Латинский язык: основы грамматики и медицинской терминологии

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

Гомель
ГомГМУ
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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.
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.
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

<table>
<thead>
<tr>
<th>Letter</th>
<th>Name</th>
<th>Pronunciation</th>
<th>Letter</th>
<th>Name</th>
<th>Pronunciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aa</td>
<td>a</td>
<td>[ a ]</td>
<td>Nn</td>
<td>en</td>
<td>[ n ]</td>
</tr>
<tr>
<td>Bb</td>
<td>be</td>
<td>[ b ]</td>
<td>Oo</td>
<td>o</td>
<td>[ o ]</td>
</tr>
<tr>
<td>Cc</td>
<td>tse</td>
<td>[ ts; k ]</td>
<td>pp</td>
<td>pe</td>
<td>[ p ]</td>
</tr>
<tr>
<td>Dd</td>
<td>de</td>
<td>[ d ]</td>
<td>Qq</td>
<td>ku</td>
<td>[ k ]</td>
</tr>
<tr>
<td>Ee</td>
<td>e</td>
<td>[ e ]</td>
<td>RR</td>
<td>er</td>
<td>[ r ]</td>
</tr>
<tr>
<td>Ff</td>
<td>ef</td>
<td>[ f ]</td>
<td>Ss</td>
<td>es</td>
<td>[ s; z ]</td>
</tr>
<tr>
<td>Gg</td>
<td>ge</td>
<td>[ g ]</td>
<td>Tt</td>
<td>te</td>
<td>[ t ]</td>
</tr>
<tr>
<td>Hh</td>
<td>ha</td>
<td>[ g/h ]</td>
<td>uu</td>
<td>u</td>
<td>[ u; v ]</td>
</tr>
<tr>
<td>Ii</td>
<td>i</td>
<td>[ i ]</td>
<td>Vv</td>
<td>ve</td>
<td>[ v ]</td>
</tr>
<tr>
<td>Jj</td>
<td>jota</td>
<td>[ j ]</td>
<td>xx</td>
<td>iks</td>
<td>[ ks ]</td>
</tr>
<tr>
<td>Kk</td>
<td>ka</td>
<td>[ k ]</td>
<td>Yy</td>
<td>epsilon</td>
<td>[ i ]</td>
</tr>
<tr>
<td>Ll</td>
<td>el</td>
<td>[ l ]</td>
<td>Zz</td>
<td>zeta</td>
<td>[ z ]</td>
</tr>
<tr>
<td>Mm</td>
<td>em</td>
<td>[ m ]</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

§3. Pronunciation of vowels

<table>
<thead>
<tr>
<th>Letter</th>
<th>Name</th>
<th>Pronunciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aa</td>
<td>a</td>
<td>pars [párs] part</td>
</tr>
<tr>
<td>Oo</td>
<td>o</td>
<td>frons [frons] forehead</td>
</tr>
<tr>
<td>Ee</td>
<td>e</td>
<td>pes [pes] foot</td>
</tr>
</tbody>
</table>

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 (inter-medium), stérum (breast bone), léctor (lecturer), procéssus (process), túber (tuber, large rounded swelling), forámen (opening), levátor (elevator muscle), fémur (thigh bone), médius (middle), intervertebrális (intervertebral), vênter (belly), nórma (norm), abdómen (abdomen), membrána (membrane), órbita (orbit), área (area), téndo (tendon), réte (network).
Diphthong is a combination of two vowels pronounced like one sound or syllable. There are four diphthongs in Latin: **ae, oe, au, eu:**

<table>
<thead>
<tr>
<th>ae</th>
<th>[e]</th>
<th>vertebrae [vértebre] ribs</th>
</tr>
</thead>
<tbody>
<tr>
<td>oe</td>
<td>[e]</td>
<td>oesophagus [ezófagus] esophagus</td>
</tr>
<tr>
<td>au</td>
<td>[au]</td>
<td>auris [áuris] ear</td>
</tr>
<tr>
<td>eu</td>
<td>[eu]</td>
<td>pleura [pléura] pleura</td>
</tr>
</tbody>
</table>

**NB!** If there is ē or ō in *ae* (aēæ) or *oe* (oēoē), each vowel is pronounced separately.

<table>
<thead>
<tr>
<th>aē / aē</th>
<th>[ae]</th>
<th>aēr [ár] air</th>
</tr>
</thead>
<tbody>
<tr>
<td>oē / oē</td>
<td>[oe]</td>
<td>diploē [díple] diploe</td>
</tr>
</tbody>
</table>

Read and pay attention to the pronunciation of the vowel “i”:

- iunctūra – junctūra (joining), intěrns (internal), iugulāris – jugulāris (jugular), intestīnum (intestine), iāter (Greek) (doctor), māior – mājor (large), infratempōralis (infratemporal), ieiūnum – jejunum (jejunum), digitālis (digital), párīes (wall), iuvēntus – juvēntus (youth), mastoīdeus (mastoidal), iliācus (iliac).

**Exercise 2.** Read and pay attention to the pronunciation of the vowel “i”:

<table>
<thead>
<tr>
<th>U u</th>
<th>[u]</th>
<th>tuber [túber] tuber</th>
</tr>
</thead>
<tbody>
<tr>
<td>ngu</td>
<td>[ngv]</td>
<td>lingua [língua] tongue</td>
</tr>
<tr>
<td>qu</td>
<td>[kv]</td>
<td>squama [skváma] squama, scale</td>
</tr>
<tr>
<td>su</td>
<td>[sv]</td>
<td>suavis [svávis] sweet</td>
</tr>
</tbody>
</table>

**Exercise 3.** Read and pay attention to the pronunciation of the vowel “u”:

- sánquius (blood), tūbículum (tubercle), Quércus (oak), sublinguális (sublingual), tríquetrum (three-edged), língua (tongue), áqua (water), quintus (the fifth), únguīs (nail), ángulus (angle), quadrātus (square), squamōsus (squamous, scaly), obliquus (oblique), inguīnālis (inguinal), quādriceps (four-headed), unguēntum (ointment), língula (small tongue).

**Exercise 4.** Read and pay attention to the pronunciation of the vowel “y”:

- cōndylos (condyle), tymšānicus (tympanic), styloīdeus (styloid, awl-shaped), hy- 
  oīdeus (hyoid, sublingual), hypoglōssus (hypoglossal), cytolōgía (study of cells), cyšta (cyst), dyspēpsia (disturbance of digestion), systēma (system), pýramis (pyra- 
  mide), pýlōrus (pylorus of the stomach), pterygoīdeus (pterygoid, wing-like), syn-
  dactyλία (fusion of fingers), stylohyoīdeus (stylohyoid), Hydrārgyrum (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:**

**Exercise 5.** Read and pay attention to the pronunciation of the **j** sound:
**diphthong**: vértebrae (vertebrae), cóstae véræae (true ribs), àuris (ear), néutrum (neuter gender), diáeta (diet), pléura (pleura), aquaedúctus (water supply), cáuda (tail), roentgénunum (X-ray examination), neurósis (disorder of nervous system), oedéma (oedema, hydrops), díplō (spongy substance), Alóë (aloe), uropoësis (formation of urine), leucopoësis (formation of white blood cells), haemopoësis (formation of blood).

§5. Pronunciation of consonants

<table>
<thead>
<tr>
<th>C</th>
<th>e</th>
<th>1) [ts] before e, i, y, ae, oe</th>
<th>processus [proteszus] process</th>
<th>facies [fatsies] face, surface</th>
<th>caecum [tsékum] cecum</th>
</tr>
</thead>
<tbody>
<tr>
<td>2) [k] in other cases</td>
<td>caput [káput] head</td>
<td>accessorius [aktseszorius] accessory</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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), cingulum (girdle), crísta (crest), processus (process), cránum (skull), fácies (face, surface), cáput (head), cérébrum (brain), cállum (neck), cáecum (blind intestine), cadáver (dead body, corpse), coréuleus (blue), cósta (rib), coccygéus (coccygeal), fácia (fascia, sheath of muscles), colúrna (column), cervícalis (cervical).

| G | [g] | gaster [gástér] stomach |
| H | [g/h] | homo [hómó] man |
| K | [k] | skelétón [skéléton] skeleton |
| L | [l] (is always pronounced softly) | lamína [lámína] thin plate, lamina cartilágus [kartil’ágó] cartilage |

**Exercise 7. Read and pay attention to the pronunciation of the consonant “l”**: cólon (large intestine), lúmbus (loin), átlast (atlas, first cervical vertebra), cartilágus (cartilage), cállum (neck), clávícula (clavicle), lábium (lip), sélła (saddle), hámulus (hook), lóbus (lobe), glándula (gland), lámína (lamina, thin plate), ovális (oval), laterális (lateral), palátum (palate), fíbula (splint-bone), válvula (valve, flap), úlna (elbow bone), úlcus (ulcer), álá (wing), lóngus (long), ánqulus (angle), pýlórus (pylorus of the stomach), línea (line), plánus (plain), frontális (frontal), longitudínális (longitudinal, lengthwise), púlmo (lung), alvéolus (alveolus), liber (free), látus (wide), búllus (bulb), móbilis (mobile), pélvis (pelvis), medúlla (medullary substance), abdominális (abdominal), mandíbula (lower jaw), flávus (yellow).

| 1) [s] in most words | os [os] bone |
Exercise 8. Read and pay attention to the pronunciation of the consonant “s”:
os (bone), óssa (bones), incisúra (notch), supérior (superior, upper), procéssus (process), sinús (sinus), spinósus (spinous), sacrális (sacral), fibrósus (fibrous), tuberósitas (tuberosity), básis (base), petrósus (petrous), imprésio (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), nasolacrimalis (nasolacrical), stérénum (breast bone), venósus (venous), distális (distal), fásica (fascia, sheath of muscles), hypogólóssus (hypoglossal), fóssa (shallow depression), tonsilla (tonsil).

| 2) [z] | - between two vowels; - between a vowel and the consonant “m” or “n”. | basis [bázis] base |
| ss [ss] | | chiasm [hiázmá] chiasm |

| T t | [t] | tendo [téndo] tendon |
| ti + vowel [tsi] | substantia [substántsia] substance |
| sti; tti; xti [ti] | ostium [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), perforátió (perforation), substántia (substance), articulátio (joint), óstium (orifice, mouth), distántia (distance), intestínus (intestine), evolútio (evolution), imitátio (imitation), palatínus (palatine), vestibulum (vestibule, threshold), retína (retina).

| X x [ks] | apex [ápeks] apex, tip |
| Z z 1) [z] | in words of Greek origin | zygomáticus [zigomáticús] zygomatic |
| Z z 2) [ts] | in words of non-Greek origin | influenza [influéntsa] influenza |
| | Zíncum [tsínkum] zinc |

Exercise 10. Read correctly:
ápe (tip), áxis (axis, second cervical vertebra), extrémítas (extremity), extrénum (external), zygomáticos (zygomatic), lárñx (larynx, throat), zóna (zone), Zíncum (zinc), rádix (root), déxter (right), proximális (proximal), pléxus (plexus), appéndix (appendix), influéncia (influenza), zygóma (zygoma, cheek-bone), 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**.

<table>
<thead>
<tr>
<th>Digraph</th>
<th>Pronunciation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ch</td>
<td>[h]</td>
<td>brachium [bráhium] shoulder</td>
</tr>
<tr>
<td>ph</td>
<td>[f]</td>
<td>phalanx [fálanks] phalanx</td>
</tr>
<tr>
<td>rh</td>
<td>[r]</td>
<td>raphé [ráfe] raphé, suture</td>
</tr>
<tr>
<td>th</td>
<td>[t]</td>
<td>thorax [tóra] chest, thorax</td>
</tr>
<tr>
<td>sch</td>
<td>[skh]</td>
<td>ischium [iskhium] ischium</td>
</tr>
</tbody>
</table>

**Exercise 11. Read correctly:**

thóraç (chest), thorácicus (thoracic), cóncha (concha), núcha (nucha), pharyngé (pharyngeal), scaphoídeum (keel-shaped), sphenoidális (wedge-shaped), ethmoidális (sieve-shaped), labyrinthus (labyrinth), íschium (ischium), ischiádicus (ischiadic), Schizándra (magnolia-vine), rhízóma (rhizome), ráphe/ráphe (suture), phárýnx (pharynx), Glycyrrhíza (licorice), Chamomilla (camomile), Altháæa (marshmallow), Helíánthus (sunflower), Galánthus (snowdrop), encéphalon (brain), sýmphysis (adhesion), synchondrósis (adhesion of bones), xeróphthálmia (dryness of eye), xerochéllia (dryness of lips), achýlia (absence of gastric juice secretion), chylothórax (accumulation of lymph in the pleural cavity), ophthalmmorrhágia (bleeding from the eye), ophthalmmorrhéxis (rupture of the eye).

**Training exercises for home reading**

1. Cránium; colúmna vertebrális; clavícula; stérum; númerus; os sácrum; os cóxa; fémur; patélla; tibia; fibula; óssa pédis; óssa digitórum; óssa metatársi; óssa társi; óssa metacárpi; óssa cárpri; rádius; úlna; cóstae; scápula; os ethmoidále; os lóngum; os plánum; óssa brévía; os irreguláre; línex epiphiyális; substántia spongíosa; substántia compactá; cávitas medulláris; perióstéum; laméllass circumpertéales internae; laméllass circumferentáles externae; trabéculae ósseae; canális nutritíus; vása sanguínea; lactúna óssea; cáput húmeri; cóllum anatómicum; cóllum chirúrgicum; tubérculum mínus; tubérculum május; diáphysis húmeri; fóssa olécrani; epicóndylus laterális; tróchlea húmeri; súlcus néri ulnárís; epicóndylus mediális; súltetón axiálé; óssa thorácis; óssa mémbrí inferiorís; óssa mémbrí inferiórís.

2. Párs cervícális colúmnae vertebrális; párs thorácica colúmnae vertebrális; párs lumbális colúmnae vertebrális; os sácrum; os coccygis; promontórium; procéssus transversus; vértebra thorácica; átlass; áxis; córpus vértebrae; árcus vértebrae; pedúnculi árcus vértebrae; forámen vértebrae; procéssus spinósus; fóvea costális procéssus transversí; procéssus transversus; procéssus articuláris superior; procéssus articuláris inferiör; incisúra vertebrális inferior; vértebra cervícális; forámen procéssus transversí; súlcus artériæa vertebrális; súl-
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-sí’-vus, coc-cy-gê-us, spi-ná’-lis.
4. If the penultimate syllable is short the stress is shifted to the third syllable from the end: mí-nī-mus, scá-pū-lā, ór-gā-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.

<table>
<thead>
<tr>
<th>Long syllables by nature</th>
<th>Short syllables by nature</th>
</tr>
</thead>
<tbody>
<tr>
<td>if it contains a long vowel (with a long mark above the vowel ˇ): ā, ē, ĭ, ŏ, ŭ: ve-sī-ca(vesica) bladder</td>
<td>if it contains a short vowel (with a short mark above the vowel ˘): ā, ē, ĭ, ŏ, ŭ: la-mī-na (lámina) plate</td>
</tr>
<tr>
<td>fo-rā-men (foramen) opening</td>
<td>tu-ber-cū-lum (tuberculum) tubercle</td>
</tr>
<tr>
<td>in-ci-sū-ra (incisūra) notch</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Long syllables by position</th>
<th>Short syllable by position</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) if the syllable has a diphthong: amoeba</td>
<td>1) if the vowel of the syllable is followed by the vowel of the next syllable: fa-ci-es (fācies) face;</td>
</tr>
<tr>
<td>a-moe-ba (amóeba) amoeba</td>
<td>cra-ni-um (crānium) skull.</td>
</tr>
<tr>
<td>2) if the vowel of the syllable is followed by two or more consonants or consonant clusters x, z:</td>
<td>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:</td>
</tr>
<tr>
<td>co-lum-na (colúmna) column;</td>
<td>ce-re-brum (cérebrum) brain;</td>
</tr>
<tr>
<td>pro-fun-dus (profundus) deep;</td>
<td>ver-te-bra (vértebra) vertebra;</td>
</tr>
<tr>
<td>cir-cum-fle-xus (circumfleks) circumflex;</td>
<td>pal-pe-bra (pálpbra) eyelid;</td>
</tr>
<tr>
<td>re-fle-xus (refléxus) reflex;</td>
<td>cho-le-do-chus (cholédochus) bilious;</td>
</tr>
<tr>
<td>Gly-cy-rrhi-za (Glycyrrhiza) licorice.</td>
<td>sto-ma-chus (stómachus) stomach (Greek).</td>
</tr>
</tbody>
</table>

**Remember the following long and short suffixes**

<table>
<thead>
<tr>
<th>Long suffixes</th>
<th>Short suffixes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>noun suffixes:</strong></td>
<td></td>
</tr>
<tr>
<td>-ūr- fissūra (fissure); iunctūra (joining);</td>
<td>-ōl- fōvēola (small pit);</td>
</tr>
<tr>
<td>-īn- medicīna (medicine).</td>
<td>-ūl- glāndūla (gland);</td>
</tr>
<tr>
<td></td>
<td>tubērclūm (tubercle).</td>
</tr>
</tbody>
</table>

| **adjective suffixes:** | |
| -āl- lumbālis (lumbar); | -īc- gāstrīcus (gastric); |
| -ār- articulāris (articular); | thorācīcus (thoracic); |
| -āt- digitātus (like fingers); | ópticus (optic); |
| hamātus (like a hook); | -āc- cardīacus (cardiac); |
| -īn- pelvinus (pelvic); | -ē- òssēus (bony); |
| -ōs- spinōsus (spinous); | tendinēus (tendinous). |
| -ē- coccygēus (coccygeal). | |
Training exercises

**Ex. 1. Read the following disyllabic words:**
ala, anus, arcus, apex, atlas, basis, bursa, biceps, caput, cavum, coccyx, dorum, ductus, fossa, fornx, gaster, genu, hepar, humor, cornu, homo, incus, index, iris, larynx, latus, lobus, manus, margo, mentum, 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:**
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. 3. Stress the words correctly minding long or short vowels:**
processus, ala, squamōsus, externus, tuberculum, superior, lateralis, rotundum, caroticus, crista, posterius, maxillaris, aquaeductus, sutūra, internus, angulus, fovea, zygomaticus, spatium, spina, frontalis, medicina, labyrinthus, maxilla, unna, petrosus, lamina, linea, pyramis, palpebra, foramina, protuberantia, columna, canalis, profundus, incisura, glandula, palatinum, medius, humerus, oleum, cerubrum, pharyngeus, atlas, jugularis, spinosus, symphyseis, facies, epiphyseis, ischium, pelvinus, foramen, tuberositas, tympanum, cartilago, hamatus.

**Ex. 4. Accent the following words and give the necessary explanations:**
processus, ala, squamōsus, externus, tuberculum, superior, lateralis, rotundum, caroticus, crista, posterius, maxillaris, aquaeductus, sutūra, internus, angulus, fovea, zygomaticus, spatium, spina, frontalis, medicina, labyrinthus, maxilla, unna, petrosus, lamina, linea, pyramis, palpebra, foramina, protuberantia, columna, canalis, profundus, incisura, glandula, palatinum, medius, humerus, oleum, cerubrum, pharyngeus, atlas, jugularis, spinosus, symphyseis, facies, epiphyseis, ischium, pelvinus, foramen, tuberositas, tympanum, cartilago, hamatus.

**Control reading and stressing**

1. Cranium: cranium cerebrale; neurocranium; sutūra frontalis; os nasale; arcus superciliaris; foramen supraorbitale; os parietale; facies orbitalis ossis frontalis; sutūra sphenofrontalis; sutūra frontozygomatica; facies orbitalis alae majores ossis sphenoidalis; sutūra sphenozygomatica; foramen zygomatico- temporale; os zygomaticum; sutūra zygomaticomaxillaris; foramen infraorbitale; concha nasalis inferior; tuberositas masseterica; lamina perpendicularis ossis ethmoidalis; angulus mandibuulae; spina nasalis anterior; juga alveolaria; protuberantia mentalis; foramen mentale; sutūra intermaxillaris; cavum nasi; fissūra orbitalis inferior; facies orbitalis maxillae; os lacrimale; lamina orbitalis ossis ethmoidalis; squama temporale; processus zygomaticus ossis frontalis; tuber
frontāle; septum nasi ossēum; sinus maxillāris; dentes maxillae; mandibula;
sutura coronalis; sutūra sphenoparietālis; margo pariētālis ossis temporālis;
sutura temporozygomatica; arcus zygomaticus; processus styloidēus; porus
acusticus externus; processus mastoīdēus; sutūra occipitomastoīdēa; sutūra
lambdoīdēa; linea temporālis inferior; linea temporālis superior; squama
temporālis; sutūra squamōsa.

2. Os frontāle: squama frontālis; tuber frontāle; glabella; processus zygomaticus;
margo pariētālis; sulcus sinus sagittālis superiōris; facies cerebrālis;
impressiones digitātēae; forāmen caecum; canālis opticus; incisūra ethmoidālis;
sinus sphenoidālis; canālis pterygoīdēus; processus pterygoīdēus; ala major; fossa
glandulae lacrimālis; lamīna orbitālis labyrinthi ethmoidālis; forāmen
ethmoidāle anterius; cellūlae ethmoidāles.

3. Os sphenoidāle: apertūra sinus sphenoidālis; dorsum sellae; concha
sphenoidalis; fissūra orbitālis superior; ala minor; margo zygomaticus; sulcus
pterygopalatinus; lamīna laterālis processus pterygoīdēi; hamūlus pterygoīdēus;
processus vaginālis; rostrum sphenoidale; forāmen rotundum; facies orbitālis
alae majōris; canālis opticus; processus clinoīdēus posterior; fossa scaphoīdēa;
sulcus hamūli pterygoīdēi; sulcus caroticus; tuberculum sellae; sulcus
prechiasmātis; forāmen ovale; 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;
tuberculum pharyngēum; eminentia cruciformis; condylus occipitālis; canālis
hypoglossus; fossa condylāris; processus jugulāris; processus intrajugulāris;
margo lambdoīdēus; sulcus sinus sigmoidei; sulcus sinus petrōsi inferiōris; pars
laterālis; fossa occipitālis superior.

5. Os pariētāle: linea temporālis inferior; tuber pariētale; angulūs
sphenoidalis; angulūs mastoīdēus; sulci arteriōsi; margo sagittālis; angulūs oc-
ccipitālis; foveolae granulāres.
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

<table>
<thead>
<tr>
<th>adjective</th>
<th>noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>petrous</td>
<td>part of the occipital bone</td>
</tr>
</tbody>
</table>

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;
    feminīnum – 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, īnis 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:

<table>
<thead>
<tr>
<th>Nominative ending</th>
<th>gender</th>
<th>example</th>
</tr>
</thead>
<tbody>
<tr>
<td>-a</td>
<td>feminine (f)</td>
<td>lamīna, ae f (plate); vertēbra, ae f (vertebra).</td>
</tr>
<tr>
<td>-us</td>
<td>masculine (m)</td>
<td>musculus, i m (muscle); arcus, us m (arch).</td>
</tr>
<tr>
<td>-um; -en; -on; -u</td>
<td>neuter (n)</td>
<td>ligamentum, i n (ligament); forāmen, īnis n (opening); ganglion, ii n (nerve node); cornu, us n (horn).</td>
</tr>
</tbody>
</table>
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 of the eyes and nose – muscūlī oculōrum et nasi;
parts of the body – partes corpōris.

3. Grammar category 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: **Nominātivus** (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 of the incus;
thoracic nerves of the pterygoid canal.

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 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.

<table>
<thead>
<tr>
<th>1st element</th>
<th>2nd element</th>
<th>3rd element</th>
</tr>
</thead>
<tbody>
<tr>
<td>noun in Nominative Singular</td>
<td>ending of Genitive Singular</td>
<td>Gender</td>
</tr>
<tr>
<td>rib – costa, ae f</td>
<td>costa</td>
<td>ae (costae)</td>
</tr>
<tr>
<td>eye – ocŭlus, i m</td>
<td>ocŭlus</td>
<td>i (ocŭlĭ)</td>
</tr>
<tr>
<td>horn – cornu, us n</td>
<td>cornu</td>
<td>us (cornus)</td>
</tr>
</tbody>
</table>

**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-\textit{a} – ven-\textit{ae} (I);
  - Nom. Sing. \quad Gen. Sing.
- **septum, i n**: sept-\textit{um} – sept-\textit{i} (II);
  - Nom. Sing. \quad Gen. Sing.
- **arcus, us m**: arc-\textit{us} – arc-\textit{us} (IV);
  - Nom. Sing. \quad Gen. Sing.
- **facies, ēi f**: faci-\textit{es} – faci-\textit{ēi} (V).
  - Nom. Sing. \quad 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\textit{a}x – thorāc-\textit{is};
  - Nom. Sing. \quad Gen. Sing.
- **margo, ĵinis m**: marg\textit{a} – margīn-\textit{is}.
  - Nom. Sing. \quad 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).

<table>
<thead>
<tr>
<th>Lexical Form</th>
<th>Nominative Singular</th>
<th>Genitive Singular</th>
<th>Declension</th>
</tr>
</thead>
<tbody>
<tr>
<td>fovea, ae f</td>
<td>fove-a</td>
<td>fove-ae</td>
<td>I</td>
</tr>
<tr>
<td>nasus, i m</td>
<td>nas-us</td>
<td>nas-i</td>
<td>II</td>
</tr>
<tr>
<td>rectum, i n</td>
<td>rect-um</td>
<td>rect-i</td>
<td>II</td>
</tr>
<tr>
<td>index, ìcis m</td>
<td>index</td>
<td>indic-is</td>
<td>III</td>
</tr>
<tr>
<td>cutis, is f</td>
<td>cut-is</td>
<td>cut-is</td>
<td>III</td>
</tr>
<tr>
<td>meātus, us m</td>
<td>meāt-us</td>
<td>meāt-us</td>
<td>IV</td>
</tr>
<tr>
<td>genu, us n</td>
<td>gen-u</td>
<td>gen-us</td>
<td>IV</td>
</tr>
<tr>
<td>superficies, ēi f</td>
<td>superfici-es</td>
<td>superfici-ēi</td>
<td>V</td>
</tr>
</tbody>
</table>

**Lexical minimum № 1**

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) lamīna, ae f — plate
7) scapūla, ae f — shoulder blade
8) vena, ae f — vein
9) vertēbra, ae f — vertebra

II declension nouns

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

III declension nouns

13) atlas, atlantis m — first cervical vertebra, atlas
14) axis, is m — second cervical vertebra, axis
15) caput, ītis n — head
16) corpus, ōris n — body
17) forāmen, īnis 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:


Ex. 2. Make the full form of Genitive Singular, underline the Genitive ending and determine the declension:
Pattern: costa – costae f – I

a) vertēbra, ae f; corpus, ōris n; dorsum, i n; arcus, us m; superficies, ēi f; basis, is f; collum, i n; apex, īcis m; cranium, ii n; ductus, us m; caput, ītis m; ganglion, ii n; cornu, us n; squama, ae f; zygōma, ātis n; processus, us m; tuberculium, 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, ātis n; muscūlus, i m; recessus, us m; cañālis, is m; cornu, us n; tuberosītas, ātis f; ala, ae f; plexus, us m; ramus, i m; cerebrum, i n; incisūra, ae f; forāmen, īcis m; sulcus, i m; fossa, ae f; crista, ae f; dens, dentis m; chiasma, ātis n; os, ossis n; cavītas, ātis f; ala, ae f; plexus, us m; ramus, i m; cerēbrum, i n; incisūra, ae f; forāmen, īcis m; sulcus, i m; fossa, ae f; crista, ae f; dens, dentis m; chiasma, ātis n; os, ossis n; cavītas, ātis f; angūlus, i m; costa, ae f.

