Invia est in medicīna via sine lingua Latīna
There is no way in medicine without Latin language

UNIT I

THEME: The Latin alphabet. The pronunciation of vowels, diphthongs and consonants

OBJECTIVES : *- to learn names and writing of Latin letters*
- to practise pronunciation of letters and letter combinations

§ 1 The Latin alphabet

The Latin alphabet initially contained 21 letters (1st cent. B.C.). But later, due to the necessity to transliterate Greek words, new letters – ***y*** (igrek) and ***z*** (zet) were added for the reproduction of Greek letters and sounds. In the course of time the specific pronunciation of these letters was lost, but the letters remained in the borrowings of Greek origin.

The Latin alphabet consisting of 26 letters was established in Western Europe since the 16th century. Letters ***j*** and ***v*** were introduced into practice by *Peter Ramus*. Also, the letter ***w*** was initially used in borrowings, such as geographical and proper names, as well as in medical and pharmaceutical terms.

Letter	Name	Latin pronunciation	English pronunciation
Aa	a	a	[ei]
Bb	be	b	[bJ]
Cc	ce	c, k	[sJ], [kei]
Dd	de	d	[dJ]
Ee	e	e	[J]
Ff	ef	f	[ef]
Gg	ge	g	[dZJ]
Hh	ha	h	[eitS]
Ii	i	e	[ai]
Jj	jot	j	[dZei]
Kk	ка	k	[kei]
Ll	el	l’	[el]
Mm	em	m	[em]
Nn	en	n	[en]
Oo	o	o	[oV]
Pp	pe	p	[pJ]
Qq	qu	qu	[kjH]
Rr	er	r	[R]
Ss	es	s, z	[es], [zed]
Tt	te	t	[tJ]
Uu	u	u	[jH]
Vv	ve	v	[vJ]

Ww	w	v	['dAbl'jH]
Xx	ex	ks, kz	[eks]
Yy	igrek	e	[wai]
Zz	zet	z, c	[zed]

§ 2 The pronunciation of vowels

There are six vowels in Latin: ***a, e, i, o, u, y.*** The pronunciation of these sounds is similar to the pronunciation of corresponding English ones, though some peculiarities do exist: ***ána*** – equally; ***línea*** – line; ***ós*** – bone; ***intérnus*** – internal; **inferior** – inferior.

I, i - A vowel *"**i**"* is pronounced as "***i"*** before and after consonants, e.g.: ***íta*** – such, ***túnica*** – layer. ***"I"*** is pronounced as *"**j"*** at the beginning of a word or a syllable, before a vowel and between two vowels. In modern medical and pharmaceutical terminology the letter *"**j"*** is used in the above-mentioned cases, e.g.: ***májor*** – big, ***jejúnum*** – intestine, ***majális*** – May*.

N.B.! There is no *"**j**"* in the borrowings of Greek origin, because there was no *"**j"*** in the Greek language, e.g.: ***iódum*** – Iodine (G. ***iódes*** – violet), ***Iodofórmium*** – iodoform, ***iódidum*** – iodide**,** ***Iodinólum*** – iodinole).

Y,y - A vowel *"**y**"* is pronounced as *"**i**"* and is used only in the borrowings of Greek origin, e.g.: ***pylórus*** – pylorus, ***myológia*** – mycology.

*A twofold writing of such terms is possible: *jejunum* or *ieiunum*. Besides, in International Medical Terminology the letter ***J*** is commonly used.

§ 3 The Greek prefixes, roots and suffixes containing the letter "y"

		Meaning	Examples
Prefix	***dys-***	disorder, disturbance	***dysfúnctio*** – any disturbance or abnormality in the function of an organ or part
	hypo-	under, beneath, below, decreased, abnormally low	***hypogástrium*** – the lower front central region of the abdomen, below the navel
	hyper-	over, excess, increased, abnormally high	***hypertónia*** – high blood pressure
Root	***my(o)-***	muscle	***myológia*** – science about muscles
	-oxy-	sour	***Oxygénium*** – oxygen
	-hydr-	water	***Hydrogénium*** – hydrogen
	-physi-	nature	***physiológia*** – physiology
	-glyc-	sweet	***Glycyrrhíza*** – Liquorice
	-pyr-	fever	***antipyréticus*** – fever reducer, antipyretic

	-myc-	fungus	***Biomycínum*** – Biomycin
	-poly-	many	***polyvitamínum*** – multivitamin
Suffix	***-yl-***	-	***salicýlicus*** – salicylic

§ 4 The pronunciation of diphthongs

The combination of two vowels is called a "diphthong". There are the following diphthongs in Latin: ***ae, oe, au, eu, ou***[*]. Diphthongs ***ae*** and ***oe*** are pronounced as **[e]**: ***aegrótus*** – sick, ***cóena*** – meal.

