nervous system; b) psychic processes; c) thinking processes; d) cause of disease; e) the skin.

2) a) having different origin; b) having the same origin; c) causing a disease; d) arising inside the organism; e) arising under the influence of external effects; f) having aural origin (arising in the ear); g) having dental origin (arising in the tooth); h) causing suppuration (pus formation); i) causing cancer; j) arising in the blood.

3) inflammation of the spinal cord gray substance.

4) insufficient (scanty) number of blood cells.

Ex. 3. Explain the meaning of the terms:

heterometropia; isometropia; neurotropus; nootropus; thyreogenus; thyreotropus; thyreoprivus; isotonia; megalomania; megacolon; splenomegalia (megalosplenia); hepatosplenomegalia; tachycardia; poliomyelitis; achromatopsia; achromatosis; gastrogenus; psychogenus; pathogenus; haematogenus; nephrogenus; autotransplantatio; homogenus; schizophrenia.

Ex. 4. Explain the meaning of the following terms:

1. mega-, megal-, -megalia:

a) a condition of abnormally large fingers or toes; b) enlargement of the spleen; c) a condition of enlargement of the liver; d) duodenum of abnormally large size; e) abnormally largehead.

2. melan-:

a) a condition in which there is an unusually large accumulation of melanin in the skin; b) a form of skin cancer that arises in the cells producing black pigment; c) the presence of melanin in the urine;

3. micr-:

a) congenital smallness of the stomach; b) examination using a microscope; c) surgical operation on the small anatomical structures with the help of a microscope; d) general reduction in size of the spinal cord; e) abnormal smallness of the mammary glands; f) an unusually small size of head.

4. olig-:

a) less urination than normal; b) a congenital deficiency of fingers or toes; c) congenital lack of intellect; d) less menstrual blood flow than usual; e) insufficient number of blood cells.

5. –tropus:

a) directed to the cause of a disease; b) selectively directed to thinking processes; c) affected psychic or mental functioning or behavior; d) localizing selectively in nerve tissue; e) having a stimulating effect on body growth; f) having an affinity for the skin.

6. –genus:

a) having different origin; b) having the same origin; c) having thyroid gland origin; d) occurring in the blood; e) causing cancer; f) arising in the kidney; g) arising in the stomach; h) producing any disease.

Ex. 5. Give the Latin lexical form and the full definition of each term in English:

neurogenic, xerodermia, metabolism, hepatomegalia, orthodontics, etiology, microcephaly, oliguria, myopia, tachycardia, invasion, otogenic, etiotropic, bradycardia, panhysterectomy, extirpation, psychogenic, orthopedics, rehabilitation, tachyphagia, melanoma, autopsy, nephrogenic, megaduodenum, implantation, oligodontia, leucosis, micromastia, polyavitaminosis, melanoderma, remission, oligocytaemia, enteromegalia, polioencephalitis, replantation, somatotropic, allergy, hypermetropia, oligophrenia, xenotransplantation, orthoptics, acrophobia.

Ex. 6. Learn the following professional expressions:

1) Status commūnis. *General condition.*
2) Status locālis. *Local condition.*
3) Status naturālis. *Natural condition.*
4) Status praesens aegroti. *Present condition of a patient.*

LESSON 9

§15. Revision Lessons 1-8

The main objectives of the lesson are:

1) to know the term-elements used in names of medical specialities and related disciplines, specialists, methods of primary diagnostic control, appliances, and instruments;

2) to know the term-elements used in names of various psychosomatic pathologies, methods of electro- and roentgenographic control;

3) to know the term-elements used in names of surgical manipulations, ways of surgical aid;

4) to know the term-elements used in the formation of the names of laboratory-diagnostic definitions;

5) to know Latin and Greek prefixes used in clinical term formation;

6) to know the term-elements used in formation of terms denoting properties, qualities, relations, various signs;

7) to know and to be able to use simple medical terms;

8) to be able to analyze compound Latin clinical terms;

9) to train in forming compound Latin clinical terms;

10) to train in translating clinical terms from Latin into English, and vice versa.

EXERCISES:

Ex. 1. Explain the meaning of the terms:

amnesia; thrombocytopoësis; biolŏgia; peritonitis; angiopathia; odontolĭthus; cardiolŏgus; thermotherapia; aplasia; cardiogĕnus; leucosis; geriāter; pancarditis; bradyphagia; pneumocentēsis; gynaecolŏgus; somatotropus; acraesthesia; haematologia; apathia; mammogramma; typhlectasia; neurolŏgus; asthenia; ophthalmoscopia; otorhinolaryngologia; dermatōsis; physiologia; hyperkeratōsis; phthisiāter; tachycardia; toxicomania; xerophthalmia; proctolŏgus; oliguria; psychiatria; dermatotropus; encephalogramma; amenorrhoea; hemicrania; myoplegia; colpotomia; rhinogramma; paraproctitis; chondropathia; haemarthrōsis; somatologia; stomatoscopia; hemianopsia; hydrophobia; osteopathia; chylothōrax; anaesthesiolŏgus; neurotropus; osteonecrōsis; dysthyreōsis; erythropenia; glossoplegia; sympathia; glykaemia; hyperthermia; hypotonia; leucocytōsis; melanoderma; cholecystītis; hypokinesia; odontogenĕsis; oligocytaemia; hidradenītis; pyosalpinx; oligophrenia; gastrocēle; colostomia; salpingectomia; dysarthria; symbiosis; pericarditis; nootropus; hyperaemia.

Ex. 2. Make up the one-word terms with the following meaning:

— branch of clinical medicine treating rectum diseases;
— an inflammation of the small intestine and the stomach;
— abnormal fast swallowing;
— causing cancer;
— less menstrual blood flow than usual;
— increased number of leucocytes in the blood;
— pain in the head;
— causing the growth of tumors;
— the origin and development of a disease;
— a malignant tumor arising from glandular epithelial;
— slow swallowing;
— inflammation of outer (serous membrane) covering the uterus;
— the origin and formative development of teeth;
— a rapid heart beat;
— presence of lymph in the urine;
— branch of medicine treating children diseases;
— insufficient number of blood cells;
— paralysis of similar parts on both sides of the body;
— tumor from vascular tissue;
— a process of sweating;
— bleeding from the urinary bladder;
— enlargement of the spleen;
— medical specialist treating blood diseases;

— a congenital fistula of the urinary bladder;
— inability to swallow;
— tendency towards bleeding;
— hardening of bony spaces;
— acute inflammation of the gray substance of the brain;
— science studying drugs and their usage;
— inflammation of lymphatic vessels;
— treatment by means of natural or artificial physical factors;
— rupture of the eyeball;
— specialist studying forms of life and living organisms;
— loss of half the vision in each eye;
— a malignant tumor of connective tissue;
— a state in which most of the teeth are lacking;
— paralysis of muscle;
— the presence of blood in the urine;
— inflammation of the sweat glands;
— dilatation of the stomach;
— narrowing of the oesophagus;
— a doctor treating mental diseases;
— surgical freeing from adhesions of a uterine tube;
— the X-ray examination of mammary glands;
— impairment of voice;
— making an incision into the cornea;
— a puncture of the thoracic wall;
— the X-ray examination of the great vessels and the chambers of the heart;
— effusion of the lymph into the thoracic cavity;
— a natural or artificial gastric fistula.

Ex. 3. Give the Latin lexical form and the full definition in English of the terms:

arthrocentesis; hyperglycaemia; cardiogram; arthralgia; cardiography; hydrometra; gerontology; bradycardia; cephalgia; hematology; polyavitaminosis; mammogram; neurogenic; dystrophy; pneumorrhaphy; keratoplasty; hemophilia; cholelithiasis; salpingopexy; nephrogenic; colonorrhagia; meningoencephalitis; homogenous; toxicosis; hypertension; ophthalmoscopy; endometritis; autopsy; otogenic; hepatomegalia; otolaryngologist; cystitis; nephropathy; ophthalmoplegia; pediatrician; micromastia; atrichia; phthisiologist; hypomnesia; osteochondrosis; proctoscopy; psychiatrist; etiology; colpohysteropexy; psychogenic; atrophy; psychologist; rhinoscopy; somatology; phlebography; stomatology; thoracometry; biopsy; mastopathy; cytology; hyperesthesia; dysmenorrhoea; enteromegalia; paranephritis; oncologist; typhlocele; oesophagostoma; otogenic; heterogenous; etiotropic.

SAMPLE OF THE FINAL TEST

“Clinical terminology”

I. Give the meaning of the terms:

1) atrichia; 2) polyuria; 3) panvasculitis; 4) cystoscopia; 5) gynaecologus; 6) leucopenia; 7) haemorrhagia; 8) aetiologia; 9) hemiplegia; 10) hyperkinesia; 11) gastroduodenostomia; 12) neurotropus; 13) dysopia; 14) xerodermia; 15) thyreoprivus; 16) cancerogenus; 17) otorrhoea; 18) cheiloschisis.

II. Make up the terms with the following term-elements:

derm- (dermat-) 1) inflammation of the skin; 2) affecting the skin; 3) doctor who treats skin diseases; 4) dryness of the skin; 5) field of medicine studying skin diseases.

-sclerosis 1) hardening of bone tissue; 2) hardening of kidneys; 3) hardening of arteries; 4) hardening of lung tissue.

-ectasia 1) widening of the stomach; 2) widening of the renal pelvis; 3) widening of the bronchi; 4) widening of the cecum.

III. Make up the terms with the following meaning:

1)pain in many joints; 2) increased number of erythrocytes in the blood; 3) stop of lymph flow; 4) tooth stone; 5) process of disease or morbid process arising and development; 6) plasticsurgery of thethorax; 7) tendency to blood clots formation; 8) suture repair of any vessel; 9) suturing the ends of the ruptured nerve together; 10) evagination of an organ or its part through openings in the anatomical formations.

PHARMACEUTICAL TERMINOLOGY

LESSON 1

INTRODUCTION TO THE PHARMACEUTICAL TERMINOLOGY

The main objectives of the lesson are:

1) to learn the basic theoretical information about pharmaceutical terminology;

2) to train in writing the medicine names in Latin;

3) to train in using the capital and small letters in pharmaceutical terminology;

4) to train in writing Latin names of medicinal preparations.

§1. Basic pharmaceutical terms and their definitions

Pharmaceutical terminology is a complex of special terms used in the branch of medicine known as *pharmacy* (Greek *pharmakeia*) which deals with getting, processing, producing, storing and handing out medicines.

The basic pharmaceutical terms are *the pharmaceutical substance, the medicinal vegetable raw materials, the medicine (drug), the medicinal form and the medicinal preparation.*

Pharmaceutical substance is a substance of natural, synthetic or biotechnological origin having pharmacological activity and used for industrial production of medicines and for making them at pharmacies.

Herbal medicinal raw materials are whole medicinal plants or parts of medicinal plants (roots, rhizomes, tubes, herbs, flowers, spores, fruit, seeds, stalks, bark, leaves) used for industrial production of medicines and for making them at pharmacies.

Medicine (drug) is a pharmaceutical substance or a combination of several pharmaceutical substances which have pharmacological activity and are permitted to be used orally or externally for prevention, diagnostics and treatment of diseases. */Law of the Republic of Belarus of the 20th of July of the year 2006 № 161-3 "On medicines"/*

A medicine which has undergone special clinical testing and is approved to be used in medical practice must be obligatory registered in the **International Non-proprietary Names (INN)**. INN is a nomenclature system used to identify active ingredients of medicines. Each INN is a unique name that is internationally consistent and globally recognized. The INN system began operating in 1953 and is now administered by the World Health Organization. The aim of the

INN system is to provide healthcare professionals with a unique and universally available designated name to identify each pharmaceutical substance. The existence of such a nomenclature assists in the clear identification, safe prescription and dispensing of medicines to patients; and facilitates communication and exchange of information among healthcare professionals and scientists world-wide.

There are distinguished the **original medicine** having the brand name and the **generic medicine** having the generic /scientific name.

Original medicine is a medicine which differs from the previously registered medicines by its pharmaceutical active substance or a combination of such substances.

Generic medicine is a medicine containing the same pharmaceutical substance or a combination of pharmaceutical substances in the same medicinal form as the original medicine. It is equivalent to the original medicine and therapeutically interchangeable with it.

Original medicine is given a brand name by the pharmaceutical company which developed it. This company takes out a patent (exclusive rights) on this medicine to ensure that it regains the money spent on its research and development. Once the patent protection expires, other companies can produce their own version of the medicine (generic medicine). Generic medicines are usually cheaper because there are fewer research and development costs, but they contain the same active ingredient as the branded products.