Ex. 3. Add the Genitive singular ending according to the given declension and guess the gender of some nouns:
tubercūlum, tubercūl... (II) ____; nervus, nerv... (II) ____; caput, capīt... (III) n; arcus, arc... (IV) ____; atlas, atlant... (III) m; forāmen, foramīn... (III) ____; costa, cost... (I) ____; crista, crist... (I) ____; collum, coll... (II) ____; arteria, arteri... (I) ____; os, oss... (III) n; vertēbra, vertēbr... (I) ____; hiātus, hiāt... (IV) ____; os, or... (III) n; basis, bas... (III) f; facies, faci... (V) f; margo, margin... (III) m; tympānum, tympān... (II) ____; apex, apīc... (III) m; processus, process... (IV) ____; canālis, canāl... (III) m; mēātus, mēāt... (IV) ____; corpus, corpūr... (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) noun1 + noun2 + noun3:
   
   facies tuberculi costae (surface of the tubercle of the rib);

b) noun1 + adjective1 + adjective2:
   
   processus articularis superior (upper articular process);

c) noun1 + noun2 + adjective1:
   
   musculus capitis longus (long muscle of the head);

d) noun1 + adjective1 + noun2 + adjective2:
   
   lobus superior pulmonis dextri (upper lobe of the right lung).

§10. Anatomical terms “Noun1 + Noun2 + (Noun3)”

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.
   
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 | arcus |
| noun 2 | rib | costa, ae f | I; Genitive Singular | costa |

**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:

\[
\begin{array}{ccc}
1 & 2 & 3 \\
\text{surface of the tubercle of the rib.} & \text{Nom. Sing.} & \text{Gen. Sing.} & \text{Gen. Sing.} \\
\end{array}
\]

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

| noun 1 | surface | facies, ēī f | V; Nominative Singular | facies |
| noun 2 | tubercle | tubercūlum, ī n | II; Genitive Singular | tubercūlī |
| noun 3 | rib | costa, ae f | I; Genitive Singular | costa |

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

### III declension nouns
15) apex, īcis 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, ātis n cheek bone
Training Exercises

In-class training

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

Pattern:  
cresta tuberculi

1) arca vertebræ; 2) angulus thoracis; 3) caput ossis; 4) cristae acusticae; 5) fossa cranii; 6) linea corporis; 7) margin of the rib; 8) processus scapulae; 9) processus spinæ; 10) promontorium manus; 11) spine of the shoulder blade; 12) spina iliaca; 13) sulcus venae; 14) sulcus tympanicus; 15) sulcus temporis.

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 capitis; 2) caput costae; 3) fossa cranii; 4) angulus scapulae; 5) columna vertebræ; 6) corpus costae; 7) foramen vertebrae; 8) tuberculum costae; 9) sulcus venae; 10) incisura scapulae; 11) facies tuberculi costae; 12) corpus sterni; 13) os cranii; 14) linea corpŏris; 15) caput sterni.

Exercises for control reading

1. Os temporāle: processus zygomaticus; tuberculum articulare; fissūra petrosquamōsa; fissūra petrotympanica; pars tympanica; porus acusticus externus; fissūra tympanomastoidēa; spina suprameatīca; sulcus nervi petrōsi minoris; sulcus nervi petrōsi majoris; hiatus canālis nervi petrōsi; eminentia arcuāta; sulcus sinus sigmoidēi; impressio nervi trigēmina; apex partis petrōsa; margo sphenoidalis; tegmen tympani; apertura externa aquaeductus vestibuli; apertura externa canalicūlī cochleae; meātu acusticus externus; fissūra tympanosquamōsa; tuberculum articulare; fossūla petrōsa; apertura externa canalicūlī cochleae; forāmen stylomastoidēum; cavum tympani; promontorium; fenestra vestibuli; fenestra cochleae; vagina processus styloidei; canālis caroticus; prominēntia canālis semicircularis laterālis; geniculum canālis faciālis; semicanālis musculī tensōris tympani; semicanālis tubae auditīvæ; cellūlæ tympanicae; canaliculus chordae tympani.
2. Os ethmoidale: lamīna perpendicularis; concha nasalis media; crista galli; labyrinthus ethmoidalis; lamīna cribrosa; ala cristae galli; forāmen caecum; concha nasalis superior; meātus nasi superior; processus uncinātus; bulla ethmoidalis.

3. Maxilla: corpus maxillae; margo infraorbitālis; facies anterior; fossa canīna; incisūra nasalis; spīna nasalis anterior; sulcus infraorbitālis; facies infratemporālis; tuber maxillae; canālis incisīvus; forāmen incisīvum; forāmina alveolāria; canāles alveolāres; hiātus maxillāris; alveolī dentāles; jugā alveolāria; os incisīvum; sutūra palatīna mediāna; septa interradiculāria; processus sphenoidalis; processus pyramidālis; lamīna horizontālis; incisūra sphenopalatīna; fossa pterygoīdea; ala vomēris; fossa sacci lacrimālis; hiātus lacrimālis; processus temporālis; forāmen zygomaticotemporāle.

4. Mandibula: basis mandibulae; processus coronoidēus; processus condylāris; tuberositas masseterica; sulcus mylohyoideus; septa interalveolāria; linea obliqua; protuberantia mentalis; lingula mandibulae; fossa digastrica; fovea sublinguālis; os hyoideum; cornu majus; cornua majora; cornu minus; cornua minora.

5. Cranium: calvaria; basis; crista frontālis; foveolae granulāres; sella turcīca; forāmen jugulāre; canālis hypoglossi; synchondrosis sphenoopticitālis; vomer; lamīna horizontālis ossis palatīni; processus pyramidālis ossis palatīni; palātum durum; choāna; cóndylus occipitalis; tuberculum pharyngēum; canālis condylāris; forāmen lacērum; fissūra tympanosquamonāsa; sutūra sphenosquamonāsa; forāmen palatīnum minus; clivus; eminentia cruciformis; orbita; aditus orbitae; canālis nasolacrimālis; fossa sacci lacrimālis; os sphenoidale; forāmen ethmoidāle posterius; meātus nasi communis; apertūra piriformis; recessus sphenoeothmoidalis; infundibulum ethmoidale; hiātus semilunāris; lamīna laterālis processus pterygoïdei; processus palatinus maxillae; os lacrimāle; fonticulus ante- rior; anūlus tympanicus; squama occipitalis.

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
n 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; are related to the noun which the adjective qualifies
2) **Gender**: masculine, feminine;, neuter;
3) **Case**: Nominative, Genitive, etc.

**For example:**

\[\text{wide ligament of the uterus;}\]
\[\text{n, Nom. Sing.}\]

\[\text{wide muscles of the back.}\]
\[\text{m, Nom.Plur.}\]

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.

<table>
<thead>
<tr>
<th><strong>Lexical form</strong></th>
<th><strong>masculine</strong></th>
<th><strong>feminine</strong></th>
<th><strong>neuter</strong></th>
<th><strong>1st group</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>latus, a, um (wide)</td>
<td>lat-us</td>
<td>lat-a</td>
<td>lat-um</td>
<td>1st group</td>
</tr>
<tr>
<td>dexter, tra, trum (right)</td>
<td>dext-er</td>
<td>dextr-a</td>
<td>dextr-um</td>
<td>1st group</td>
</tr>
<tr>
<td>articulāris, e (articular)</td>
<td>articulār-is</td>
<td>articulār-is</td>
<td>articulār-e</td>
<td>2nd group</td>
</tr>
<tr>
<td>costālis, e (costal)</td>
<td>costāl-is</td>
<td>costāl-is</td>
<td>costāl-e</td>
<td>2nd group</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th><strong>English</strong></th>
<th><strong>Lexical form</strong></th>
<th><strong>m</strong></th>
<th><strong>f</strong></th>
<th><strong>n</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>long</td>
<td>longus, a, um</td>
<td>long-us</td>
<td>long-a</td>
<td>long-um</td>
</tr>
<tr>
<td>left</td>
<td>sinister, tra, trum</td>
<td>sinist-er</td>
<td>sinistr-a</td>
<td>sinistr-um</td>
</tr>
</tbody>
</table>

The choice of the adjective ending depends on the gender of the concrete noun which the adjective qualifies:
- **long muscle**: muscūlus, i **m** + longus, a, um = muscūlus longus;
- **long head**: caput, ītis **n** + longus, a, um = caput longum;
- **long artery**: arteria, ae **f** + longus, a, um = arteria longa.
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 = pars³ petrōsā¹ (f);  
deep vessel*: vas, vasis n + profundus, a, um = vas³ profundum² (n);  
*thoracic duct*: ductus, us m + thoracīcus, a, um = ductus⁴ thoracicus² (m).

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

<table>
<thead>
<tr>
<th>English</th>
<th>Lexical form</th>
<th>m</th>
<th>f</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>lateral</td>
<td>laterālis, e</td>
<td>laterāl-is</td>
<td>laterāl-is</td>
<td>laterāl-e</td>
</tr>
<tr>
<td>renal</td>
<td>renālis, e</td>
<td>renāl-is</td>
<td>renāl-is</td>
<td>renāl-e</td>
</tr>
</tbody>
</table>

The choice of the adjective ending depends on the gender of the concrete  
noun which the adjective qualifies:  
*frontal suture*: sutūra, ae f + frontālis, e = sutūra frontālis;  
*frontal angle*: angūlus, i m + frontālis, e = angūlus frontālis;  
*vertebral tuber*: tuber, ēris n + vertebrālis, e = tuber vertebrāle.

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

- anterior, ius *front, anterior*; inferior, ius *lower*;  
- posterior, ius *back, posterior*; major, ius *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)**:

<table>
<thead>
<tr>
<th>English</th>
<th>Lexical form</th>
<th>m</th>
<th>f</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>front</td>
<td>anterior, ius</td>
<td>anter-ior</td>
<td>anter-ior</td>
<td>anter-ius</td>
</tr>
<tr>
<td>large</td>
<td>major, ius</td>
<td>ma-ior</td>
<td>ma-ior</td>
<td>ma-jus</td>
</tr>
<tr>
<td>small</td>
<td>minor, us</td>
<td>min-ior</td>
<td>min-ior</td>
<td>min-us</td>
</tr>
</tbody>
</table>

**Example:**

*large wing*: ala, ae f + major, ius = ala major;  
*lower process*: processus, us m + inferior, ius = processus inferior;  
*upper ligament*: ligamentum, i n + superior, ius = ligamentum superius.
The declension of the second group adjectives is always the III-nd.

Example:
frontal suture: sutūra, ae f + frontālis, e = sutūra frontālis III;
upper arch: arcus, us m + superior, ius = arcus IV superior III;
vertebral tuber: tuber, ēris n + vertebrālis, e = tuber III vertebrāle III.

<table>
<thead>
<tr>
<th>gender</th>
<th>1st group</th>
<th>2nd group</th>
<th>Comparative degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nom.sing. end.</td>
<td>m</td>
<td>f</td>
<td>n</td>
</tr>
<tr>
<td>Declension</td>
<td>II</td>
<td>I</td>
<td>II</td>
</tr>
</tbody>
</table>

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) thoracīcus, a, um thoracic
10) transversus, a, um transverse

**2nd group adjectives**

11) articulāris, e articular, related to joints
12) costālis, e costal, related 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); tubercūlum, i n (anterior, ius); canālis, is m (vertebrālis, e); forāmen, īnis n
  (vertebrālis, e); columnā, 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); ars, 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) – faciesV articulārisIII.
  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, īnis n (posterior, ius); forāmen, īnis n (magnus, a, um); vertèbra, ae f
  (thoracĭcus, a, um); fovea, ae f (costālis, e); nervus, i m (spinālis, e); margo, īnis
  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):

<table>
<thead>
<tr>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>palatine</td>
<td>opening</td>
</tr>
</tbody>
</table>


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

<table>
<thead>
<tr>
<th>English</th>
<th>Lexical forms</th>
<th>Grammar categories</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>opening</td>
<td>forāmen, īnis n</td>
<td>noun, III, Nom. Sing.</td>
<td>forāmen</td>
</tr>
<tr>
<td>palatine</td>
<td>palātīnus, a, um</td>
<td>adj., n, II, Nom. Sing.</td>
<td>palātīnum</td>
</tr>
</tbody>
</table>

**palatine opening – forāmen palātīnum**

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, etc.). Then goes the adjective determining the size (large, small), form (round, sphenoid, etc.) and position (upper, anterior, lower, etc.):

<table>
<thead>
<tr>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>right temporal bone</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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:

\[
\begin{array}{ccc}
\text{transverse} & \text{nerve} & \text{of the neck} \\
\text{Nom. Sing. adj.} & \text{Nom. Sing. noun} & \text{Gen. Sing. noun}
\end{array}
\]

nerve nervus, i m noun, II, Nom. Sing. nervus
neck collum, i n noun, II, Gen. Sing. colli
transverse transversus, 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:

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Meaning</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>-īc-, -in-, -ē-</td>
<td>relation to some anatomical structure</td>
<td>gastr-īc-us, a, um gastric, related to the stomach; pancreat-īc-us, a, um pancreatic, related to the pancreas; pelv-in-us, a, um pelvic, related to the pelvis; oss-ē-us, a, um bony.</td>
</tr>
<tr>
<td>-ōs-</td>
<td>plenty of some feature</td>
<td>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.</td>
</tr>
<tr>
<td>-idē-</td>
<td>likeness with something</td>
<td>pterygo-idē-us, a, um pterygoid, like the wing; lambda-idē-us, a, um lambdoid, like the Greek letter Λ; sigmo-idē-us, a, um sigmoid, having the form of the Greek letter Σ.</td>
</tr>
<tr>
<td>-āt-</td>
<td>supplied with something</td>
<td>ham-āt-us, a, um supplied with hooks.</td>
</tr>
</tbody>
</table>

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);
cavicula, 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 -о-. 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) + zygomaticus, a, um (zygomatic) = sphen-o-zygomaticus, 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:

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Meaning</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>infra-</em></td>
<td>under, beneath</td>
<td>infrACLaviculāris – infrACLavicular (situated under clavicle);</td>
</tr>
<tr>
<td><em>inter-</em></td>
<td>between</td>
<td>intervertebrālis – intervertebral (situated between vertebrae);</td>
</tr>
<tr>
<td><em>intra-</em></td>
<td>inside</td>
<td>intravenōsus – intravenous (lying inside the vein);</td>
</tr>
<tr>
<td><em>pre-</em> (praez-)</td>
<td>in front of</td>
<td>presacrālis – presacral (situated in front of sacrum);</td>
</tr>
<tr>
<td><em>semi-</em></td>
<td>half</td>
<td>semilunāris – semilunar (looking like half of the moon);</td>
</tr>
<tr>
<td><em>supra-</em></td>
<td>above</td>
<td>suprarcaplāris – suprascapular (situated above shoulder-blade).</td>
</tr>
</tbody>
</table>

Lexical minimum № 4

Prefixes

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

7) carotīcus, 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) ischiadīcus, a, um  ischiadic
13) jugulāris, e  jugular
14) mastoideus, a, um  mastoidal, mammiform
15) orbitālis, e  orbital
16) ossēus, 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) tympanīcus, a, um  tympanic
27) zygomātīcus, 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, arterīōsus, spinōsus, cribrōsus, squamōsus, cartilagīnēus, gastrīcus, hepāticus, pancreaticīcus, tympanīcus, thorācīcus, palpātīnus, coccygēus, zygomātīcus, 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, īnis f cartilage; gaster, tris f stomach; hepār, ātis n liver; pancreas, ātis n pancreas; tympanum, i n tympanum; thorāx, ācis m chest; palpātum, i n palate; coccyx, ygis m coccyx; zygōma, ātis n cheek-bone; pelvis, is f pelvis; arcus, us m arch).
Ex. 2. Translate the following adjectives; explain the meaning of the prefixes:
tercostālis, 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: vertēbra, ae f vertebra;
scapūla, ae f shoulder blade;
squama, ae f squama, scale.
<table>
<thead>
<tr>
<th>lexical form</th>
<th>Nom. Sing.</th>
<th>Gen. Sing.</th>
<th>gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>costa, ae f (rib)</td>
<td>-a</td>
<td>-ae</td>
<td>f</td>
</tr>
<tr>
<td>vena, ae f (vein)</td>
<td>-a</td>
<td>-ae</td>
<td>f</td>
</tr>
</tbody>
</table>

Exception: nouns of Greek origin ending in –ma are of the neuter gender and refer to the III-rd declension:
zygōma, ātis n zygoma, cheek bone;
glaucōma, ātis 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:

<table>
<thead>
<tr>
<th>lexical form</th>
<th>gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>verus, a, um</td>
<td>f</td>
</tr>
<tr>
<td>sinister, tra, trum</td>
<td>f</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>true rib</th>
<th>costa</th>
<th>vera</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nom. Sing.</td>
<td>-a</td>
<td>cost-a</td>
</tr>
<tr>
<td>Gen. Sing.</td>
<td>-ae</td>
<td>cost-ae</td>
</tr>
<tr>
<td>Nom. Plur.</td>
<td>-ae</td>
<td>cost-ae</td>
</tr>
<tr>
<td>Gen. Plur.</td>
<td>-ārum</td>
<td>cost-ārum</td>
</tr>
</tbody>
</table>

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)
vena¹ palatina¹
Nom. Sing. – vena palatina
Gen Sing. – vena palatinae
Nom. Plur. – vena palatinæ
Gen. Plur. – venārum palatinārum

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; systōle, es f systole, rhythmical contraction of heart ventricles; raphe, es f suture, seam; diabētes, ae m diabetes; ascītes, ae m dropsy of abdominal cavity.
<table>
<thead>
<tr>
<th>Sing.</th>
<th>Plur.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nom.</td>
<td>systŏl-e</td>
</tr>
<tr>
<td>Gen.</td>
<td>systŏl-es</td>
</tr>
<tr>
<td></td>
<td>ascīt-es</td>
</tr>
<tr>
<td></td>
<td>ascīt-ae</td>
</tr>
</tbody>
</table>

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 - comissūra palpebrārum**

1) the term has preposition “of”, so

<table>
<thead>
<tr>
<th>joining of the eyelids</th>
<th>Nom. Sing.</th>
<th>Gen. Plur</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

joining is Nominative Singular and eyelids is Genitive Plural.

2) making the order:

1 – Nominative noun (joining);
2 – Genitive noun (eyelids).

3) write the lexical forms of each noun;

*comissūra* noun: declension;
Nominative or Genitive;
Singular or Plural.

*palpebrārum* noun: declension;
*eyelid*: Nominative or Genitive;
Singular or Plural.

**palatine folds – plicae palatīnae**

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

<table>
<thead>
<tr>
<th>palatine folds</th>
<th>Nom. Plur.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

2) make the order:

1 – Nominative noun (folds);
2 – adjective (palatine).
fold:
plica, ae f – noun; I; Nom. Plur.:  
plicae

palatine:
palatīnus, a, um – adj.; f; I; Nom. Plur.:  
palatinae

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) clavicūla, 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) fibūla, ae f  
splint-bone
11) lingua, ae f  
tongue
12) mandibūla, 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) palpēbra, 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) tunīca, 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, ēī f (externus, a, um); vertēbra, ae f (cervicālis, e); manus, us f (dexter, tra, trum); auris, is f (internus, a, um); tunīca, ae f (musculāris, e); articulatio, ōnis f (planus, a, um); arteria, ae f (inferior, ius); regio, ōnis f (zygōmaticus, 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:

vertēbra thoracīca; corpus vertebrae thoracīcae; incisūra scapūlae profunda; lineae transversae; linea costārum inferior; clavicula dextra; processus styloideus ulnae; apertūra thorācīs 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:

lamīna, ae f (cribrōsus, a, um); tunīca, 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 fibūlae; lamīna mucōsae; costae verae; comissūra palpebrārum; sulcus mediānus linguae; concha sphenoidālis; sinus venārum cavārum; lamīna cribrōsa dextra; bursa mucōsa ischiadīca; 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 thoracic 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:

<table>
<thead>
<tr>
<th>Lexical form</th>
<th>Nom. Sing.</th>
<th>Gen. Sing.</th>
<th>gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>nervus, i m (nerve)</td>
<td>-us</td>
<td>-i</td>
<td>m</td>
</tr>
<tr>
<td>collum, i n (neck)</td>
<td>-um</td>
<td>-on</td>
<td>n</td>
</tr>
<tr>
<td>ganglion, ii n (nerve node)</td>
<td>-on</td>
<td>-i</td>
<td>n</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>lexical form</th>
<th>Gender</th>
<th>Nom. Sing.</th>
</tr>
</thead>
<tbody>
<tr>
<td>longus, a, um</td>
<td>m</td>
<td>long-us</td>
</tr>
<tr>
<td>n</td>
<td>long-um</td>
<td></td>
</tr>
<tr>
<td>dexter, tra, trum</td>
<td>m</td>
<td>dext-er</td>
</tr>
<tr>
<td>n</td>
<td>dextr-um</td>
<td></td>
</tr>
</tbody>
</table>

Example:
processus, us m (mastoideus, a, um) – processus (IV) mastoideus (II);
pulmo, ōnis m (dexter, tra, trum) – pulmo (III) dexter (II);
cornu, us n (coccygeus, a, um) – cornu (IV) coccygeum (II).

Second declension nouns and adjective have the following case endings:

<table>
<thead>
<tr>
<th>Nom. Sing.</th>
<th>m</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gen. Sing.</td>
<td>-i</td>
<td>-i</td>
</tr>
<tr>
<td>Nom. Plur.</td>
<td>-i</td>
<td>-a</td>
</tr>
<tr>
<td>Gen. Plur.</td>
<td>-ōrum</td>
<td>-ōrum</td>
</tr>
</tbody>
</table>
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) **cerēbrum, i n** brain
6) **digitus, i m** finger
7) **encephālon, i n** large brain
8) **humērus, 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 II**<sup>nd</sup> **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 ophthālmīc(-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 tubercūli; ligamenta digitōrum; angūlus sterni; sulcus nervī; angūlus scapūlae laterālis; lobus dexter et sinister; septum atrīōrum; 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; muscūli dorsi rectī; ligamenta cranii; ventricūlus dexter; muscūli thorācis; ligamentum sternoclaviculāre posterius; muscūli colli; ligamentum capītis fibūlae posterius; muscūlus longus capītis; rami zygomatīci; 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:

<table>
<thead>
<tr>
<th>Lexical form</th>
<th>-a, ae f</th>
<th>-us, i m</th>
<th>-um /-on, i n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declension</td>
<td>I° decl.</td>
<td>II° decl.</td>
<td>II° decl.</td>
</tr>
<tr>
<td>Nom. Sing.</td>
<td>-a</td>
<td>-us</td>
<td>-um/-on</td>
</tr>
<tr>
<td>Gen. Sing.</td>
<td>-ae</td>
<td>-i</td>
<td>-i</td>
</tr>
<tr>
<td>Nom. Plur.</td>
<td>-ae</td>
<td>-i</td>
<td>-a</td>
</tr>
<tr>
<td>Gen. Plur.</td>
<td>-ārum</td>
<td>-ōrum</td>
<td>-ōrum</td>
</tr>
</tbody>
</table>

Adjectives:

<table>
<thead>
<tr>
<th>Lexical form</th>
<th>m</th>
<th>-us /-er</th>
<th>f</th>
<th>-a /-tra</th>
<th>n</th>
<th>-um /-trum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nom. Sing.</td>
<td>-us /-er</td>
<td>-a /-tra</td>
<td>-um/-trum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Declension</td>
<td>II° decl.</td>
<td>I° decl.</td>
<td>II° decl.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nom. Plur.</td>
<td>-i /-tri</td>
<td>-ae /-trae</td>
<td>-i /-tri</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gen. Plur.</td>
<td>-ōrum /-trōrum</td>
<td>-ārum /-trārum</td>
<td>-ōrum /-trōrum</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Lexical minimum №7

1) acetábulum, i n
cotyloid cavity, acetabulum

2) antebračium, i n
forearm

3) bronchus, i m
bronchus

4) bulbus, i m
bulb

5) bulbus očuľi, bulbi očuľi
eyeball (bulb of the eye)

6) carpus, i m
wrist

7) coronary, 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) oesophagus, i m
gullet, esophagus

15) opthalmicus, a, um
ophthalmic, related to the eye

16) opticus,a,um
optic, visual

17) palatum, i n
palate

18) radius, i m
forearm bone, radius

19) radiialis, e
radial, related to the forearm bone

20) uterus, 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)

<table>
<thead>
<tr>
<th>Case</th>
<th>Nominative</th>
<th>Nominative Singular (squamōsus)</th>
<th>Genitive</th>
<th>Genitive Singular (squamōsa)</th>
<th>Accusative</th>
<th>Accusative Singular (squamōsa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.S.</td>
<td>pars</td>
<td>squamōsa</td>
<td>G.S.</td>
<td>partis squamōsa</td>
<td>N.P.</td>
<td>squamōsa</td>
</tr>
<tr>
<td>G.P.</td>
<td>???</td>
<td>squamosārum</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) membrum, i n (inferior, ius); 2) facies, ē i 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 (opticus, a, um).

Ex. 2. Translate into English:

1) musculi bulbi oculi;
2) septum ventriculorum;
3) tuberculum humeri minus;
4) ligamenta pterygoidea;
5) facies articularis tuberculi costae;
6) sulcus nervi petrōsi;
7) angulus scapulae 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; 6) inferior muscle of the tongue;
2) wide ligaments; 7) straight muscles of the back;
3) bags of the muscles; 8) nerves of the eyes and the nose;
4) deep veins of the shoulder; 9) palatine process of the upper jaw;
5) lobes of the large brain; 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 (ossēus, a, um); nervus, i m (opticus, 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 ophthalmicus profundus; septum nasi; musculi dorsi recti; nervi
optici; musculi membri; septum nasale; membrum superius; musculi thoracis;
ramus nervi externus; musculi labiorum; caput longum musculi brachii; tunica
oesophagi; crista nasalis anterior; musculus 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 declin-
ing:
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, inis m (border); pars, partis f (part); tuber, ebris n (tuber).

<table>
<thead>
<tr>
<th>Gender</th>
<th>Nominative Singular</th>
<th>Genitive Singular</th>
</tr>
</thead>
<tbody>
<tr>
<td>m, f, n</td>
<td>various endings</td>
<td>-is</td>
</tr>
</tbody>
</table>

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 Geni-
tive 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*, *Īnis* n (*fo-rā-men – fo-ra-mī-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):

<table>
<thead>
<tr>
<th>Nom. Sing.</th>
<th>Pulmo, Ōnis m</th>
<th>Radix, Īcis f</th>
<th>Forāmen, Īnis n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gen. Sing.</td>
<td>Pulmōn-is</td>
<td>Radōc-is</td>
<td>Foramīn-is</td>
</tr>
<tr>
<td>Nom. Plur.</td>
<td>Pulmōn-es</td>
<td>Radīc-es</td>
<td>Foramīn-a</td>
</tr>
<tr>
<td>Gen. Plur.</td>
<td>Pulmōn-um</td>
<td>Radīc-um</td>
<td>Foramīn-um</td>
</tr>
</tbody>
</table>

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*, *corpōr-is* n *body*; *forāmen*, *foramīn-is* n *opening*; *crus*, *crūr-is* n *leg*; *homo*, *homīn-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*; *animal*, 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 (*rete*, 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 (*cutis*, is f).
<table>
<thead>
<tr>
<th>consonant type</th>
<th>vowel type</th>
<th>mixed type</th>
</tr>
</thead>
<tbody>
<tr>
<td>gender</td>
<td>m, f, n</td>
<td>m, f, n</td>
</tr>
<tr>
<td>ending of Nom. Sing.</td>
<td>-e, -al, -ar</td>
<td>-es, -is (for nouns with equal number of syllables in Nom. Sing. and Gen. Sing.)</td>
</tr>
</tbody>
</table>

**examples**
- rete, is n
- calc<em>ar</em>, is n
- animal, is n
- canál<em>is</em>, canál<em>ılis</em> m
- compág<em>es</em>, 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 (corpē<em>us</em> - corpū<em>rıs</em> n);
- If the stem ends in two consonants, the noun is of the mixed type (os, ossīs n).