If there are two dots **(¨)** above the second component of the diphthong **ae** or **oe**, such combination is not considered as a diphthong. Consequently, each letter should be read separately, e.g., ***áër*** – air, ***Áloë*** – Aloe, ***díploë*** – diploe.

au – au (av) ***Aúrum*** – gold
eu – eu (ev) ***pneumonía*** – inflammation of lungs
ou – u ***croupósus*** – croupous

N.B! The endings ***-eus***, ***-eum*** are not diphthongs, therefore they should be read separately, e.g.: ***scaphoideus*** – scaphoid.

§ 5 The pronunciation of consonants

There is a twofold way of pronunciation of some consonants depending on their position in the word. Usually these rules of pronunciation are similar to English ones but still, there is a reason to review them more precisely.

C — **c** - before vowels ***e*** (***ae, oe***) and ***i, y,*** e.g.: ***cérebrum*** – cerebrum, ***medicína*** – medicine, ***caécus*** – blind, ***coéna*** – meal, ***cytus*** – cell;
C — **k** - in other cases, e.g.: ***cór*** – heart, ***cútis*** – skin, ***occipitális*** – occipital;
G, g - is similar to English consonant ***g***, e.g.: ***glándula*** – gland, ***grávis*** – heavy;
H, h - is similar to English consonant ***h,*** e.g.: ***húmerus*** – humerus, ***hómo*** – human;
K, к - is used only in borrowings, e.g.: ***skéleton*** (Greek) – skeleton, ***Kálium*** (Arabic) – Potassium, ***keratítis*** (Greek) – inflammation of cornea, ***kefír*** (Arabic) – kefir;
L, l - - is always a palatalized sound, unlike the English one, e.g.: ***lóngus*** – long;
S — **s** e.g.: ***sánus*** – healthy, ***cósta*** – rib;
S — **z** - between two vowels, e.g.: ***nasális*** – nasal, and also between vowels and consonants ***m***, ***n***: ***ménsis*** – month;
V,v - like English consonant ***v***, e.g.: ***vértebra*** – vertebra, ***víta*** – life;
X — **kz** - between two vowels, e.g.: ***exémplar*** – example, ***pléxus*** – plexus;
X — **ks** - in other cases, e.g.: ***lex*** – law, ***fórnix*** – fornix;

[*] The diphthong **ou** came into medical terminology from the French language.

Z — **z** - is used in borrowings of Greek origin, e.g.: ***horizontális*** – horizontal, ***zóna*** – belt, ***zygóma*** – zygomatic bone;
c - in borrowings, e.g.: ***Zíncum*** – zinc (German), ***influénza*** – flu (Italian);

W, w - in borrowings, e.g.: ***unguéntum Wilkinsóni*** – Wilkinson's ointment, ***syndrómum Wílsoni*** – Wilson's syndrome.

§ 6 The combinations of letters ngu, qu, su, ti

ngu - before vowels is pronounced as ***ngv,*** e.g.: ***sánguis*** – blood, ***unguéntum*** – ointment.
before consonants is pronounced as ***ngu,*** e.g.: ***ángulus*** – angle, ***língula*** – tongue.

qu - is pronounced as ***kv,*** e.g.: ***áqua*** – water, ***antíquus*** – ancient.

su - before vowels in the same syllable is pronounced as ***sv,*** e.g.: ***suávis*** – pleasant, ***consuetúdo*** – habit.

ti - before vowels is pronounced as ***ci,*** e.g.: ***injéctio*** – injection, ***operátio*** – operation.
- before consonants is pronounced as ***ti,*** e.g.: ***tíbia*** – tibia.

Medical and pharmaceutical terms of non-Latin origin are pronounced due to the rules of their original language, e.g.: *French:* ***dragée*** – dragee*;* ***cháncre*** – chancre; *English:* ***shunt*** – shunt, bypass; *German:* ***Spátel*** – spatula, spreader; ***Stamm*** – strain, etc.

§ 7 The pronunciation of letter combinations ch, ph, th, rh, sch.

Combinations of these letters are only used in words of Greek origin. They are pronounced exactly as in English.

ch - *ch*: ***chorda*** – chord, string; ***concha*** – concha
rh - *r*: ***rhaphe*** – raphe, seam, suture; ***rheumatismus*** – rheumatism
th - *t*: ***thorax*** – thorax; ***urethra*** – urethra
ph - *f*: ***pharynx*** – pharynx; ***periphéricus*** – peripheral

The capital letter is usually used:
- at the beginning of a sentence;
- for proper names, names of months;
- with names of chemical elements, plants and animals.