Medicinal form is a state of a medicine which makes it convenient to use. There are divided into:

- *liquid medicinal forms* (emulsion, extract, infusion, liniment, mixture, solution, suspension, tincture);
- *soft medicinal forms* (ointment, paste, suppository);
- *solid medicinal forms* (tablet, capsule, dragée, powder, species, pill).

Medicinal preparation is some medicine in a certain medicinal form *(tablet of analgine; zinc paste).*

§2. Brief information about medicinal forms

Liquid medicinal forms

Emulsion (*emulsum, i n*) is a liquid medicinal form in which water-insoluble fluids (fatty oils, balsams) are in an aqueous medium in a suspended state and look like small droplets.

Extract (*extractum, i n*) is obtained from medicinal vegetable raw materials.

Infusion (*infūsum, i n*) and **decoction (*decoctum, i n*)** are liquid medicinal forms which are aqueous extracts from vegetable raw materials.

Liniment (*linimentum, i n*) is a medicinal form for external use. Most liniments are homogeneous mixtures in a state of thick fluids.

Mixture (*mixtūra, ae f*) is a liquid medicinal form which is obtained when dissolving or mixing some solid substances in various liquid bases or when mixing some fluids.

Mucilage (*mucilāgo, ĭnis f*) is obtained by dissolving mucilaginous substances of vegetable origin or by extracting mucilaginous substances from vegetable raw materials by means of drawing as well as from starch processed with hot water.

Solution (*solutio, ōnis f*) is a liquid medicinal form which is obtained by means of dissolution of a solid pharmaceutical substance or a fluid in a solvent. There are aqueous, alcoholic, glyceric and oil solutions. They are used for internal and external use as well as for injections.

Suspension (*suspensio, ōnis f*) is a liquid medicinal form in which solid finely crushed insoluble pharmaceutical substances are in a suspended state in some fluid.

Tincture (*tinctūra, ae f*) is a liquid clear coloured to different degrees spirituous extract from vegetable raw materials.

Soft medicinal forms

Ointment (*unguentum, i n*) is a viscous medicinal form for external use.

Paste (*pasta, ae f*) is a variety of ointments containing not less than 25 percent of powdery substances.

Suppository (*suppositorium, i n*) is a dosed medicinal form, solid at room temperature and melting or dissolving at body temperature. There are rectal suppositories (*suppositoria rectalia*) and vaginal suppositories (*suppositoria vaginalia*).

Solid medicinal forms

Capsule (*capsŭla, ae f*) is a cover for powdery, paste-like, granulated or liquid pharmaceutical substances in doses used orally. Medicinal preparations having an unpleasant taste, smell or an irritant effect are produced in capsules.

Dragée (*dragée*) is a solid medicinal form in doses for internal use obtained by making multiple layers of pharmaceutical substances and adjuvants over sugary granules.

Granule (*granŭlum, i n*) is a solid medicinal form in a state of homogeneous particles (grains, kernels) of rounded, cylindrical or irregular form.

Pill (*pilŭla, ae f*) is a solid medicinal form in doses for internal use which resembles small balls of 0.1 – 0.5 grammes. Nowadays pills are prescribed very seldom.

Powder (*pulvis, ĕris m*) is a solid medicinal form for internal and external use having dry property.

Tablet (*tabuletta, ae f*) is a solid medicinal form in doses obtained by pressing pharmaceutical substances or mixtures of pharmaceutical substances and adjuvants.

Species (*species, ērum f*) is a mixture of several sorts of crumbled or more seldom of whole vegetable medicinal raw materials.

Different medicinal forms

Aerosol (*aërosōlum, i n*) is a spray for inhalations or external use.

Ophthalmic films (*membranŭlae ophthalmĭcae*) are sterile polymeric films containing pharmaceutical substances in definite doses and soluble in tear fluid.

§3. Medicine names

There are three types of medicine names:

1) non-proprietary names, 2) chemical names and 3) trade names.

Non-proprietary medicine names consist of one word only. They are not translated into other languages, they are transcribed, i.e. are written with the letters of Latin alphabet and get specific Latin endings. As a rule, such medicine names are **second declension neuter nouns with the ending –um / -ium**.

English name	*Latin name*
corvalole	Corlvalolum, i n
atropine	Atropinum, i n
chloroform	Chloroformium, i n

But many medicines preserve their **chemical names** corresponding to their chemical composition. They are:

- names of chemical elements: *Zincum (zinc), Iodum (iodine);*
- names of salts: *Calcii gluconas (calcium gluconate), Natrii chloridum (sodium chloride)*;
- names of inorganic acids: *Acidum acetylsalicylicum (acetylsalicylic acid)*;
- names of oxides, peroxides and hydroxides: *Zinci oxydum (zinc oxide), Aluminii hydroxydum (aluminium hydroxide)*.

Medicines containing two or more pharmaceutical substances in their composition are given **trade names**. They are written in the Nominative case in inverted commas after the name of a medicinal form. These names are given in pharmaceutical reference books.

For example: tablets "Pyrcophen" – tabulettae "Pyrcophenum";
ointment "Laevomecol" - unguentum "Laevomecolum".

§4. Capital and small letter

CAPITAL letter is **always** used in the following names:

1) names of medicines: *Analgīnum, i n; Platyphyllīnum, i n; Spirĭtus aethylĭcus – ethyl alcohol*;

2) names of medicinal plants: *Valeriāna, ae f; Althaea, ae f*;

3) names of chemical elements: *Calcium, i n; Kalium, i n;*

BUT: if a chemical element (Natrium, i n; Kalium, i n) is a part of a compound name as apposition, it is written with a small letter after a hyphen: *Oxacillinum-natrium*;

4) prescription verbs: *Recĭpe (Take); Da (Give); Signa (Mark)*;

5) the words *Aqua, ae f (water), Acĭdum, i n (acid), Spirĭtus, us m (alcohol), Oleum, i n (oil*);

6) the first word of each new prescription line.

Small letter is **always** used in the following cases:

1) names of salt anions *(Atropini **s**ulfas*);

2) all the adjectives and participles *(Aqua **d**estillata*).

Capital / small letter may vary depending on the position of the word:

names of medicinal forms and names of parts of medicinal plants have the capital letter if they begin a prescription line and have the small letter if they don't begin a prescription line.

§5. Structure of medicinal preparation

The names of medicines produced by pharmaceutical industry include names of medicinal forms and other characteristics (solvent, percentage concentration, type of vegetable raw materials, etc.). The names of medicinal preparations are presented by word combinations consisting of several pharmaceutical terms. These words should be in a definite order according to the rules used in anatomical terminology.

1) medicinal form + medicine name / medicinal plant

1	2
medicinal form in Nominative Sing. / Plur.	medicine name or medicinal plant in Genitive Sing. with the capital letter

*tablets of analgine – tabulett**ae** Analgin**i**;*
*Zinc paste = paste of zinc – past**a** Zinc**i**;*
*tincture of motherwort – tinctur**a** Leonur**i**.*

1	2
medicinal form in Nominative Sing. / Plur.	«trade medicine name» in Nominative Sing.

*tablets «Citramon» – tabulett**ae** «Citramon**um**»;*
*suppositories «Anusol» - suppositori**a** «Anusol**um**».*

2) adjective + medicinal form + name of medicine / plant

1 medicinal form in Nominative Sing. / Plur.	2 medicine name or medicinal plant in Genitive Sing. with capital letter	3 adjective in Nominative (if referring to medicinal form) or in Genitive (if referring to the name of medicine / plant)

3 1 2
*coated tablets of ampicilline – tabulett**ae** Ampicillin**i** obduct**ae**;*
*ophthalmic ointment of tetracycline – unguent**um** Tetracyclin**i** ophthalmic**um**;*
*liquid extract of motherwort – extract**um** Leonur**i** fluid**um**.*

REMEMBER!

❖ The name of a pharmaceutical substance is indicated after the preposition ***cum*** (with) in Ablative Singular form. As most medicine names are IInd declension nouns, their Ablative Singular form is formed by the ending **–o:**

*vaginal suppositories **with** synthomycine – suppositoria vaginalia **cum** Synthomycin**o**.*

❖ In the names of vaginal and rectal suppositories the adjectives *vaginalis,e* and *rectalis,e* are written right after the noun *suppositorium, i n*:

vaginal suppositories «Anaesthesol» – suppositoria vaginalia «Anaesthesolum».

The same structure is also used in the names of ophthalmic films *(membranŭlae ophthalmĭcae):*

membranŭlae ophthalmĭcae cum Pilocarpīni hydrochlorĭdo.

❖ In the names of medicinal preparations obtained from stone-fruits, the name of a fruit is written in the Genitive plural:

*peach oil = oil of peaches – Oleum Persic**ōrum**;*
*olive oil = oil of olives – Oleum Oliv**ārum**.*

❖ If an adjective characterizes a pharmaceutical substance or medicinal plant, it agrees with the name of this substance or plant:

*peppermint oil = oil of peppermint – Oleum Menth**ae** piperīt**ae**.*

Vocabulary 1

Liquid medicinal forms

1) decoctum, i n	*decoction*	dec.
2) emulsum, i n	*emulsion*	emuls.
3) extractum, i n	*extract*	extr.
4) infūsum, i n	*infusion*	inf.
5) linimentum, i n	*liniment*	lin.
6) mixtūra, ae f	*mixture*	mixt.
7) solutio, ōnis f	*solution*	sol.
8) suspensio, ōnis f	*suspension*	susp.

9) tinctūra, ae f	*tincture*	tinct.
	Soft medicinal forms	
10) pasta, ae f	*paste*	past.
11) unguentum, i n	*ointment*	ung.
12) suppositorium, i n	*suppository*	supp.
	Solid forms	
13) capsŭla, ae f	*capsule*	caps.
14) dragée	*dragee*	drag.
15) granŭlum, i n	*granule*	gran.
16) pulvis, ĕris m	*powder*	pulv.
17) tabuletta, ae f	*tablet*	tab.
18) species, ērum f /plur./	*species*	spec.
19) aërosōlum, i n	*aerosol*	aëros.
20) membranŭlae ophthalmĭcae (Nom.Plur.)	*ophthalmic films*	
	Names of plants and medicines	
21) Belladonna, ae f	*belladonna*	
22) Leonūrus, i m	*motherwort*	
23) Quercus, us f	*oak tree*	
24) Valeriāna, ae f	*valerian*	
	Parts of medicinal plants	
25) cortex, ĭcis m	*bark*	*cort.*
26) herba, ae f	*herb*	*hb., h.*
27) radix, īcis f	*root*	*rad., r.*
	Adjectives	
28) fluĭdus, a, um	*liquid*	*fluid.*
29) obductus, a, um	*coated*	*obd.*
30) ophthalmĭcus, a, um	*ophthalmic*	
31) siccus, a, um	*dry*	*sicc.*
32) spissus, a, um	*thick*	
33) rectālis, e	*rectal*	*rect.*
34) vaginālis, e	*vaginal*	*vagin.*

EXTRA information:

❖ ***Atropa Belladonna /Belladonna***/ grows in North Africa, Europe, Crimea and Asia. The common name "*belladonna*" originates from its historic use by women, as "*Bella Donna*" is Italian for "beautiful lady". Drops prepared from the belladonna plant were used to dilate women's pupils to get an effect considered to be attractive and seductive. In medicine belladonna has been used in herbal medicine for centuries as a pain reliever, muscle relaxer, and anti-inflammatory, and to treat menstrual problems, peptic ulcer disease, histaminic reaction, and motion sickness. Now Atropine sulphate containing Belladonna is used for eye examination.

❖ ***Motherwort /Leonurus/*** has a long history of use as a herb in traditional medicine in Central Europe, Asia, and North America. It was historically used in China to prevent pregnancy and to regulate menstruation. Motherwort has also been used to ease stomach gas and cramping, menopausal problems, and insomnia.

❖ ***Oak tree /Quercus/*** is a tree in the genus of the beech family. There are approximately *600* species of oaks. Oak bark is the bark from several types of oak trees. It is used to make medicine. It is used as a tea for diarrhea, colds, fever, cough, and bronchitis; for stimulating appetite; and for improving digestion. Some people apply oak bark directly to the skin in a compress or add it to bath water for pain and swelling (inflammation) of the skin, mouth, throat, genitals, and anal region; and for red itchy skin due to cold exposure (chilblains).Oak bark contains tannins, which might help treat diarrhea and inflammation.