<table>
<thead>
<tr>
<th>stem of Gen. Sing.</th>
<th>consonant type</th>
<th>vowel type</th>
<th>mixed type</th>
</tr>
</thead>
<tbody>
<tr>
<td>ends in one consonant</td>
<td>m, f, n</td>
<td>n</td>
<td>m, f, n</td>
</tr>
<tr>
<td>ends in two consonants</td>
<td>pulmo, pulmō&lt;em&gt;n&lt;/em&gt;-is m</td>
<td>dens, dent-&lt;em&gt;ı&lt;/em&gt;s m</td>
<td></td>
</tr>
<tr>
<td>radix, radīc-&lt;em&gt;ı&lt;/em&gt;s f</td>
<td>os, oss-&lt;em&gt;ı&lt;/em&gt;s n</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pectus, pectōr-&lt;em&gt;ı&lt;/em&gt;s n</td>
<td>pars, part-&lt;em&gt;ı&lt;/em&gt;s f</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**Consonant type**

<table>
<thead>
<tr>
<th>Nom. Sing.</th>
<th>different</th>
<th>regio, ōnis f</th>
<th>forāmen, īnis n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gen. Sing.</td>
<td>-is</td>
<td>regiōn-is</td>
<td>foramin-is</td>
</tr>
<tr>
<td>Nom. Plur.</td>
<td>-es&lt;sub&gt;m&lt;/sub&gt;&lt;sup&gt;n&lt;/sup&gt; -&lt;em&gt;a&lt;/em&gt; n</td>
<td>regiōn-es</td>
<td>foramin-a</td>
</tr>
<tr>
<td>Gen. Plur.</td>
<td>-um</td>
<td>regiōn-um</td>
<td>foramin-&lt;em&gt;ı&lt;/em&gt;um</td>
</tr>
</tbody>
</table>

**Vowel Type**

<table>
<thead>
<tr>
<th>Nom. Sing.</th>
<th>-e; -al; -&lt;em&gt;ar&lt;/em&gt;</th>
<th>rete, is n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gen. Sing.</td>
<td>-is</td>
<td>ret-&lt;em&gt;ı&lt;/em&gt;s</td>
</tr>
<tr>
<td>Nom. Plur.</td>
<td>-ia</td>
<td>ret-&lt;em&gt;ı&lt;/em&gt;a</td>
</tr>
<tr>
<td>Gen. Plur.</td>
<td>-ium</td>
<td>ret-&lt;em&gt;ı&lt;/em&gt;um</td>
</tr>
</tbody>
</table>

**Mixed Type**

<table>
<thead>
<tr>
<th>Nom. Sing.</th>
<th>different</th>
<th>pars, partis f</th>
<th>os, ossīs n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gen. Sing.</td>
<td>-is</td>
<td>pars</td>
<td>oss-&lt;em&gt;ı&lt;/em&gt;s</td>
</tr>
<tr>
<td>Nom. Plur.</td>
<td>-es&lt;sub&gt;m&lt;/sub&gt;&lt;sup&gt;n&lt;/sup&gt; -&lt;em&gt;a&lt;/em&gt; n</td>
<td>part-&lt;em&gt;ı&lt;/em&gt;s</td>
<td>oss-&lt;em&gt;a&lt;/em&gt;</td>
</tr>
<tr>
<td>Gen. Plur.</td>
<td>-ium</td>
<td>part-&lt;em&gt;ı&lt;/em&gt;um</td>
<td>oss-&lt;em&gt;ı&lt;/em&gt;um</td>
</tr>
</tbody>
</table>
Nota Bene! In the plural the noun *vas, vasis n* (vessel) is declined according to the second declension:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>vas</em></td>
<td><em>vas-is</em></td>
<td><em>vas-a</em></td>
<td><em>vas-ōrum</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lexical form</th>
<th>Nom.sing.</th>
<th>Gen.sing.</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) <em>abdōmen</em>, īnis n</td>
<td><em>abdōmen</em></td>
<td><em>abdomīnis</em></td>
<td>abdomen</td>
</tr>
<tr>
<td>2) <em>accessorius</em>, a, um</td>
<td><em>accessorius</em></td>
<td><em>articulatio</em></td>
<td>accessory</td>
</tr>
<tr>
<td>3) <em>articulatio</em>, ķinis f</td>
<td><em>articulatio</em></td>
<td><em>articulatioānis</em></td>
<td>joint</td>
</tr>
<tr>
<td>4) <em>auris</em>, is f</td>
<td><em>auris</em></td>
<td><em>aurīs</em></td>
<td>ear</td>
</tr>
<tr>
<td>5) <em>coccyx</em>, ķīgis m</td>
<td><em>coccyx</em></td>
<td><em>coccyγis</em></td>
<td>coccygeal bone</td>
</tr>
<tr>
<td>6) <em>dens</em>, dentis m</td>
<td><em>dens</em></td>
<td><em>dentīs</em></td>
<td>tooth</td>
</tr>
<tr>
<td>7) <em>fibrosus</em>, a, um</td>
<td><em>fibrosus</em></td>
<td><em>fibrosum</em></td>
<td>fibrous</td>
</tr>
<tr>
<td>8) <em>hallux</em>, īcis m</td>
<td><em>hallux</em></td>
<td><em>hallūcis</em></td>
<td>great toe</td>
</tr>
<tr>
<td>9) <em>index</em>, īcis m</td>
<td><em>index</em></td>
<td><em>indīcis</em></td>
<td>forefinger, index</td>
</tr>
<tr>
<td>10) <em>lymphaticus</em>, a, um</td>
<td><em>lymphaticus</em></td>
<td><em>lymphaticōnis</em></td>
<td>lymphatic</td>
</tr>
<tr>
<td>11) <em>margo</em>, īnis m</td>
<td><em>margo</em></td>
<td><em>margīnis</em></td>
<td>border</td>
</tr>
<tr>
<td>12) <em>nutricius</em>, a, um</td>
<td><em>nutricius</em></td>
<td><em>nutricīs</em></td>
<td>nutritious</td>
</tr>
<tr>
<td>13) <em>os</em>, oris n</td>
<td><em>os</em></td>
<td><em>oris</em></td>
<td>mouth</td>
</tr>
<tr>
<td>14) <em>pars</em>, partis f</td>
<td><em>pars</em></td>
<td><em>partīs</em></td>
<td>part</td>
</tr>
<tr>
<td>15) <em>pes</em>, pedis m</td>
<td><em>pes</em></td>
<td><em>pedīs</em></td>
<td>foot</td>
</tr>
<tr>
<td>16) <em>phalanx</em>, ngis f</td>
<td><em>phalanx</em></td>
<td><em>phalangīs</em></td>
<td>phalanx</td>
</tr>
<tr>
<td>17) <em>planus</em>, a, um</td>
<td><em>planus</em></td>
<td><em>planīs</em></td>
<td>flat</td>
</tr>
<tr>
<td>18) <em>pollex</em>, īcis m</td>
<td><em>pollex</em></td>
<td><em>pollicīs</em></td>
<td>thumb</td>
</tr>
<tr>
<td>19) <em>pulmo</em>, ēnis m</td>
<td><em>pulmo</em></td>
<td><em>pulmōnis</em></td>
<td>lung</td>
</tr>
<tr>
<td>20) <em>pyrāmis</em>, īdis f</td>
<td><em>pyrāmis</em></td>
<td><em>pyrāmidīs</em></td>
<td>pyramid</td>
</tr>
<tr>
<td>21) <em>reīgio</em>, īnis f</td>
<td><em>reīgio</em></td>
<td><em>reīgiōnis</em></td>
<td>region</td>
</tr>
<tr>
<td>22) <em>tendo</em>, īnis m</td>
<td><em>tendo</em></td>
<td><em>tendīnis</em></td>
<td>tendon</td>
</tr>
<tr>
<td>23) <em>tuber</em>, ēris n</td>
<td><em>tuber</em></td>
<td><em>tuberōris</em></td>
<td>tuber</td>
</tr>
<tr>
<td>24) <em>tuberosīta</em>, ēpis f</td>
<td><em>tuberosīta</em></td>
<td><em>tuberosītātis</em></td>
<td>tuberosity</td>
</tr>
<tr>
<td>25) <em>vas</em>, vasis n</td>
<td><em>vas</em></td>
<td><em>vasīs</em></td>
<td>vessel</td>
</tr>
</tbody>
</table>

**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*, īnis n; *atlas*, nīsis m; *aurīs*, is f; *caput*, ītis n; *cervix*, īcis f; *rete*, is n; *cartilāgo*, īnis f; *dens*, dentis m; *crūris*, crūris n; *canālis*, is m; *extremītās*, ātis f; *gaster*, tris f; *hallux*, ēcis m; *iris*, irīdis 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 (nutricia, a, um); regio, ōnis f (zygomaticus, 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 petrōsa; articulatioes cranii; caput phalangis; foramina nutricia; ligamentum transversum atlantis; nervi vasorum; os coccýgis; vasa lymphatica; vasa nervorum; tuber ischiadicum; phalanges digitorum.

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

Ex. 7. Decline the following nouns:
articulatio, ōnis f; pars, partis f; tuber, ēris 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 (optīcus, a, um); vas, vasis n (lymphaticus, a, um); pars, partis f (petrōsus, a, um); dens, dentis m (incisīvus, a, um); os, ossis n (zygomaticus, a, um).

Ex. 9. Translate the following terms into English:
regiōnes et partes corpōris; vasa vasorum; phalanx distālis (proximālis) indicis; processus styloideus ulnae; corpus phalangis; caput phalangis; basis cranii externa; os zygomaticum; angūlus oris; apex pulmōnis; articulatio capītis costae; muscŭlus longus capītis.
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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>-os</td>
<td>-ōris</td>
<td>flos, flōris m flower</td>
<td>os, ossis n bone; os, oris n mouth</td>
</tr>
<tr>
<td>-or</td>
<td>-ōris</td>
<td>tumor, tumōris m tumor</td>
<td>cor, cordis n heart; arbor, ōris f tree</td>
</tr>
<tr>
<td>-ōn or -ōnis</td>
<td>pulmo, ōnis m lung</td>
<td>nouns ending in -go, -do, -io are of the feminine gender</td>
<td></td>
</tr>
<tr>
<td>-ēnis</td>
<td>homo, īnis m man</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-ēris</td>
<td>urēter, ēris m ureter</td>
<td>gaster, tris f stomach; mater, tris f membrane of the brain or spinal cord; tuber, ēris n tuber</td>
<td></td>
</tr>
<tr>
<td>-ēris</td>
<td>venter, ventris m belly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-ex or -ēcis</td>
<td>apex, apīcis m apex, top</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>-es or -ēdis</td>
<td>pes, pedis m foot</td>
<td>equal nouns ending in -es are of the feminine gender</td>
<td></td>
</tr>
<tr>
<td>-ētis</td>
<td>paries, ētis m wall</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following nouns are also of the masculine gender: canālis, is m canal; dens, dentis m tooth; fornic, īcis m vault; hallux, ūcis m great toe; larynx, ngis m larynx; margo, īnis m border; tendo, īnis m tendon; pharynx, ngis m pharynx; unguis, is m nail.
### Third declension nouns of the feminine gender

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>-as</td>
<td>-ātis</td>
<td>cavītās, ātis f <em>cavity</em></td>
<td>vas, vasis n <em>vessel</em>; pancreas, ātis n <em>pancreas</em></td>
</tr>
<tr>
<td>-us</td>
<td>-ūtis</td>
<td>salus, ūtis f <em>health</em></td>
<td></td>
</tr>
<tr>
<td>-ūdis</td>
<td>-ūdis</td>
<td>incus, ūdis f <em>incus, anvil</em></td>
<td></td>
</tr>
<tr>
<td>-es (equal)</td>
<td>-is</td>
<td>tabes, is f <em>tabes (tuberculosis)</em></td>
<td></td>
</tr>
<tr>
<td>-is (equal)</td>
<td>-is</td>
<td>auris, is f <em>ear</em></td>
<td>axis, is m <em>axis, 2nd cervical vertebra</em>; canālis, is m <em>canal</em>; unguis, is m <em>nail</em></td>
</tr>
<tr>
<td>-is (unequal)</td>
<td>-īdis</td>
<td>iris, īdis f <em>iris of the eye</em></td>
<td></td>
</tr>
<tr>
<td>-ns</td>
<td>-nitis</td>
<td>lens, lentis f <em>crystalline lens</em></td>
<td>dens, dentis m <em>tooth</em></td>
</tr>
<tr>
<td>-rs</td>
<td>-ritis</td>
<td>pars, partis f <em>part</em></td>
<td></td>
</tr>
<tr>
<td>-ax</td>
<td>-ācis</td>
<td>pax, pacis f <em>peace</em></td>
<td>thorax, ācis m <em>chest</em></td>
</tr>
<tr>
<td>-ux</td>
<td>-ūcis</td>
<td>nux, nucis f <em>nut</em></td>
<td>hallux, ūcis m <em>great toe</em></td>
</tr>
<tr>
<td>-ix</td>
<td>-īcis</td>
<td>radix, īcis f <em>root</em></td>
<td>fornīx, īcis m <em>vault, fornix</em></td>
</tr>
<tr>
<td>-nx</td>
<td>-ngis</td>
<td>phalanx, ngis f <em>phalanx</em></td>
<td>larynx, ngis m <em>larynx</em>; pharynx, ngis m <em>pharynx</em></td>
</tr>
<tr>
<td>-lx</td>
<td>-lecis</td>
<td>calx, calcis f <em>heel</em></td>
<td></td>
</tr>
<tr>
<td>-do</td>
<td>-dīnis</td>
<td>hīrūdo, īnis f <em>leech</em></td>
<td>tendo, īnis m <em>tendon</em></td>
</tr>
<tr>
<td>-go</td>
<td>-ginis</td>
<td>cartilāgo, īnis f <em>cartilage</em></td>
<td>margo, īnis m <em>border</em></td>
</tr>
<tr>
<td>-io</td>
<td>-iōnis</td>
<td>articulatio, ōnis f <em>joint</em></td>
<td></td>
</tr>
</tbody>
</table>

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

### Third declension nouns of the neuter gender

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>-en</td>
<td>-īnis</td>
<td>tegmen, īnis n <em>roof</em></td>
<td>ren, renis m <em>kidney</em>; lien, īnis m (or Greek splen, splēnis m) <em>spleen</em>; lichen, īnis m <em>lichen, herpes</em></td>
</tr>
<tr>
<td>-us</td>
<td>-ōris</td>
<td>corpus, ōris n <em>body</em></td>
<td></td>
</tr>
<tr>
<td>-ēris</td>
<td>-ēris</td>
<td>glomus, ēris n <em>glome</em></td>
<td>-</td>
</tr>
<tr>
<td>-ūris</td>
<td>-ūris</td>
<td>crus, cruris n <em>leg</em></td>
<td></td>
</tr>
<tr>
<td>-ur</td>
<td>-ōris</td>
<td>femur, ōris n <em>femur, thigh bone</em></td>
<td>-</td>
</tr>
<tr>
<td>-ūris</td>
<td>-ūris</td>
<td>guttur, ūris n <em>throat</em></td>
<td>-</td>
</tr>
<tr>
<td>-ut</td>
<td>-ītis</td>
<td>caput, ītis n <em>head</em></td>
<td>-</td>
</tr>
<tr>
<td>-ma</td>
<td>-ātis</td>
<td>chiasma, ātis n <em>chiasm</em></td>
<td>-</td>
</tr>
<tr>
<td>-e</td>
<td>-is</td>
<td>rete, is n <em>net, network</em></td>
<td>-</td>
</tr>
<tr>
<td>-ar</td>
<td>-āris</td>
<td>calcar, āris n <em>calcar, spur</em></td>
<td>hepar, ātis n <em>liver (r→t)</em></td>
</tr>
<tr>
<td>-(a)l</td>
<td>-(a)lis</td>
<td>animal, alis n <em>animal</em></td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>fel, felis n <em>bile</em></td>
<td>-</td>
</tr>
</tbody>
</table>
The following nouns are also of the neuter gender: cor, cordis n heart; os, oris n mouth; os, ossis n bone; pancreas, ātis n pancreas; tuber, ěris n tuber; vas, vasis n vessel.

**Lexical minimum №9**

<table>
<thead>
<tr>
<th>Lexical form</th>
<th>Nom.sing.</th>
<th>Gen.sing.</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) cartilāgo, įnis f</td>
<td>cartilāgo</td>
<td>cartilāgĭnis</td>
<td>cartilage</td>
</tr>
<tr>
<td>2) cervix, ĭcis f</td>
<td>cervix</td>
<td>cervĭcis</td>
<td>neck</td>
</tr>
<tr>
<td>3) cor, cordis n</td>
<td>cor</td>
<td>cordis</td>
<td>heart</td>
</tr>
<tr>
<td>4) crus, cruris n</td>
<td>crus</td>
<td>cruris</td>
<td>leg, shin</td>
</tr>
<tr>
<td>5) cutis, is f</td>
<td>cutis</td>
<td>cutis</td>
<td>skin</td>
</tr>
<tr>
<td>6) femur, ōris n</td>
<td>femur</td>
<td>femŏris</td>
<td>thigh bone</td>
</tr>
<tr>
<td>7) frons, frontis f</td>
<td>frons</td>
<td>frontis</td>
<td>forehead</td>
</tr>
<tr>
<td>8) gaster, tris f</td>
<td>gaster</td>
<td>gastris</td>
<td>stomach</td>
</tr>
<tr>
<td>9) gastrīcus, a, um</td>
<td>hepar</td>
<td>hepātis</td>
<td>gastric, related to the stomach</td>
</tr>
<tr>
<td>10) hepár, ātis n</td>
<td>hepar</td>
<td></td>
<td>liver</td>
</tr>
<tr>
<td>11) hepaticús, a, um</td>
<td></td>
<td></td>
<td>hepatic, related to the liver</td>
</tr>
<tr>
<td>12) impressio, ōnís f</td>
<td>impressio</td>
<td>impressiōnis</td>
<td>impression</td>
</tr>
<tr>
<td>13) larynx, ngis m</td>
<td>larynx</td>
<td>laryngis</td>
<td>larynx</td>
</tr>
<tr>
<td>14) laryngēus, a, um</td>
<td>lién</td>
<td>liēnis</td>
<td>laryngeal, related to the larynx</td>
</tr>
<tr>
<td>15) lien, liēnis m</td>
<td>lien</td>
<td>liēnis</td>
<td>spleen</td>
</tr>
<tr>
<td>16) occīput, ītis n</td>
<td>occīput</td>
<td>occipĭtis</td>
<td>occiput, back of the head</td>
</tr>
<tr>
<td>17) pancreas, ātis n</td>
<td>pancreas</td>
<td>pancreătis</td>
<td>pancreas</td>
</tr>
<tr>
<td>18) paries, ėtis m</td>
<td>paries</td>
<td>pariētis</td>
<td>wall</td>
</tr>
<tr>
<td>19) pharynx, ngis m</td>
<td>pharynx</td>
<td>pharyngis</td>
<td>pharynx</td>
</tr>
<tr>
<td>20) pharyngēus, a, um</td>
<td></td>
<td></td>
<td>pharyngeal, related to the pharynx</td>
</tr>
<tr>
<td>21) ren, renis m</td>
<td>ren</td>
<td>renis</td>
<td>kidney</td>
</tr>
<tr>
<td>22) renālis, ē</td>
<td></td>
<td></td>
<td>renal, related to the kidney</td>
</tr>
<tr>
<td>23) rete, is n</td>
<td>retę</td>
<td>retis</td>
<td>network</td>
</tr>
<tr>
<td>24) sanguis, ĭnis m</td>
<td>sanguis</td>
<td>sanguĭnis</td>
<td>blood</td>
</tr>
<tr>
<td>25) sanguineus, a, um</td>
<td></td>
<td></td>
<td>bloody, sanguineous</td>
</tr>
<tr>
<td>26) splen, splenis m</td>
<td>splen</td>
<td>splenis</td>
<td>spleen (Greek)</td>
</tr>
<tr>
<td>27) vomer, ėris m</td>
<td>vomer</td>
<td>vomēris</td>
<td>vomer</td>
</tr>
</tbody>
</table>

**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 (hepaticús, 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; tuberositas pterygoidea; impressio hepatica pulmonis; collum ossis femoris; canalis cervicis uteri; arteria femoris profunda; cervix dentis; incisura apicis cordis; crura ossis; margo linguae; pars laryngis 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:

Home training
vas (sanguineus, a, um); impressio (hepaticus, a, um); ren (dexter, tra, trum); regio (zygomaticus, a, um); crus (ossus, 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:
cartilago septi nasi; margines interni; ligamenta hepatis; paries gastris posterior; lobi pulmonum; cartilagines accessoriae; musculus rectus femoris; venae cordis; nervi vasorum lymphaticorum; tuberositas ulnae; impressio gastrica; ligamentum hepatogastricum; lobus hepatis dexter; margo uteri dexter; musculi laryngis; nervus canalis pterygoidei.

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  (*celer, èris, ère 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  (*frontālis, 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, ētis: teres* (*Nom. Sing. m; f; n*) – *terētis* (*Gen. Sing.*)

<table>
<thead>
<tr>
<th>Adjectives of two endings</th>
<th>m</th>
<th>f</th>
<th>n</th>
<th>lexical form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjectives of one ending</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nom. Sing.</td>
<td>-is</td>
<td>-e</td>
<td></td>
<td>brevis, e short</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>costālis, e costal</td>
</tr>
<tr>
<td>Gen. Sing.</td>
<td>-is</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Third declension adjectives of two endings**

<table>
<thead>
<tr>
<th>Nom. Sing.</th>
<th>m</th>
<th>f</th>
<th>n</th>
<th>Gen. Sing.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-is</td>
<td>-e</td>
<td></td>
<td>costāl-is</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>costāl-e</td>
</tr>
<tr>
<td>Nom. Plur.</td>
<td>-es</td>
<td>-ia</td>
<td></td>
<td>costāl-es</td>
</tr>
<tr>
<td>Gen. Plur.</td>
<td>-ium</td>
<td></td>
<td></td>
<td>costāl-ium</td>
</tr>
</tbody>
</table>

**Third-declension adjectives of one ending**

<table>
<thead>
<tr>
<th>Nom. Sing.</th>
<th>m</th>
<th>n</th>
<th>Gen. Sing.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-s; -x, -r</td>
<td></td>
<td>teres, ētis</td>
</tr>
<tr>
<td></td>
<td>-is</td>
<td></td>
<td>terēt-is</td>
</tr>
<tr>
<td>Nom. Plur.</td>
<td>-es</td>
<td>-ia</td>
<td>terēt-es</td>
</tr>
<tr>
<td>Gen. Plur.</td>
<td>-ium</td>
<td></td>
<td>terēt-ium</td>
</tr>
</tbody>
</table>
Lexical minimum №10

1) abdomīnālis, e  
abdominal

2) ascendēns, ntis  
ascending, going upward

3) auriculāris, e  
auricular, related to the ear

4) biceps, cipītis  
two-headed

5) brevis, e  
short

6) cardīcācus, a, um  
hearty, cardiac

7) cerebrālis, e  
cerebral, related to the brain

8) cervicālis, e  
cervical, related to the neck

9) communicāns, ntis  
communicative

10) commūnis, e  
common

11) craniālis, e  
cranial, related to the skull

12) descendēns, 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) quadrīcēps, cipītis  
four-headed

21) radiālis, e  
radial, related to the forearm bone

22) simplex, ićis  
simple

23) superficiālis, e  
superficial

24) teres, ētis  
round

25) triceps, cipītis  
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, ēris n (side); dorsum, i n (back); muscūlus, i m (muscle), orbīta, ae f (eyeocket); clavicūla, ae f (clavicle); costa, ae f (rib); vertēbra, ae f (vertebra); fibūla, ae f (splint-bone); facies, ēi f (face); occīput, ētis n (occiput, back of the head); ulnā, ae f (elbow bone); mandibūla, ae f (lower jaw); maxilla, ae f (upper jaw); cranium, i n (skull).

Ex. 2. Decline the following word combinations:
forāmen teres; muscūlus biceps; vertēbra cervicālis; vas capillāre.

Ex. 3. Translate the terms into English:
incisūra claviculāris sterni; ossa cranii cerebrālis; tuber frontāle; os pari-etāle; bursa muscūli terētis; ligamentum teres acetabūli; articulatio simplex;
muscŭlus biceps femŏris; nervi cardiăci thoracici; caput laterăle 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 (communi-
cans, ntis); tubercŭlum, i n (mediālis, e); forāmen, īnis n (ethmoidālis, e); articu-
latio, ŏnis f (simplex, ĕcis).

**Ex. 6. Agree the adjectives with the nouns and decline the word combinations:**
margo, ĭnis m (frontālis, e); os, ossis n (temporālis, e); nervus, i m (faciālis,
e); incisūra, ae f (radiālis, e); caput, ĕitis n (laterālis, e); ligamentum, i n (teres,
ētis); 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 (mus-
cle; tuber); lumbar (fascia; region; vertebra); occipital (opening; artery; nerve).

**Ex. 8. Translate the terms into English**
muscŭlus semispinālis thorācis; sutūra intermaxillāris; crista infratem-
porālis; 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
muscŭlōrum commūnis; ateriae communicantes; nervi faciales; tunica mus-
culāris 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 ves-
sels; clavicular notch; openings of the pulmonary veins; lateral parts of the oc-
cipital 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.

<table>
<thead>
<tr>
<th>gender</th>
<th>Nominative Singular</th>
<th>Genitive Singular</th>
<th>example</th>
</tr>
</thead>
<tbody>
<tr>
<td>m</td>
<td>- us</td>
<td>- us</td>
<td>sinus, us m (sinus)</td>
</tr>
<tr>
<td>f</td>
<td>- u</td>
<td>- us</td>
<td>manus, us f (hand)</td>
</tr>
<tr>
<td>n</td>
<td>- u</td>
<td>- u</td>
<td>cornu, us n (horn)</td>
</tr>
</tbody>
</table>

Nouns of the fourth declension are declined as follows:

<table>
<thead>
<tr>
<th></th>
<th>m</th>
<th>f</th>
<th>n</th>
<th>m</th>
<th>f</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nom. Sing.</td>
<td>- us</td>
<td>- u</td>
<td>sin-us</td>
<td>man-us</td>
<td>corn-us</td>
<td></td>
</tr>
<tr>
<td>Gen. Sing.</td>
<td>- us</td>
<td>- us</td>
<td>sin-us</td>
<td>man-us</td>
<td>corn-us</td>
<td></td>
</tr>
<tr>
<td>Nom. Plur.</td>
<td>- us</td>
<td>- ua</td>
<td>sin-us</td>
<td>man-us</td>
<td>corn-ua</td>
<td></td>
</tr>
<tr>
<td>Gen. Plur.</td>
<td>- uum</td>
<td>- uum</td>
<td>sin-uum</td>
<td>man-uum</td>
<td>corn-uum</td>
<td></td>
</tr>
</tbody>
</table>
§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).