Assignments for self-control:

- *What letters and diphthongs are used to express the sound **"e"**?*
- *How can the vowel **"i"** be pronounced?*
- *How can the sound **"j"** be expressed at the beginning of a word?*
- *By what letter combination can the sound **"f"** be expressed?*
- *What vowel is the consonant **"q"** usually combined with?*
- *How is the consonant **"s"** pronounced between two vowels?*
- *How is the letter combination **"ti"** pronounced between consonants?*

Exercises:

I. Read medical terms, paying particular attention to the pronunciation of vowels:

inférior, supérior, antérior, postérior, anatómia, junctúra, májor, mínor, Iódum, mémbrum, mediánus, fíbra, Iodinólum, artéria, palátum, pýramis, systéma, syndrómum, hypotónia, symbiósis, hyoídeus, fóvea, nódus, parietális, hypogástrium, hýdrops, hypertónia, dysbacteriósis, Hydrárgyrum, gossýpium, gýrus.

II. Read terms, paying special attention to the pronunciation of diphthongs:

oedéma, aúris, faúces, pleúra, áër, díploë, perinaéus, ápnoë, Áloë, gangraéna, gynaecológia, haemostáticus, lambdoídeus, oesóphagus, aequális, foétor.

III. Read the terms and comment on their pronunciation:

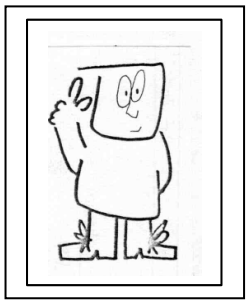
árcus, cávum, cránium, cérebrum, cáput, crísta, maxílla, cervicális, coerúleus, caécum, lámina, súlcus, labiális, mandíbula, púlvis, básis, incisívus, Oxygénium, cóccyx, lárynx, spinósus, eczéma, Zíncum, proximális, influénza, glóttis, cápsula, ángulus, periodóntium, quadrátus, sublinguális, substántia, articulátio, phárynx, thórax, sphenoidális, chirúrgicus, ischiádicus, thyroídeus, hemisphérium, brónchus, periphéricus, antebráchium, adenohypóphysis, sphíncter, lýmpha, erythrócytus, quíntus, rádix, gingíva, cór, subcutáneus, Kálium, praeparátum.

IV. Study the medical terms listed below and read them aloud:

A) Cóstae vérae, glándulae nasáles, córpus búccae, canális caróticus, rádix déntis, véna maxilláris extérna, canáles alveoláres, músculus palatoglóssus, artéria faciális transvérsa, véna ázygos, músculus zygomáticus májor, régio cóxae, márgo radiális, fácies palmáres digitórum, fóssa coronoídea, músculus pyramidális, búrsae mémbri inferióris, palátum mólle, taénia omentális, válvula semilunáris déxtra, véna canális pterygoídei, árcus zygomáticus, línea trapezoídea, párs squamósa, sánguis venósus, márgo línguae, línea oblíqua, vértebrae thorácicae, sectiónes hypothálami, synchondrósis cóstae prímae.

B) Processus styloideus ulnae, aquaedúctus mesencéphali, fóssa hypophysiális, labyrínthus ethmoidális, kyphósis thorácica, árbor bronchiális, trochánter májor, cartilágo thyroídea, vása sanguínea, vértebrae coccýgeae, gýri cérebri, crús verticále, córpus striátum, radiátio óptica, fascículus laterális, vértex córneae, húmor aquósus, córpus vítreum, dúctus lactíferi, artéria pulmonális déxtra, músculus procérus, procéssus styloídeus úlnae, protuberántia occipitális extérna.

Do you know that…



…in the very old days the physiologists dreamed up some funny and fancy fairy tales about this world of ours and its makeup. The Greek philosopher Aristotle taught that the earth and ourselves, too, were composed of 4 substances: first, "fire", which was hot and dry; second, "air", which was warm and moist; third, "the earth", which he rated cold and dry; and fourth, "water", cold and moist. Fire, air, earth, water, these were the four "elements"; and Aristotle believed that the way they were combined or were "woven together" in you gave your ***complexion.*** *The word "complexion" suggests this idea for it is from Latin "com" – together, and "plecto" –" braid" or "weave".*

Aphorisms and quotations:

Omnia itinĕra Romam ducunt. *– All roads lead to Rome.*
Cum fuĕris Romae, Romāno vivĭto more. *– When at Rome, do as the Romans do.*
Cogĭto ergo sum. *– I think, therefore I exist.*
Dum spiro, spero. *– While I breathe, I hope.*
Nulla regŭla est sine exceptiōne. *– There is no rule without an exception.*
Errāre humānum est. *– To err is human.*

Non scholae, sed vitae discĭmus
We do not study for school but for life

UNIT II

THEME : The stress. The length and brevity of a syllable

OBJECTIVES : *- to learn how to stress Latin words*
- to learn the rules on length and brevity of a syllable

§ 8 The length and brevity of a syllable. The stress

The Latin word has as many syllables, as vowels. The syllables are to be counted from the end of a word (from the right to the left), e. g :

me-di-cī-na
4 3 2 1

Only the second or third syllable can be stressed. The Latin language, unlike the English one, has long and short vowels. The place of stress depends on the length or brevity of the second syllable: if the second syllable is long, the stress remains on the second syllable; if it is short, the stress moves to the third syllable.