❖ ***Valerian /Valeriana/***. The name of the herb is derived from the personal name *Valeria* and the Latin verb *valere* (to be strong, healthy). Crude extract of valerian root is sold as a dietary supplement in the form of capsules. Valerian root may have sedative and anxiolytic effects.

EXERCISES

Ex. 1. Latinize the following medicine names:

bicilline, boromenthole, amoxicilline, nitroglycerin, glucose, gentamycine, prednisolone, bisoprolole, dibazole.

Ex. 2. Write the capital letter where necessary:

solutio glucosi; unguentum ditetracyclini ophthalmĭcum; infusum cortĭcis quercus; suppositoria rectalia "anusolum"; tabulettae prednisoloni obductae; radix valerianae; linimentum "sanitas"; extractum belladonnae spissum; herba leonuri.

Ex. 3. Choose the correct endings and translate into English:

tabulettae Nitroglycerīni *(obducta; obductae; obducti)*; suspensio *(Hydrocortisōnum; Hydrocortisōni)*; *(tinctūra; tinctūrae)* Valeriānae; *(unguentum; unguenti)* Erythromycīni; herba *(Leonūri; Leonūrus)*; infūsum *(herba; herbae)* Leonūri; extractum Leonūri *(fluĭdum; fluĭdi; fluĭdus)*; extractum Belladonnae *(siccum; siccae)*; cortex *(Querci; Quercus)*; decoctum *(cortex; cortis; cortĭcis)* Quercus; suppositoria *(vaginālis; vagināle; vaginalia)*.

Ex. 4. Put the following words into the necessary cases:

unguentum, i n - _____ *(Gen Sing.)*; tabuletta, ae f - _____ *(Nom. Plur.)*; radix, ĭcis f - _____ *(Gen. Sing.)*; suppositorium, i n - _____ *(Nom. Plur.)*; Quercus, us f - _____ *(Gen. Sing.)*; siccus, a, um - _____ *(Nom. Sing., neuter)*; vaginālis, e - _____ *(Nom. Plur., neuter)*; pulvis, ĕris m - _____ *(Gen. Sing.)*; Belladonna, ae f - _____ *(Gen. Sing.)*; obductus, a, um - _____ *(Nom. Plur., feminine)*.

Ex. 5 Put the necessary case ending instead of dots:

unguent… Dimexin…; solut… Nitroglycerin…; suspens… Griseofulvin…; tabulett… Ibuprophen…; tabulett… «Bellasthesin…»; tabulett… «Cholenzym…» obduct…; suppositori… «Pharmatex…»; unguent… Ditetracyclin… ophthalmĭc…; suppositori… vagināl… cum Synthomycino.

Ex. 6. Translate from English into Latin:

coated tablet – coated tablets, rectal suppository – rectal suppositories, vaginal suppository – vaginal suppositories, tincture of motherwort, infusion of valerian, ophthalmic films, dry extract of belladonna, thick extract of valerian, coated tablets of extract of valerian; liniment of streptocide; aerosol "Cameton"; tincture of valerian; root of belladonna; liquid extract of motherwort; decoction of bark of oak; ophthalmic ointment of dibiomycine; solution of glucose; tablets of validole; vaginal suppositories "Osarbon"; granules of orase.

LESSON 2

STANDARD PRESCRIPTION PHRASES

The main objectives of the lesson are:

1) to memorize the basic standard verb phrases and prepositional phrases used in prescription;

2) to train in writing the prescription verbs and prepositional phrases.

§6. Standard prescription verbs denoting orders and instructions

There are several verbs used in the prescription. They denote order, instruction or request as the prescription itself is a written address of a doctor to a pharmacist. These prescription verbs may be used either in Imperative Mood or in Subjunctive Mood. *Prescription phrases in Imperative and Subjunctive mood have the same meaning "order, instruction", therefore they can equally be used in a prescription.*

Imperative mood. Modus imperatīvus

Imperative Singular	***Translation***
Da!	Give!
Signa!	Mark!
Sterilīsa!	Sterilize!
Misce!	Mix!
Recĭpe!	Take!
Repĕte!	Repeat!
Verte!	Turn over!

!!!**After verb "Recĭpe"** medicine names, names of medicinal forms or names of parts of medicinal plants are used in **Genitive** Singular or Plural.

Subjunctive mood. Modus conjunctīvus

Subjunctive Singular	***Translation***	***Subjunctive Plural***	***Translation***
Detur	*Let it be given.*	Dentur	*Let them be given.*
Signētur	*Let it be marked.*		
Sterilisētur	*Let it be sterilized.*		
Misceātur	*Let it be mixed.*		
Repetātur	*Let it be repeated.*		

REMEMBER** the following prescription phrases**!

Da tales doses numĕro … *Give such doses in number …*
Dentur tales doses numĕro … *Let such doses be given in number …*

The verb "fiĕri" in prescription phrases:

Usage: while writing out a prescription for a medicine (drug) prepared at a pharmacy in order to indicate the components to prepare the medicine and the medicinal form to make.

Forms: the verb ***fiĕri*** (*to make*) is used in subjunctive mood singular or plural and is followed by the name of a medicinal form to be made:

- singular form – ***fiat*** is used when prescribing powders, ointments, liniments, suppositories;
- plural form – ***fiant*** is used when prescribing species.

After these verb forms the medicinal form is used in **Nominative** Singular or Plural.

REMEMBER the prescription phrases with these forms**!**

Misce, fiat unguentum / pulvis / suppositorium. – *Mix to make ointment / powder / suppository.*

Misce, fiant species. – *Mix to make species.*

§7. Standard prepositional phrases used in prescription

ad 100 ml	*up to 100 ml*
ad usum internum (externum)	*for internal (external) use*
contra tussim	*against / for cough*
cum Glycerino	*with glycerine*
cum radicĭbus	*with roots*
ex 0,5 – 180 ml	*from 0.5 gram (of dry substance) – 180 ml (of decoction, infusion)*

in ampullis	*in ampoules*
in capsŭlis gelatinōsis	*in gelatinous capsules*
in charta cerāta	*in waxed paper*
in tabulettis	*in tablets*
in tabulettis obductis	*in coated tablets*
in vitro nigro	*in a dark phial*
per se	*by itself*
pro auctōre (pro me)	*for the author (for me)*
pro infantĭbus	*for children*
pro injectionĭbus	*for injections*
pro narcōsi	*for narcosis*
pro suspensiōne	*for suspension*

Vocabulary 2

Names of medicines

1) aqua, ae f	*water*	aq.
2) Camphora, ae f	*camphor*	
3) oleum, i n	*oil*	ol.
4) Oleum Ricĭni	*castor oil*	
5) spirĭtus, us m	*alcohol*	spir.
6) Spirĭtus aethylĭcus, Spirĭtus aethylĭci *(Gen.Sing.)*	*ethyl alcohol*	

Names of medicinal plants

7) Hyperīcum , i n	*St. John's Wort*	
8) Mentha, ae f	*mint*	
9) Mentha piperīta, Menthae piperītae *(Gen.Sing.)*	*peppermint*	
10) Rheum, i n	*rhubarb*	
11) Urtīca, ae f	*nettle*	
12) Virĭde nitens, Virĭdis nitentis *(Gen.Sing.)*	*brilliant green*	

Parts of medicinal plants

13) folium, i n	*leaf*	fol.
14) rhizōma, ātis n	*rhizome*	rhiz.

Adjectives

15) aethylĭcus, a, um	*ethyl*	
16) destillātus, a, um	*distilled*	destill.
17) gelatinōsus, a, um	*gelatinous*	gel.
18) oleōsus, a, um	*oily*	
19) purificātus, a, um	*purified*	purif.
20) spirituōsus, a, um	*spirituous*	

EXTRA information:

❖ ***Mentha /Mint/*** All mints grow near pools of water in partial shade all year round. Mint was originally used as a medicinal herb to treat stomach ache and chest pains. There are several uses in traditional medicine and preliminary research for possible use in treating irritable bowel syndrome. Menthol from mint essential oil (40–90%) is an ingredient of many cosmetics and perfumes. Menthol and mint essential oil are also used in aromatherapy which may have clinical use to alleviate post-surgery nausea.

❖ ***Viride nitens /Brilliant green/*** is a synthetic medicine. It has been used to color silk and wool. In Eastern Europe and Russia the dilute alcoholic solution of Brilliant Green is sold as a topical antiseptic. It is effective against gram-positive bacteria. The main advantage of Brilliant Green over the more common antiseptics such as iodine is that it does not irritate mucous membranes as harshly on accidental contact.

EXERCISES

Ex. 1. Translate into Latin:

water of peppermint; distilled water; spirituous solution of brilliant green; root of rhubarb; leaves of nettle; purified water; infusion of leaves of peppermint; dry extract of rhubarb; coated tablets of nystatin; oil of peppermint; emulsum of castor oil; oily solution of camphor; spirituous solution of menthole; herb of St. John's Wort; infusion of rhizome of valerian; powder of root of rhubarb.

Ex. 2. Use the necessary prepositions or endings and translate into English:

Nystatinum _____ tabulettis obduct___; tabulettae Furacilin___ ad usum extern___; Oleum Ricĭni ____ capsŭl___ gelatinōsis; rhizoma ____ radicĭbus Valeriān___; pulvis Polysorb___ _____ tussim; solutio Glucos___ in ampull___; suppositoria rectal___ cum Theophyllin___; tabulettae "Allochol___" ____ infantĭbus; tabulettae Ampicillin___ pro suspensiōn___.

Ex. 3. Translate into Latin minding the prepositional phrases:

solution of penicillin for injections; collargol in a dark phial; suppositories with ichthyole; oily solution of camphor for external use; tablets of dimedrole for children; water for injections; validole in capsules; dry mixture against cough for children; powder with levorine for suspension; solution of nitroglycerine in ampoules; rhizome with roots of valerian; theophylline by itself; predione for narcosis; amidoprocaine in coated tablets.

Ex. 4. Translate into Latin minding the prescription verb forms:

1. Give such doses in number 10 in tablets.
2. Give in waxed paper.

3. Mix to make a suppository.
4. Give such doses in number 20 in ampoules.
5. Mix to make ointment.
6. Sterilize.
7. Give in a dark phial.
8. Mix to make liniment.
9. Mark.
10. Mix to make species.
11. Give such doses in number 15 in gelatinous capsules.
12. Take ethyl alcohol 70% up to 100 ml.
13. Mix to make powder.
14. Give such doses in number 10 in coated tablets.
15. Mix to make paste.

Ex. 5. Read and analyze the underlined endings:

1. Recĭpe: Menthōl**i** 0,2
   Spirĭt**us** aethylĭc**i** 90% 50,0
   Misce. Da. Signa:
2. Recĭpe: Aqu**ae** Menth**ae** piperīt**ae**
   Glycerīn**i**
   Spirĭtus aethylĭci 70% ana 30 ml
   Misce. Da. Signa:
3. Recĭpe: Unguent**i** Xeroformii 3% 10,0
   Da. Signa:
4. Recĭpe: Solutiōnis Phentanyli 0,005% – 5 ml
   Da tales doses numĕro 10 in ampullis
   Signa:

LESSON 3

LATIN CHEMICAL TERMINOLOGY

The main objectives of the lesson are:
1) to learn the Latin names of main chemical elements;
2) to learn the Latin names of oxides, peroxides, hydroxides and acids;
3) to train in writing the Latin names of oxides and acids.

§8. Latin names of chemical elements

• All the names of chemical elements are always written with the CAPITAL letter.

• Latin names of chemical elements are **2nd declension neuter nouns**:
*E.g.: Ferr**um, i n** – iron; Zinc**um, i n** – zinc.*
Exceptions: *Sulfur, ŭr**is** n (3rd declension);*
*Phosphŏrus, i **m** (masculine).*
•The chemical elements *fluorine* and *magnesium* have two Latin names:
fluorine: Phthorum and Fluōrum;
magnesium: Magnium and Magnesium.