<table>
<thead>
<tr>
<th>gender</th>
<th>Nominative Singular</th>
<th>Genitive Singular</th>
<th>example</th>
</tr>
</thead>
<tbody>
<tr>
<td>f</td>
<td>-es</td>
<td>-ēi</td>
<td>facies, ēi f (face)</td>
</tr>
</tbody>
</table>

Nouns of the fifth declension are declined as follows:

<table>
<thead>
<tr>
<th>Noun</th>
<th>Case</th>
<th>Form 1</th>
<th>Form 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>facies</td>
<td>Nom. Sing.</td>
<td>-es</td>
<td>faci-es</td>
</tr>
<tr>
<td>facies</td>
<td>Gen. Sing.</td>
<td>-ēi</td>
<td>faci-ēi</td>
</tr>
<tr>
<td>facies</td>
<td>Nom. Plur.</td>
<td>-es</td>
<td>faci-es</td>
</tr>
<tr>
<td>facies</td>
<td>Gen. Plur.</td>
<td>-ērum</td>
<td>faci-ērum</td>
</tr>
</tbody>
</table>

§24. Anatomical abbreviations

<table>
<thead>
<tr>
<th>Sing.</th>
<th>Plur.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. – arteria</td>
<td>aa. – arteriae</td>
</tr>
<tr>
<td>b. – bursa</td>
<td>bb. – bursae</td>
</tr>
<tr>
<td>gl. – glandŭla</td>
<td>gll. – glandŭlae</td>
</tr>
<tr>
<td>for. – forāmen</td>
<td>forr. – foramĭna</td>
</tr>
<tr>
<td>lig. – ligamentum</td>
<td>ligg. – ligamenta</td>
</tr>
<tr>
<td>m. – muscŭlus</td>
<td>mm. – muscŭli</td>
</tr>
<tr>
<td>n. – nervus</td>
<td>nn. – nervi</td>
</tr>
<tr>
<td>r. – ramus</td>
<td>rr. – rami</td>
</tr>
<tr>
<td>sul. – sulcus</td>
<td>sull. – sulci</td>
</tr>
<tr>
<td>v. – vena</td>
<td>vv. – venae</td>
</tr>
<tr>
<td>vag. – vagīna</td>
<td>vagg. – vagīnae</td>
</tr>
</tbody>
</table>

Lexical minimum №11

1) bilis, is f
2) bilifer, era, erum
3) cornu, us n
4) ductus, us m
5) ductus biliferi, ductuum biliferŏrum
6) dura mater, durae matris (G.S.)
7) flavus, a, um
8) genu, us n
9) hiatus, us m
10) intercostālis, e
11) manus, us f
12) mater, tris f
13) meātus, us m
14) medulla, ae f
15) medulla ossium, medullae ossium (G.S.)
16) medulla spinālis, medullae spinālis (G.S.)
17) obliquis, a, um
18) pia mater, piae matris (G.S.)
19) plexus, us m
20) recessus, us m
21) sinus, us m
22) sublinguālis, e
23) tractus, us m

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; nasolacrīmālis; posterior); processus, us m (palatīnus; maxillāris; posterior); faciēs, 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; muscūli faciāles; plexus faciālis; plexus cardīāci; arcus ductus thoracīci; 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 renalis; apertūra sinus sphenoidālis; ossa digitorum manus; ligamenta flava; regiōnes faciēi; ductus hepātīcus commūnis; processus styloideus ulnae; arteria mediālis genus; sinus maxillāris; tractus optīci; rami tractus optīci; 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 capītis; rr. cardīaci inferiōres; rr. musculāres n. ischiadīci; a. et v. thoracīca 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:

<table>
<thead>
<tr>
<th>Term</th>
<th>Latin Equivalent</th>
<th>Term</th>
<th>Latin Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>anterior, ius</td>
<td>front, anterior;</td>
<td>inferior, ius</td>
<td>lower, inferior;</td>
</tr>
<tr>
<td>superior, ius</td>
<td>upper; superior</td>
<td>major, ius</td>
<td>large;</td>
</tr>
<tr>
<td>inferior, ius</td>
<td>lower; inferior</td>
<td>minor, us</td>
<td>small</td>
</tr>
<tr>
<td>posterior, ius</td>
<td>back, posterior;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Term</th>
<th>Latin Equivalent</th>
<th>Term</th>
<th>Latin Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>inferior, ius</td>
<td>lower; inferior</td>
<td>major, ius</td>
<td>large;</td>
</tr>
<tr>
<td>posterior, ius</td>
<td>back, posterior;</td>
<td>minor, us</td>
<td>small</td>
</tr>
</tbody>
</table>

57
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:

<table>
<thead>
<tr>
<th>Lexical form</th>
<th>m: f</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>anterior, ius (front)</td>
<td>anter-ior</td>
<td>anter-ius</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th>m</th>
<th>f</th>
<th>n</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Nom. Sing.</td>
<td>-ior</td>
<td>-ius</td>
<td>anter-ior</td>
<td>anter-ius</td>
<td></td>
</tr>
<tr>
<td>Gen. Sing.</td>
<td>-iōris</td>
<td></td>
<td>anter-iōris</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nom. Plur.</td>
<td>-iōres</td>
<td>-iōra</td>
<td>anter-iōres</td>
<td>anter-iōra</td>
<td></td>
</tr>
<tr>
<td>Gen. Plur.</td>
<td>-iōrum</td>
<td></td>
<td>anter-iōrum</td>
<td>anter-iōrum</td>
<td></td>
</tr>
</tbody>
</table>

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

back arch         arcus posterior;
back spine        spina posterior;
back tubercle     tubercŭlum posterius.

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 muscŭlus, i m + the name of the muscle by its function having the ending –or / -er:

<table>
<thead>
<tr>
<th>muscŭlus, i m</th>
<th>the name of the muscle –or, ŏris m -er, eris m</th>
</tr>
</thead>
</table>
| muscŭlus abductor, ŏris m (abductor muscle).

Mind that the first word (muscŭlus, i m) is the second-declension noun and the second word (abductor, ŏris m) is the third-declension noun. After the name of the muscle there goes the noun in Genitive Singular or Plural: muscŭlus levātor scapŭlāe – elevator muscle of the shoulder blade; muscŭlus flexor digitŏrum manus – flexor muscle of the fingers of the hand.

Lexical minimum №12

1) caecum, i n
2) colon, i n
3) duodēnum, i n
4) ileum, i n
5) intestinālis, e
6) intestinum, i n
7) intestinum crassum
8) intestinum tenue, intestini tenuis (G.S.)
9) jejūnum, i n
10) latissĭmus, a, um
11) longissĭmus, a, um
12) magnus, a, um
13) maxĭmus, a, um
14) minĭmus, a, um
15) m. abductor, ŏris m
16) m. adductor, ŏris m
17) m. buccinātor, ŏris m
18) m. constrictor, ŏris m
19) m. corrugātor, ŏris m
20) m. depressor, ŏris m
21) m. dilatātor, ŏris m
22) m. extensor, ŏris m
23) m. flexor, ŏris m
24) m. levātor, ŏris m
25) m. massēter, ēris m
26) m. rotātor, ŏris m
27) m. sphincter, ēris m
28) m. tensor, ŏris m
29) rectum, i n
30) suprēmus, a, um

blind intestine
colon
duodenum
ileum
intestinal
intestine
large intestine
small intestine
jejunum
the widest
the longest
large, great
the largest
the smallest
abductor muscle
adductor muscle
cheek muscle
constrictor muscle
corrugator muscle
depressor muscle
dilator muscle
extensor (muscle)
flexor (muscle)
levator, elevator muscle
cheWER muscle
rotator muscle
sphincter (muscle)
tensor muscle
rectum
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
- muscūlus latissīmus

Ex. 3. Translate the terms into English:
- arcus dentālis inferior (superior)
- arteria intercostālis suprēma
- arteriae palatīnae minōres
- cornu medullae spinālis posterius
- crīsta nasālis anterior
- facies articulāris superior
- forāmen sacrāle anterius
- foramina palatīna minōra
- tuberculum 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
- foramina venārum minimārum
- ligamentum tibioulnāre anterius
- muscūli intercostāles minimī
- muscūlus longissīmus thorācis
- muscūlus teres minor
- muscūli obliqui superiōres et inferiōres
- muscūlus latissīmus dorsi
- spīna inferior
- nodi lymphatīci gastrīci sinistri
- ossa membri inferiōris
- processus articulāres superiōres
- vena ophthalmīca 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
- lower occipital opening
- opening of the lower hollow vein
- back tuber of the atlas
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) cavītas, ātis f  cavity
2) cellūla, ae f  cell
3) chiasma, ātis n  chiasm
4) cingūlum, i n  girdle
5) extremitas, 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) glandūla, 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, icis f  root
17) retīna, ae f  retina
18) sympathīcus, a, um  sympathetic
19) thyroidēus, a, um  thyroid
20) viscerālis, e  visceral, related to inner organs
Training Exercises

Ex. 1. Translate the words in Nom. Plur. into English:
venae; foramina; musculi; sinus; arteriae; sulci; crura; rami; canales; nervi; cartilagines; cornua; ligamenta; processus; lobii; ganglia; dentes; septa; vasa; regiones.

Ex. 2. Group the terms into two columns – terms in Nom. Sing. and terms in Nom. Plur. Translate them into English:
pyramides renales; musculi transversi; sinus frontales; ductus lymphatici; ductus sublinguales; sulcus inferior; sinus ethmoidales; articulationes costochordales (Greek chondros cartilage); ductus laterales; arteria major; atrium dextrum; articulationes sternocostales; arteriae inferiores; sulcus inferior; processus temporales; tunica muscularis.

Ex. 3. Choose the correct ending. Give the lexical form of each word and translate the terms into English:
suturae oss (-ium; -um); vagina tendin (-ium; -um); septum sinus frontalis (-ium; -um); ligamenta dentis (-ium; -um); plexus nervorum spinales (-ium; -um); chiasma tendinis (-ium; -um); tuberculum anterius et posterius vertebrarum cervicalis (-ium; -um); nuclei nervorum cranialis (-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) hepatis; 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); foramin (-a; -ia; -ua) palatin (-a; -ia; -ua) minor (-a; -ia; -ua); ligament (-a; -ia; -ua) transvers (-a; -ia; -ua); lamina (-a; -ia; -ua) arcus vertebrale; oss (-a; -ia; -ua) cranii; valv (-a; -ia; -ua) lymphatic (-a; -ia; -ua); foramin (-a; -ia; -ua) sacral (-a; -ia; -ua) minor (-a; -ia; -ua); foramin (-a; -ia; -ua) ethmoidal (-a; -ia; -ua); ligament (-a; -ia; -ua) intercarpal (-a; -ia; -ua) interossae (-a; -ia; -ua); cornu (-a; -ia; -ua) major (-a; -ia; -ua) et minor (-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:
vagina tendinum musculorum extensorum radiium carpi; sulcus temporalius inferior; caput laterale musculi tricipitis; musculus flexor hallucis longus; flexura coli sinistra; musculus longus colli; plica longitudinalis duodeni; ligamentum transversum scapulae superioris; articulationes craniae; ligamenta interossae; plicae palmatae transversae; lobus superior pulmonis sinistri; plicae tunicae mucosae; apex partis petrosis; vasa auris internae; septum sinus sphenoidali; ganglia plexuum sympatheticorum; sulcus sinus sphenoidalis; sulci nervi petrosis majoris; plicae rectae; musculi dorsi recti; lingula pulmonis sinistri.

Ex. 6. Translate into English:
angulus oculi lateralis; bursa musculi teretis; caput laterale musculi tricipitis; caput longum musculi bicipitis brachii; crista nasal is anterior; foramen
ovāle; foramina sacralia pelvīna; margo mastoideus ossis occipitālis; muscūli faciāles; muscūlí obliquí superior et inferior; muscūlus biceps femōris; muscūlus teres minor; os parietāle; tuber frontāle; processus lacrimālis conchae nasālis inferiōris; muscūli intercostāles; medulla ossium flava; medulla ossium rubra; medulla renālis; ossa membri inferiōris; cornu superius cartilaginis thyroideae; arteria hepatica; canālis radīcis dentis; ductus hepaticus commune; facies viscerālis; foramina sacralia pelvīna; ligamenta anteriōra durae matris; ligamentum teres hepātis; margo linguae; ossa membri inferiōris; tunīca mucōsa oris; vasa sanguinea retīnae; pia mater spinālis; vaginae fibrōsa tendīnum pedis; ligamentum hepatoduodenāle; articulationes sternocostāles; muscūlus bronchooesophagēus; muscūlus rectus abdomīnis; pars abdomīnalis (thoracica, cervicālis) oesophāgi; recessus duodenāles superior et inferior; recessus ilioceacīalis inferior; tunīca musculāris oesophāgi; muscūli obliquí superior et inferior; cornu inferius cartilaginis thyroideae; processus articulāres superiōres; arteria superior mediālis genus; pelvis major et minor; r. externus n. laryngēi superiōris; rr. cardiāci inferiōres; vv. cordis anteriōres; forr. palatīna minōra; cornu medullāe spinālis posterius; muscūlus latissīmus dorsī; 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
caput, ītis 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 femōris;
2) cornu uteri dextrum;
3) facies pulmonālis cordis;
4) muscūlus longus;
5) muscūlus flexor digitī;
6) arteria superior laterālis genus;
7) basis cordis;
8) forāmen sacrāle anterius.
## LATIN — ENGLISH ANATOMICAL GLOSSARY

<table>
<thead>
<tr>
<th>LATIN</th>
<th>ENGLISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>a (ab) (w. abl.)</td>
<td>from</td>
</tr>
<tr>
<td>abdomēn, īnis n</td>
<td>abdomen</td>
</tr>
<tr>
<td>abdominālis, e</td>
<td>abdominal</td>
</tr>
<tr>
<td>accessorius, a, um</td>
<td>accessory</td>
</tr>
<tr>
<td>acetabŭlum, i n</td>
<td>cotyloid cavity, acetabulum</td>
</tr>
<tr>
<td>acromion, i n</td>
<td>acromion, lateral end of the shoulder blade crest</td>
</tr>
<tr>
<td>acustĭcus, a, um</td>
<td>acoustic</td>
</tr>
<tr>
<td>ad (acc.)</td>
<td>to</td>
</tr>
<tr>
<td>affĕrens, ntis</td>
<td>afferent</td>
</tr>
<tr>
<td>ala, ae f</td>
<td>wing</td>
</tr>
<tr>
<td>alāris, e</td>
<td>alar</td>
</tr>
<tr>
<td>albus, a, um</td>
<td>white</td>
</tr>
<tr>
<td>alveŏlus, i m</td>
<td>alveolus</td>
</tr>
<tr>
<td>angŭlus, i m</td>
<td>angle</td>
</tr>
<tr>
<td>ante (w. acc.)</td>
<td>before</td>
</tr>
<tr>
<td>antebrachium, i n</td>
<td>forearm</td>
</tr>
<tr>
<td>anterior, ius</td>
<td>front, anterior</td>
</tr>
<tr>
<td>anus, i m</td>
<td>anus</td>
</tr>
<tr>
<td>aorta, ae f</td>
<td>aorta</td>
</tr>
<tr>
<td>apertūra, ae f</td>
<td>aperture</td>
</tr>
<tr>
<td>apex, ĭcis m</td>
<td>apex, top</td>
</tr>
<tr>
<td>apicālis, e</td>
<td>apical, related to the top</td>
</tr>
<tr>
<td>appendix, ĭcis f</td>
<td>appendage</td>
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<tr>
<td>arcus, us m</td>
<td>arch</td>
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<tr>
<td>areŏla, ae f</td>
<td>areola</td>
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<td>arteria, ae f</td>
<td>artery</td>
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<tr>
<td>arteriālis, e</td>
<td>arterial</td>
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<tr>
<td>arteriōsus, a, um</td>
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<tr>
<td>articulāris, e</td>
<td>articular</td>
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<tr>
<td>articulatio, ōnis f</td>
<td>joint</td>
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<td>ascendens, ntis</td>
<td>ascending</td>
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<tr>
<td>asper, ēra, ērum</td>
<td>rough</td>
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<td>atlas, antis m</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; cervical vertebra, atlas</td>
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<td>atrium, i n</td>
<td>atrium (heart chamber)</td>
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<td>auricŭla, ae f</td>
<td>auricle, auricula</td>
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<td>auriculāris, e</td>
<td>auricular</td>
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<tr>
<td>auris, is f</td>
<td>ear</td>
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<tr>
<td>axis, is m</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; cervical vertebra, axis</td>
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basis, is f
biceps, cipĭtis
biliāris, e
bilis, is f
brachium, i n
brevis, e
brachium, i n
bulbus, i m
bulbus ocŭli
bursa, ae f

caecum, n
calcanēus, a, um
calcar, āris n
canālis, is m
capillāris, e
capsula, ae f
caput, ītis n
cardiācus, a, um
carotīcus, a, um
carōtis, īdis
carpus, i m
cartilaginēus, a, um
cartilāgo, ĭnis f
caverna, ae f
cavernōsus, a, um
cavītas, ātis f
cavum, i n
cavus, a, um
cellūla, ae f
cellulāris, e
cerebellāris, e
cerebellum, i n
cerebrālis, e
cerĕbrum, i n
cervicālis, e
cervix, īcis f
chiasma, ātis n
cilium, i n
cingŭlum, i n
circumflexus, a, um
clavicula, ae f
claviculāris, e
coccygēus, a, um
coccyx, ygis m
cochlea, ae f

B
base
two-headed, bicipital
biliary
bile
shoulder
short
bronchus
bulb
eyeball
bursa, bag

C
ciaecum, blind intestine
calcaneum
calcaneus

calcanēus

canālis

capillāris

capsula

caput

cardiācus

carotīcus

carōtis

carpus
cartilaginēus

cartilāgo

caverna

cavernōsus

cavītas

cavum

cavus

cellūla

cellulāris

cerebellāris

cerebellum

cerebrālis

cerĕbrum

cervicālis

cervix
chiasma

cilium

cingŭlum

circumflexus

clavīcula

clavīcīlaris

coccygēus

coccyx

cochlea
encephalon, brain
esophageal
esophagus
and
ethmoid, sieve-shaped
external
extremity, limb

facial
face, surface
fascia
femur, thigh bone, thigh
fibra, fiber
fibrous
fibular, related to the splint
bone
flexure, curve, twist
foramen, opening
vault, fornix
fossa, shallow depression
fovea, small pit
forehead
frontal
fundus, bottom

ganglion, nerve node
stomach
gastric
general
knee
gingiva, gum
gland
thyroid gland
globe
gray
gyrus, convolution

great toe
hamulus, hook
liver
hepatic, related to the liver
hiātus, us m
homo, īnis m
horisonštālis, e
humĕrus, i m
humor, ōris m
hyoideus, a, um
hypogastrīcus, a, um
hypoglossus, a, um

hiatus, crack, split
man
horizontal
humerus, upper arm
humor
hyoid (bone)
hypogastric
hypoglossal (nerve)

I
ileocaecālis, e
ileum, i n
iliācus, a, um
impressio, ōnis f
incisīvus, a, um
incisūra, ae f
incus, ūdis f
index, ĭcis m
inferior, ius
infra
in (w. acc., abl.)
inter (w. acc.)
tercostālis, e
interior, ius
internus, a, um
interosseus, a, um
intestinalis, e
intestīnum, i n
intestīnum crassum
intestīnum (i) tenue (is)
intravenōsus, a, um
iris, irĭdis f
ischiadĭcus, a, um
ischium, i n

ileocecal
ileum
iliac
impression
incisive (tooth)
notch
incus, anvil
index, forefinger
lower, inferior
under, beneath
into, in
between
intercostal
inner
internal
interosseal
intestinal
intestine
large intestine
small intestine
intravenous
iris of the eye
ischiadic
ischiorectal
ischium

J
jejūnum, i n
jugulāris, e

jejunum
jugular

L
labium, i n
lacrimālis, e
lamīna, ae f
laryngēus, a, um
larynx, yngis m
laterālis, e
latissīmus, a, um
latus, a, um

lip
lacrimal, related to tears
plate, lamina
laryngeal, related to the larynx
larynx
lateral
the widest
broad, wide
latus, ĕris n
lens, lentis f
liber, ĕra, ĕrum
lien, liēnis m
ligamentum, i n
līnea, ae f
lingua, ae f
linguālis, e
lobus, i m
longissīmus, a, um
longus, a, um
lumbālis, e
lumbus, i m
lymphaticus, a, um
magnus, a, um
major, jus
mandibūla, ae f
mandibulāris, e
manubrium, i n
manus, us f
margo, ĭnis m
mastoideus, a, um
mater, tris f
maxilla, ae f
maxillāris, e
maximus, a, um
meātus, us m
mediālis, e
mediānus, a, um
medius, a, um
medulla, ae f
medulla ossium
medulla spinālis
membrāna, ae f
membrum, i n
meninx, ngis f
mentālis, e
mentum, i n
metacarpus, i m
metatarsus, i m
minimus, a, um
minor, minus
mucōsa, ae f
mucōsus, a, um
musculāris, e
muscūlus, i m
m. abductor, ŏris m
side, flank
crystalline lens
free
spleen
ligament
line
tongue
lingual, related to the tongue
lobe
the longest
long
lumbar, related to the loin
loin
lymphatic

M
large, great
larger, greater
lower jaw, mandible
mandibular, related to the lower jaw
manubrium
hand
margin, border
mastoidal, mammiform
membrane of the brain or spinal cord
upper jaw, maxilla
maxillary, related to the upper jaw
the largest, the greatest
passage
medial
middle, median
middle
marrow, medullary substance
bone marrow
spinal cord, spinal marrow
membrane, covering
extremity, limb
meninx
mental, related to the chin
chin
metacarpus
metatarsus
the smallest
smaller
mucous membrane
mucous
muscular
muscle
abductor muscle
m. adductor, ōris m
m. buccinātor, ōris m
m. constrictor, ōris m
m. corrugātor, ōris m
m. depressor, ōris m
m. dilatātor, ōris m
m. extensor, ōris m
m. flexor, ōris m
m. levātor, ōris m
m. massēter, ēris m
m. rotātor, ōris m
m. sphincter, ēris m
m. tensor, ōris m
adductor muscle
cheek muscle, buccinator
constrictor
corrugator, muscle that wrinkles
depressor muscle
dilator muscle
extensor (muscle)
flexor (muscle)
levator, elevator muscle
chewer muscle
rotator muscle
sphincter (muscle)
tensor muscle

naris, is f
nasālis, e
nasolacrimālis, e
nasus, i m
nervōsus, a, um
nervus, i m
niger, gra, grum
nodus, i m
nucha, ae f
nucleus, i m
nutricius, a, um

obliquus, a, um
oblongātus, a, um
occipitālis, e
occīput, ĭtis n
ocūlus, i m
oesophāgus, i m (esophāgus)
olecrānon, i n
ophthalmīcus, a, um
optīcus, a, um
orbita, ae f
orbitālis, e
orgānon, i n
os, oris n
os, ossis n
os hyoideum
ossēus, a, um
ostium, i n
ovālis, e

N
nostril
nasal, related to the nose
nasolacrimal
nose
nervous
nerve
black
node
nucha, nape of neck
nucleus, centre
nutricious

O
oblique
oblong
occipital
back of the head, occiput
eye
esophagus, gullet
tip of the elbow
ophthalmic, related to the eye
optic, visual
orbit, eye-socket
orbital, related to the eye-socket
organ
mouth
bone
hyoid bone
osseous, bony
opening, ostium
oval
palatīnus, a, um
palatoglossus, a, um
palātum, i n
palpēbra, ae f
pancreas, ātis n
pancreaticus, a, um
papilla, ae f
paries, ētis m
parietālis, e
pars, partis f
patella, ae f
pelvīnus, a, um
pelvis, is f
pelvis renālis
per (w. acc.)
perin(a)eum, i n
periosteum, i n
periton(a)eum, i n
pes, pedis m
petrōsus, a, um
phalanx, ngis f
pharyngēus, a, um
pharynx, ngis m
pia mater
pilus, i m
planus, a, um
pleura, ae f
plexus, us m
plica, ae f
pollex, ĭcis m
post (w. acc.)
posterior, ius
praemolāris, e
primus, a, um
pro (w. abl.)
processus, us m
profundus, a, um
proprius, a, um
protuberantia, ae f
proximālis, e
proximus, a, um
pterygoideus, a, um
pulmo, ōnis m
pulmonālis, e
pylōrus, i m
pyrāmis, idis f

P
palatal, palatine
palatoglossal
palate
eyelid
pancreas
pancreatic, related to the pancreas
papilla, nipple
wall
parietal
part
kneepan
pelvic
pelvis
renal pelvis
for, by
perineum
periosteum
peritoneum
foot
petrous, stony
phalanx
pharyngeal, related to the pharynx
pharynx
soft brain membrane
hair
plain
pleura
plexus
fold
thumb
after
posterior, back
premolar (tooth)
first
for
process
deep
proper
projection
proximal
nearest
pterygoid, wing-shaped
lung
pulmonary, related to the lung
pylorus
pyramid
quadriceps, cipītis

four-headed, quadriceps

radiālis, e
radius, i m
radix, ĭcis f
ramus, i m
raphe (rhaphe), es f
recessus, us m
rectālis, e
rectum, i n
rectus, a, um
regio, ōnis f
ren, renis m
renālis, e
rete, is n
retīna, ae f
retinacŭlum, i n
rotundus, a, um
ruber, bra, brum

radial, related to the forearm bone
radius, forearm bone
root
branch
raphe
recess
rectal
rectum
straight
region
kidney
renal, related to the kidney
net, network
retina
retinaculum
round
red

sacrālis, e
sacrum, i n
sanguineus, a, um
sanguis, ĭnis m
scapŭla, ae f
secundus, a, um
semi-
septum, i n
serōsus, a, um
seu
simplex, ĭcis
sine (w. abl.)
sinister, tra, trum
sinus, us m
skelēton, i n
spatium, i n
sphenoidālis, e
spina, ae f
spinālis, e
spinōsus, a, um
spleen, splenis m
spongiōsus, a, um
squama, ae f

sacral
sacrum
bloody
blood
scapula, shoulder blade
second
half
septum, dividing wall
serous
or
simple
without
left
sinus
skeleton
space
sphenoidal, wedge-shaped
spine
spinal
spinous
spleen (Greek)
spongy
squama, scale
squamōsus, a, um  
stapes, ĕdis m  
sternālis, e  
sternocostālis e  
sternum, i n  
stratum, i n  
stroma, ātis n  
structūra, ae f  
styloideus, a, um  
sub (w. acc., abl.)  
sublinguālis, e  
substantia, ae f  
sulcus, i m  
supercilium, i n  
superficiālis, e  
superficies, ĕi f  
superior, ius  
supra-  
suprarenālis, e  
suprēmus, a, um  
sutūra, ae f  
sympathicus, a, um  
symphysis, is f  
synchondrōsis, is f  
systēma, ātis n  

scaly, squamous  
stapes  
sternal, related to the breast bone  
sternocostal  
sternum, breast bone  
layer  
stroma, framework  
structure  
styloid, awl-shaped  
under  
sublingual  
substance  
groove  
eyebrow  
superficial  
surface  
upper, superior  
above  
suprarenal  
the highest  
seam, suture  
sympathetic, sympathetic  
symphysis  
synchondrosis  
system  