The length or brevity of a vowel depends on its position or on its nature. Diphthongs are always long by their nature, e.g.:

gangraena – mortification, gangrene,
pharmaceuta – pharmacist,

The length or brevity of a vowel is indicated in a dictionary: the length is denoted with a dash (¯) above the vowel, the brevity is marked with a tick (˘), e. g.: ***ā, ă, ē, ĕ.***

The syllable is long, if:

■ The vowel is followed by two or more consonants, e.g.: ***malígnus*** – malignant, ***maxílla*** – the upper jaw[1].
■ The vowel is followed by ***x, z,*** e.g.: ***refléxus*** – reflex, ***Orýza*** – rice.

The syllable is short, if:

■ The vowel is followed by one more vowel, e.g.: ***línĕa*** – line, ***cránĭum*** – skull, ***fácĭes*** – surface.
■ The vowel is followed by letter ***h***, e.g.: ***éxtrăho*** – extract.

The length and brevity of some suffixes which are frequently used in medical terminology

The following syllables are always long:

-āl-	***costālis***	costal
-ār-	***ulnāris***	ulnar

[1] Exception: the vowel is not lenghthened by consonants **b, p, d, t, c, g** in combination with **r, l,** e.g.: *cérĕbrum* – brain, *éphĕdra* – ephedra.

-āt-	***digitātus***	digitate
-īn-	***palatīnus***	palatine
-ōs-	***squamōsus***	squamous
-ūr-	***fissūra***	fissure
-ūt-	***dilūtus***	diluted

The following syllables are always short:

-bĭl-	***sanabĭlis***	curable
-ĭc-	***lymphatĭcus***	lymphatic
-ŏl-	***malleŏlus***	malleolus
-ŭl-	***ventricŭlus***	ventricle

The place of a stress depends on the length or brevity of a syllable. Borrowings of Greek origin are stressed according to the rules of the Greek language, therefore some of these words do not fall under the aforementioned rules, e.g.: ***cryotherapía*** – ***cryotherapy***, ***pharmacía*** – pharmacy; but: ***hystológia*** – histology, etc.

Assignments for self-control:

- *How are the syllables counted in Latin words?*
- *What syllables can be stressed?*
- *What syllable should be stressed if the second one is short?*
- *Define whether the vowel is long or short, if it is followed by one more vowel.*
- *Define whether the vowel is long or short, if it is followed by* ***x*** *or* ***z****.*

Exercises:

I. Define the length or brevity of the second syllable:

insufficientia	affixus
ascendens	sublingualis
instrumentum	choledochus
sanguineus	oculistae
complexus	pharmaceuta
contraho	Chamomilla
anhydrus	benignus
glycyrrhiza	labyrinthus

papillae	hypoglossus
malaria	vertebralis
fibula	rotundus
gangraena	aquaeductus
ostium	laryngis
periosteum	aethereus
catarrhus	cerebrum
platysma	unguentum
caverna	coracoideus

II. Put a stress due to the length or brevity of a syllable:

junctura	dilutus
praeparatum	spongiosus
ventriculus	tuberculum
arteriola	tuberalis
capitulum	glandularis
maturus	solubilis
scapula	lobulatus
sagittalis	denticulatus
fractura	vegetabilis
foveola	cuticula

III. Stress the following terms:

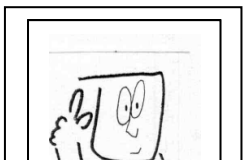
respiratio thoracica	ulcus trophicum
bursa sublingualis	dilatatorium oris
cicatrix combustionalis	redressatio articulationis genus
pneumonia crouposa	linea mammilaris
irritatio spinalis	medulla ossium rubra
incontinentia pigmenti	febris haemorrhagica
sinus tonsillaris	pathologia humoralis
positura gladiatoris	methodus curativa

IV. Write out words with the same stress as in the term *tibia:*

sanabilis	arteriola
nodulus	pelvinus
palpebra	foveola
caroticus	hepaticus
lateralis	mucosus
musculus	

V. Write out words with the same stress as in the term *malignus*:

Palatinus, epiglottis, regio, stomachus, capillaris, cuboideus, maxilla, centralis, calvaria, papilla.