Names of the most important chemical elements

Latin name	***Symbol***	***English name***	***Latin name***	***Symbol***	***English name***
Aluminium, i n	*Al*	*aluminium*	Hydrargўrum, i n	*Hg*	*mercury*
Argentum, i n	*Ag*	*silver*	Iōdum, i n	*I*	*iodine*
Arsenĭcum, i n	*As*	*arsenic*	Kalium, i n	*K*	*potassium*
Aurum, i n	*Au*	*gold*	Lithium, i n	*Li*	*lithium*
Borum, i n	*B*	*boron*	Magnesium, i n	*Mg*	*magnesium*
Bromum, i n	*Br*	*bromine*	Magnium, i n		
Barium, i n	*Ba*	*barium*	Mangănum, i n	*Mn*	*manganese*
Bismŭthum, i n	*Bi*	*bismuth*	Nitrogenium, i n	*N*	*nitrogen*
Carboneum, i n	*C*	*carbon*	Natrium, i n	*Na*	*sodium*
Chlorum, i n	*Cl*	*chlorine*	Oxygenium, i n	*O*	*oxygen*
Calcium, i n	*Ca*	*calcium*	Plumbum, i n	*Pb*	*lead*
Cuprum, i n	*Cu*	*copper*	Phosphŏrus, i m	*P*	*phosphorus*
Fluorum, i n	*F*	*fluorine*	Sulfur, ŭris n	*S*	*sulphur*
Phthorum, i n			Silicium, i n	*Si*	*silicon*
Ferrum, i n	*Fe*	*iron*	Zincum, i n	*Zn*	*zinc*
Hydrogenium, i n	*H*	*hydrogen*			

§9. Names of oxides, hydroxides, peroxides

Latin names of oxides, hydroxides and peroxides consist of two words:

1	2
name of a chemical element	***the word "oxide, hydroxide, peroxide"***
▪ non-changeable ▪ always in Genitive Singular ▪ with the capital letter	▪ changeable ▪ Nominative or Genitive Singular ▪ with the small letter

English	**Nom.**	**Gen.**
zinc oxide	Zinc**i** oxўd**um**	Zinc**i** oxўd**i**
aluminium hydroxide	Alumini**i** hydroxўd**um**	Alumini**i** hydroxўd**i**
hydrogen peroxide	Hydrogeni**i** peroxўd**um**	Hydrogeni**i** peroxўd**i**

§10. Names of acids

Latin names of acids consist of the noun *Acĭdum, i n*, *acid*, which is written with the capital letter, and the adjective denoting the name of the acid of neuter gender. Both words are declined.

1	2
Acidum (acid)	***adjective of neuter gender (- um)***
Acĭdum	*ascorbinicum*
▪ changeable ▪ with the capital letter ▪ Nom. Sing. – **um;** Gen. Sing. – **i**	▪ changeable ▪ with the small letter ▪ Nom. Sing. – **um;** Gen. Sing. – **i**

English	**Nom. Sing.**	**Gen. Sing.**
sulfuric acid	Acĭd**um** sulfurĭc**um**	Acĭd**i** sulfurĭc**i**
sulfurous acid	Acĭd**um** sulfurōs**um**	Acĭd**i** sulfurōs**i**
hydrochloric acid	Acĭd**um** hydrochlorĭc**un**	Acĭd**i** hydrochlorĭc**i**

REMEMBER the following names of acids!!!

Latin	*English*
Acĭdum acetĭcum, i n	acetic acid
Acĭdum acetylsalicylĭcum, i n	acetylsalicylic acid
Acĭdum ascorbinĭcum, i n	ascorbic acid
Acĭdum benzoĭcum, i n	benzoic acid
Acĭdum borĭcum, i n	boric acid
Acĭdum carbolĭcum, i n	carbolic acid
Acĭdum carbonĭcum, i n	carbonic acid
Acĭdum citrĭcum, i n	citric acid
Acĭdum folĭcum, i n	folic acid
Acĭdum glutaminĭcum, i n	glutaminic acid
Acĭdum hydrochlorĭcum, i n	hydrochloric acid
Acĭdum lactĭcum, i n	lactic acid
Acĭdum lipoĭcum, i n	lipoic acid
Acĭdum nicotinĭcum, i n	nicotinic acid
Acĭdum nitrĭcum, i n	nitric acid
Acĭdum salicylĭcum, i n	salicylic acid
Acĭdum sulfurĭcum, i n	sulphuric acid
Acĭdum sulfurōsum, i n	sulphurous acid

Vocabulary 3

Chemical terms		
1) Acĭdum, i n	*acid*	
2) Cuprum, i n	*copper*	
3) Ferrum, i n	*iron*	
4) Fluorum, i n	*fluorine*	
Phthorum, i n		
5) Hydrargўrum, i n	*mercury*	
6) hydroxўdum, i n	*hydroxide*	
7) Iōdum, i n	*iodine*	
8) Kalium, i n	*potassium*	
9) Magnium, i n	*magnesium*	
Magnesium, i n		
10) Natrium, i n	*sodium*	
11) oxўdum, i n	*oxide*	
12) peroxўdum, i n	*peroxide*	
13) Phosphŏrus, i m	*phosphorus*	
14) Sulfur, ŭris n	*sulphur*	
Names of medicinal plants		
15) Chamomilla, ae f	*matricaria*	
16) Convallaria, ae f	*lily of the valley*	
17) Foenicŭlum, i n	*fennel*	
18) Glycyrrhīza, ae f	*liquorice*	
Parts of medicinal plants		
19) flos, floris m	*flower*	fl.
20) fructus, us m	*fruit*	fr., fruct.
Adjectives		
21) concentrātus, a, um	*concentrated*	concentr.
22) dilūtus, a, um	*diluted*	dil.
23) flavus, a, um	*yellow*	

Extra information:

❖ ***Fennel /Foenicŭlum/*** Its "relatives" – are well known to us plants like celery, cumin, coriander, carrots, parsnips and parsley. Fennel seeds and fennel oil are sold in pharmacies. Dill water, which is often given to children with colic - is nothing less than the solution of the essential oil of fennel in warm water. Useful properties of fennel allow to include it in the composition of many drugs charges: diuretic, choleretic, laxative, pectoral, sedative. Fennel has an anti-spasmodic and antiseptic action. It helps when you have cough, insomnia, pain in the stomach.

❖ ***Liquorice /Glycyrrhīza/*** The word “liquorice” is derived from the Greek (*glukurrhiza*), meaning "sweet root". Countries producing liquorice include In-

dia, Iran, Italy, Afghanistan, China, Pakistan and others. It has demonstrated antiviral, antimicrobial, anti-inflammatory, hepatoprotective, and blood pressure-increasing effects.

❖ ***Matricaria /Chamomilla/*** The word "chamomile" derives from Greek (*khamaimēlon*) meaning "earth apple". Flowers of matricaria are used as herbal medicinal raw material in forms of dried flowers and extract. Matricaria flowers are a part of gastric and sudorific species. Infusion of matricaria flowers has an anti-inflammatory, antiseptic, analgetic and sedative effect.

EXERCISES

Ex. 1. Make the names of oxides with the following chemical elements (use them in Nominative and Genitive Singular):

sulfur – Sulfuris oxўdum – Sulfuris oxўdi
Nom. Sing. Gen. Sing.

iron; mercury; hydrogen; sodium; zinc; bismuth.

Ex. 2. Choose the right variant:

Acĭdum ascorbinic(us; um; i); (Acĭdum; acĭdum) nicotinicum; tabulettae Acĭd(um; i) folic(um; i); solutio (Acĭdi; acĭdi) (Nicotonici; nicotinici); Zinc(um; i) oxўdum; Acĭd(um; i) acetylsalicylic(um; i); (Magnesii; magnesium) peroxўd(um; i).

Ex. 3. Translate into Latin:

A. tablets of magnesium oxide; solution of nicotinic acid in ampoules; ointment of yellow mercury oxide; diluted hydrochloric acid; tablets of acetylsalicylic acid; paste of zinc oxide; concentrated solution of hydrogen peroxide; spirituous solution of iodine; tablets of lipoic acid; dragee of ascorbinic acid; iodine in tablets.

B. tincture of the lilly of the valley; root of liquorice; flowers of matricaria for external use; rhizome with roots of liqourice; herb of lilly of the valley; fruits of fennel.

Ex. 4. Translate the following prescriptions into Latin. Mind using Genitive form after the prescription verb "Recĭpe":

1. Take: Salicylic acid 5,0
Zinc oxide 25,0
Talc 50,0
Mix to make powder
Give. Mark:

2. Take: Solution of nicotinic acid 1%-1ml
Give such doses in number 10 in ampoules
Mark:

3. Take: Concentrated solution of hydrogen peroxide 33% - 1,0
Distilled water 15 ml
Mix. Give. Mark:

4. Take: Oily solution of boric acid 1% - 40 ml
Give. Mark:

5. Take: Benzoic acid 0,6
Salicylic acid 0,3
Vaseline 10,0
Mix to make ointment
Give. Mark:

6. Take: Spirituous solution of iodine 5% - 20 ml
Tannine 3,0
Glycerine 10,0
Mix. Give. Mark:

7. Take: Resorcine 2,0
Salicylic acid 3,0
Ethyl alcohol 70% up to 100 ml
Mix. Give. Mark:

8. Take: Folic acid 0,0008
Ascorbic acid 0,1
Give such doses in number 30 in tablets
Mark:

9. Take: Aluminium hydroxide 0,5
Give such doses in number 10 in tablets
Mark:

10. Take: Yellow mercury oxide 0,6
Ichthyole 0,8
Zinc oxide 20,0
Mix to make ointment
Give. Mark:

11. Take: Diluted hydrochloric acid 5 ml
Pepsine 2,0
Purified water up to 180 ml
Mix. Give. Mark:

12. Take: Ointment of boric acid 10,0
Give. Mark:

LESSON 4

LATIN NAMES OF SALTS

The main objectives of the lesson are:
1) to learn the structure of the Latin names of salts;
2) to train in writing Latin names of salts.

§11. Names of salts

Latin names of salts consist of two nouns:

- 1 – the name of **cation** in Genitive Singular with the capital letter.
- 2 – the name of **anion** with the small letter. The name of anion may be used in Nominative Singular or Genitive Singular.

1	2
cation *name of a chemical element or a drug*	***anion*** *the name of the acid stem + "-as"; "-is"; "-idum"*
▪ non-changeable ▪ always in Genitive Singular ▪ with the capital letter	▪ changeable ▪ Nominative or Genitive Singular ▪ with the small letter

*** You should keep in mind the relation between English endings of anion and Latin names. This table will help you.

English		***Latin***			
		Nom.	*Gen.*	*gender*	
-ate	*sulf**ate***	**-as**	**-ātis**	m	*sulf**as** – sulf**atis***
-ite	*nitr**ite***	**-is**	**-ītis**	m	*nitr**is** – nitr**itis***
-ide	*hydrochlor**ide***	**-ĭdum**	**-ĭdi**	n	*hydrochlor**idum** – hydrochlor**idi***

***** FOR EXAMPLE!!!**

English	*Latin*	
	Nom. Sing.	*Gen. Sing.*
atropine sulfate	Atropīn**i** sulf**as**	Atropīn**i** sulf**ātis**
sodium nitrite	Natri**i** nitr**is**	Natri**i** nitr**ītis**
hydrocortisone acetate	Hydrocortisōn**i** acēt**as**	Hydrocortisōn**i** acet**ātis**
bismuth subcitrate	Bismŭth**i** subcitr**as**	Bismŭth**i** subcitr**ātis**
morphin hydrochloride	Morphīn**i** hydrochlor**ĭdum**	Morphīn**i** hydrochlor**ĭdi**

REMEMBER!!!!

✓ Two-component names of **potassium and sodium salts** are written with the hyphen, both words can change from Nominative into Genitive and the words *natrium* and *kalium* are written with the small letter after the hyphen:

*sulphacyl-sodium: Sulfacyl**um**-natri**um** - Sulfacyl**i**-natri**i***

✓ The name of the salt ***caffeine and sodium benzoate*** has got a specific equivalent in Latin:

Nom. Sing.: ***Coffeinum-natrii benzoas*** */ Gen. Sing.:* ***Coffeini-natrii benzoatis***

Vocabulary 4

1) Aether, eris m	*ether*
2) Chinīni sulfas, ātis m	*quinine sulphate*
3) Coffeīnum-natrii benzoas, Coffeīni-natrii benzoātis *(Gen.Sing.)*	*caffeine and sodium benzoate*
4) isotonicus, a, um	*isotonic, having the same pressure*
5) Saccharum, i n	*sugar, sachar*
6) Solutio Ammonii caustici, Solutionis Ammonii caustici *(Gen.Sing.)*	*ammonia solution*
7) Sulfacylum-natrium - Sulfacyli-natrii	*sulphacyle-sodium*

Nota Bene!!!