T  
tegmen, īnis n  
temporālis, e  
tempos, òris n  
tendo, īnis m  
teres, ētis  
textus, us m  
thalāmus, i m  
thoracīcus, a, um  
thorax, ācis m  
thymus, i m  
thyr(e)oideus, a, um  
tibia, ae f  
tonsilla, ae f  
tonsillāris, e  
trachēa, ae f  
tractus, us m  
transversālis, e  
transversus, a, um  
trapezoideus, a, um  
tegmen, roof  
temporal  
temple  
tendon  
round  
tissue  
thalamus  
thoracic  
chest, thorax  
thymus gland  
thyroid  
tibia, shinbone  
tonsil  
tonsillar, tonsillary  
trachea, windpipe  
tract  
transverse  
transverse  
trapezoid
triceps, cipĭtis
trigemĭnus, a, um
truncus, i m
tuba, ae f
tuber, ēris n
tubercŭlum, i n
tuberosĭtas, ātis f
tunīca, ae f
tympanicus, a, um

ulna, ae f
urēter, ēris m
urethra, ae f
urinarius, a, um
utĕrus, i m

vagīna, ae f
dvacinālis, e
valva, ae f
valvula, ae f
vas, vasis n
vena, ae f
vena portae
venōsus, a, um
venter, ntris m
ventrālis, e
venrtricŭlus, i m
vertēbra, ae f
vertebrālis, e
vertex, ĭcis m
verus, a, um
vesīca, ae f
vesīca fellea
vesīca urinaria
vestibŭlum, i n
viscēra, um n (pl.)
viscēralis, e
vitreus, a, um
vomer, ēris m

three-headed, tricipital
trigeminal
trunk
tube
tuber
tubercle
tuberosity
covering, membrane
tympanic

ulna, elbow bone
ureter
urethra
urinary
uterus, womb

vagina, sheath
vaginal
valve
valve, valvule
vessel
vein
portal vein
venous
belly
ventral
ventricle (heart chamber)
vertebra
vertebral
vertex
true
bladder
gallbladder
urinary bladder
vestibule
viscera
visceral, related to inner organs
vitreous
vomer

zygōma, ātis n
zygomaticus, a, um

zygoma, cheek-bone
zygomatic
<table>
<thead>
<tr>
<th>ENGLISH</th>
<th>LATIN</th>
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<tbody>
<tr>
<td>abdomen</td>
<td>abdōmen, ĭnis n</td>
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<tr>
<td>abdominal</td>
<td>abdominālis, e</td>
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<tr>
<td>abductor muscle</td>
<td>m. abductor, ōris m</td>
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<tr>
<td>adductor muscle</td>
<td>m. adductor, ōris m</td>
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<td>above</td>
<td>supra-</td>
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<td>accessory</td>
<td>accessorius, a, um</td>
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<td>acetabulum, cotyloid cavity</td>
<td>acetabŭlum, i n</td>
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<td>after</td>
<td>post (w. acc.)</td>
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<td>contra (w. acc.)</td>
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<td>alveŏlus, i m</td>
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<td>and</td>
<td>et</td>
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<td>angle</td>
<td>angūlus, i m</td>
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<td>anterior, front</td>
<td>anterior, ius</td>
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<td>anus</td>
<td>anus, i m</td>
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<td>anvil, incus</td>
<td>incus, ŭdis f</td>
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<td>aorta</td>
<td>aorta, ae f</td>
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<td>aperture</td>
<td>apertūra, ae f</td>
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<td>apex, top</td>
<td>apex, ĭcis m</td>
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<td>apicālis, e</td>
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<td>appendix, ĭcis f</td>
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<td>arch</td>
<td>arcus, us m</td>
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<tr>
<td>areola</td>
<td>areōla, ae f</td>
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<td>arterial</td>
<td>arteriōsus, a, um; arteriālis, e</td>
</tr>
<tr>
<td>artery</td>
<td>arteria, ae f</td>
</tr>
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<td>articular</td>
<td>articulāris, e</td>
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<td>ascending</td>
<td>ascendens, ntis</td>
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<tr>
<td>atlas, 1st cervical vertebra</td>
<td>atlas, antis m</td>
</tr>
<tr>
<td>atrium (heart chamber)</td>
<td>atrium, i n</td>
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<td>auricle, auricula</td>
<td>auricŭla, ae f</td>
</tr>
<tr>
<td>auricular</td>
<td>auriculāris, e</td>
</tr>
<tr>
<td>awl-shaped, styloid</td>
<td>styloideus, a, um</td>
</tr>
<tr>
<td>axis, 2nd cervical vertebra</td>
<td>axis, is m</td>
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</tbody>
</table>
back
back, posterior
back of the head, occiput
bag, bursa
base
before
belly
beneath, under
between
bicipital
bile
biliary, bilious
black
bladder
blind intestine, caecum
blood
bloody
body
bone
bone marrow
bony, osseous
border, margin
bottom, fundus
brain
branch
breast bone, sternum
broad, wide
bronchus
buccinator, cheek muscle
bulb
bursa, bag

calcaneal
calcar, spur
fibula, splint-bone
canal
capillary
capsule
cardiac
carotic
carotid
cartilage
cartilaginous
cavern
cavernous

dorsum, i n
posterior, ius
occiput, ĭtis n
bursa, ae f
basis, is f
ante-
venter, ntris m
infra-
inter-
biceps, cipĭtis
bilis, is f
biliāris, e
niger, gra, grum
vesīca, ae f
caecum, i n
sanguis, ĭnis m
sanguineus, a, um
corpus, ŏris n
os, ossis n
medulla ossium
osseus, a, um
margo, ĭnis m
fundus, i m
encephālon, i n; cerēbrum, i n
ramus, i m
sternum, i n
latus, a, um
bronchus, i m
m. buccinātor, ŏris m
bulbus, i m
bursa, ae f

calcanēus, a, um
calcar, āris n
fibŭla, ae f
canālis, is m
capillāris, e
capsula, ae f
cardiācus, a, um
carotīcus, a, um
carōtis, ĭdis
cartilāgo, ĭnis f
cartilaginēus, a, um
caverna, ae f
cavernōsus, a, um
cavity
caecum, blind intestine
cell
cellular
cerebellar
cerebellum
cerebral, related to the brain
cerebrum, brain
cervical, related to the neck
cervix, neck
cheek muscle, buccinator
chest, thorax
chefwer
chiasm
chin
cilium, eyelash
circumflex
clavicle
clavicular
fisure, narow slit
covering, membrane
coccygeal
coccygeal bone, coccyx
cochlea
cochlear
colon
column
commissure, joining
common
compounded
concha
constrictor muscle
convolution, gyrus
coronal
corrugator muscle, that wrinkles
cortex
cortical
costal
cotyloid cavity
crack, split, hiatus
cranial
cranium, skull
crest
cribrate, sieve-shaped
curvature
curve, twist, flexure
cavum, i n, cavĭtas, ātis f
caecum, i n
cellŭla, ae f
cellulāris, e
cerebellāris, e
cerebellum, i n
cerebrālis, e
cerēbrum, i n
cervicālis, e
cervix, ācis f
m. buccinātor, ōris m
thorax, ācis m
m. massēter, ēris m
chiasma, ātis n
mentum, i n
cilium, i n
circumflexus, a, um
clavicūla, ae f
claviculāris, e
fissūra, ae f
tunīca, ae f
coccygēus, a, um
coccyx, ygis m
cochlea, ae f
cochleāris, e
colon, i n
columna, ae f
commissūra, ae f
commūnīs, e
composĭtus, a, um
concha, ae f
m. constrictor, ōris m
gyrus, i m
coronarius, a, um
m. corrugātor, ōris m
cortex, īcis m
corticālis, e
costālis, e
acetabŭlum, i n
hiātus, us m
craniālis, e
cranium, i n
crista, ae f
cribrōsus, a, um
curvatūra, ae f
flexūra, ae f
deep
deltoid
dense
dental, related to the tooth
depressor muscle
descending
diaphragm
dilator muscle
diploe
distal
dividing wall, septum
dorsal
duct
duodenal
duodenum

ear
efferent
elbow bone, ulna
elevator muscle
encephalon, brain
esophageal
esophagus, gullet
ethmoid, sieve-shaped
extensor (muscle)
external
extremity, limb
eye
eyeball
eyebrow
eyelash, cilium
eyelid
eye-socket, orbit

face, surface
facial
fascia
femur, thigh bone
fiber, fibra
fibrous
fibula, splint-bone
fibular, related to the splint-bone
finger

d profundus, a, um
deltoideus, a, um
compactus, a, um
dentālis, e
m. depressor, ōris m
descendens, ntis
diaphragma, ātis n
m. dilatātor, ōris m
diploē, ēs f
distālis, e
septum, i n
dorsālis, e
ductus, us m
duodenālis, e
duodēnum, i n
e auris, is f
effĕrens, ntis
ulna, ae f
m. levātor, ōris m
encephălon, i n
esophagēus, a, um
oe(e)sophāgus, i m
ethmoidālis, e
m. extensor, ōris m
externus, a um
membrum, i n; extremītas, ātis f
ocŭlus, i m
bulbus ocŭli
supercilium, i n
cilium, i n
palpĕbra, ae f
orbīta, ae f

f facies, ēi f
faciālis, e
fascia, ae f
femur, ōris n
fibra, ae f
fibrōsus, a, um
fibŭla, ae f
fibulāris, e
digĭtus, i m
first
fissure, narrow slit
flank, side
flexor (muscle)
flexure, curve, twist
fold
foot
foramen, opening
forearm
forearm bone, radius
forefinger, index
forehead
fornix, vault
fossa, shallow depression
four-headed, quadriceps
fovea, small pit
framework
free
front, anterior
frontal
fundus, bottom

gallbladder
ganglion, nerve node
gastric
general
gingiva, gum
girdle
gland
globe
glome
gray
great, large
greater, larger
great toe
the greatest, the largest
groove
gullet, esophagus
gum, gingiva
gyrus, convolution

hair
half
hamulus, hook

primus, a, um
fissūra, ae f
latus, ĕris n
m. flexor, ŏris m
flexūra, ae f
plica, ae f
pes, pedis m
forāmen, ĭnis n
antebrachium, i n
radius, i m
index, ĭcis m
frons, ntis f
fornix, ĭcis m
fossa, ae f
quadriceps, cipītis
fovea, ae f
stroma, ātis n
liber, ēra, ērum
anterior, ius
frontālis, e
fundus, i m

vesīca fellea
ganglion, i n
gastrīcus, a, um
generālis, e
gingīva, ae f
cingūlum, i n
glandūla, ae f
globus, i m
glomus, i m
griseus, a, um
magnus, a, um
major, jus
hallux, ūcis m
maximus, a, um
sulcus, i m
oe(e)sophāgus, i m
gingīva, ae f
gyrus, i m

pilus, i m
semi-
hamūlūs, i m
hand
hard
hard brain membrane
head
heart
hepatic, related to the liver
hiatus, crack, split
the highest
hollow
horizontal
horn
humerus, upper arm
humor
hyoid (bone)
hyoid bone
hypogastric
hypoglossal (nerve)

ileocecal
ileum
iliac
impression
incisive (tooth)
index, forefinger
inferior, lower
inner
intercostal
internal
interosseal
intestinal
intestine
intravenous
iris of the eye
ischadic
ischiorectal
ischium

jejunum
joining, comissure
joint
jugular

kidney
knee
kneepan

manus, us f
durus, a, um
dura mater
caput, ītis n
cor, cordis n
hepātīcus, a, um
hiātus, us m
suprēmus, a, um
cavus, a, um
horisontālis, e
cornu, us n
humērus, i m
humor, ōris m
hyoideus, a, um
os hyoideum
hypogastrīcus, a, um
hypoglossus, a, um

I
ileocaecālis, e
ileum, i n
iliācus, a, um
impressio, ōnis f
incisīvus, a, um
index, ĭcis m
inferior, ius
internus, a, um
intercostālis, e
internus, a, um
interosseus, a, um
intestinālis, e
intestīnum, i n
intravenōsus, a, um
iris, irīdis f
ischiadīcus, a, um
ischiorectālis, e
ischium, i n

J
jejūnum, i n
comissūra, ae f
articulatio, ōnis f
jugulāris, e

K
ren, renis m
genu, us n
patella, ae f
lacrical, related to tears
lamina, plate
large, great
larger, greater
large intestine
the largest, the greatest
laryngeal, related to the larynx
larynx
lateral
layer
left
leg, shin
lens
levator muscle
ligament
limb, extremity
line
lingual, related to the tongue
lip
liver
lobe
loin
long
the longest
lower, inferior
lower jaw, mandible
lumbar, related to the loin
lung
lymphatic

man
mandible, lower jaw
mandibular, related to the lower jaw
manubrium
margin, border
marrow, medullary substance
mastoidal, mammiform
maxilla, upper jaw
maxillary, related to the upper jaw
meatus, passage
medial
median, middle
membrane, covering
membrane of the brain or spinal cord

lacrimālis, e
lamīna, ae f
magnus, a, um
major, jus
intestīnum crassum
maxīmus, a, um
laryngēus, a, um
larynx, yngis m
laterālis, e
stratum, i n
sinister, tra, trum
crus, cruris n
lens, lentis f
m. levātor, ōris m
ligamentum, i n
membrum, i n; extremītas, ātis f
linea, ae f
linguālis, e
labium, i n
hepar, ātis n
lobus, i m
lumbus, i m
longus, a, um
longissīmus, a, um
inferior, ius
mandibūla, ae f
lumbālis, e
pulmo, ōnis m
lymphatīcus, a, um

homo, ĭnis m
mandibūla, ae f
mandibulāris, e
manubrium, i n
margo, īnis m
medulla, ae f
mastoideus, a, um
maxilla, ae f
maxillāris, e
meātus, us m
mediālis, e
mediānus, a, um
membrāna, ae f
mater, tris f
meninx
mental, related to the chin
metacarpus
metatarsus
middle
mouth
mucous
mucous membrane
muscle
muscular

nape of neck, nucha
narrow slit, fissure
nasal, related to the nose
nasolacrimal
the nearest
neck
nerve
nerve node
nervous
net, network
nipple, papilla
node
nose
nostril
notch
nucha, nape of neck
nucleus, centre
nutriicious

oblique
oblong
occiput, back of the head
occipital
opening, foramen
ophthalmic, related to the eye
optic, visual
or
orbit, eyeocket
orbital, related to the eyeocket
organ
osseous, bony
ostium, opening
oval

meninx, ngis f
mentālis, e
metacarpus, i m
metatarsus, i m
medius, a, um; mediānus, a, um
os, oris n
mucōsus, a, um
mucōsa, ae f
musculāris, e

N
nucha, ae f
fissūra, ae f
nasālis, e
nasolacrimālis, e
proxīmus, a, um
collum, i n; cervix, īcis f
nervus, i m
ganglion, ii n
nervōsus, a, um
rete, īs n
papilla, ae f
nodus, i m
nasus, i m
naris, is f
incisūra, ae f
nucha, ae f
nucleus, i m
nutricius, a, um

O
obliquus, a, um
oblongātus, a, um
occīput, ĭtis n
occipitālis, e
forāmen, ĭnis n
ophthalmīcus, a, um
optīcus, a, um
seu
orbīta, ae f
orbitālis, e
orgānon, i n
ossēus, a, um
ostium, i n
ovālis, e
palatal, palatine
palate
palatoglossal
pancreas
pancreatic, related to the pancreas
papilla, nipple
parietal
part
passage, meatus
pelvic
pelvis
perineum
periosteum
peritoneum
petrous, stony
phalanx
pharyngeal, related to the pharynx
pharynx
plain
plate, lamina
pleura
plexus
portal vein
posterior, back
premolar (tooth)
process
projection
proper
proximal
pterigoid, wing-shaped
pulmonary, related to the lung
pylorus
pyramid

quadriiceps, four-headed

radial, related to the forearm bone
radius, forearm bone
raphe
recess
rectal
rectum
red

palatinus, a, um
palatum, i n
palatoglossus, a, um
pancreas, åtis n
pancreatîcus, a, um
papilla, ae f
parietālis, e
pars, partis f
meātus, us m
pelvīnus, a, um
pelvis, is f
perin(a)eum, i n
periosteum, i n
periton(a)eum, i n
petrōsus, a, um
phalax, ōgis f
pharyngēus, a, um
pharynx, ōgis m
planus, a, um
lamīna, ae f
pleura, ae f
plexus, us m
vena portae
posterior, ius
praemolāris, e
processus, us m
protuberantia, ae f
proprius, a, um
proximālis, e
pterygoideus, a, um
pulmonālis, e
pylōrus, i m
pyrāmis, ĭdis f

quadriceps, cipītis

radiālis, e
radius, i m
raphe (rhaphe), es f
recessus, us m
rectālis, e
rectum, i n
rubēr, bra, brum
regionenal, related to the kidney
renal pelvis
retina
retinaculum
rib
right
root
rotator muscle
rough
round

sacral
sacrum
scapula, shoulder blade
second
septum, dividing wall
serous
shallow depression, fossa
sheath, vagina
shin, leg
shinbone, tibia
short
shoulder
shoulder blade, scapula
side, flank
sieve-shaped, cribrate
sieve-shaped, ethmoid
simple
sinus
skeleton
skin
skull, cranium
small intestine
smaller
the smallest
small pit, fovea
soft brain membrain
space
sphenoidal, wedge-shaped
sphincter (muscle)
spinal
spinal cord, spinal marrow
spine
spinous
spleen
splint-bone, fibula

S
sacrālis, e
sacrum, i n
scapūla, ae f
secundus, a, um
septum, i n
serōsus, a, um
fossa, ae f
vagīna, ae f
crus, cruris n
tibia, ae f
brevis, e
brachium, i n
scapūla, ae f
latus, ĕris n
cibrōsus, a, um
ethmoidālis, e
simplex, īcis
sinus, us m
skelēton, i n
cutis, is f
cranium, i n
intestīnum (i) tenue (is)
minor, minus
minīmus, a, um
fovea, ae f
pia mater
spatium, i n
sphenoidālis, e
m. sphincter, ĕris m
spinālis, e
medulla spinālis
spina, ae f
spinōsus, a, um
lien, liēnis m; splen, splenis m
fibūla, ae f
split, crack, hiatus
spongy
spur, calcar
squam, scale
squamous, scaly
stapes
sternal, related to the breast bone
sternocostal
sternum, breast bone
stomach
stony, petrous
straight
stroma, framework
structure
sublingual
substance
superficial
surface
superior, upper
suprarenal
surface, face
suture, seam
sympathetic, sympathetic
symphysis
synchondrosis
system

tegmen, roof
temple
temporal
tendon
tensor muscle
thalamus
thigh, thigh bone, femur
thoracic
thorax, chest
three-headed, tricipital
thumb
thymus gland
thyroid
thyroid gland
tibia, shin bone
top, apex
tip of the elbow
tissue
tongue
tonsil

hiatus, us m
spongiosus, a, um
calcar, āris n
squama, ae f
squamosus, a, um
stapes, ēdis m
sternalis, e
sternocostalis e
sternum, i n
gaster, tris f
petrosus, a, um
rectus, a, um
stroma, ātis n
structure, ae f
sublingualis, e
substantia, ae f
superficialis, e
superficies, ēi f
superior, ius
suprarenalis, e
facies, ēi f
sutura, ae f
sympathicus, a, um
symphysis, is f
synchondrosis, is f
systema, ātis n

T
tegmen, Ĭnis n
tempus, ŏris n	
temporālis, e
tendo, ĭnis m
m. tensor, ŏris m
thalamus, i m
femur, ŏris n
thoracīcus, a, um
thorax, ācis m
triceps, cipītis
pollex, ĭcis m
thymus, i m
thyr(e)oideus, a, um
glandula thyr(e)oidea
tibia, ae f
apex, ĭcis m
olecranon, i n
textus, us m
lingua, ae f
tonsilla, ae f
<table>
<thead>
<tr>
<th>Latin Word</th>
<th>English Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>tonsillāris, e</td>
<td>tonsillar, tonsillary</td>
</tr>
<tr>
<td>dens, dentis m</td>
<td>tooth</td>
</tr>
<tr>
<td>apex, ĭcis m</td>
<td>top, apex</td>
</tr>
<tr>
<td>trachēa, ae f</td>
<td>trachea, windpipe</td>
</tr>
<tr>
<td>tractus, us m</td>
<td>tract</td>
</tr>
<tr>
<td>transversālis, e; transversus, a, um</td>
<td>transverse</td>
</tr>
<tr>
<td>trapezoideus, a, um</td>
<td>trapezoid</td>
</tr>
<tr>
<td>trigemīnus, a, um</td>
<td>trigeminal</td>
</tr>
<tr>
<td>verus, a, um</td>
<td>true</td>
</tr>
<tr>
<td>truncus, i m</td>
<td>trunk</td>
</tr>
<tr>
<td>tuba, ae f</td>
<td>tube</td>
</tr>
<tr>
<td>tuber, ēris n</td>
<td>tuber</td>
</tr>
<tr>
<td>tubercūlum, i n</td>
<td>tubercle</td>
</tr>
<tr>
<td>tuberosītas, ātis f</td>
<td>tuberosity</td>
</tr>
<tr>
<td>biceps, cipĭtis</td>
<td>two-headed, bicipital</td>
</tr>
<tr>
<td>tympanicus, a, um</td>
<td>tympanic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Latin Word</th>
<th>English Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ulna, ae f</td>
<td>ulna, elbow bone</td>
</tr>
<tr>
<td>infra-; sub-</td>
<td>under, beneath</td>
</tr>
<tr>
<td>superior, ius</td>
<td>upper, superior</td>
</tr>
<tr>
<td>humĕrus, i m</td>
<td>upper arm</td>
</tr>
<tr>
<td>maxilla, ae f</td>
<td>upper jaw, maxilla</td>
</tr>
<tr>
<td>urēter, ēris m</td>
<td>ureter</td>
</tr>
<tr>
<td>urethra, ae f</td>
<td>urethra</td>
</tr>
<tr>
<td>urinarius, a, um</td>
<td>urinary</td>
</tr>
<tr>
<td>vesīcа urinaria</td>
<td>urinary bladder</td>
</tr>
<tr>
<td>utērus, i m</td>
<td>uterus, womb</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Latin Word</th>
<th>English Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>vagīna, ae f</td>
<td>vagina, sheath</td>
</tr>
<tr>
<td>vaginālis, e</td>
<td>vaginal</td>
</tr>
<tr>
<td>valva, ae f; valvūla, ae f</td>
<td>valve</td>
</tr>
<tr>
<td>fornix, icis m</td>
<td>vault, fornix</td>
</tr>
<tr>
<td>vena, ae f</td>
<td>vein</td>
</tr>
<tr>
<td>venōsus, a, um</td>
<td>venous</td>
</tr>
<tr>
<td>ventrālis, e</td>
<td>ventral</td>
</tr>
<tr>
<td>venrtricūlus, i m</td>
<td>ventricle (heart chamber)</td>
</tr>
<tr>
<td>vertēbra, ae f</td>
<td>vertebra</td>
</tr>
<tr>
<td>vertebrālis, e</td>
<td>vertebral</td>
</tr>
<tr>
<td>vertex, ĭcis m</td>
<td>vertex</td>
</tr>
<tr>
<td>vas, vasis n</td>
<td>vessel</td>
</tr>
<tr>
<td>vestibulum, i n</td>
<td>vestibule</td>
</tr>
<tr>
<td>viscēra, um n (pl.)</td>
<td>viscera</td>
</tr>
<tr>
<td>visceral, realted to the inner organs</td>
<td>viscerālis, e</td>
</tr>
</tbody>
</table>
visual
vitreous
vomer

wall
wedge-shaped, sphenoidal
white
wide, broad
the widest
windpipe, trachea
wing
wing-shaped, pterigoid
womb, uterus
wrist

yellow

zygoma
zygomatic

opticus, a, um
vitreus, a, um
vomer, ēris m

W
paries, ētis m
sphenoidālis, e
albus, a, um
latus, a, um
latissimus, a, um
trachēa, ae f
ala, ae f
pterygoideus, a, um
utērus, i m
carpus, i m

Y
flavus, a, um

Z
zygōma, ātis n
zygomaticus, 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. 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 bi-lingual 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 languages make it possible to 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 —

1Greek. nosos disease+ logia study, science – different particular diseases with their own names
removal of a part of an organ, ulcer, ėris n — ulcer, tuberculōsis, is f — tuberculōsis, 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 a function, tonsillītis, itīdis f — inflammation of palatine 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 tissue integrity under the influence of external factors; infarction – limited area of necrotizing tissue mortified as a result of blood supply stop; contusion – general affection of the organism as a result of instantaneous mechanical lesion and others. More often they are not translated, but transliterated by means of national languages and are international:

<table>
<thead>
<tr>
<th>Latin</th>
<th>Russian</th>
<th>Belorussian</th>
<th>English</th>
<th>French</th>
<th>German</th>
</tr>
</thead>
<tbody>
<tr>
<td>infarctus</td>
<td>инфаркт</td>
<td>инфаркт</td>
<td>infarction</td>
<td>Infarctus</td>
<td>Infarct</td>
</tr>
<tr>
<td>contusion</td>
<td>контузія</td>
<td>контузія</td>
<td>contusion</td>
<td>Contusion</td>
<td>Kontusion</td>
</tr>
<tr>
<td>pneumonia</td>
<td>пневмонія</td>
<td>пневмонія</td>
<td>pneumonia</td>
<td>Pneumonie</td>
<td>Pneumonie</td>
</tr>
<tr>
<td>stupor</td>
<td>ступор</td>
<td>ступор</td>
<td>stupor</td>
<td>Stupeur</td>
<td>Stupor</td>
</tr>
<tr>
<td>trauma</td>
<td>травма</td>
<td>травма</td>
<td>trauma</td>
<td>Traumatisme</td>
<td>Trauma</td>
</tr>
</tbody>
</table>

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: brady-cardia, hemi-plegia, neur-algia, hyster-ectomy and so on.

Derivative terms consist of:

-a root and a prefix: dia+agnōsis – diagnosis, recognition;
-a prefix, a root and a suffix: para+-nephri+-itis – paranephritis, inflammation of paranephric cellular tissue, peri+-nephri+-itis – perinephritis, inflammation of kidney fibrous capsule;
-a root and a suffix: nephr-+-itis – nephritis, kidney inflammation, nephr-+-osis – nephrosis, general name of 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; gastorrhagia profusa – profuse gastric bleeding; vitium cordis – heart disease; tuberculōsis pulmōnum – tuberculosis of the lungs; cancer cervīcis utēri – 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, pathophysiology* 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:

<table>
<thead>
<tr>
<th>Term Element</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>carcinôma, ātis n – malignant tumor developing from scaly or glandular epithelium</td>
<td>adenocarcinôma, ātis n – malignant tumor from glandular epithelium</td>
</tr>
<tr>
<td>diagnostica, ae f 1. science about diseases recognition; 2. process of a patient examination</td>
<td>iridodiagnostica, ae f diagnostics of diseases by the eye iris</td>
</tr>
<tr>
<td>therapia, ae f – science of internal diseases treatment</td>
<td>hydrotherapia, ae f – treatment with water</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Greek term-element</th>
<th>Latin word</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>cyst-</td>
<td>vesīca urinaria</td>
<td>urinary bladder</td>
</tr>
<tr>
<td>proct-</td>
<td>rectum, i n</td>
<td>rectum</td>
</tr>
<tr>
<td>colp-</td>
<td>vagīna, ae f</td>
<td>vagina</td>
</tr>
</tbody>
</table>

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 -cýtus, -genēsis, -gēnus, -lithiāsis, -lithus, -lōgus, -lŷsis, -stāsis, -stōma.

§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:
gland, glandular tissue – adenocytus glandular cell;
adenoids – adenotomy removal of adenoids;
lymph node – lymphadenitis inflammation of the lymph node;
eye cornea – keratotomy incision of the cornea;
corneal layer of epidermis – keratosis skin disease characterized by thickening of the epidermis corneal layer;
bone marrow – myelogramma blood picture of bone marrow punctuate;
spinal cord – myelographia X-ray filming of the spinal cord.