Do you know that ...

...to be a true scholar one must have leisure for reading, research, meditation, and intelligent discussions. So it isn't strange to find that the word "scholar" is from the Greek word "schole" which means "leisure". Later when philosophers such as Plato and Aristotle taught groups of young men, the early classes were termed "schole". This passed into Latin as "schola", "school", and so gave us "school" and "scholar".

Aphorisms and quotations:

Tamdiu discendum est, quamdiu vivis. *– Live and learn.*
Nulla aetas ad discendum sera*. – It is never too late to learn.*
Repetitio est mater studiōrum. *– Repetition is the mother of learning****.***
Scientia nulla res praestantior*. – Money spent on the brain is never spent in vain.*
Satius est bene ignorare, quam male didicisse*. – Little knowledge is a dangerous thing.*
Nosce te ipsum. *– Know thyself.*

Medicīna soror philosophiae est
Medicine is the sister of Philosophy

UNIT III

THEME: The notion of the scientific term. The structure of anatomical and histological terms. The grammatical categories of nouns. The non-agreed modifier and the ways of its translation

OBJECTIVE: - *to learn how to determine the structure and grammatical form of anatomical terms*

§ 9 The structure of anatomical terms

Anatomical nomenclature ***(Nomĭna anatomĭca)*** is a scientifically unified register of anatomical terms used in medicine and biology, which is formed accordingly to the body systems. The creation and development of anatomical nomenclature is linked with formation and evolution of anatomy. Anatomical terms were created during centuries on the ground of Greek and Latin languages. The modern anatomical nomenclature consists mainly of Latin words, but Greek terms are also used among them.

In the late nineteenth century some 50,000 terms for various body parts were in use. The same structures were described by different names, depending (among other things) on the anatomist's school and national tradition. Vernacular translations of Latin and Greek, as well as various eponymous terms, were barriers to effective international communication. There was disagreement and confusion among anatomists regarding anatomical terminology.

The First Anatomical nomenclature was adopted at the Congress of Anatomical Society (Basel, 1895) and was called ***Baseler Nomina Anatomica (BNA)***. With the development of morphology, anatomical terminology was improved and expanded, and the new register of terms was proposed by German Anatomical Society (Jena, 1935). The new register ***Jenaer Nomina Anatomica (JNA)*** was only used in Europe. In 1950, the 5th International Anatomical Conference renewed the existing register of Anatomical terms to make them shorter and easier to memorize.

The renewed and optimized register of terms was presented at the 6th International Anatomical Conference (Paris, 1955). The new register was named ***Parisiana Nomĭna Anatomĭca (PNA)***. This version of Anatomical nomenclature was widely used, but at consequent International Anatomical Conferences several changes were added (Montreal, 1987; Budapest, 1988; New York, 1989).

In 1989 the established Federal Committee on Anatomical Terminology ***(FCAT)*** compiled the new International register of anatomical terms. In 1997 the new universal register of anatomical terms was accepted and approved.

According to their structure all the terms are divided into monomial, binomial and polynomial.

1. Monomial:

■ ***simple*** – expressed by one word, e.g.: ***ulna, ae f*** – elbow bone, ***humĕrus, i m*** – humeral bone, ***cuneus, i m*** – wedge, ***caput, ĭtis n*** – head, ***tuber, ĕris n*** – tuber, ***facies, ēi f*** – surface;
■ ***composed*** – formed by two (or more) stems using linking vowels **-o** or **-i** , e.g.: ***humer-o-ulnaris*** – humeroulnar, ***cune-o-naviculāris*** – cuneonavicular, ***cune-i-formis*** – cuneiform, ***scaph-o-ideus*** – scaphoid.

2. Binomial:
■ terms are composed of a noun and a modifier, which concretizes the noun. Modifier always follows the noun, e.g.: ***cornu coccygeum*** (S_nA_n) – coccygeal horn, ***os coccўgis*** (S_nS_g) – coccygeal bone.

§ 10 The Noun *(Nomen substantīvum)*. Review of Latin nouns

All Latin nouns are divided into three genders – male, female and neutral. The category of gender in Latin is more definite than in English. The gender is included into the dictionary form of a noun and should be memorized. The gender of a noun is unchangeable.

Male – ***genus masculīnum,***
female – ***genus femininum,***
neutral – ***genus neutrum,***

Latin nouns, unlike English ones, are declined by cases and numbers.