English	Latin
eth-	**ae**th-
sul**ph**-	sul**f**-

EXERCISES

Ex. 1. Add the necessary endings in the names of salts:

barium sulphate – Bari__ sulf___; *iron lactate* – Ferr___ lact___; *potassium chloride* – Kali___ chlor___; *codeine phosphate* – Codein___ phosph___; *mercury iodide* – Hydrargyr___ iod___; *copper citrate* – Cupr___ citr___; *sodium nitrite* – Natri___ nitr___.

Ex. 2. Translate the names of salts into Latin and make them Genitive singular:

testosterone propionate – Testosteroni propionas / Testosteroni propionatis

potassium acetate, potassium chloride, lithium carbonate, magnesium sulphate, morphine hydrochloride, sodium salicylate, sodium thiosulphate, silver nitrate, quinine sulphate, sulphacyle-sodium; ethylmorphine hydrochloride, apomorphine hydrochloride, bismuth subnitrate, caffeine and sodium benzoate, sodium nitrite, zinc sulphate.

Ex. 3. Translate into Latin:

barbitale-sodium in tablets; solution of ethazole-sodium in ampoules; bismuth subnitrate with extract of belladonna; solution of sodium arsenate for injections; ointment of copper citrate; ointment of ethacridine lactate; solution of sodium nitrite in ampoules; tablets of potassium orotate for children; ether for narcosis; isotonic solution of sodium chloride for injections; oily solution of retinole acetate; ointment of sulphacyle-sodium; suspension of hydrocortisone acetate for injections.

Ex. 4. Translate the prescriptions into Latin:

1. Take: Phenobarbitale 0,05
   Bromisovale 0,2
   Caffeine and sodium benzoate 0,015
   Calcium gluconate 0,5
   Mix to make powder
   Give such doses in number 24
   Mark:

2. Take: Sodium hydrocarbonate 1,0
   Glycerine 5,0
   Distilled water 15 ml
   Mix. Give. Mark:

3. Take: Papaverine hydrochloride 0,25
   Atropine sulphate 0,0001
   Distilled water 10 ml
   Mix. Sterilize!
   Give. Mark:

4. Take: Bismuth subnitrate 0,25
   Extract of valerian 0,015
   Mix to make powder
   Give such doses in number 10
   Mark:

5. Take: Atropine sulfate 0,1
   Ethylmorphine hydrochloride 0,3
   Solution of boric acid 2% 10 ml
   Mix. Give. Mark:

6. Take: Mercury dichloride 0,2
   Carbolic acid 40,0
   Lanoline 50,0
   Vaseline 40,0
   Mix to make ointment
   Give. Mark:

7. Take: Acetylsalicylic acid 0,3
Phenacetine 0,2
Phenobarbitale 0,025
Coffeine 0,025
Codeine phosphate 0,01
Give such doses in number 10 in tablets
Mark:

8. Take: Boric acid 1,0
Salicylic acid 5,0
Zinc oxide 25,0
Talc 50,0
Mix to make powder
Give. Mark:

9. Take: Zinc sulphate 0,25
Lead acetate 0,3
Distilled water 200 ml
Mix. Give. Mark:

10. Take: Acetylsalicylic acid 0,25
Paracetamole 0,1
Caffeine and sodium benzoate 0,2
Give such doses in number 10 in tablets
Mark:

11. Take: Dimedrole 0,01
Ephedrine hydrochloride 0,1
Oil of mint 10 ml
Mix. Give. Mark:

12. Take: Calcium carbonate 0,5
Sodium hydrocarbonate 0,4
Bismuth subnitrate 0,5
Mix to make powder
Give such doses in number 10
Mark:

13. Take: Salicylic acid 1,0
Mercury amidochloride 10,0
Bismuth subnitrate 9,0
Vaseline 10,0
Lanoline 8.0
Mix to make ointment
Give. Mark:

14. Take: Riboflavine 0,05
Ascorbic acid 0,1
Nicotinic acid 0,03
Give such doses in number 50 in tablets
Mark:

15. Take: Powder of root of rhubarb 0,2
Magnesium oxide 0,3
Extract of valerian 0,015
Mix to make powder
Give such doses in number 10
Mark:

16. Take: Solution of thiamine bromide 3% - 2 ml
Give such doses in number 10 in ampoules
Mark:

LESSON 5

MEDICAL PRESCRIPTION. PRESCRIBING LIQUID MEDICINAL FORMS.

The main objectives of the lesson are:
1) to learn the main requirements to the Latin part of a prescription;
2) to learn the doses of medicinal substances and the types of a prescription;
3) to train in prescribing liquid medicinal forms.

§12. Medical prescription

The **prescription** *(lat. receptum – received)* is the doctor's written appeal to the pharmacist about producing and selling medicines to the patient with indicating the way of their use. It is the important document. The prescription must be written according to the official rules on preprinted prescription forms.

Traditionally a prescription is composed of **four** parts: "*superscription*", "*inscription*" "*subscription*" and "*signature*":

- The "**superscription**" part contains the information about the date of the prescription, the doctor and the patient information. It is written in the state language of the country.
- The "**inscription**" begins from Latin word *Recĭpe*, /*Rp*. in reduced/, that means – take. In English prescriptions a special prescription symbol *(see below)*

is used in this part of the prescription. After "Rp." substances necessary for dispensing or preparing the medicines are accounted. The names of these substances are written in Latin in the Genitive case, each from the capital letter and from the new line. After the medicine name its quantity (dose) is indicated.

℞ prescription symbol used in English prescriptions

- The "**subscription**" part contains the directions to the pharmacist about the medicinal form and the quantity of the medicine. This part is written in Latin. There are used the following prescription phrases: *Misce. Misce, fiat / fiant … Da. Da tales doses numĕro ….*
- The "**signature**" part is appointed for the patient. That's why it is written in the state language without any reductions. It describes the way of using the prescribed medicine. At the end the prescription there is the doctor's signature and his (her) personal seal.

The medical prescription abroad.

The prescription in foreign countries has the same function as in our country. In English speaking countries and countries with English speaking education system (India, Pakistan and others) prescription is written out in English on special prescription forms according to all structural stages of the prescription.

Министерство здравоохранения Российской Федерации
Кафедра фармакологии
УГМА

Код формы по ОКУД
код учреждения по ОКПО
Медицинская документация

Форма № 107/у

Рецепт **(взрослый, детский – ненужное зачеркнуть)**	
«___»_____ 2002 г.	
Ф.И.О. больного	
Возраст	
Ф.И.О. врача	
Руб. **коп.**	**Rp.:**
Подпись и личная печать Врача	**М.П.**
Рецепт действителен в течение 10 дней, 1 месяц, 2 месяца (ненужное зачеркнуть)	

Supersize Health Center
123 Main Street Big City, Upstate 12345
(123) 456-7890

Rx

Name: Cindy Allen Date: 08/13/13
Phone: 123-456-7890 DOB: 02/24/73
Address:
34 Cherry Lane
Anytown, USA 22222

Prescription:

Metformin 500mg
1 tab PO BID, #60
2 refills

Dr. Best, MD

Dispense as written Substitution permissible

DEA#: _____
NPI# _____

Superscription:
/1/ doctor's surname;
/2/ license classification or his professional degree;
/3/ address of the medical establishment;
/4/ work telephone number of the doctor;
/5/ the date of writing out the prescription;
/6/ the patient's surname;
/7/ the patient's address;

Inscription:
prescription symbol meaning "Recĭpe" has already been printed;
/8/ the name of the medicine;
/9/ indication of the medicine dose (in milliliters or milligrams);

Subscription:
/10/ the quantity of the medicinal preparation determined by the duration of the treatment course;

Signature "Sig." ("S:"):
/11/ the detailed direction for the patient about using this medicine:

*Recĭpe: Analgin**i** 0,2*
Da tales doses numĕro 10 in tabulettis
Signa: 1 tab. 2 times a day

*Recĭpe: Protargol**i** 0,2*
*Glycerin**i** 5,0*
*Aqu**ae** destillat**ae** 15 ml*
Misce. Da. Signa: 1 spoon 3 times a day

Special marks:

/12/ doctor's marks about the necessity of repeating the treatment course;

/13/ doctor's marks about the necessity of keeping this medicine in the inaccessible for children;

/14/ the information about the necessity to keep some precautionary measures while taking this medicine;

/15/ doctor's signature;

/16/ doctor's identification number;

/17/ the state license number.

In some jurisdictions, the preprinted prescription contains two signature lines: one line has "dispense as written" printed underneath; the other line has "substitution permitted" underneath. In other jurisdictions the protocol is for the prescriber to handwrite one of the following phrases: "dispense as written", "DAW", "brand necessary", "do not substitute", "no substitution", "medically necessary", "do not interchange". In some jurisdictions, it may be a legal requirement to include the age of child on the prescription. For pediatric prescriptions some advise to include the age of the child if the patient is less than twelve and the age and months if less than five. Adding the weight of the child is also helpful.

§13. Doses of pharmaceutical substances

• Quantity of **solid pharmaceutical substances** is indicated in *grams*. The abbreviation "gr" is not indicated, the quantity is written with *decimal* points: 10,0 (10 gr.); 0,25 (0,25 gr.):

Recĭpe: Vaselini 5,0

• **Liquid pharmaceutical substances** are written out in *millilitres* using a whole number with the abbreviation "*ml*":

Recĭpe: Solutionis Glucosi 10% - 100 ml

• Quantity of a **liquid pharmaceutical substance less than 1 ml** is measured in *drops*. The number of drops is indicated with a *Roman* numeral and the Latin word "drop" (*gutta, ae f*) in the Accusative case before it:

*1 drop – **guttam I*** *4 drops – **guttas IV***

Recĭpe: Olei Menthae piperītae guttas IV (guttam I)

• If the medicinal substance is dosed in activity unit (OD), in the prescription activity unites quantity is specified (for example: 200 000 OD).

Recĭpe: Insulini 25OD

• If two or more ingredients are prescribed in the same amount, the dose is written after the last of them with the adverb ***ana*** (equally, of each):

Recĭpe: Cupri citratis
Lanolini
*Vaselini **ana** 5,0*

• If the name of a pharmaceutical substance is too long to be written in one line, it is allowed to move it to another line but the continuation must be shifted to the right in such a way that the first letter should not fall on the beginning of a prescription line and the amount of pharmaceutical substance should be to the right:

Recĭpe: Solutiōnis Platyphyllīni
hydrochlorĭdi 1% 10 ml

§14. Types of prescriptions

There are two ways of prescribing medicines: shortened /simple/ and detailed /complex/ prescribings.

In contemporary practice, doctors most often prescribe medicines of industrial production. Prescribing of such medicines is known as ***officinal*** and ***shortened*** /simple/ prescribing is used.

The prescription line of such a prescription includes *the medicinal form, the name of pharmaceutical substance, its dose and its dosage for the whole course of treatment*.

A **dose** refers to a specified amount of medication taken at one time. By contrast, **dosage** is the prescribed administration of a specific amount, number, and frequency of doses over a specific period of time.

There are **dosed** and **non-dosed** medicines. Dosed medicines are prescribed in a certain number *(tablets, capsules, suppositories*). Non-dosed medicines are prescribed in a certain amount *(ointment, paste, solution*).

*Structure of a prescription for **non-dosed** medicines*

Recipe: Medicinal form + Medicine name + dosage
in Gen. Sing. in Gen. Sing.

Da. Signa:

Recĭpe: Unguenti Xeroformii 3% - 10,0
Da. Signa:

*Structure of a prescription for **dosed** medicines*

Recipe: Medicinal form + Medicine name + dose
in Gen. Sing. in Gen. Sing.

Da tales doses numĕro 10.
Signa:

Recĭpe: Pulvĕris Polysorbi 10,0
Da tales doses numĕro 10
Signa:

Complex prescriptions are written out for medicines made directly at the pharmacy. Such prescribings are called ***magistral prescribings*** and written out in a detailed form.

In a complex prescription, all the ingredients of the medicinal preparation and their dosage are enumerated. Each pharmaceutical substance is written on a separate prescription line. Then it is necessary to indicate the medicinal form to be made. This prescribing is presented by the prescription phrase "*Misce, fiat / fiant ....*". Then an explanation how to use the medicine follows.

Recĭpe: *Xeroformii 1,0*
Zinci oxŭdi 5,0
Lanolini
Vaselini ana 10,0
Misce, fiat unguentum
Da. Signa:

§15. Rules of prescribing liquid medicinal forms

Liquid medicinal forms include solutions, tinctures, infuses, decoctions, balsams, liquid extracts, mixtures, elixirs, suspensions, syrups, juices, musses and other medicinal products. These medical forms are dosed in milliliters, some of them – in drops. Liquid forms are better entering into the blood, soaking up in the skin and acting more quickly, than solid medicinal forms. They may be written out in a shortened way (simple prescription) and in a detailed way (complex prescription).