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 ‘arthron’ – 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 joint and 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; metroposis – falling of uterus; metrorrhagia – acyclic uterine 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

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

Root term-elements

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

**Prefix term-element**

endo-  inside

*nosologia – study about forms and classification of diseases.*
**Simple medical terms:**

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

**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:*

- femīna, ae f;
- nasus, i m;
- embryo, ōnis m;
- oculus, 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:

<table>
<thead>
<tr>
<th>-lōgus</th>
<th>-iater</th>
<th>-lōgus; -iater</th>
</tr>
</thead>
<tbody>
<tr>
<td>oncologus</td>
<td>paediater</td>
<td>psychologus</td>
</tr>
<tr>
<td>otorhinolaryngologus</td>
<td>phthisiater</td>
<td>psychiater</td>
</tr>
<tr>
<td>gynaecologus</td>
<td>phoniatr</td>
<td>gerontologus</td>
</tr>
<tr>
<td>ophthalmologus</td>
<td>geriatr</td>
<td></td>
</tr>
<tr>
<td>biologus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>embryologus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>stomatologus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>physiologus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>dermatologus</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

1) dermat(o) -logia; (-lōgus);
2) ophthalm(o) -logia; (-lōgus; -metria; -scopia; -scopium);
3) physi(o) -logia; (-lōgus; -therapia);
4) psych(o) -logia; (-lōgus; -iatria; -iater; -therapia);
5) stomat(o) -logia; (-lōgus; -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; dermatológus; geriatria; geroder-mia; gerontologia; dactyloscopia; ophthalmológus; otolaryngológus; otorhino-laryngologia; otoscopia; phonendoscopium; phthisiater; physiologia; physiológus; psychiatrist; 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, ἐνδό (endo) -inner; internal and σκοπή (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, paediatricia, geriatria, phoniatria.
2) -logia: nosologia, dermatologia, gerontologia, oncologia, embryologia, otorhinolaryngologia.
3) -scopia: ophthalmoscopia, otoscopia, rhinoscopia, endoscopia.
4) -lŏgus: dermatológus, ophthalmológus, physiológus, otolaryngológus.
5) -therapia: physiotherapia, psychotherapia.

Ex. 8. Give the Latin lexical form and the full definition of each term in English:
otorhinolaryngology, biologist, geriatrics, ophthalmology, phoniatics, physiotherapy, psychiatics (psychiatry), physiology, stomatology, paediatrics, gerontology, ophthalmoscopy, otolaryngologist, psychologist, rhinoscopy, paediatrician, 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.
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

<table>
<thead>
<tr>
<th>Term-element</th>
<th>Meaning</th>
<th>English equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>-pathia</td>
<td>general name of diseases</td>
<td>-pathy</td>
</tr>
<tr>
<td>-graphia</td>
<td>1) X-ray examination; 2) examination of electrical activity (of the heart or brain)</td>
<td>-graphy</td>
</tr>
<tr>
<td>-gramma</td>
<td>result of examination or X-ray picture</td>
<td>-gram</td>
</tr>
<tr>
<td>-algia</td>
<td>pain (ache)</td>
<td>-algia (-alga)</td>
</tr>
<tr>
<td>-odynia</td>
<td></td>
<td>-odynia</td>
</tr>
<tr>
<td>-phobia</td>
<td>obsessive fear</td>
<td>-phobia</td>
</tr>
<tr>
<td>-mania</td>
<td>abnormal addiction to something</td>
<td>-mania</td>
</tr>
</tbody>
</table>

Suffix term-elements

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Meaning</th>
<th>English equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>-ītis, itidis f</td>
<td>inflammation</td>
<td>-ītis</td>
</tr>
<tr>
<td>-ōsis, is f</td>
<td>non-inflammatory disease</td>
<td>-ōsis</td>
</tr>
</tbody>
</table>

Root term-elements

<table>
<thead>
<tr>
<th>Greek term-element</th>
<th>Latin term</th>
<th>Meaning</th>
<th>English equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>angi-</td>
<td>vas, vasis n</td>
<td>vessel</td>
<td>angi-</td>
</tr>
<tr>
<td>arthr-</td>
<td>articulatio, ōnis f</td>
<td>joint</td>
<td>arthr-</td>
</tr>
<tr>
<td>cardi- (-cardia)</td>
<td>cor, cordis n</td>
<td>heart</td>
<td>cardi- (-cardia)</td>
</tr>
<tr>
<td>cephal-; -cephalia</td>
<td>caput, ĭtis n</td>
<td>head</td>
<td>cephal-</td>
</tr>
<tr>
<td>cholecyst-</td>
<td>vesīca fellea</td>
<td>gall-bladder</td>
<td>cholecyst-</td>
</tr>
<tr>
<td>cyst-</td>
<td>vesīca urinaria</td>
<td>urinary bladder</td>
<td>cyst-</td>
</tr>
<tr>
<td>encephal-</td>
<td>cerēbrum, ĭn</td>
<td>brain</td>
<td>encephal-</td>
</tr>
<tr>
<td>gloss-</td>
<td>lingua, ae f</td>
<td>tongue</td>
<td>gloss-</td>
</tr>
<tr>
<td>Greek term-element</td>
<td>Latin term</td>
<td>Meaning</td>
<td>English equivalent</td>
</tr>
<tr>
<td>--------------------</td>
<td>------------</td>
<td>---------</td>
<td>------------------</td>
</tr>
<tr>
<td>hydr-</td>
<td>aqua, ae f</td>
<td>water</td>
<td>hydr-</td>
</tr>
<tr>
<td>my-, myos-</td>
<td>muscŭlus, i m</td>
<td>muscle</td>
<td>my-</td>
</tr>
<tr>
<td>myel- (myelia)</td>
<td>medulla spinālis</td>
<td>spinal cord</td>
<td>myel- (-myelia)</td>
</tr>
<tr>
<td>neur-</td>
<td>nervus, i m</td>
<td>nerve</td>
<td>neur-</td>
</tr>
<tr>
<td>odont-</td>
<td>dens, dentis m</td>
<td>tooth</td>
<td>odont-</td>
</tr>
<tr>
<td>oste-</td>
<td>os, ossis n</td>
<td>bone</td>
<td>oste-</td>
</tr>
<tr>
<td>osteomyel-</td>
<td>medulla ossium</td>
<td>bone marrow</td>
<td>osteomyel-</td>
</tr>
<tr>
<td>path-</td>
<td>morbus, i m</td>
<td>disease, disorder</td>
<td>path-</td>
</tr>
<tr>
<td>phleb-</td>
<td>vena, ae f</td>
<td>vein, venous network</td>
<td>phleb-</td>
</tr>
<tr>
<td>pyr-</td>
<td>febris, is f</td>
<td>1. fire 2. fever</td>
<td>pyr-</td>
</tr>
<tr>
<td>somat-</td>
<td>corpus, ŏris n</td>
<td>body</td>
<td>somat-</td>
</tr>
<tr>
<td>spondyl-</td>
<td>vertĕbra, ae f</td>
<td>vertebra, backbone</td>
<td>spondyl-</td>
</tr>
<tr>
<td>tox-, toxic-</td>
<td>venēnum, i n</td>
<td>poison</td>
<td>tox-, toxic-</td>
</tr>
</tbody>
</table>

**Simple medical terms:**

<table>
<thead>
<tr>
<th>Latin simple term</th>
<th>English equivalent</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>angīna, ae f</td>
<td>quinsy</td>
<td>acute infectious disease of pharyngeal lymphadenoid ring</td>
</tr>
<tr>
<td>ascītes, ae m</td>
<td>ascites</td>
<td>accumulation of fluid in the abdominal cavity</td>
</tr>
<tr>
<td>asthenia, ae f</td>
<td>asthenia</td>
<td>general weakness, characterized by exhaustion of nervous and mental processes in the organism</td>
</tr>
<tr>
<td>auscultatio, ōnis f</td>
<td>auscultation (1)</td>
<td>listening to the internal sounds of the body, usually using a stethoscope (performed for the purposes of examining the circulatory, respiratory and gastrointestinal systems)</td>
</tr>
<tr>
<td>curatio, ōnis f</td>
<td>curing</td>
<td>care, taking care of the patient, treatment</td>
</tr>
<tr>
<td>cysta, ae f</td>
<td>cyst</td>
<td>hollow tumor with liquid or semi-liquid contents</td>
</tr>
<tr>
<td>habitus, us m</td>
<td>habitus</td>
<td>combination of external signs, body-build</td>
</tr>
<tr>
<td>hydrops, ōpis m</td>
<td>hydrops</td>
<td>accumulation of fluid in some body cavity</td>
</tr>
<tr>
<td>oedema, atis n</td>
<td>oedema</td>
<td>accumulation of fluid in tissue spaces</td>
</tr>
<tr>
<td>palpatio, ōnis f</td>
<td>palpation (2)</td>
<td>medical diagnostic examination with the hands to discover internal abnormalities</td>
</tr>
<tr>
<td>pathologia, ae f</td>
<td>pathology</td>
<td>1) deviation from norm; 2) field of medicine, studying regularities of morbid processes arising</td>
</tr>
<tr>
<td>percussio, ōnis f</td>
<td>percussion (3)</td>
<td>a method of tapping body parts with fingers, hands, or small instruments</td>
</tr>
<tr>
<td>toxicosis, is f</td>
<td>toxicosis</td>
<td>any diseased condition due to poisoning</td>
</tr>
</tbody>
</table>
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, ōris n; língua, ae f; vesīca fellea; os, ossis n; aq-ua, ae f; venēnum, i n; cerēbrum, i n; vertebra, ae f; vas, vasis n; morbus, i m; muscūlus, 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; -ĭtis);
5) cyst-(o) -pathia; (-gramma; -ĭtis);
6) encephal-(o) -pathia; (-gramma; -ĭtis);
7) my-(o), myos- -algia; (-odynia; -logia; -pathia; -ĭtis);
8) myel-(o) -pathia; (-ĭtis; -gramma);
9) neur-(o) -algia; (-ĭtis; -logia; -pathia; -osis);
10) odont(o) -algia; (-logia);
11) phleb-(o) -graphia; (-gramma; -ĭtis);
12) spondyl-(o) -ĭtis; (-ŏsis; -pathia);
13) toxic-( o) -ŏsis; (-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; arthrophathia; 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; arthritīs; spondylītis; phlebītis; cystītis; rhinītis; peritonītis; dermatītis; neurītis; myosītis.

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; cholecystitis; angiologia; cephalgia; encephalitis; encephalomylelitis; myocarditis; glossalgia; myositis; neurodermitis; neurologus; osteoarthritis; osteoarthropathia; osteoarthrosis; osteomyelitis; osteologia; pathologia; peritonitis; phlebogramma; thoracodynia; thoracomyodynia; thrombophebitis; neurasthenia; toxicosis; psychosis; 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, angiography, 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:
2) Habitus 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

<table>
<thead>
<tr>
<th>Term-element</th>
<th>Meaning</th>
<th>English equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>-cele</td>
<td>hernia, evagination, cyst</td>
<td>-cele</td>
</tr>
<tr>
<td>-centēsis</td>
<td>puncture</td>
<td>-centesis</td>
</tr>
<tr>
<td>-ectomia</td>
<td>complete removal (of an organ or tissue), excision</td>
<td>-ectomy</td>
</tr>
<tr>
<td>-pexia</td>
<td>fixation, attachment of some inner organ</td>
<td>-pexis, -pexy</td>
</tr>
<tr>
<td>-plastĭca</td>
<td>plastic surgical operation, operative restoring of organ form or functions</td>
<td>-plasty</td>
</tr>
<tr>
<td>-ptōsis</td>
<td>descending</td>
<td>-ptosis</td>
</tr>
<tr>
<td>Term-element</td>
<td>Meaning</td>
<td>English equivalent</td>
</tr>
<tr>
<td>--------------</td>
<td>---------</td>
<td>--------------------</td>
</tr>
<tr>
<td>-rrhagia</td>
<td>bleeding</td>
<td>-rrhagia, -rrhage</td>
</tr>
<tr>
<td>-rrhēxis</td>
<td>tissue rupture</td>
<td>-rrhexis</td>
</tr>
<tr>
<td>-rrhaphia</td>
<td>suturing</td>
<td>-rrhaphy</td>
</tr>
<tr>
<td>-schisis</td>
<td>congenital splitting, dividing into two parts</td>
<td>-schisis</td>
</tr>
<tr>
<td>-stōma</td>
<td>artificial opening (fistula)</td>
<td>-stoma</td>
</tr>
<tr>
<td>-stomia</td>
<td>operation of making a fistula or anastomosis</td>
<td>-stomy</td>
</tr>
<tr>
<td>-tomia</td>
<td>dissection, making an incision</td>
<td>-tomy</td>
</tr>
</tbody>
</table>

**Suffix term-element**

| -ōma, ātis n | mainly benign tumor from some kind of tissue| -oma |
| -carcinōma, ātis n | malignant tumor from some kind of tissue| -carcinoma |

**Prefix term-elements**

<table>
<thead>
<tr>
<th>Prefix term-elements</th>
<th>Meaning</th>
<th>English equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>endo-</td>
<td>inner (mucous) lining</td>
<td>endo-</td>
</tr>
<tr>
<td>para-</td>
<td>cellular tissue around the organ</td>
<td>para-</td>
</tr>
<tr>
<td>peri-</td>
<td>outer covering (capsule, fibrous tissue, peritoneum covering an organ)</td>
<td>peri-</td>
</tr>
</tbody>
</table>

**Root term-elements**

<table>
<thead>
<tr>
<th>Greek term-element</th>
<th>Latin term</th>
<th>Meaning</th>
<th>English equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>aden-</td>
<td>1) glandūla, ae f 2) adenoīdes, um f 3) nodus lymphaticus</td>
<td>1) glandular epithelium; 2) adenoids; 3) lymph node</td>
<td>aden-</td>
</tr>
<tr>
<td>cheil- (-cheilia)</td>
<td>labium, i n</td>
<td>lip</td>
<td>cheil- (-cheilia)</td>
</tr>
<tr>
<td>chondr-</td>
<td>cartilāgo, ŭnis f</td>
<td>cartilage</td>
<td>chondr-</td>
</tr>
<tr>
<td>col-, -colon</td>
<td>1) crassum, i n 2) colon, i n</td>
<td>1) large intestine; 2) colon</td>
<td>col-, -colon</td>
</tr>
<tr>
<td>colp-</td>
<td>vagīna, ae f</td>
<td>vagina</td>
<td>colp-</td>
</tr>
<tr>
<td>enter-</td>
<td>intestīnum, i n</td>
<td>intestine (mainly small intestine)</td>
<td>enter-</td>
</tr>
<tr>
<td>gastr-</td>
<td>ventricūlus, i m</td>
<td>stomach</td>
<td>gastr-</td>
</tr>
<tr>
<td>hepat-</td>
<td>jecur, ōris n</td>
<td>liver</td>
<td>hepat-</td>
</tr>
<tr>
<td>Greek term-element</td>
<td>Latin term</td>
<td>Meaning</td>
<td>English equivalent</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------</td>
<td>----------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>kerat-</td>
<td>cornea, ae f</td>
<td>1) cornea; 2) corneal layer of epiderm(^2)</td>
<td>kerat-</td>
</tr>
<tr>
<td>lapar-</td>
<td>abdomen, īnis n</td>
<td>abdomen</td>
<td>lapar-</td>
</tr>
<tr>
<td>mast- (-mastia), mamm-</td>
<td>mamma, ae f</td>
<td>mammary gland</td>
<td>mamm-</td>
</tr>
<tr>
<td>1) metr-, hyster- 2) -metra</td>
<td>utērus, i m</td>
<td>1) uterus; 2) in the uterus</td>
<td>metr-, hyster-</td>
</tr>
<tr>
<td>nephr-</td>
<td>ren, renis m</td>
<td>kidney</td>
<td>nephr-</td>
</tr>
<tr>
<td>proct-</td>
<td>rectum, i n</td>
<td>rectum</td>
<td>proct-</td>
</tr>
<tr>
<td>pyel-</td>
<td>pelvis renālis</td>
<td>renal pelvis</td>
<td>pyel-</td>
</tr>
<tr>
<td>salping- (-salpinx)</td>
<td>tuba uterîna</td>
<td>uterine tube</td>
<td>salping-</td>
</tr>
<tr>
<td>splen- (-splenia)</td>
<td>lien, liēnis m</td>
<td>spleen</td>
<td>splen-</td>
</tr>
<tr>
<td>typhl-</td>
<td>caecum, i n</td>
<td>blind intestine (caecum)</td>
<td>typhl-</td>
</tr>
</tbody>
</table>

### Simple medical terms:

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

\(^2\) 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
<table>
<thead>
<tr>
<th>Latin simple term</th>
<th>English equivalent</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>prolapssus, us m</td>
<td>prolapse</td>
<td>falling, displacement of an inner organ through a natural opening</td>
</tr>
<tr>
<td>resectio, ōnis f</td>
<td>resection</td>
<td>partial removal of an organ, usually connecting of its preserved parts</td>
</tr>
<tr>
<td>sarcōma, ātis n</td>
<td>sarcoma</td>
<td>malignant tumor consisting of immature connective tissue</td>
</tr>
</tbody>
</table>

**EXERCISES:**

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

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

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

- tuba uterīna; ventricūlus, i m;
- vagina, ae f; intestīnum, i n;
- crassum, i n;
- cornea, ae f; utērus, i m;
- adenoīdes, um f; ren, renis m;
- pelvis renālis; abdomen, īnis n;
- labium, ii n;
- rectum, i n;
- caecum, i n;
- glandula, ae f;
- mamma, ae f;
- cartilāgo, īnis 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; -stoma; -itis; -pexia);
4) colp(o) -itis; (-ptosis; -scopia; -rrhaphia);
5) enter(o) -itis; (-pexia; -ptosis; -rrhagia; -rraphia; -plastica; -colitis; -pathia);
6) gastr(o) -algia; (-itis; -ectomia; -cele; -ptosis; -rrhagia; -rraphia; -scopia; -tomia);
7) mast(o) -itis; (-pathia; -ectomia);
8) hyst̄er(o) -ectomia; (-rraphia; -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; glossoptōsis; glossorrhagia; glossorrhaphia;
3) cardiocentesis; laparocentesis; thoracocentesis;
4) cheiloschisis; palatoschisis; onychoschisis (onych - nail);
5) appendectomia; tonsillectomia, keratectomia; mastectomia; cystectomia;
6) enteroctōsis; gastroduodenītis; gastroenterītis; gastroenterocīlitis; lymphadenītis;
7) myōma; odontōma; osteōma; neurōma;
8) gastropōsis; hepatoptōsis; hysteroptōsis; colpoptōsis; nephroptōsis;
9) adenotomia; embryotomia; myelotomia; phlebotomia; osteotomia.

Ex. 5. Explain the meaning of the terms:
colpohysterotomia, colpohysteropexia; palatoschisis; cardiorrhexis; gastroenterologia; lymphadenōma; myotomia; nephroptōsis; cheiloschīsis; metro(hystero)salpingographia; hydrosalpinx; chondrosarcōma; embryotomia; ophthalmorrhexis; chondrītis; septicōplastica; endometrītis; parametrītis; perimetrītis; endocardītis; endophysalītis; pericardītis; perinephrītis; paranephrītis; paracīlitis; paraproctītis; periadenītis; periarthrītis; perichondrītis; periduodenītis; peritonītis; periosītis; 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, gastroesophagostomia, 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, metrorrhaxis, colpo-hysteropexy, ascites, gastropthosis, cystoschisis, keratoplasty, adenotomia, oesophagostomia, gastrocele, proctoscoptry, angiorrhagia, enterocolitis, auscultation, mammogram, salpingectomy, typhloccele, ophthalmorrhaxis, asthenia, pyelitis, nephropathy, proctologist, angioma, palpation, splenotomostis, infarct, nephritis, hydros, colonorrhagia, enterococele, osteoma, colpocystotomy, cheiloschisis, percussion, salpingogram, laparoscopy, neurorrhaphy, oedema, cardiorrhaxis.

Ex. 9. Learn the following professional expressions:
   1) Situs viscèreum inversus. Abnormal position of viscera.
   2) Facies Hippocrática. 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, phthisiater, stomatoscopia, osteitis, encephalogramma, psychosis, thoracocentesis, cystorrhagia, diagnosis, salpingectomy, physiologia, angiopathia, myelitis, cancerophobia, rhinogramma, colpotoria, osteopathia, toxicosis, neurologus, adenocarcinoma, keratotomy, dermatosis, gynaecologus, myasthenia, oncologus, enterocolitis, psychiatria, aetiology, osteoma, biologia, cardiolgoeus, physiotherapia, otorhinolaryngologia, hydrarthrosis, spondylitis, laparoscopy, cystoscopy, myocèle, embryologia, geriatricus, cholecystitis, gastrocele, neuralgia, pyliritis, osteonecrosis, leymphangioma, mastogramma, ophthalmoscopia, proctologus, somatologia, toxicomania, odontalgie, nephrographia, paediatria, mammogramma, arthropathia, hepatitis, gastroenteritis, osteosclerosis, metrorrhaxis, splenoptosis, 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

<table>
<thead>
<tr>
<th>Term-element</th>
<th>Meaning</th>
<th>English equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>-lýsis</td>
<td>1) breakdown, dissolution, destruction; 2) freeing from adhesions by surgical way <em>(heart, lung, uterine tube, brain membrane)</em></td>
<td>-lysis</td>
</tr>
<tr>
<td>-aemia</td>
<td>presence of something in the blood</td>
<td>-aemia</td>
</tr>
<tr>
<td>-ectāsia (-ectasia)</td>
<td>pathological widening</td>
<td>-ectasia</td>
</tr>
<tr>
<td>-genēsis</td>
<td>process of development</td>
<td>-genesis</td>
</tr>
<tr>
<td>-lithus (lith-)</td>
<td>stone</td>
<td>-lith</td>
</tr>
<tr>
<td>-lithiāsis</td>
<td>stone disease, stone formation</td>
<td>-lithiasis</td>
</tr>
<tr>
<td>-penia</td>
<td>decreased number of some blood cells</td>
<td>-penia</td>
</tr>
<tr>
<td>-philia</td>
<td>tendency to something</td>
<td>-philia</td>
</tr>
<tr>
<td>-poēsis</td>
<td>formation</td>
<td>-poesis, -poiesis</td>
</tr>
<tr>
<td>-rrhoea</td>
<td>1) outflow of secretion, mucus; 2) loss <em>(hair)</em></td>
<td>-rrhoea</td>
</tr>
<tr>
<td>-menorrhoea</td>
<td>monthly uterine bleeding (menstruation)</td>
<td>-menorrhea</td>
</tr>
<tr>
<td>-stāsis</td>
<td>flow stop; congestion of physiological fluid</td>
<td>-stasis</td>
</tr>
<tr>
<td>-uria</td>
<td>presence of something in the urine</td>
<td>-uria</td>
</tr>
</tbody>
</table>

### Suffix term-elements

<table>
<thead>
<tr>
<th>Term-element</th>
<th>Meaning</th>
<th>English equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>-ōsis, is <em>f</em></td>
<td>increased amount of blood cells; multiplicity of manifestation</td>
<td>-ōsis</td>
</tr>
</tbody>
</table>

### Root term-elements

<table>
<thead>
<tr>
<th>Greek term-element</th>
<th>Latin term</th>
<th>Meaning</th>
<th>English equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>chole- (-cholia)</td>
<td>1) fel, fellis <em>n</em> 2) bilis, is <em>f</em></td>
<td>bile</td>
<td>chole- (-cholia)</td>
</tr>
<tr>
<td>chyl-, lymph-*</td>
<td>lympha, ae <em>f</em></td>
<td>lymph</td>
<td>chyl-, lymph-*</td>
</tr>
<tr>
<td>cyt- (-cytus)*</td>
<td>cellŭla, ae <em>f</em></td>
<td>cell, blood corpuscle</td>
<td>cyt- (-cyte)</td>
</tr>
<tr>
<td>erythr-</td>
<td>ruber, bra, brum</td>
<td>red, related to erythrocytes</td>
<td>erythr-</td>
</tr>
<tr>
<td>glyk-, glucos-</td>
<td>dulcis, e</td>
<td>sweet, presence of sugar, glucose</td>
<td>glyc-</td>
</tr>
<tr>
<td>galact-, -galactia</td>
<td>lac, lactis <em>n</em></td>
<td>milk</td>
<td>galact-, -galactia</td>
</tr>
<tr>
<td>haem-, haemat-</td>
<td>sanguis, inis <em>m</em></td>
<td>blood</td>
<td>hem-, hemat-</td>
</tr>
<tr>
<td>hidr-</td>
<td>sudor, ōris <em>m</em></td>
<td>sweat</td>
<td>hidr-</td>
</tr>
<tr>
<td>hygr-</td>
<td>humor, ōris <em>m</em></td>
<td>moisture, humor, fluid</td>
<td>hygr-</td>
</tr>
<tr>
<td>leuc-</td>
<td>albus, a, um</td>
<td>white, related to leucocytes</td>
<td>leuc-</td>
</tr>
<tr>
<td>Greek term-element</td>
<td>Latin term</td>
<td>Meaning</td>
<td>English equivalent</td>
</tr>
<tr>
<td>--------------------</td>
<td>------------</td>
<td>---------</td>
<td>--------------------</td>
</tr>
<tr>
<td>lip-, seb-</td>
<td>1) adeps, ipis m  2) sebum, i n</td>
<td>1) fatty tissue of the body; 2) fatty secretion of the sebaceous glands</td>
<td>lip-, seb-</td>
</tr>
<tr>
<td>mening-</td>
<td>meninx, ngis f</td>
<td>brain membrane</td>
<td>mening-</td>
</tr>
<tr>
<td>pneum-, pneumat-</td>
<td>aër, æris m</td>
<td>air or gas in the organ or cavity</td>
<td>pneum-, pneumat-</td>
</tr>
<tr>
<td>pneum-, pneumon-</td>
<td>pulmo, ōnis m</td>
<td>lung</td>
<td>pneum-, pneumon-</td>
</tr>
<tr>
<td>py-</td>
<td>pus, puris n</td>
<td>pus</td>
<td>py-</td>
</tr>
<tr>
<td>sero-</td>
<td>serum, i n</td>
<td>blood serum</td>
<td>sero-</td>
</tr>
<tr>
<td>thyr-</td>
<td>glandūla thyr(e)oidea</td>
<td>thyroid gland</td>
<td>thyr-</td>
</tr>
<tr>
<td>trich-(-trichia)</td>
<td>pilus, i m capillus, i m</td>
<td>hair</td>
<td>trich-</td>
</tr>
<tr>
<td>thorac-, -thōrax</td>
<td>thorax, pleural cavity</td>
<td>thorac-, -thōrax</td>
<td></td>
</tr>
<tr>
<td>thromb-</td>
<td>thrombus, i m</td>
<td>blood clot</td>
<td>thromb-</td>
</tr>
<tr>
<td>ur-</td>
<td>urīna, ae f</td>
<td>1) urine; 2) urinary organs; 3) nitrous substance</td>
<td>ur-</td>
</tr>
</tbody>
</table>

*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;
chyliuria, ae f — a condition in which the urine contains lymph, chyliuria.
The root lymph- is used if lymph is considered as a part of lymphatic cells, glands and vessels:
lymphangītis, itĭdis f — an inflammation of lymphatic vessels, lymphangiitis.

*Myelocytus, i m – myelocyte – bone marrow cell.