There are two numbers in Latin – singular – ***numĕrus singulāris***, plural – ***numĕrus plurālis.*** And there are five cases ***(casus)***:

Nominatīvus **(N.)**
Genitīvus **(G.)**
Datīvus **(D.)**
Accusatīvus **(Acc.)**
Ablatīvus **(Abl.)**

§ 11 The dictionary form of Latin nouns

All Latin nouns are divided into five types or declensions. The dictionary form of a noun consists of:

■ the nominative form
■ the ending of the Genitive case
■ the gender

e.g.: ***vertĕbra, ae f*** – vertebra; ***angŭlus, i m*** – angle; ***septum, i n*** – wall; ***canālis, is m*** – channel, canal; ***processus, us m*** – process; ***facies, ēi f*** – surface.

The **Gen. sing.** defines the declension of a noun, the **Nom. sing**. defines its gender.

Declensions include the following genders:

I – feminine
II – masculine, neutral
III – masculine, feminine, neutral
IV – masculine, neutral
V – feminine

Declensions of a noun:

Case	Declension				
	I	**II**	**III**	**IV**	**V**
Nom. sing.	-a (f)	-us, -er (m) -um (n)	different endings (m, f, n)	-us (m) -u (n)	-es (f)
Gen. sing	-ae	-i	-is	-us	-ei

Gen. sing. defines the declension and the stem of a noun, e.g.:

Noun	Meaning	Stem
costa, cost-ae f	*rib*	**cost-**
nervus, nerv-i m	*nerve*	**nerv-**
radius, radi-i m	*radial bone*	**radi-**
septum, sept-i n	*wall*	**sept-**
apex, apĭc-is m	*apex*	**apic-**
extremĭtas, extremitāt-is f	*extremity*	**extremitat-**
corpus, corpŏr-is n	*body*	**corpor-**
processus, process-us m	*process*	**process-**
cornu, corn-us n	*horn*	**corn-**
facies, faci-ēi f	*surface*	**faci-**

§ 12 Examples on nouns

The 1st declension

apertūra, ae f	*aperture*	**costa, ae f**	*rib*
calvaria, ae f	*calvaria*	**crista, ae f**	*crest*
clavicŭla, ae f	*clavicle*	**fossa, ae f**	*hole*
columna, ae f	*column*		

The 2nd declension

angŭlus, i m	*angle*	**collum, i n**	*neck*
muscŭlus, i m	*muscle*	**capitŭlum, i n**	*small head*
pedicŭlus, i m	*feet*	**skelĕton, i n** (Greek)	*skeleton*

The 3rd declension

apex, ĭcis m	*apex*	**cavĭtas, ātis f**	*cavity*
canālis, is m	*canal*	**caput, ĭtis n**	*head*
basis, is f	*stem*	**corpus, ŏris n**	*body*
forāmen, ĭnis n	*opening, foramen*	**margo, ĭnis m**	*margin*

The 4th declension

arcus, us m	*arc, arch*	**sinus, us m**	*sinus*
processus, us m	*process*	**cornu, us n**	*horn*

The 5th declension

facies, ēi f	*surface*		

§ 13 The noun as a non-agreed modifier

The modifier expressed by a noun in the Genitive case (sing. or pl.) is a ***non-agreed modifier***. A modifier always follows a noun. A non-agreed modifier is translated into English with the preposition *"**of**"*, e.g.: ***spina scapŭlae*** – spine of scapula, ***os coccýgis*** – coccygeal bone, ***arteria cerĕbri*** – artery of cerebrum, cerebral artery. The scheme of such terms is – $\mathbf{S_n\ S_g}$:

S = substantīvum
n = nominatīvus
g = genitīvus

Assignments for self-control:

■ *What does the dictionary form of a noun consist of?*
■ *How many declensions of a noun do you know?*
■ *How is the stem of a noun determined?*
■ *What is the gender of a noun with the ending -**a**?*
■ *What is the gender of a noun with the ending -**us**?*
■ *What is the gender of a noun with the ending -**um,** or -**on**?*
■ *Name the nouns with the ending -**en.***
■ *What is the gender of a noun with the ending -**u**?*
■ *What is the ending of a noun in Gen. sing., if its Nom. has the ending -**a?***
■ *What is the ending of a noun in Gen. sing., if its Nom. has the ending -**um,** or -**on**?*
■ *What is the ending of a noun in Gen. sing., if its Nom. has the ending -**u**?*
■ *What is the ending of masculine nouns in Gen. sing., if its Nom. has the ending -**us**?*
■ *What is the non-agreed modifier expressed by?*

Exercises:

I. Complete the dictionary form of the following nouns:

tubercŭlum	collum
humĕrus	facies
forāmen	arcus
corpus	scapŭla
sulcus	clavicŭla
margo	capitŭlum
cornu	caput
processus	crista