In a *simple prescription*, the name of a medicinal form, pharmaceutical substance or medicinal vegetable raw materials is written in Genitive Singular with the capital letter after the prescription verb *Recĭpe.* The line is finished with the amount of a medicine. Concentration of solutions may be denoted in percentage (5%), in ratios (1:1000) or in mass-and-volumetric ratios, when the first figure denotes the amount of medicinal vegetable raw materials and the second one denotes the amount of the obtained infusion or decoction (0,6 – 180 ml).

Recĭpe: *Tinctūrae Leonūri 25 ml*
Da. Signa:

Recĭpe: *Solutiōnis Camphŏrae oleōsae 10% – 100 ml*
Da. Signa:

Recĭpe: *Solutiōnis Furacilīni 1: 5000 – 500 ml*
Da. Signa:

Recĭpe: *Solutiōnis Furacilīni 0,1 – 500 ml*
Da. Signa:

Preparations which are prepared at the pharmacy according to a doctor's prescription are written out in a detailed form using a *complex prescription*:

Recĭpe: *Olei Ricĭni 20 ml*
Xeroformii 1,
Vinylini 1ml
Misce, fiat linimentum
Da. Signa:

When prescribing *mixtures* in a detailed way, the direction "*Misce, fiat mixtūra*" is **not written**. *Misce. Da. Signa.* is written*:*

Recĭpe: *Mentholi 0,1*
Phenylii salicylatis 0,3
Olei Vaselini ad 10 ml
Misce. Da. Signa: nasal drops

§16. Medicinal forms for injections

Aqueous and oily solutions as well as suspensions are often used for injections. In medical practice, such forms of industrial production as ampoules and vials are mostly used. The very form of output testifies that special demands for these medicinal forms are observed, therefore the phrase "*pro injectionĭbus*" is not written in a prescription as it goes without saying.

When writing out solutions and suspensions in ampoules, the sequence is the following:

-a medicinal form is indicated first in Genitive Singular *(Solutionis / Suspensionis)*;

-then follows the name of pharmaceutical substance in Genitive Singular, its concentration in percentage and the volume of one ampoule *(Glucosi 40% - 5 ml)*;

-the number of doses and the form of output are written on the next line: "*Give such doses in number … in ampoules – Da tales doses numĕro … in ampullis*";

-the prescription is finished with the prescription verb *Signa:*.

Recĭpe: *Solutiōnis Thiamini bromidi 3% – 1 ml*
Da tales doses numĕro 10 in ampullis
Signa: 1 ml intramuscular

When writing out *medicines in vials* a prescription is drawn up according to the same rules as when writing out medicines in ampoules but the word "vial" is not written.

Recĭpe: *Benzylpenicillini-natrii 500 000 OD*
Da tales doses numĕro 12
Signa:

VOCABULARY 5

Names of medicinal plants

1) Aloë, es f	aloe
2) Althaea ,ae f	marshmallow
3) Anīsum, i n	anise
4) Eucalyptus, i f	eucalypt
5) Frangŭla, ae f	buckthorn
6) Oleum Cacao, Olei Cacao	cacao butter
7) sirŭpus, i m	syrup

Adjectives

8) composĭtus, a, um	compound
9) diuretĭcus, a, um	diuretic
10) laxans, ntis	laxative
11) pectorālis, e	pectoral
12) sedatīvus, a, um	sedative

EXERCISES

Ex. 1. Translate into Latin:

compound liniment of chloroform; syrup of marshmallow against cough; liquid extract of aloe for injections; coated tablets of aloe; infusion of root of marshmallow; bark of buckthorn; pectoral species; extract of bark of buckthorn; fruits of anise; leaves of eucalypt; oil of anise; diuretic species; liquid extract of buckthorn; compound powder.

Ex. 2. Translate the following prescriptions into Latin:

1. Take: Root of marshmallow
   Root of liquorice equally 20,0
   Fruits of fennel 10,0
   Mix to make species
   Give. Mark:

2. Take: Solution of litonite 10% - 1 ml
   Give such doses in number 10 in ampoules
   Mark:

3. Take: Oily solution of camphor 10% - 100 ml
   Give. Mark:

4. Take: Decoction of bark of oak 200 ml
   Give. Mark:

5. Take: Tincture of lily of the valley
Tincture of valeriane equally 10 ml
Tincture of belladonna 5 ml
Mix. Give. Mark:

6. Take: Dry extract of root of marshmallow 2,0
Syrup of sacchar 90 ml
Mix. Give. Mark:

7. Take: Solution of norsulfazole-sodium 10%
Isotonic solution of sodium chloride equally 10 ml
Mix. Give. Mark:

8. Take: Root of marshmallow
Root of liquorice equally 10,0
Fruits of anise
Leaves of eucalypt equally 5,0
Mix to make species
Give. Mark:

9. Take: Solution of aminophylline 24% - 1 ml
Give such doses in number 6 in ampoules
Mark:

10. Take: Fluid extract of buckthorn 4,0
Powder of root of rhubarb 3,0
Dry extract of belladonna 0,7
Mix. Give. Mark:

Ex. 3. Write Latin part of a simple prescription for the following medicines:

1) 10 ampoules of solution of ascorbic acid 5% 1 ml;
2) solution of furaciline 0,02% 10 ml;
3) ointment of oxoline 0,5% 10,0;
4) liniment of synthomycine 1% with novocaine 0,5% 25,0;
5) spirituous solution of iodine 5% 10 ml;
6) oily solution of camphor 10% 100 ml;
7) suspension of griseofulvine 100 ml;
8) 10 ampoules of solution of nicotinic acid 2% 1 ml;
9) 10 ampoules of liquid extract of aloe 1 ml;
10) ophthalmic ointment of tetracycline 10,0;
11) 10 ampoules of solution of adrenaline hydrochloride 0,1% 1 ml;
12) 10 ampoules of solution of caffeine and sodium benzoate 10% 1 ml

Ex. 4. Write Latin part of a complex prescription for the following medicines:

1) mixture consisting of infusion of root of valerian from 15,0 – 200 ml; tincture of mint 3 ml; tincture of motherwort 10 ml;

2) ointment consisting of yellow mercury oxide 0,6; ichthyole 0,8; zinc oxide 20,0;

3) ointment consisting of benzoic acid 0,6; salicylic acid 0,3; vaseline 10,0;

4) mixture consisting of magnesium oxide 20,0; distilled water 120 ml;

5) mixture consisting of diluted hydrochloric acid 4,0; pepsine 2,0; purified water up to 200,0;

6) 24 doses of powder consisting of phenobarbitale 0,05; bromisovale 0,2; caffeine and sodium benzoate 0,015; papaverine hydrochloride 0,03; calcium gluconate 0,5;

7) mixture consisting of atropine sulphate 0,1; ethylmorphine hydrochloride 0,3; solution of boric acid 2% 10ml;

8) mixture consisting of peppermint 3 ml; camphor 7,0; tincture of valerian 10 ml;

9) ointment consisting of sulphacyle-sodium 1.0, lanoline 0,4, vaseline up to 5,0;

10) 20 doses of powder consisting of codeine 0,015; acetylsalicylic acid 0,5; calcium lactate 0,1; ascorbic acid 0,2, rutine 0,02; dimedrole 0,03;

11) mixture consisting of menthole 0,25; tincture of eucalypt 50 ml; ethyl alcohol 90% up to 100 ml;

12) liniment consisting of castor oil 20 ml; xeroform 1,2; vinyline 1,0;

13) mixture consisting of chloroform, ethyl alcohol 95% equally 20 ml; ethyl ether 10 ml; ammonia solution X drops.

LESSON 6

PRESCRIBING SOFT MEDICINAL FORMS

The main objectives of the lesson are:

1) to learn the structure of a simple and a complex prescription for soft medicinal forms;

2) to train in writing out soft medicinal forms.

§17. Rules of writing out soft medicinal forms

Ointments /1/, pastes, and suppositories /2; 3/ are soft medicinal forms. They may be produced by pharmaceutical industry and prepared at the pharmacy according to a magistral prescription. So they may be written out in both shortened and detailed form.

/1/ /2/ /3/

Ointment / paste – *Simple prescription.*

A shortened form of prescribing ointment and paste is the following:

-it starts with the name of a medicinal form in Genitive Singular *(Unguenti / Pastae)*;

-then follows an active pharmaceutical substance in the Genitive Singular form with its percentage concentration *(Xeroformii 3%)*;

-the line is concluded with the amount of the prescribed remedy *(10,0)*.

Recĭpe: Unguenti Xeroformii 3% - 10,0
Da. Signa: ophthalmic ointment

Recĭpe: Pastae Zinci 50,0
Da. Signa:

Ointment / paste – *Complex prescription.*

Using a detailed form of prescribing, all the ingredients and their amount are written on separate prescription lines. Further, the direction "*Mix to make ointment / paste – Misce, fiat unguentum / pasta*" is given.

Recĭpe: Argenti nitritis 0,25
Vinylini 1,0
Vaselīni 30,0
Misce, fiat unguentum
Da. Signa:

Recĭpe: Iodoformii 10,0
Amўli Tritĭci
Zinci oxўdi ana 5,0
Vaselīni ad 50,0
Misce, fiat pasta
Da. Signa:

Suppositories.

Suppositories are dosed medicinal forms, solid at room temperature and melting at body temperature. There are rectal and vaginal suppositories (*suppos-*

itoria rectalia et vaginalia). Rectal suppositories usually have the form of a cone or of a cylinder with a sharpened end. Their mass varies from 1.1 to 4.0 grams; in pediatric practice – from 0.5 to 1.5 grams.

Vaginal suppositories may be spherical (*globŭli*), egg-shaped (*ovŭla*) or look like a flat body with a rounded end (*pessaria*). Their mass is from 1.5 to 6.0 grams.

Simple prescription.

Suppositories of industrial production are prescribed in a shortened way, like other officinal medicinal forms:

-prescribing starts with the name of a medicinal form in the Accusative Singular form which is the same as Nominative Singular form *(Suppositorium)*;

-the name of a pharmaceutical substance is indicated after the preposition ***cum*** (with) in Ablative Singular form. As most medicine names are IInd declension nouns, their Ablative Singular form is formed by the ending –**o** *(cum Ichthyolo)*;

-then the dose of the substance is indicated *(0,2)*;

-the prescribing is finished with the direction "*Da tales doses numĕro…*" and a prescription signature.

Recĭpe: Suppositorium cum Ichthyōlo 0,2
Da tales doses numĕro 10
Signa:

If the name of a medicinal form is used in the Accusative Plural, the same as Nominative Plural *(Suppositoria)*, the prescribing is written in one line and finished with the number of doses *(numero 10)*.

Recĭpe: Suppositoria cum Glycerino 1,44 numĕro 10
Da. Signa:

The adjectives *vaginal* and *rectal* are always written just after the noun "suppository" in the corresponding form *(Acc. Sing – vaginal**e** / rectal**e**; Acc. Plur. – vaginal**ia** / rectal**ia**)*:

Recĭpe: Suppositorium vaginale cum Synthomycīno 0,25
Da tales doses numĕro 5
Signa:
Recĭpe: Suppositoria vaginalia cum Synthomycīno 0,25 numĕro 5
Da. Signa:

When writing out suppositories of complex composition with a **trade name**, a medicinal form is written in the Accusative Plural; the name of a preparation in inverted commas keeps its initial form; the line is finished with the number of suppositories. Doses of pharmaceutical substances are not given in such prescriptions:

Recĭpe: Suppositoria "Anusolum" numĕro 10
Da. Signa:

Complex prescription.

Suppositories may be prepared at a pharmacy according to magistral prescribing. In this case a prescription is written in a detailed form indicating all the ingredients and their doses.