### Simple medical terms:

<table>
<thead>
<tr>
<th>Latin simple term</th>
<th>English equivalent</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>asthama, ātis n</td>
<td>asthma</td>
<td>suffocation attacks of different origin</td>
</tr>
<tr>
<td>exsudātum, i n</td>
<td>exudate</td>
<td>inflammatory fluid coming out from small vessel walls in inflammation</td>
</tr>
<tr>
<td>glaucōma, ātis n</td>
<td>glaucoma</td>
<td>eye disease characterized by elevated intraocular pressure</td>
</tr>
<tr>
<td>(haemo)dialywaćs, is f</td>
<td>(haemo)dialysis</td>
<td>method of treating renal failure by means of the apparatus “artificial kidney”</td>
</tr>
<tr>
<td>hidrōsis, is f</td>
<td>hidrosis</td>
<td>process of sweating, perspiration</td>
</tr>
<tr>
<td>hygrōma, ātis n</td>
<td>hygroma</td>
<td>an accumulation of fluid in a sac, cyst or bursa causing swelling</td>
</tr>
<tr>
<td>Latin simple term</td>
<td>English equivalent</td>
<td>Meaning</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------------</td>
<td>---------</td>
</tr>
<tr>
<td>leucōsis, is f</td>
<td>leucosis</td>
<td>general name of tumors arising from blood cells (blood cancer)</td>
</tr>
<tr>
<td>panaritium, i n</td>
<td>panaritium</td>
<td>acute purulent inflammation of the tissue around the nail</td>
</tr>
<tr>
<td>polypus, i m</td>
<td>polyp</td>
<td>pathologic formation protruding above the organ surface and connected to it with a pedicle</td>
</tr>
<tr>
<td>sepsis, is f</td>
<td>sepsis</td>
<td>infection with pyogenic microorganisms</td>
</tr>
<tr>
<td>struma, ae f</td>
<td>goiter</td>
<td>enlarged thyroid gland as a result of iodine deficiency</td>
</tr>
<tr>
<td>thrombōsis, is f</td>
<td>thrombosis</td>
<td>formation of a blood clot inside a blood vessel, obstructing the blood flow through the circulatory system</td>
</tr>
</tbody>
</table>

**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:**

- cellula, ae f; albus, a, um; pulmo, ōnis m; sanguis, īnis m; pus, puris n; serum, i n; lympha, ae f; urīna, ae f; glandula 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; (-stāsis; -lithiāsis; -cysētis; -cystogramma; -angītis);
2) chyl(o)- -stāsis; (-thōrax; -urīa);
3) cyt(o)- -logia; (-gramma; -diagnōsis);
4) erythr(o)- -cūtus; (-dermia; -poēsis; -cytōsis);
5) haem(o)- -rrhagia; (-līysis; -philia; -thōrax);
6) haemato(o)- -ōma; (-lōgus; -urīa);
7) hidr(o)- -adenītis; (-ādenōma; -cystōma; -ōsis);
8) leuc(o)- -cūtus; (-cytōsis; -ōsis; -derma; -līysis; -poēsis);
9) myel(o)- -tīs; (-cūtus; -graphia; -pathia; -tomia);
10) onc(o)- -logia; (-lōgus; -genēsis);
11) thromb(o)- -cūtus; (-phlebītis; -philia; -cytōsis; -ōsis);
12) py(o)- -dermia; (-metra; -salpinx; -thōrax; -urīa);
13) sero- -diagnōsis; (-logia; -therapia);
14) ur(o)- -logia; (-aemia; -graphia; -lithiāsis; -lithus; -lōgus; -poēsis; -sepsis);
15) pneum(o)- -tomia; (-lŷsis; -thōrax; -peritoneum);
16) lip- -ōma; (-aemia);
17) thorac(o)- -algia; (-centēsis; -scopia; -odynia; -tōmia; -plastīca);
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) cardiolŷsis; pneumolŷsis; meningolŷsis; osteolŷsis; hydrolŷsis;
3) uropoēsis; erythropoēsis; leucopoēsis; haemopoēsis;
4) haemorrhagia; haemolŷsis; haemophilia; haemothōrax; haematolōgus;
5) glucosuria; glykaemia;
6) hydrothōrax; hydropneumothōrax; pneumothōrax; haemothōrax;
7) phlebolithus; urolithus; rhinolithus; nephrolithus; enterolithus; hepatolithus; odontolithus;
8) cholelithiāsis; hepatolithiāsis; urolithiāsis; enterolithiāsis.

Ex. 5. Explain the meaning of the terms:
strumectomia; haematosalpinx; typhlectasia; chondrogenēsis; galactostāsis; pneumohamathōrax; leucocyturia; salpingolŷsis; adiponecrōsis; thyreotox-icōsis; albuminuria; hidradēnitis; hidradēnōma; hygrōma; lipuria; pathogenēsis; thyreoidectomia; thyreōditis; odontogenēsis; thrombōsis; cholecystolithotomia; leucōsis; leucocytōsis; myelogenēsis; dacryorrhoea (dacry-tears); urolithiāsis; 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, chylothora,
   uraemia, monocytopoesis, adenotomy, galactostasis, thyrotoxicosis, hemophilia,
   erythropenia, lymphangiitis, trichorrhrea, cholecystolithiasis, hematometra,
   osteochondrosis, pneumorrhaphy, dialysis, thoracometry, meningolysis,
   hematology, pathogenesis, pyorrhrea, 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 medicina 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.

<table>
<thead>
<tr>
<th>Final term-elements</th>
<th>Term-element</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>-arthria</td>
<td>ability to pronounce distinctly</td>
<td></td>
</tr>
<tr>
<td>-aesthesia</td>
<td>sensitivity</td>
<td></td>
</tr>
<tr>
<td>-chlorhydria</td>
<td>hydrochloric acid (HCl)</td>
<td></td>
</tr>
<tr>
<td>-chylia</td>
<td>gastric juice</td>
<td></td>
</tr>
<tr>
<td>-ergia; -urgia</td>
<td>reactivity, activity, work</td>
<td></td>
</tr>
<tr>
<td>-kinesia</td>
<td>movement</td>
<td></td>
</tr>
<tr>
<td>-mnesia (mnem)</td>
<td>memory</td>
<td></td>
</tr>
<tr>
<td>-pepsia</td>
<td>digestion</td>
<td></td>
</tr>
<tr>
<td>-phagia (phag-)</td>
<td>1) swallowing; 2) eating up</td>
<td></td>
</tr>
<tr>
<td>-plasia</td>
<td>formation of an organ or tissue</td>
<td></td>
</tr>
<tr>
<td>-plegia</td>
<td>paralysis of muscles group</td>
<td></td>
</tr>
<tr>
<td>-tensio</td>
<td>pressure in the vessels or hollow organs</td>
<td></td>
</tr>
<tr>
<td>-thermia</td>
<td>temperature, heating</td>
<td></td>
</tr>
<tr>
<td>-tonia</td>
<td>tonus (of muscles, vessels)</td>
<td></td>
</tr>
<tr>
<td>-trophia</td>
<td>nutrition of tissues and organs</td>
<td></td>
</tr>
<tr>
<td>optic; -opia, -opsia</td>
<td>1) related to eyesight; 2) diagnostic investigation</td>
<td></td>
</tr>
</tbody>
</table>

§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.

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Meaning</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>a-, an-(before a vowel)</td>
<td>Latin</td>
<td>absence</td>
</tr>
<tr>
<td>dia-</td>
<td>Greek</td>
<td>through</td>
</tr>
<tr>
<td>dys-</td>
<td>Greek</td>
<td>disorder, impairment</td>
</tr>
<tr>
<td>ec-</td>
<td>Greek</td>
<td>out (of)</td>
</tr>
<tr>
<td>in-</td>
<td>Latin</td>
<td>in, into</td>
</tr>
<tr>
<td>im- before b, m</td>
<td>Latin</td>
<td>implantation – implantation, inserting materials foreign to the organism (plastic, metals and others) and implants of living nature (cartilages, bones and others) into the body</td>
</tr>
<tr>
<td>ir-</td>
<td></td>
<td>irradiação – radial spreading of pain to nearby body parts</td>
</tr>
<tr>
<td>endo-</td>
<td>Greek</td>
<td>inner lining of a hollow organ</td>
</tr>
<tr>
<td>hyper-</td>
<td>Greek</td>
<td>increase, elevation</td>
</tr>
<tr>
<td>hypo-</td>
<td>Greek</td>
<td>decrease</td>
</tr>
<tr>
<td>meta-</td>
<td>Greek</td>
<td>transition from one place or state into another</td>
</tr>
<tr>
<td>para-</td>
<td>Greek</td>
<td>1. cellular tissue near or around the organ; 2. false; 3. from both sides</td>
</tr>
<tr>
<td>Prefix</td>
<td>Meaning</td>
<td>Examples</td>
</tr>
<tr>
<td>--------</td>
<td>------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>peri-</td>
<td>Greek outer covering</td>
<td>perimetrium – serous uterus covering; periosteum – external covering of bones</td>
</tr>
<tr>
<td>pro-</td>
<td>Greek forward, in advance</td>
<td>prognōsis= pro forward+ agnos recognition, cognition – foreseeing; scientifically well-grounded supposition about further disease course; progeria – untimely organism aging</td>
</tr>
<tr>
<td>re-</td>
<td>Latin recurrence, restoration</td>
<td>recidivum recidivation – relapse, recurrence of a disease in its typical or not fully manifested form; replantatio replantation – operation of reattachment of the amputated in trauma part of an organ or extremity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>reverse action refluxus reflux – reverse flow</td>
</tr>
<tr>
<td>sub-</td>
<td>Latin less, in a lesser degree</td>
<td>subacūtus – subacute (about a disease which has no acute and no chronic course); subictērus – the slightest degree of jaundice</td>
</tr>
<tr>
<td>super-</td>
<td>Latin more, excess</td>
<td>superacūtus – extremely acute (about a disease) superinfectio – new, repeated contamination while the primary infection still persists</td>
</tr>
<tr>
<td>syn-, sym-</td>
<td>Greek connection joint action</td>
<td>syndactylia – fusion of fingers or toes synergismus – joint activity of organs in the same direction</td>
</tr>
<tr>
<td>hemi-</td>
<td>half-, one-sided</td>
<td>hemiplegia – hemiplegia, paralysis of muscles of one body side</td>
</tr>
<tr>
<td>mono-</td>
<td>one-, one, single</td>
<td>monoplegia – monoplegia, paralysis of one extremity</td>
</tr>
<tr>
<td>di-</td>
<td>two-, double</td>
<td>diplegia – diplegia, bilateral paralysis of the same body parts (both legs, both halves of the face)</td>
</tr>
</tbody>
</table>

**Greek numerals as prefixes**

<table>
<thead>
<tr>
<th>Latin simple term</th>
<th>English equivalent</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>allergia, ae f</td>
<td>allergy</td>
<td>reaction by person's immune system to harmless substances (food, plant pollen, dust, etc.)</td>
</tr>
<tr>
<td>apathia, ae f</td>
<td>apathy</td>
<td>state of indifference or the suppression of emotions</td>
</tr>
<tr>
<td>autopsia, ae f</td>
<td>autopsy</td>
<td>a medical procedure involving the examination of a dead body</td>
</tr>
<tr>
<td>biopsia, ae f</td>
<td>biopsy</td>
<td>the removal of tissue from any body part to examine it for disease</td>
</tr>
</tbody>
</table>
### 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; hypaes-
-thesis;
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 or-
-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, autopsia, amnesia, diathermia, syndactyli, 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 vaginam. 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

<table>
<thead>
<tr>
<th>Term-element</th>
<th>Meaning</th>
<th>English equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>-gēnus, a, um</td>
<td>having some origin; causing something, being caused by something; arising from – in something</td>
<td>-genic, -genous</td>
</tr>
<tr>
<td>-phrenia, ae f</td>
<td>spirit, mind, intellect (‘phren’ – diaphragm, «location of the soul»)</td>
<td>-phrenia</td>
</tr>
<tr>
<td>-prīvus, a, um</td>
<td>conditioned by absence of some organ</td>
<td>-privic</td>
</tr>
<tr>
<td>-trōpus, a, um</td>
<td>selectively directed to something, affecting something</td>
<td>-tropic</td>
</tr>
</tbody>
</table>

Root term-elements

<table>
<thead>
<tr>
<th>Term-element</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>acr-</td>
<td>distal body parts; height</td>
</tr>
<tr>
<td>aetio-</td>
<td>cause, reason</td>
</tr>
<tr>
<td>auto-</td>
<td>self-</td>
</tr>
<tr>
<td>brady-</td>
<td>slow</td>
</tr>
<tr>
<td>chlor(o)-</td>
<td>green; yellow-green</td>
</tr>
<tr>
<td>Term-element</td>
<td>Meaning</td>
</tr>
<tr>
<td>--------------</td>
<td>---------</td>
</tr>
<tr>
<td>chrom(o)-; chromat(o)-; -chromia</td>
<td>color; coloration</td>
</tr>
<tr>
<td>cyan(o)-</td>
<td>blue</td>
</tr>
<tr>
<td>heter(o)-</td>
<td>different</td>
</tr>
<tr>
<td>hom(o)-</td>
<td>identical, the same</td>
</tr>
<tr>
<td>iso-</td>
<td>identical, equal</td>
</tr>
<tr>
<td>macr(o)-</td>
<td>large (in size)</td>
</tr>
<tr>
<td>mega-, megal-, -megalia</td>
<td>large, enlarged</td>
</tr>
<tr>
<td>melan(o)-</td>
<td>black, melanin</td>
</tr>
<tr>
<td>micr(o)-</td>
<td>small (in size)</td>
</tr>
<tr>
<td>noo(s)-</td>
<td>thinking processes</td>
</tr>
<tr>
<td>olig(o)-</td>
<td>scanty, small (in quantity)</td>
</tr>
<tr>
<td>orth(o)-</td>
<td>straight, correct, corresponding to normal position</td>
</tr>
<tr>
<td>pan-</td>
<td>all, whole</td>
</tr>
<tr>
<td>poli(o)-</td>
<td>gray, related to gray substance of the brain</td>
</tr>
<tr>
<td>poly-</td>
<td>many (in quantity); large amount of</td>
</tr>
<tr>
<td>tachy-</td>
<td>fast, rapid</td>
</tr>
<tr>
<td>xanth(o)-</td>
<td>yellow</td>
</tr>
<tr>
<td>xen(o)-</td>
<td>another’s, foreign</td>
</tr>
<tr>
<td>xer-</td>
<td>dry, dryness</td>
</tr>
</tbody>
</table>

**Simple medical terms:**

<table>
<thead>
<tr>
<th>Latin simple term</th>
<th>English equivalent</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>transplantatio, ōn is f</td>
<td>transplantation</td>
<td>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</td>
</tr>
<tr>
<td>allotransplantatio, ōn is f</td>
<td>allotransplantation</td>
<td>transplantation of organs or tissues from a human being to a human being</td>
</tr>
<tr>
<td>autotransplantatio, ōn is f</td>
<td>autotransplantation</td>
<td>transplantation of man’s own tissues or organs</td>
</tr>
<tr>
<td>endogènus, a, um</td>
<td>endogenic</td>
<td>arising inside the organism</td>
</tr>
<tr>
<td>exogènus, a, um</td>
<td>exogenic</td>
<td>arising under the influence of external effects</td>
</tr>
<tr>
<td>iatrogenia, ae f</td>
<td>iatrogenia, iatrogenic disease</td>
<td>psychogenic disease or neurosis arising as a result of imprudent remark of a doctor about the diagnosis</td>
</tr>
<tr>
<td>isotransplantatio, ōn is f</td>
<td>isotransplantation</td>
<td>transplantation of organs or tissues from the genetically identical organisms</td>
</tr>
<tr>
<td>Latin simple term</td>
<td>English equivalent</td>
<td>Meaning</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>megalomania, ae f</td>
<td>megalomania</td>
<td>a mental state characterized by delusions of self-importance and greatness</td>
</tr>
<tr>
<td>paroxysmus, i m</td>
<td>paroxysm</td>
<td>bad attack, bad fit</td>
</tr>
<tr>
<td>oligophrenia, ae f</td>
<td>oligophrenia</td>
<td>mental retardation</td>
</tr>
<tr>
<td>orthodontia, ae f</td>
<td>orthodontics</td>
<td>field of medicine dealing with correction of the teeth and jaws deformities</td>
</tr>
<tr>
<td>orthopaedia, ae f</td>
<td>orthopedics</td>
<td>field of medicine dealing with correction of bones deformities</td>
</tr>
</tbody>
</table>
| 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; -optica; -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 (megalosplenium); 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, xeroderma, 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 commūnīs.** 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; thrombocytopenia; biologia; peritonitis; odontolithus; cardiolagus; thermoterapia; aplasia; cardiogenesis; leukosis; geriatrics; pancarditis; bradyphagia; pneumocentesis; gynaecolagus; somatotropus; acraesthesia; haematologia; apathia; mammogramma; typhlectasia; neurologus; asthenia; ophthalmoscopy; otorhinolaryngologia; dermatosis; physiologia; hyperkeratosis; phthisiater; tachycardia; toxicomania; xerophthalmia; proctologus; oliguria; psychiatria; dermatotropus; encephalogramma; amenorrhoea; hemicrania; myoplegia; colpotomia; rhinogramma; paraprotitis; chondropathia; hae-marthrosis; somatologia; stomatoscopia; hemianopsia; hydrophobia; osteopathia; chylothorax; anaesthesiologus; neurotropus; osteonecrosis; dysthyreosis; erythroplegia; glossoptosis; sympathia; glykaemia; hyperthermia; hypotonia; leucocytosis; melanoderma; cholecystitis; hypokinesia; odontogenesis; oligocytopenia; hidradenitis; pyosalpinx; oligophrenia; gastrocele; colostomia; salpingectomy; 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) aetiology; 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 the thorax; 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 (*aērosōlum, i n*) is a spray for inhalations or external use.

Ophthalmic films (*membranūlae ophthalmīcae*) 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.

<table>
<thead>
<tr>
<th>English name</th>
<th>Latin name</th>
</tr>
</thead>
<tbody>
<tr>
<td>corvalole</td>
<td>Corlvalolum, i n</td>
</tr>
<tr>
<td>atropine</td>
<td>Atropinum, i n</td>
</tr>
<tr>
<td>chloroform</td>
<td>Chloroformium, i n</td>
</tr>
</tbody>
</table>

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);

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*; *Spirītus ae-thylīcus* – 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: Recīpe (Take); Da (Give); Signa (Mark);
5) the words Aqua, ae f (water), Acidum, i n (acid), Spīritus, 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 sulfas);
2) all the adjectives and participles (Aqua destillata).

**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.

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§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**

<table>
<thead>
<tr>
<th>1 medicinal form in Nominative Sing. / Plur.</th>
<th>2 medicine name or medicinal plant in Genitive Sing. with the capital letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>tablets of analgine – tabulettae Analgini;</td>
<td></td>
</tr>
<tr>
<td>Zinc paste = paste of zinc – pasta Zincī;</td>
<td></td>
</tr>
<tr>
<td>tincture of motherwort – tinctura Leonūrī.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1 medicinal form in Nominative Sing. / Plur.</th>
<th>2 «trade medicine name» in Nominative Sing.</th>
</tr>
</thead>
<tbody>
<tr>
<td>tablets «Citramon» – tabulettae «Citramonum»;</td>
<td></td>
</tr>
<tr>
<td>suppositories «Anusol» - suppositoria «Anusolum».</td>
<td></td>
</tr>
</tbody>
</table>
2) adjective + medicinal form + name of medicine / plant

<table>
<thead>
<tr>
<th>1</th>
<th>medicinal form in Nominative Sing. / Plur.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>medicine name or medicinal plant in Genitive Sing. with capital letter</td>
</tr>
<tr>
<td>3</td>
<td>adjective in Nominative (if referring to medicinal form) or in Genitive (if referring to the name of medicine / plant)</td>
</tr>
</tbody>
</table>

coated tablets of ampicilline – tabulettae Ampicillini obductae;
ophthalmic ointment of tetracycline – unguentum Tetracyclini ophthalmicum;
liquid extract of motherwort – extractum Leonuri fluidum.

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 -ō:
  - vaginal suppositories with synthomycine – suppositoria vaginalia cum Synthomycino.
- In the names of vaginal and rectal suppositories the adjectives vaginal-īs,e and rectal-īs,e are written right after the noun suppositorium, i n:
  - vaginal suppositories «Anaesthesol» – suppositoria vaginalia «Anaesthesol».

The same structure is also used in the names of ophthalmic films (membranŭlæ ophthalmĭcae):

- membranŭlæ ophthalmĭcae cum Pilocarpīni hydrochlorīdo.
- 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 Persicŏrum;
  - olive oil = oil of olives – Oleum Olivārum.
- 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 Menthae piperītæ.

**Vocabulary 1**

### Liquid medicinal forms

| 1) decoctum, i n | decocction | 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) capsūla, ae f  
capsule  
caps.

14) dragée  
dragee  
drag.

15) granūlum, i n  
*granule*  
gran.

16) pulvis, ĕris m  
*powder*  
pulv.

17) tabletta, ae f  
*tablet*  
tab.

18) species, ĕrum f /plur./  
species  
spec.

19) aērosōlum, i n  
aerosol  
aēros.

20) membranūlæ 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, ĭcis f  
*root*  
rad., r.

**Adjectives**

28) fluĭdus, a, um  
*liquid*  
fluid.

29) obductus, a, um  
*coated*  
obd.

30) ophthālmĭcus, a, um  
*ophthalmic*

31) siccus, a, um  
*dry*  
sicc.

32) spīssus, a, um  
*thick*

33) rectālis, e  
*rectal*  
rect.

34) vagīnālis, 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 ophthalmīcum
- infusum cortīcis quercus
- suppositoria rectalia “anusolum”
- tabulettae predisoloni 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 (fluīdum; fluīdi; fluīdus)
- extractum Belladonnae (siccum; siccæ)
- cortex (Querci; Quercus)
- decoctum (cortex; cortis; cortīcis) Quercus
- suppositoria (vaginālis; vagināle; vaginalia)

*Ex. 4. Put the following words into the necessary cases:*
- unguentum, i n - ________ (Gen Sing.)
- tabulettae, ae f - ________ (Nom. Plur.)
- radix, īcis 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, ēris 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... ophthalmic...; suppositori... vagināl... cum Synthomycin.

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.

<table>
<thead>
<tr>
<th>Imperative Singular</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Da!</td>
<td>Give!</td>
</tr>
<tr>
<td>Signa!</td>
<td>Mark!</td>
</tr>
<tr>
<td>Sterilisa!</td>
<td>Sterilize!</td>
</tr>
<tr>
<td>Misce!</td>
<td>Mix!</td>
</tr>
<tr>
<td>Recipe!</td>
<td>Take!</td>
</tr>
<tr>
<td>Repete!</td>
<td>Repeat!</td>
</tr>
<tr>
<td>Verte!</td>
<td>Turn over!</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Subjunctive Singular</th>
<th>Translation</th>
<th>Subjunctive Plural</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detur</td>
<td>Let it be given.</td>
<td>Dentur</td>
<td>Let them be given.</td>
</tr>
<tr>
<td>Signētur</td>
<td>Let it be marked.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sterilisētur</td>
<td>Let it be sterilized.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Misceātur</td>
<td>Let it be mixed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repetātur</td>
<td>Let it be repeated.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Prepositional Phrase</th>
<th>English Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>ad 100 ml</td>
<td>up to 100 ml</td>
</tr>
<tr>
<td>ad usum internum (externum)</td>
<td>for internal (external) use</td>
</tr>
<tr>
<td>contra tussim</td>
<td>against / for cough</td>
</tr>
<tr>
<td>cum Glycerino</td>
<td>with glycerine</td>
</tr>
<tr>
<td>cum radicībus</td>
<td>with roots</td>
</tr>
<tr>
<td>ex 0.5 – 180 ml</td>
<td>from 0.5 gram (of dry substance) – 180 ml (of decoction, infusion)</td>
</tr>
</tbody>
</table>
in ampullis
in capsūlis gelatinōsis
in charta cerāta
in tabulettis
in tabulettis obductis
in vitro nigro
per se
pro auctōre (pro me)
pro infantībus
pro injectionībus
pro narcōsi
pro suspensiōne

in ampoules
in gelatinous capsules
in waxed paper
in tablets
in coated tablets
in a dark phial
by itself
for the author (for me)
for children
for injections
for narcosis
for suspension

Vocabulary 2

Names of medicines
1) aqua, ae f
   water aq.
2) Camphora, ae f
   camphor
3) oleum, i n
   oil
4) Oleum Ricīni
   castor oil
5) spirĭtus, us m
   alcohol
6) Spirĭtus aethylĭcus,
   Spirĭtus aethylīci (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
14) rhizōma, ātis n
    rhizome

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; emulsion of castor oil; oily solution of camphor; spirituous solution of menthol; 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 Ricinii _____ capsûl___ gelatinosis; rhizoma ____ radicibus Valeriân___; pulvis Polysorb____ _____ tussim; solutio Glucos____ in ampull____; suppositoria rectal___ cum Theophyllin___; tabulettae “Allochol___” ____ infantibus; tabulettae Ampicillin___ pro suspensiôn__.

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 dixedro 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.
7. Give in a dark phial.
8. Mix to make liniment.
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. **Recīpe:** Menthōlí 0,2
   Spiritus ethylīci 90% 50,0
   Misce. Da. Signa:

2. **Recīpe:** Aquae Menthae piperītae
   Glycerīnī
   Spiritus ethylīci 70% ana 30 ml
   Misce. Da. Signa:

3. **Recīpe:** Unguenti Xeroformīi 3% 10,0
   Da. Signa:

4. **Recīpe:** Solutiōnis Phentanyli 0,005% – 5 ml
   Da tales doses numero 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 CAPI-TAL letter.
Latin names of chemical elements are 2nd declension neuter nouns: E.g.: Ferrum, i n – iron; Zirconum, i n – zinc.

Exceptions: Sulfur, ūris 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

<table>
<thead>
<tr>
<th>Latin name</th>
<th>Symbol</th>
<th>English name</th>
<th>Latin name</th>
<th>Symbol</th>
<th>English name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium, i n</td>
<td>Al</td>
<td>aluminium</td>
<td>Hydrargyrum, i n</td>
<td>Hg</td>
<td>mercury</td>
</tr>
<tr>
<td>Argentum, i n</td>
<td>Ag</td>
<td>silver</td>
<td>Iōdum, i n</td>
<td>I</td>
<td>iodine</td>
</tr>
<tr>
<td>Arseniicum, i n</td>
<td>As</td>
<td>arsenic</td>
<td>Kalium, i n</td>
<td>K</td>
<td>potassium</td>
</tr>
<tr>
<td>Aurum, i n</td>
<td>Au</td>
<td>gold</td>
<td>Lithium, i n</td>
<td>Li</td>
<td>lithium</td>
</tr>
<tr>
<td>Borum, i n</td>
<td>B</td>
<td>boron</td>
<td>Magnesium, i n</td>
<td>Mg</td>
<td>magnesium</td>
</tr>
<tr>
<td>Bromum, i n</td>
<td>Br</td>
<td>bromine</td>
<td>Magnesium, i n</td>
<td>Mg</td>
<td>magnesium</td>
</tr>
<tr>
<td>Barium, i n</td>
<td>Ba</td>
<td>barium</td>
<td>Mangānum, i n</td>
<td>Mn</td>
<td>manganese</td>
</tr>
<tr>
<td>Bismuthum, i n</td>
<td>Bi</td>
<td>bismuth</td>
<td>Nitrogenium, i n</td>
<td>N</td>
<td>nitrogen</td>
</tr>
<tr>
<td>Carbonum, i n</td>
<td>C</td>
<td>carbon</td>
<td>Natrium, i n</td>
<td>Na</td>
<td>sodium</td>
</tr>
<tr>
<td>Chlorum, i n</td>
<td>Cl</td>
<td>chlorine</td>
<td>Oxygenium, i n</td>
<td>O</td>
<td>oxygen</td>
</tr>
<tr>
<td>Calcium, i n</td>
<td>Ca</td>
<td>calcium</td>
<td>Plumbum, i n</td>
<td>Pb</td>
<td>lead</td>
</tr>
<tr>
<td>Cuprum, i n</td>
<td>Cu</td>
<td>copper</td>
<td>Phosphŏrus, i m</td>
<td>P</td>
<td>phosphorus</td>
</tr>
<tr>
<td>Fluorum, i n</td>
<td>F</td>
<td>fluoride</td>
<td>Sulfur, ūris n</td>
<td>S</td>
<td>sulphur</td>
</tr>
<tr>
<td>Phthorum, i n</td>
<td>F</td>
<td>fluoride</td>
<td>Silicium, i n</td>
<td>Si</td>
<td>silicon</td>
</tr>
<tr>
<td>Ferrum, i n</td>
<td>Fe</td>
<td>iron</td>
<td>Zincum, i n</td>
<td>Zn</td>
<td>zinc</td>
</tr>
</tbody>
</table>

§9. Names of oxides, hydroxides, peroxides

Latin names of oxides, hydroxides and peroxides consist of two words:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>name of a chemical element</td>
<td>the word “oxide, hydroxide, peroxide”</td>
</tr>
<tr>
<td>non-changeable</td>
<td>changeable</td>
</tr>
<tr>
<td>always in Genitive Singular</td>
<td>Nominative or Genitive Singular</td>
</tr>
<tr>
<td>with the capital letter</td>
<td>with the small letter</td>
</tr>
</tbody>
</table>

English

- zinc oxide
- aluminium hydroxide
- hydrogen peroxide

Nom.