II. Define the declension and the stem of the following nouns:

ramus, i m – branch	*ala, ae f* – wing
cranium, i n – skull	*dens, dentis m* – tooth
ductus, us m – duct	*cartilāgo, ĭnis f* – cartilage
membrum, i n – member	*lamĭna, ae f* – layer
septum, i n – septum	*meātus, us m* – duct
tuber, ĕris n – tuber	*truncus, i m* – body
linea, ae f – line	*superficies, ēi f* – surface

III. Translate the following terms by the scheme S_nS_g:

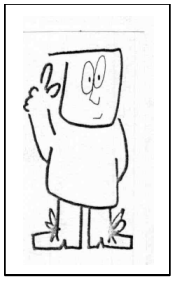
incisure of scapula	crest of tubercle
angle of breastbone	arc of vertebra
tubercle of muscle	process of vertebra
apex of bone	tubercle of rib
neck of scapula	head of rib
crest of neck of rib	acoustic meatus

IV. Translate the following terms and comment on their formation:

tuberosĭtas muscŭli
fovea dentis
cavĭtas thorācis
corpus sterni
apertūra thorācis
pedicŭlus arcus vertebrae
facies tubercŭli costae
lamĭna arcus vertebrae

V. Translate the following terms and explain their formation:

muscle of neck	cervix of rib
basis of skull	hole of head of femur
angle of vertebra	layer of tooth
artery of scapula	spine of scapula
root canal	neck of humerus
septal cartilage of nose	ligament of head of femoral bone



Do you know that ....

…the ancient Romans favoured the prevention of diseases over the cures of them. Unlike the Greek society, where health was a personal matter, public health was encouraged by the government. They built bath houses and aqueducts to pipe water to the cities. Large cities, such as Rome, boasted an advanced sewage system. However the Romans did not fully understand the involvement of germs in disease.

Aphorisms and quotations:

Quod optĭmus medĭcus sit quoque philosŏphus. *– In order to be a good doctor one should be a philosopher as well.*
Et medicīna triplex, servāre, cavēre, medēri. *– The tasks of medicine are threefold: to prevent, to observe, to treat.*
Facilius est morbum evitāre, quam curāre*. – Prevention is better than cure.*
Maxĭmum remedium irae mora est*. – When angry, count a hundred.*
Risus est medicamentum optĭmum. *– Laughter is the best medicine.*
Curis gaudia misce. *– Bring into control the joy of life with anxiety.*

UNIT IV

THEME: The grammatical categories of the adjective. The endings of genders. The division into groups. The agreed modifier

OBJECTIVES: - *to learn grammatical categories of an adjective*
- *to learn how to distinguish adjectives in medical terminology*
- *to gain practice in translation of terms containing adjectives*

§ 14 The grammatical categories of the adjective

All adjectives are divided into two groups. The adjectives of the 1st and the 2nd declension belong to the first group, and the adjectives of the 3rd declension belong to the second one. Each group of the adjectives is declined according to the corresponding declension of nouns. Adjectives have the same endings as nouns.

Masculine – ***-us, -er***
Feminine – ***-a***
Neutral – ***-um***

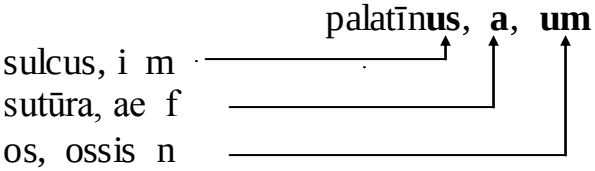
Masculinum	Femininum	Neutrum
longus (long) **dexter** (right)	**longa** **dextra**	**longum** **dextrum**

In a dictionary all adjectives are given in their dictionary form, which consists of a complete form of the masculine gender and endings of feminine and neutral genders, e.g.: ***longus, a, um***; ***dexter, tra, trum.***

Adjectives of the feminine gender are declined according to the 1st declension, adjectives of masculine and neutral genders – according to the 2nd one. The adjective (modifier) always follows a noun and agrees with it in gender, number and case.