It is possible not to indicate the mass of a base in a prescription. In this case one should write ***quantum satis*** (*as much as necessary*):

Recĭpe: *Promedoli 0,02*
Olei Cacāo 3,0
Misce, fiat suppositorium rectāle
Da tales doses numĕro 6
Signa:

Recĭpe: *Promedoli 0,02*
Olei Cacāo quantum satis
Misce, fiat suppositorium rectāle
Da tales doses numĕro 6
Signa:

EXERCISES

Ex. 1. Translate the following prescriptions into Latin:

1. Take: Ointment of boric acid 10,0
Give such doses in number 2
Mark:

2. Take: Suppositories ”Novurit” in number 10
Give. Mark:

3. Take: Ophthalmic ointment of tetracycline 10,0
Give. Mark:

4. Take: Suppositories with glycerine 1,44 in number 10
Give. Mark:

5. Take: Vaginal suppository with synthomycine 0,25
Give such doses in number 10
Mark:

6. Take: Rectal suppositories with novocaine 0,1 in number 10
Give. Mark:

7. Take: Extract of belladonna 0,02
Xeroform 0,1
Zinc sulphate 0,05
Glycerine 0,12
Cocao butter 2,0
Mix to make suppository
Give such doses in number 10
Mark:

8. Take: Ointment of bismuth subnitrate 20,0
Give such doses in number 2
Mark:

9. Take: Suppositories with digitoxine 0,00015 in number 10
Give. Mark:

10. Take: Benzoic acid 5,0
Salicylic acid 0,3
Vaseline 10,0
Mix to make ointment
Give. Mark:

Ex. 2. Write the Latin part of a simple or complex prescription:

1) ointment of neomycine sulphate 1% 50,0;

2) paste of zinc 50,0;

3) ointment consisting of sulphacyle-sodium 1,0; lanoline 0,4; vaseline up to 5,0;

4) paste consisting of iodoform 10,0; zinc oxide 5,0; vaseline up to 50,0;

5) 10 suppositories with ichthyole 0,2;

6) 20 suppositories “Anusol”;

7) 10 suppositories consisting of atropine sulfate 0,0005; cocoa butter as much as necessary;

8) ointment of anaesthesine 5% 10,0;

9) ointment consisting of menthole 0,02; zinc oxide 10,0; solution of adrenaline hydrochloride 1% 5 drops; vaseline 10,0;

10) 10 vaginal suppositories consisting of chinosole 0,03; boric acid 0,3; tannine 0,06; cocao butter as much as necessary.

LESSON 7

PRESCRIBING SOLID MEDICINAL FORMS

The main objectives of the lesson are:
1) to learn the structure of a prescription for solid medicinal forms;
2) to learn the rules of prescribing ophthalmic fims and aerosol.

§18. Rules of writing out solid medicinal forms

/1/ /2/ /3/ /4/


Tablets /1/, dragée /2/, powders /3/, granules, pills and capsules /4/ are solid medicinal forms. Tablets, dragée and powders are most often used.

Tablets are solid medicinal forms obtained by pressing pharmaceutical substances and adjuvants. Nowadays tablets are not prepared at the pharmacy and therefore magistral prescribing isn't used.

(1) The most widespread prescribing of tablets is the following:

-first goes the name of a pharmaceutical substance in the Genitive Singular form and its single dose *(Analgini 0,5);*

-then follows the direction about the number of the prescribed tablets *(Da tales doses numĕro 10)* which is finished with the prepositional phrase *in tabulettis (in tablets)*:

Recĭpe: *Analgīni 0,5*
Da tales doses numĕro 10 in tabulettis
Signa:

(2) Another version of prescribing tablets:

-starts with the name of a medicinal form in the Accusative Singular form *(Tabulettam);*

-then the name of a pharmaceutical substance and its single dose are indicated *(Analgini 0,5);*

-the direction for the number of the prescribed tablets is indicated on the next line *(Da tales doses numĕro 10):*

Recĭpe: Tabulettam Analgīni 0,5
Da tales doses numĕro 10
Signa:

(3) There is one more way of prescribing tablets:

-It starts with the name of a medicinal form in the Accusative Plural form *(Tabulettas);*

-then the name of a pharmaceutical substance and its single dose are indicated *(Analgini 0,5);*

-the direction about the number of the prescribed tablets is indicated on the same line *(numĕro 10):*

Recĭpe: Tabulettas Analgīni 0,5 numĕro 10
Da. Signa:

If the adjective *obductus, a, um* is necessary to use in the prescription, this adjective is placed after the dose and takes the same endings as the noun "tablet":

Recĭpe: Tabulettam Oleandomycini phosphatis 0,125 obductam
Da tales doses numĕro 25
Signa:
Recĭpe: Tabulettas Oleandomycini phosphatis 0,125 obductas numĕro 25
Da. Signa:

When prescribing tablets with a special **trade name**, it's necessary to start the prescription with the name of a medicinal form in the Accusative plural *(Tabulettas)*; then the drug name in the Nominative case in inverted commas follows *("Pentalginum")*; the line is finished with the number of doses *(numĕro 10)*. A single dose of pharmaceutical substances is not indicated as it is standard. Other versions of prescribing for tablets with a commercial name are impossible:

Recĭpe: Tabulettas "Pentalginum" numĕro 10
Da. Signa:

Dragée is a solid medicinal form in doses for internal use obtained by making multiple layers of pharmaceutical substances and adjuvants over sugary granules and prescribed like tablets. The Latin noun "dragée" has the same form in all versions of prescription:

Recĭpe: Dragée Diazolīni 0,05
Da tales doses numĕro 20
Signa:
Recĭpe: Dragée "Hexavitum" numĕro 50
Da. Signa:

Powder is a solid medicinal form for internal and external use. There are *simple* powders (consisting of one substance), *compound* powders (consisting of two or more ingredients), *dosed* powders which are divided into separate doses and *non-dosed* powders which are not divided into separate doses.

Prescribing **simple non-dosed powder:**

Recĭpe: Pulvĕris Ampicillini 60,0
Da. Signa:

Prescribing **simple dosed powder:**

Recĭpe: Pulvĕris Theobromini 0,5
Da tales doses numĕro 10
Signa:

Prescribing **compound non-dosed powder:**

Recĭpe: Benzylpenicillini-natrii 125 000 OD
Ethazōli 5,0
Misce, fiat pulvis
Da. Signa:

Pescribing **compound dosed powder:**

Recĭpe: Euphyllini 0,01
Dimedroli 0,0125
Sacchari 0,2
Misce, fiat pulvis
Da tales doses numero 10
Signa:

Capsules are covers for powdery, paste-like, granulated or liquid pharmaceutical substances in doses for internal use. When prescribing medicines in capsules, the following form of a prescription is used:

Recĭpe: Solutiōnis Nitroglycerīni 1% oleōsae 0,5
Da tales doses numĕro 50 in capsŭlis gelatinōsis
Signa:

Recĭpe: Ampicillīni 0,25
Da tales doses numĕro 20 in capsŭlis
Signa:

§19. Other medicinal forms

Ophthalmic films (*membranŭlae ophthalmĭcae*) and **aerosols** (*aërosōla*) are produced only by pharmaceutical industry and, like other ready medicinal forms, they are prescribed in a shortened way. The name of a medicinal form is used in the Accusative case:

Recĭpe: Membranŭlas ophthalmĭcas cum Apilaco 0,2 numĕro 6
Da. Signa:

Recĭpe: Aërosōlum "Ephatinum" numĕro 1
Da. Signa:

EXERCISES

Ex. 1. Complete the prescription with the necessary endings:

1. Recĭpe: Cyclophosphān___ 0,05
   Da tales doses numĕro 50 in tabulett___ obduct___
   Signa:

2. Recĭpe: Tabulett___ "Citramon___" numĕro 6
   Da. Signa:

3. Recĭpe: Tabulett__ Nitrogranulong__ 0,029 obduct__
   Da tales doses numĕro 50
   Signa:

4. Recĭpe: Aerosōl___ "Amprovisol___" numĕro 1
   Da. Signa:

5. Recĭpe: Membranŭl__ ophthalmĭc__ cum Dicaīn__ 0,2 numĕro 6
   Da. Signa:

Ex. 2. Write the Latin part of a prescription for the following medicines:

1) 20 tablets of acyclovir 0.2;
2) 15 gelatinous capsules of castor oil 1,0;
3) 10 tablets of "Bellaesthesin";
4) aerosol "Camethon" 30 ml in number 2;
5) 10 tablets of ampicillin 0,25;
6) 20 coated tablets of aloe 0,005;
7) 50 tablets of lipoic acid 0,025;
8) 15 doses of powder consisting of sulphur and powder of liquorice equally 0,25;
9) 50 tablets of potassium orotate 0,5 for children;
10) 3 doses of powder consisting of sodium tetraborate; sodium hydrocarbonate equally 20,0; oil of mint 3 drops;
11) 10 tablets "Thepaphylline";
12) 30 coated tablets of oleandomycine phosphate 0,125;
13) 10 ophthalmic films with pilocarpine hydrochloride 2,7;
14) 10 doses of powder of theobromine 0,5;
15) 50 dragee "Undevit".

LESSON 8

ABBREVIATIONS IN PRESCRIPTIONS

The main objectives of the lesson are:
1) to learn the main abbreviations used in prescription;
2) to train in writing the Latin part of prescription using abbreviations.

§20. Abbreviations in prescriptions

Abbreviation	Full Latin form	Translation
Ac. (Acid.)	acĭdum	acid
āā	ana	equally, of each
amp.	ampulla	ampoule
aq.	aqua	water
Aq. destill.	Aqua destillāta	distilled water
Aq. purif.	Aqua purificāta	purified water
aëros.	aërosōlum	aerosol
caps.	capsŭla	capsule
comp., cps., cp.	composĭtus, a, um	compound, compounded
concentr.	concentrātus, a, um	concentrated
cort.	cortex	bark
D.	Da.	Give.
	Detur.	Let it be given.
	Dentur.	Let them be given.
D.S.:	Da. Signa:	Give. Mark:
	Detur. Signetur:	Let it be given. Let it be marked:
D.t.d. N.	Da tales doses numĕro	Give such doses in number
dec., dct.	decoctum	decoction
dep.	depurātus, a, um	purified
dest., destill.	destillātus, a, um	distilled
dil.	dilūtus, a, um	diluted
empl.	emplastrum	plaster
emuls.	emulsum	emulsion
ext.	externus, a, um	external
extr.	extractum	extract
f.	fiat (fiant)	let it be made
fl.	flos	flower
fluid.	fluĭdus, a, um	fluid, liquid
fol.	folium	leaf
fr., fruct.	fructus	fruit
gran.	granŭlum	granule

Abbreviation	Full Latin form	Translation
gtt.	guttam	drop
gtts.	guttas	drops
h., hb.	herba	herb
in ampull.	in ampullis	in ampoules
in caps. (gel.)	in capsŭlis (gelatinōsis)	in (gelatinous) capsules
in tab.	in tabulettis	in tablets
in vitr. nigr.	in vitro nigro	in a dark phial
inf.	infūsum	infusion
int.	internus, a, um	internal
lin.	linimentum	liniment
liq.	liquor	liquor, solution
M.	Misce.	Mix.
	Misceātur.	Let it be mixed.
M.D.S.:	Misce. Da. Signa:	Mix. Give. Mark:
mixt.	mixtūra	mixture
mucil.	mucilāgo	mucilage
N.	numĕro	in number
obd.	obductus, a, um	coated
past.	pasta	paste
pil.	pilŭla	pill
praec., ppt.	praecipitātus, a, um	precipitated
pro inject.	pro injectionĭbus	for injections
pulv.	pulvis	powder
purif.	purificātus, a, um	purified
q.s.	quantum satis	as much as necessary
rad., r.	radix	root
rect.	rectālis, e	rectal
rectif.	rectificātus, a, um	rectified (about liquid substances)
Rep.	Repĕte!	Repeat!
	Repetātur!	Let it be repeated!
rhiz.	rhizōma	rhizome
Rp.:	Recĭpe:	Take:
S.:	Signa:	Mark:
	Signetur:	Let it be marked:
sem.	semen	seed
sicc.	siccus, a, um	dry
simpl.	simplex, ĭcis	simple
sir.	sirŭpus	syrup
sol.	solutio	solution
spec.	species	species
Spir.	Spirĭtus	spirit
Steril.	Sterilĭsa!	Sterilize!
	Sterilisētur!	Let it be sterilized!