- Zincī oxydatum
- Aluminiī hydroxỹdatum
- Hydrogenīī peroxỹdatum

Gen.

- Zincī oxỹdi
- Aluminiī hydroxỹdi
- Hydrogenīī peroxỹdi
§10. Names of acids

Latin names of acids consist of the noun *Acīdum, 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.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acīdum (acid)</strong></td>
<td><strong>adjective of neuter gender (- um)</strong></td>
</tr>
<tr>
<td>Acidum</td>
<td>ascorbinicum</td>
</tr>
</tbody>
</table>

- changeable
- with the capital letter
- Nom. Sing. – **um**;
- Gen. Sing. – **i**

sulfuric acid Acīdum sulfurīcum Acīdi sulfurīci
sulfurous acid Acīdum sulfurōsum Acīdi sulfurōsi
hydrochloric acid Acīdum hydrochlorīcum Acīdi hydrochlorīci

**REMEMBER** the following names of acids!!!

<table>
<thead>
<tr>
<th>Latin</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acīdum acetīcum, i n</td>
<td>acetic acid</td>
</tr>
<tr>
<td>Acīdum acetylsalicylicum, i n</td>
<td>acetylsalicylic acid</td>
</tr>
<tr>
<td>Acīdum ascorbinicum, i n</td>
<td>ascorbic acid</td>
</tr>
<tr>
<td>Acīdum benzoīcum, i n</td>
<td>benzoic acid</td>
</tr>
<tr>
<td>Acīdum borīcum, i n</td>
<td>boric acid</td>
</tr>
<tr>
<td>Acīdum carbolīcum, i n</td>
<td>carboic acid</td>
</tr>
<tr>
<td>Acīdum carbonīcum, i n</td>
<td>carbonic acid</td>
</tr>
<tr>
<td>Acīdum citrīcum, i n</td>
<td>citric acid</td>
</tr>
<tr>
<td>Acīdum folīcum, i n</td>
<td>folic acid</td>
</tr>
<tr>
<td>Acīdum glutaminīcum, i n</td>
<td>glutaminic acid</td>
</tr>
<tr>
<td>Acīdum hydrochlorīcum, i n</td>
<td>hydrochloric acid</td>
</tr>
<tr>
<td>Acīdum lactīcum, i n</td>
<td>lactic acid</td>
</tr>
<tr>
<td>Acīdum lipoīcum, i n</td>
<td>lipoic acid</td>
</tr>
<tr>
<td>Acīdum nicotīnicum, i n</td>
<td>nicotinic acid</td>
</tr>
<tr>
<td>Acīdum nitrīcum, i n</td>
<td>nitric acid</td>
</tr>
<tr>
<td>Acīdum salicylicum, i n</td>
<td>salicylic acid</td>
</tr>
<tr>
<td>Acīdum sulfurīcum, i n</td>
<td>sulphuric acid</td>
</tr>
<tr>
<td>Acīdum sulfurōsum, i n</td>
<td>sulphurous acid</td>
</tr>
</tbody>
</table>
Vocabulary 3

Chemical terms

1) Acīdum, i n  
   acid

2) Cuprum, i n  
   copper

3) Ferrum, i n  
   iron

4) Fluorum, i n  
   fluorine

   Phthorum, i n

5) Hydrargyrum, i n  
   mercury

6) hydroxīdum, i n  
   hydroxide

7) lōdum, i n  
   iodine

8) Kalium, i n  
   potassium

9) Magniüm, i n  
   magnesium

   Magnesium, i n

10) Natrium, i n  
    sodium

11) oxīdum, i n  
    oxide

12) peroxīdum, i n  
    peroxide

13) Phosphŏrus, i m  
    phosphorus

14) Sulfur, ūris 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 (glukurrhīza), 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 (khamaimêlon) 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):

<table>
<thead>
<tr>
<th>Chemical Element</th>
<th>Nominative</th>
<th>Genitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>sulfur</td>
<td>Sulfuris oxýdim</td>
<td>Sulfuris oxýdi</td>
</tr>
<tr>
<td>iron</td>
<td>(Ironis) oxýdim</td>
<td>(Ironis) oxýdi</td>
</tr>
<tr>
<td>mercury</td>
<td>(Mercuris) oxýdim</td>
<td>(Mercuris) oxýdi</td>
</tr>
<tr>
<td>hydrogen</td>
<td>(Hydrogenis) oxýdim</td>
<td>(Hydrogenis) oxýdi</td>
</tr>
<tr>
<td>sodium</td>
<td>(Sodiumis) oxýdim</td>
<td>(Sodiumis) oxýdi</td>
</tr>
<tr>
<td>zinc</td>
<td>(Zincis) oxýdim</td>
<td>(Zincis) oxýdi</td>
</tr>
<tr>
<td>bismuth</td>
<td>(Bismuthis) oxýdim</td>
<td>(Bismuthis) oxýdi</td>
</tr>
</tbody>
</table>

Ex. 2. Choose the right variant:

A. Acidum ascorbinic(us; um; i); (Acídum; acídum) nicotinicum; tabulettae Acíd(um; i) folic(um; i); solutio (Acídi; acídi) (Nicotonic(um; i); nicotinici); Zinc(um; i) oxýdum; Acid(um; i) acetylsalicylic(um; i); (Magnesii; magnesium) peroxýd(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 liquorice; 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 “Recipe”:

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: Resorcin 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.

<table>
<thead>
<tr>
<th>English</th>
<th>Latin</th>
<th>Nom.</th>
<th>Gen.</th>
<th>gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>-ate sulfate</td>
<td>-as -ătis m</td>
<td>sulfas – sulfātis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-ite nitrite</td>
<td>-is -ītis m</td>
<td>nitrīs – nitrītis</td>
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<td></td>
</tr>
<tr>
<td>-ide hydrochloride</td>
<td>-īdum -īdi n</td>
<td>hydrochlorīdum – hydrochlorīdi</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** FOR EXAMPLE!!!

---                              | ---                        | ---         | ---         |
atropine sulfate                | Atropīnī sulfas           | Atropīnī sulfātis |
Sodium nitrite                  | Natriī nitrīs             | Natriī nitrītis |
Hydrocortisone acetate          | Hydrocortisōnī acetātis   | Hydrocortisōnī acetātīs |
Bismuth subcitrate              | Bismūthī subcitras        | Bismūthī subcitratīs |
Morphin hydrochloride           | Morphīnī hydrochlorīdum   | Morphīnī hydrochlorīdi |
**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: Sulfacylum-natrium - Sulphacyli-natrii

✓ 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
2) Chinīni sulfas, ātis m
3) Coffeīnum-natrii benzoas, Coffeīni-natrii benzoātis (Gen.Sing.)
4) isotonīcūs, a, um
5) Saccharum, i n
6) Solutio Ammonii caustici, Solutionis Ammonii caustici (Gen.Sing.)
7) Sulfacylum-natrium - Sulfacyli-natrii

**Nota Bene!!!**

<table>
<thead>
<tr>
<th>English</th>
<th>Latin</th>
</tr>
</thead>
<tbody>
<tr>
<td>eth-</td>
<td>aeth-</td>
</tr>
<tr>
<td>sulph-</td>
<td>sulf-</td>
</tr>
</tbody>
</table>

**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, sulphacyl-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  
Phenobarbital 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  
Coffeine 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 Recīpe, /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.

*Rx* 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.*

- 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.

<table>
<thead>
<tr>
<th>Министерство здравоохранения</th>
<th>Код формы по ОКУД</th>
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<tbody>
<tr>
<td>Российский Федераций</td>
<td>код учреждения по ОКПО</td>
</tr>
<tr>
<td>Кафедра фармакологии</td>
<td>Медицинская документация</td>
</tr>
<tr>
<td>УГМА</td>
<td>Форма № 107/у</td>
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Форма № 107/у

<table>
<thead>
<tr>
<th>Рецепт</th>
</tr>
</thead>
<tbody>
<tr>
<td>(взрослый, детский — ненужное зачеркнуть)</td>
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<td>«___» ____________________ 2002 г.</td>
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</tr>
<tr>
<td>Ф.И.О. больного</td>
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<tr>
<td>Взрослый</td>
</tr>
<tr>
<td>Ф.И.О. врача</td>
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<tr>
<td>Руб.</td>
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<td>коп.</td>
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<td>Пр.:</td>
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Подпись и личная печать
Врача               М.П.

Рецепт действителен в течение 10 дней, 1 месяц, 2 месяца
(ненужное зачеркнуть)
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 “Recîpe” 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:

Recîpe: Analgin 0,2
    Da tales doses numéro 10 in tabulettis
    Signa: 1 tab. 2 times a day

Recîpe: Protargoli 0,2
    Glycerini 5,0
    Aquae destillatae 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.):
  
  Recipé:  Vaselinī 5,0

- Liquid pharmaceutical substances are written out in millilitres using a whole number with the abbreviation “ml”:
  
  Recipé:  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

  Recipé:  Olei Menthae piperītæ 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).
  
  Recipé:  Insulīni 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):
  
  Recipé:  Cupri citratis
  Lanolīni
  Vaselīni 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:

Reciēpe:  Solutiōnis Platypyllīni hydrochlorīdi 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:

Reciēpe:  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 numěro 10.
Signa:

Reciēpe:  Pulvēris Polysorbi 10,0
Da tales doses numěro 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.

Recīpe: Xeroformii 1,0
       Zinci oxýdi 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, bal-sams, 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 Recīpe. 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).

Recīpe: Tinctūrae Leonūri 25 ml
       Da. Signa:

Recīpe: Solutiōnis Camphōrae oleōsa 10% – 100 ml
       Da. Signa:

Recīpe: Solutiōnis Furacilīni 1: 5000 – 500 ml
       Da. Signa:

Recīpe: 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*:

**Recipē:**  
Olei Ricīni 20 ml  
Xeroformii 1,  
Vinylini 1 ml  
*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:  

**Recipē:**  
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 injectionībus*” 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*:.

**Recipē:**  
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.

**Recipē:**  
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) Anísum, i n  
anise
4) Eucalyptus, i f  
eucalypt
5) Frangúla, ae f  
buckthorn
6) Oleum Cacao, Olei Cacao  
cacao butter
7) sirúpus, i m  
syrup

Adjectives

8) compositus, a, um  
compound
9) diureticus, a, um  
diuretic
10) laxans, ntis  
laxative
11) pectoralis, e  
pectoral
12) sedativus, 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; bromisoval 0,2; caffeine and sodium benzoate 0,015; papaverine hydrochloride 0,3; calcium gluconate 0,5;
7) mixture consisting of atropine sulphate 0,1; ethylmorphine hydrochloride 0,3; solution of boric acid 2% 10 ml;
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.
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).

Recipe: Unguenti Xeroformii 3% - 10,0
Da. Signa: ophthalmic ointment

Recipe: 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.

Recipe: Argenti nitritis 0,25
Vinylini 1,0
Vaselīni 30,0
Misce, fiat unguentum
Da. Signa:

Recipe: Iodoformii 10,0
Amīī Tritīci
Zinci oxīdi 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 (globuli), egg-shaped (ovula) 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 II\textsuperscript{nd} declension nouns, their Ablative Singular form is formed by the ending –о (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.

Recīpe: Suppositorium cum Ichthyolo 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).

Recīpe: Suppositoria cum Glycerino 1,44 numero 10
Da. Signa:

The adjectives vaginal and rectal are always written just after the noun “suppository” in the corresponding form (Acc. Sing – vaginale / rectale; Acc. Plur. – vaginalia / rectalia):

Recīpe: Suppositorium vaginale cum Synthomycīno 0,25
Da tales doses numĕro 5
Signa:
Recīpe: 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:

Recīpe: 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):

Reciēpe: Promedoli 0,02
Olei Cacāo 3,0
Misce, fiat suppositorium rectāle
Da tales doses numĕro 6
Signa:

Reciēpe: 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
Cocoa 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; cocoa 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 films and aerosol.

§18. Rules of writing out solid medicinal forms

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):

  Recīpe:  *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 numéro 10):

Reciße: Tabulettam Analgīni 0,5
Da tales doses numéro 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 (numéro 10):

Reciße: Tabulettas Analgīni 0,5 numéro 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”:

Reciße: Tabulettam Oleandomycini phosphatis 0,125 obductam
Da tales doses numéro 25
Signa:

Reciße: Tabulettas Oleandomycini phosphatis 0,125 obductas numéro 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 (numéro 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:

Reciße: Tabulettas “Pentalginum” numéro 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:

Reciße: Dragée Diazolīni 0,05
Da tales doses numéro 20
Signa:

Reciße: Dragée “Hexavitum” numéro 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:
Recīpe: Pulvēris Ampicillini 60,0 Da. Signa:

Prescribing simple dosed powder:
Recīpe: Pulvēris Theobromini 0,5 Da tales doses numero 10 Signa:

Prescribing compound non-dosed powder:
Recīpe: Benzylpenicillini-natrii 125 000 OD Ethazōli 5,0 Misce, fiat pulvis Da. Signa:

Prescribing compound dosed powder:
Recīpe: 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:

Recīpe: Solutiōnis Nitroglycerīni 1% oleōsae 0,5 Da tales doses numero 50 in capsŭlis gelatinōsis Signa:

Recīpe: Ampicillini 0,25 Da tales doses numero 20 in capsŭlis Signa:

§19. Other medicinal forms

Ophthalmic films (membranŭlae ophthalmĭcae) and aerosols (aērosōla) 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:

Recīpe: Membranŭlas ophthalmĭcas cum Apilaco 0,2 numero 6 Da. Signa:

Recīpe: Aērosōlum “Ephatinum” numero 1 Da. Signa:
EXERCISES

**Ex. 1. Complete the prescription with the necessary endings:**

1. **Reci̇pe:** Cyclophosphān̓ 0,05  
   Da tales doses numĕro 50 in tabulett̓ obduct̓  
   Signa:

2. **Reci̇pe:** Tabulett̓ “Citramon̓ ” numĕro 6  
   Da. Signa:

3. **Reci̇pe:** Tabulett̓ Nitrogranulong̓ 0,029 obduct̓  
   Da tales doses numĕro 50  
   Signa:

4. **Reci̇pe:** Aerosōl̓ “Amprovisol̓ ” numĕro 1  
   Da. Signa:

5. **Reci̇pe:** Membranūl̓ ophthalmīc̓ cum Dicaīn̓ 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 “Bellaesthesia”;  
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

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<thead>
<tr>
<th>Abbreviation</th>
<th>Full Latin form</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ac. (Acid.)</td>
<td>аcǐdum</td>
<td>acid</td>
</tr>
<tr>
<td>aa</td>
<td>ana</td>
<td>equally, of each</td>
</tr>
<tr>
<td>amp.</td>
<td>ampullā</td>
<td>ampoule</td>
</tr>
<tr>
<td>aq.</td>
<td>aqua</td>
<td>water</td>
</tr>
<tr>
<td>Aq. destill.</td>
<td>Aqua destillāta</td>
<td>distilled water</td>
</tr>
<tr>
<td>Aq. purif.</td>
<td>Aqua purificāta</td>
<td>purified water</td>
</tr>
<tr>
<td>aëros.</td>
<td>aërosōlum</td>
<td>aerosol</td>
</tr>
<tr>
<td>caps.</td>
<td>capsūla</td>
<td>capsule</td>
</tr>
<tr>
<td>comp., cps., cp.</td>
<td>composītus, a, um</td>
<td>compound, compounded</td>
</tr>
<tr>
<td>concentr.</td>
<td>concentrātus, a, um</td>
<td>concentrated</td>
</tr>
<tr>
<td>cort.</td>
<td>cortex</td>
<td>bark</td>
</tr>
<tr>
<td>D.</td>
<td>Da.</td>
<td>Give</td>
</tr>
<tr>
<td></td>
<td>Detur.</td>
<td>Let it be given.</td>
</tr>
<tr>
<td></td>
<td>Dentur.</td>
<td>Let them be given.</td>
</tr>
<tr>
<td>D.S.:</td>
<td>Da. Signa:</td>
<td>Give. Mark:</td>
</tr>
<tr>
<td></td>
<td>Detur. Signetur:</td>
<td>Let it be given. Let it be marked:</td>
</tr>
<tr>
<td>D.t.d. N.</td>
<td>Da tales doses numĕro</td>
<td>Give such doses in number</td>
</tr>
<tr>
<td>dec., dct.</td>
<td>decoctum</td>
<td>decoction</td>
</tr>
<tr>
<td>dep.</td>
<td>depurātus, a, um</td>
<td>purified</td>
</tr>
<tr>
<td>dest., destill.</td>
<td>destillātus, a, um</td>
<td>distilled</td>
</tr>
<tr>
<td>dil.</td>
<td>dilītus, a, um</td>
<td>diluted</td>
</tr>
<tr>
<td>empl.</td>
<td>emplastraum</td>
<td>plaster</td>
</tr>
<tr>
<td>emuls.</td>
<td>emulsionum</td>
<td>emulsion</td>
</tr>
<tr>
<td>ext.</td>
<td>externus, a, um</td>
<td>external</td>
</tr>
<tr>
<td>extr.</td>
<td>extractum</td>
<td>extract</td>
</tr>
<tr>
<td>f.</td>
<td>fiat (fiunt)</td>
<td>let it be made</td>
</tr>
<tr>
<td>fl.</td>
<td>flos</td>
<td>flower</td>
</tr>
<tr>
<td>fluid.</td>
<td>fluidus, a, um</td>
<td>fluid, liquid</td>
</tr>
<tr>
<td>fol.</td>
<td>folium</td>
<td>leaf</td>
</tr>
<tr>
<td>fr., fruct.</td>
<td>fructus</td>
<td>fruit</td>
</tr>
<tr>
<td>gran.</td>
<td>granūlum</td>
<td>granule</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Latin form</td>
<td>Translation</td>
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<tr>
<td>--------------</td>
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<tr>
<td>gtt.</td>
<td>guttam</td>
<td>drop</td>
</tr>
<tr>
<td>gtts.</td>
<td>guttas</td>
<td>drops</td>
</tr>
<tr>
<td>h., hb.</td>
<td>herba</td>
<td>herb</td>
</tr>
<tr>
<td>in ampull.</td>
<td>in ampullis</td>
<td>in ampoules</td>
</tr>
<tr>
<td>in caps. (gel.)</td>
<td>in capsulēs (gelatinōsis)</td>
<td>in (gelatinous) capsules</td>
</tr>
<tr>
<td>in tab.</td>
<td>in tabulettis</td>
<td>in tablets</td>
</tr>
<tr>
<td>in vitr. nigr.</td>
<td>in vitro nigro</td>
<td>in a dark phial</td>
</tr>
<tr>
<td>inf.</td>
<td>infūsum</td>
<td>infusion</td>
</tr>
<tr>
<td>int.</td>
<td>internus, a, um</td>
<td>internal</td>
</tr>
<tr>
<td>lin.</td>
<td>linimentum</td>
<td>liniment</td>
</tr>
<tr>
<td>liq.</td>
<td>liquor</td>
<td>liquor, solution</td>
</tr>
<tr>
<td>M.</td>
<td>Misce.</td>
<td>Mix.</td>
</tr>
<tr>
<td></td>
<td>Misceātur.</td>
<td>Let it be mixed.</td>
</tr>
<tr>
<td>mixt.</td>
<td>mixtūra</td>
<td>mixture</td>
</tr>
<tr>
<td>mucil.</td>
<td>mucilāgo</td>
<td>mucilage</td>
</tr>
<tr>
<td>N.</td>
<td>numĕro</td>
<td>in number</td>
</tr>
<tr>
<td>obd.</td>
<td>obductus, a, um</td>
<td>coated</td>
</tr>
<tr>
<td>past.</td>
<td>pasta</td>
<td>paste</td>
</tr>
<tr>
<td>pil.</td>
<td>pilŭla</td>
<td>pill</td>
</tr>
<tr>
<td>praecl., ppt.</td>
<td>praeclippitātus, a, um</td>
<td>precipitated</td>
</tr>
<tr>
<td>pro inject.</td>
<td>pro injectionĭbus</td>
<td>for injections</td>
</tr>
<tr>
<td>pulv.</td>
<td>pulvis</td>
<td>powder</td>
</tr>
<tr>
<td>purif.</td>
<td>purificātus, a, um</td>
<td>purified</td>
</tr>
<tr>
<td>q.s.</td>
<td>quantum satis</td>
<td>as much as necessary</td>
</tr>
<tr>
<td>rad., r.</td>
<td>radix</td>
<td>root</td>
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<tr>
<td>rect.</td>
<td>rectālis, e</td>
<td>rectal</td>
</tr>
<tr>
<td>rectif.</td>
<td>rectificātus, a, um</td>
<td>rectified (about liquid substances)</td>
</tr>
<tr>
<td>Rep.</td>
<td>Repĕte!</td>
<td>Repeat!</td>
</tr>
<tr>
<td></td>
<td>Repetātur!</td>
<td>Let it be repeated!</td>
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<tr>
<td>rhiz.</td>
<td>rhizōma</td>
<td>rhizome</td>
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<tr>
<td>Rp.:</td>
<td>Recĭpe:</td>
<td>Take:</td>
</tr>
<tr>
<td>S.:</td>
<td>Signa:</td>
<td>Mark:</td>
</tr>
<tr>
<td></td>
<td>Signetur:</td>
<td>Let it be marked:</td>
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<tr>
<td>sem.</td>
<td>semen</td>
<td>seed</td>
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<tr>
<td>sicc.</td>
<td>siccus, a, um</td>
<td>dry</td>
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<tr>
<td>simpl.</td>
<td>simplex, ĭcis</td>
<td>simple</td>
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<tr>
<td>sir.</td>
<td>sirūpus</td>
<td>syrup</td>
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<tr>
<td>sol.</td>
<td>solutio</td>
<td>solution</td>
</tr>
<tr>
<td>spec.</td>
<td>species</td>
<td>species</td>
</tr>
<tr>
<td>Spir.</td>
<td>Spirĭtus</td>
<td>spirit</td>
</tr>
<tr>
<td>Steril.</td>
<td>Sterilīsa!</td>
<td>Sterilize!</td>
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<tr>
<td></td>
<td>Sterilisētur!</td>
<td>Let it be sterilized!</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Latin form</td>
<td>Translation</td>
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<td>--------------</td>
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<tr>
<td>supp.</td>
<td>suppositorium</td>
<td>suppository</td>
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<tr>
<td>susp.</td>
<td>suspensio</td>
<td>suspension</td>
</tr>
<tr>
<td>tab.</td>
<td>tabuletta</td>
<td>tablet</td>
</tr>
<tr>
<td>tinct., t-ra, tct.</td>
<td>tinctūra</td>
<td>tincture</td>
</tr>
<tr>
<td>ung.</td>
<td>unguentum</td>
<td>ointment</td>
</tr>
<tr>
<td>vagin.</td>
<td>vaginālis, e</td>
<td>vaginal</td>
</tr>
</tbody>
</table>

**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; spiritual 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

<table>
<thead>
<tr>
<th>Phrase</th>
<th>Translation/Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ante cibum /a.c./</td>
<td>Before meals /medical instruction/</td>
</tr>
<tr>
<td>2. A posteriōri.</td>
<td>From the latter, based on observation. / used to denote something known from experience/</td>
</tr>
<tr>
<td>3. A priōri.</td>
<td>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./</td>
</tr>
<tr>
<td>5. Anamnēsis vitae.</td>
<td>Data about the life.</td>
</tr>
<tr>
<td>6. Bis in die. /b.i.d./</td>
<td>Twice a day.</td>
</tr>
<tr>
<td>9. Cito!</td>
<td>Quickly!</td>
</tr>
<tr>
<td>11. Facies Hippocratica.</td>
<td>Hippocratic face. It is the change in the face by impending death or long illness. &quot;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&quot;. The Hippocratic face is so called because it was first described by Hippocrates.</td>
</tr>
<tr>
<td>12. In vitro.</td>
<td>Taking place outside a living organism (for example in a test tube).</td>
</tr>
<tr>
<td>13. In vivo.</td>
<td>In a living organism /An experiment or process performed on a living specimen/.</td>
</tr>
<tr>
<td>14. Oculus dexter. /O.D./</td>
<td>Right eye. /abbreviations used in Ophthalmology as Left eye. /medical attention for eyes/</td>
</tr>
<tr>
<td>15. Per os.</td>
<td>Through the mouth.</td>
</tr>
<tr>
<td>16. Per rectum.</td>
<td>Through the rectum.</td>
</tr>
<tr>
<td>17. Per vaginam.</td>
<td>Through the vagina.</td>
</tr>
<tr>
<td>18. Post cibum /p.c./</td>
<td>After meals /medical instruction/.</td>
</tr>
<tr>
<td>19. Post mortem.</td>
<td>Examination of a body after death to learn the cause of death /autopsy/.</td>
</tr>
<tr>
<td>23. Rubor, tumor, calor, dolor et functio laesa.</td>
<td>Redness, swelling, fever, pain, and loss of function are the classical signs of inflammation.</td>
</tr>
<tr>
<td>24. Statim!</td>
<td>Immediately!</td>
</tr>
<tr>
<td>25. Ter in die /t.i.d./</td>
<td>Three times a day.</td>
</tr>
</tbody>
</table>
GAUDEAMUS

Gaudeamus igitur,  
Juvenes dum sumus;  
Post icundum iuventutem,  
Post molestam senectutem  
Nos habebit humus.

Vita nostra brevis est,  
Brevi finietur;  
Venit mors velociter,  
Rapit nos atrociter;  
Nemini parcetur.

Ubi sint qui ante nos  
In mundo fuere?  
Vadite ad superos,  
Transite in inferos  
Hos si vis videre.

Vivat academia,  
Vivant professores,  
Vivat membro quodlibet,  
Vivat membra quaelibet;  
Semper sint in flore!

Vivat et republica  
Et qui illam regit.  
Vivat nostra civitas,  
Maecenatum caritas  
Quae nos hic protegit.

Vivat omnes virgines,  
Faciles, formosae!  
Vivant et mulieres,  
Teneae, amabilis,  
Bonae, laboriosae.

Pereat tristitia,  
Pereant osores.  
Pereat diabolus,  
Quivis antiburschius  
Atque irrisores!

Let us therefore rejoice,  
While we are young;  
After our youth,  
After a troublesome old age  
The ground will hold us.

Our life is short,  
It will shortly end;  
Death comes quickly,  
Cruelly snatches us;  
No-one is spared.

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.

Long live the university,  
Long live the teachers,  
Long live each male student,  
Long live each female student;  
May they always flourish!

Long live the state  
And those who rule it.  
Long live our city,  
And the charity of benefactors  
Which protects us here.

Long live all young women,  
Easy and beautiful!  
Long live wives as well,  
Tender, loveable,  
Honest, hardworking.

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.

Vivat nostra societas,
Vivant studiosi!
Crescat una veritas,
Floreat fraternitas,
Patriae prosperitas.

Alma Mater floreat,
Quae nos educavit;
Caros et commilitones,
Dissitas in regions
Sparsos, congregavit.

Who has gathered now
Of the university?
They gather from long distances,
Immediately joining
Our common forum.

Long live our fellowship,
Long live the studious!
May truth and honesty thrive,
Flourish with our fraternity,
And our homeland be prosperous.

May our Alma Mater thrive,
That which educated us;
Dear ones and comrades,
Who we let scatter afar,
Let us assemble.


9. Закон Республики Беларусь от 20 июля 2006 г. № 161-З «О лекарственных средствах».


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