Abbreviation	Full Latin form	Translation
supp.	suppositorium	suppository
susp.	suspensio	suspension
tab.	tabuletta	tablet
tinct., t-ra, tct.	tinctūra	tincture
ung.	unguentum	ointment
vagin.	vaginālis, e	vaginal

EXERCISES

Ex. 1. Write the Latin part of the prescription using the abbreviations:

1) 10 tablets of methyloestradiole 0,0002;

2) mixture for intravenous injection consisting of solution of aminazine 2,5% 2 ml and solution of glucose 5% 20 ml;

3) 10 ampoules of oily solution of synoestrole 0,1% 1 ml;

4) 25 coated tablets of tetracycline with nystatine;

5) mixture consisting of menthole 2,5; novocaine and anaesthesine equally 1,0; ethyl alcohol 70% up to 100ml;

6) syrup of aloe 300 ml;

7) ointment of hydrocortisone acetate 0,5% 10,0;

8) 20 doses of powder consisting of dibazole 0,005 and sachar 0,3;

9) 6 ampoules of solution of ethazole-sodium 10 ml;

10) 6 suppositories consisting of extract of belladonna 0,02; xeroform 0,1; zinc sulphate 0,05; glycerine 0,12; cacao butter as much as necessary;

11) 10 doses of powder consisting of phenacetine 0,3; acetylsalicylic acid 0,5 and caffeine and sodium benzoate 0,1;

12) 6 vaginal suppositories with natamycine 1,0;

13) 30 tablets of dioxybenzoic acid 0,5;

14) mixture consisting of concentrated solution of hydrogen peroxide 5,0 and distilled water 15 ml;

15) mixture consisting of morphine hydrochloride 0,015; apomorphine hydrochloride 0,05; diluted hydrochloric acid 1 ml; distilled water up to 200 ml;

16) ointment consisting of benzoic acid 0,6; salicylic acid 0,3 and vaseline 10,0;

17) 50 tablets of monomycine 0,25;

18) 6 suppositories “Anusol”;

19) 30 ophthalmic films with florenale;

20) 10 capsules of oily solution of nitroglycerine 1% -0,0005.

Ex. 2. Translate into Latin:

thiopentale-sodium in ampoules; dibazole with papaverine hydrochloride; oily solution of camphor; liquid extract of aloe; oil of peppermint; vaginal suppositories with novocaine; cordiamine for injections; powder of root of rhubarb;

solution of iodine for external use; syrup of marshmallow against cough; coated tablets of dimedrole for children; emulsion of castor oil; infusion of leaves of mint; ethyl alcohol; leaves of nettle; suppositories with cordigite; ointment of yellow mercury oxide; solution of sodium nitrite in ampoules; codeine phosphate in tablets; bismuth subnitrate with extract of belladonna; spirituous solution of brilliant green; powder of ampicilline for suspension; ammonia solution; castor oil in capsules; tablets of furaciline for external use.

SAMPLE OF THE FINAL TEST
"Pharmaceutical Terminology and the Prescription"

I. Translate into Latin:

1) validol in gelatinous capsules; 2) powder of sodium benzoate; 3) tablets of acetylsalicylic acid for children; 4) rectal suppositories with anaesthesine; 5) tablets of potassium orotate for children; 6) powder of root of rhubarb; 7) decoction of bark of oak; 8) purified water; 9) thick extract of valerian; 10) mixture for cough.

II. Write out the Latin part of a prescription:

1) 10 coated tablets of lipoic acid 0,25 (2 variants);
2) 10 ampoules of solution of caffeine and sodium benzoate 20% 1 ml;
3) 40 coated tablets "Ferrocal";
4) mixture consisting of diluted hydrochloric acid 1 ml; pepsin 2,0; distilled water up to 100 ml;
5) 10 suppositories with glycerin 0,1;
6) paste of neomycin sulfate 25,0;
7) 20 capsules of methacycline hydrochloride 0,25;
8) ointment of heparin 10,0;
9) 10 suppositories "Anusol";
10) 10 suppositories consisting of phthivaside 0,5; anaesthesine 0,2; cocoa butter as much as necessary.

III. Write out the Latin part of a prescription with abbreviations:

1) 10 ampoules of solution of glucose 5% 10 ml; 2) tincture of motherwort 50 ml; 3) ointment of heparin.

PROFESSIONAL LATIN MEDICAL PHRASES

1. **Ante cibum /a.c./**	*Before meals /medical instruction/.*
2. **A posteriōri.**	*From the latter, based on observation. / used to denote something known from experience/*
3. **A priōri.**	*From the former, known or postulated before a proof has been carried out. /In everyday speech, it denotes something occurring or being known before the event./*
4. **Anamnēsis morbi.**	*Data about the disease.*
5. **Anamnēsis vitae.**	*Data about the life.*
6. **Bis in die. /b.i.d./**	*Twice a day.*
7. **Casus extraordinarius.**	*Extraordinary /unusual/ case.*
8. **Casus ordinarius.**	*Ordinary /usual/ case.*
9. **Cito!**	*Quickly!*
10. **Exĭtus letālis.**	*Fatal outcome.*
11. **Facies Hippocratĭca.**	*Hippocratic face. It is the change in the face by impending death or long illness. "If the patient's facial appearance may be described this: the nose sharp, the eyes sunken, the temples fallen in, the ears cold and drawn in and their lobes distorted, the skin of the face hard, stretched and dry, and the colour of the face pale or dusky…and if there is no improvement within a prescribed period of time, it must be realized that this sign portends death". The Hippocratic face is so called because it was first described by Hippocrates.*
12. **In vitro.**	*Taking place outside a living organism (for example in a test tube).*
13. **In vivo.**	*In a living organism /An experiment or process performed on a living specimen/.*
14. **Oculus dexter. /O.D./ Oculus sinister. /O.S./**	*Right eye. /abbreviations used in Ophthalmology as Left eye. /medical attention for eyes/*
15. **Per os**.	*Through the mouth.*
16. **Per rectum.**	*Through the rectum.*
17. **Per vagīnam.**	*Through the vagina.*
18. **Post cibum /p.c./**	*After meals /medical instruction/.*
19. **Post mortem.**	*Examination of a body after death to learn the cause of death /autopsy/.*
20. **Prognōsis bona / optima.**	*Good / the best prognosis.*
21. **Prognōsis dubia.**	*Doubtful prognosis.*
22. **Prognōsis mala / pessima.**	*Bad / the worst prognosis.*
23. **Rubor, tumor, calor, dolor et functio laesa.**	*Redness, swelling, fever, pain, and loss of function are the classical signs of inflammation.*
24. **Statim!**	*Immediately!*
25. **Ter in die /t.i.d./**	*Three times a day.*

GAUDEAMUS

Gaudeamus igitur, Juvenes dum sumus; Post icundum iuventutem, Post molestam senectutem Nos habebit humus.	Let us therefore rejoice, While we are young; After our youth, After a troublesome old age The ground will hold us.
Vita nostra brevis est, Brevi finietur; Venit mors velociter, Rapit nos atrociter; Nemini parcetur.	Our life is short, It will shortly end; Death comes quickly, Cruelly snatches us; No-one is spared.
Ubi sint qui ante nos In mundo fuere? Vadite ad superos, Transite in inferos Hos si vis videre.	Where are those who before us Existed in the world? You may go up to the gods, You may cross into the underworld If you wish to see them.
Vivat academia, Vivant professores, Vivat membrum quodlibet, Vivat membra quaelibet; Semper sint in flore!	Long live the university, Long live the teachers, Long live each male student, Long live each female student; May they always flourish!
Vivat et republica Et qui illam regit. Vivat nostra civitas, Maecenatum caritas Quae nos hic protegit	Long live the state And those who rule it. Long live our city, And the charity of benefactors Which protects us here.
Vivant omnes virgines, Faciles, formosae! Vivant et mulieres, Tenerae, amabiles, Bonae, laboriosae.	Long live all young women, Easy and beautiful! Long live wives as well, Tender, loveable, Honest, hardworking.
Pereat tristitia, Pereant osores. Pereat diabolus, Quivis antiburschius Atque irrisores!	Perish sadness, Perish haters. Perish the devil, Whoever is against the student fraternity, As well those who mock us!

Quis confluxus hodie Academicorum? E longinquo convenerunt, Protinusque successerunt In commune forum.	Who has gathered now Of the university? They gather from long distances, Immediately joining Our common forum.
Vivat nostra societas, Vivant studiosi! Crescat una veritas, Floreat fraternitas, Patriae prosperitas.	Long live our fellowship, Long live the studious! May truth and honesty thrive, Flourish with our fraternity, And our homeland be prosperous.
Alma Mater floreat, Quae nos educavit; Caros et commilitones, Dissitas in regions Sparsos, congregavit.	May our Alma Mater thrive, That which educated us; Dear ones and comrades, Who we let scatter afar, Let us assemble.

REFERENCE

1. Martindale. The Extra Pharmacopoeia. Thirtieth Edition. Edited by James E. F. Reynolds. Deputy Editor Kathleen Parfitt. Assistant Editors Anne V. Parsons, Sean C. Sweetman. — London: The Pharmaceutical Press, 1993.

2. *Stone, Jon R.* More Latin for the illiterati: a guide to everyday medical, legal, and religious Latin. Routledge — New York and London, 1999.

3. *Авксентьева, А. Г.* Латинский язык и основы медицинской терминологии / А. Г. Авксентьева. — Ростов-на-Дону, 2002. — 288 с.

4. Англо-русский медицинский словарь. — Таллин: LINGVA, 1992. — 600 с.

5. *Акжигитов, Г. Н.* Англо-русский медицинский словарь. / Г. Н. Акжигитов, М. С. Бенюмович, А. К. Чикорин. — М.: Рус. яз., 1989. — 608 с.

6. Англо-русский медицинский словарь; сост.: М. П. Мультановский, А. Я. Иванова. — 2-е изд., доп. и исправ. — М.: Медицина", 1969. — 687 с.

7. Большой русско-английский медицинский словарь. — М: РУССО, 2005. — 704 с.

8. *Бухарина, Т. Л.* Латинский язык: учеб. пособие / Т. Л. Бухарина, В. Ф. Новодранова, Т. В. Михина. — М.: Медиа, 2015. — 496 с.

9. Закон Республики Беларусь от 20 июля 2006 г. № 161-З «О лекарственных средствах».

10. *Зуева, Н. И.* Латинский язык и фармацевтическая терминология: учеб. пособие / Н. И. Зуева, И. В. Зуева, В. Ф. Семеченко. — М: Медиа, 2012. — 286 с.

11. *Капитула, Л. С.* Латинский язык с основами медицинской терминологии / Л. С. Капитула. — Минск: БГМУ, 2002. — 241 с.

12. *Кондратьев, Д. К.* Latin and fundamentals of medical terminology: for foreign students / Д. К. Кондратьев, О. Е. Велегжанина, Ю. В. Князева. — Гродно: ГрГМУ, 2005 — 250 с.

13. *Лин, С. А.* Латинский язык = Lingua latina: учебник / С. А. Лин. — Минск: Выш. шк., 2017. — 365 с.

14. *Панасенко, Ю. Ф.* Латинский язык: учеб. пособие / Ю. Ф. Панасенко. — М.: Медиа, 2016. — 352 с.

15. *Подосинов, А. В.* LINGUA LATINA. Введение в латинский язык и античную культуру: в 5 ч. / А. В. Подосинов. — 6-е изд. — М.: Наука, 2010. — Ч. 5: Грамматика латинского языка.

16. *Чернявский, М. Н.* Латинский язык и основы фармацевтической терминологии: учебник / М. Н. Чернявский. — М.: Медиа, 2014. — 400 с.

17. *Харкевич, Д. А.* Фармакология: учеб. / Д. А. Харкевич. — 8-е изд., перераб., доп. и испр. — М.: ГЭОТАР-МЕД, 2004.

18. *Цисык А. З.* Латинский язык. — Минск: ТетраСистемс, 2006. — 448 с.

CONTENTS

Учебное издание

Лин Светлана Антоновна
Киселевич Ирина Николаевна
Максименко Алла Федоровна и др.

ЛАТИНСКИЙ ЯЗЫК:
ОСНОВЫ ГРАММАТИКИ
И МЕДИЦИНСКОЙ ТЕРМИНОЛОГИИ
(на английском языке)

Учебно-методическое пособие
для студентов 1 курса
факультета иностранных студентов
учреждений высшего медицинского образования

Редактор ***Т. М. Кожемякина***
Компьютерная верстка ***Ж. И. Цырыкова***

Подписано в печать 18.09.2019
Формат $60\times84^{1}/_{8}$. Бумага офсетная 80 г/м^2. Гарнитура «Таймс».
Усл. печ. л. 21,39. Уч.-изд. л. 23,39. Тираж 170 экз. Заказ № 414.

Издатель и полиграфическое исполнение:
учреждение образования «Гомельский государственный медицинский университет».
Свидетельство о государственной регистрации издателя,
изготовителя, распространителя печатных изданий № 1/46 от 03.10.2013.
Ул. Ланге, 5, 246000, Гомель.