The scheme of an agreed modifier is as follows:

$\mathbf{S_nA_n}$ (**S** – Substantivum, **n** – Nominativus,
A – Adjectivum **n** – Nominativus)



sulcus palatīnus – palatine sulcus
sutūra palatīna – palatine suture
os palatīnum – palatine bone

Adjectives of the 1st and 2nd declension:

■ with the endings ***-us, -a, -um :***

bifĭdus, a, um – bifid
canīnus, a, um – canine
cavernōsus, a, um – cavernous
cavus, a, um – cave
clavātus, a, um – clavate
deciduus, a, um – deciduous
durus, a, um – hard
enameleus, a, um – enamel
hyoideus, a, um – hyoid
hypoglossus, a, um – sublingual
incisīvus, a, um – incisive
internus, a, um – internal
lacteus, a, um – lacteal, milky
masseterĭcus, a, um – masseteric

■ with the endings **-er, -a, -um:**

dexter, tra, trum – right
sinister , tra, trum – left
sacer, cra, crum – sacral
asper, ĕra, ĕrum – sharp

§ 15 The second group of adjectives (adjectives of the 3rd declension)

All the adjectives of the 3rd declension are divided into three groups:

1. Adjectives with three endings:

Male ***(masculīnum)*** – ***-er***
Female ***(feminīnum)*** – ***-is***
Neutral ***(neutrum)*** – ***-e***

Masculīnum	**Feminīnum**	**Neutrum**
puter (rotten) ***salūber*** (healthy)	***putris*** ***salūbris***	***putre*** ***salūbre***

These adjectives are rarely used.

2. Adjectives with two endings:

Male ***(masculīnum)*** – ***-is***
Female ***(femininum)*** – ***-is***
Neutral ***(neutrum)*** – ***-e***

These adjectives are commonly used.

Masculīnum	**Feminīnum**	**Neutrum**
dentālis (dental) ***occipitālis*** (occipital) ***sublinguāli***s (beneath the tongue)	***dentālis*** ***occipitālis*** ***sublinguālis***	***dentāle*** ***occipitāle*** ***sublinguāle***

This type of adjectives is used more frequently.

nervus sublinguālis – sublingual nerve
plica sublinguālis – sublingual fold
os sublinguāle – hyoid bone, lingual bone, tongue bone

3. Adjectives with one ending:

masculīnum
feminīnum → **-r, -s, -x**
neutrum

Masculīnum	**Feminīnum**	**Neutrum**
simplex – simple ***par*** – equal ***teres*** – round	***simplex*** ***par*** ***teres***	***simplex*** ***par*** ***teres***

The dictionary form of adjectives with one ending consists of ***Nom.*** and ***Gen. sing.***, e. g.: ***simplex, ĭcis***; ***par, paris***; ***teres, ĕtis.***

According to the 3rd declination of adjectives one declines:

■ **Participle Present Active** ***(Participium praesentis activi)***. This form is similar to the one-ending adjectives, e.g.: ***recens, ntis*** – fresh:

afférens, ntis – afferent
permănens, ntis – permanent
incipiens, ntis – incipient

Similarly to adjectives, participle follows the noun and agrees with it:

vas afférens – afferent vessel
dens permănens – permanent tooth

■ **Adjectives in the comparative degree,** e.g.:

m, f n

anterior, anterius – anterior
posterior, posterius – posterior
superior, superius – superior
inferior, inferius – inferior

ductus inferior – inferior duct
linea inferior – inferior line
labium inferius – inferior lip

■ **Adjectives major (m, f), majus (n)** – big and **minor (m, f), minus (n)** – small in the anatomical terminology are translated in the positive or comparative degree, e.g.:

ductus sublinguālis major – major sublingual duct
forāmen palatīnum majus – greater palatine foramen
ductus sublinguālis minor – minor (lesser) sublingual duct

§ 16 The adjectives of the 3rd declension:

- **with two endings**:

brevis, e – short
buccālis, e – buccal
cervicālis, e – cervical
craniālis, e – cranial
dentālis, e – dental
faciālis, e – facial
frontālis, e – frontal
gingivālis, e – gingival
labiālis, e – labial

- **with one ending**:

duplex, ĭcis – double
par, paris – equal
simplex, ĭcis – simple
teres, ĕtis – round

Assignments for self-control:

■ *What does the dictionary form of an adjective consist of?*
■ *According to what declensions are adjectives with the endings* ***-us, -a,*** *or* ***-um*** *declined?*
■ *What group do masculine adjectives with the ending* ***-is*** *belong to?*
■ *What group do adjectives with the endings* ***-us (er), -a,*** *or* ***-um*** *belong to?*
■ *What group do adjectives with the endings* ***-er, -is,*** *or* ***-e*** *belong to?*

Exercises:

I. Add the endings according to the model S_nA_n:

dens lacte… – milk tooth
caries profund… – deep caries
fossa canīn … – canine hole
sulcus palatīn… maj… – greater palatine sulcus
concha nasāl… infer… – inferior nasal concha
spatium interdentāl… – interdental space
dens canīn… superi… – superior canine tooth
foramen incisīv… – incisive foramen
facies articulār…anter… dentis – anterior articular tooth surface
muscŭlus zygomatĭc… min… – lesser zygomatic muscle

II. Provide the dictionary form of the following adjectives:

transversus	brevis	inferior
coccygeus	dentālis	sinister

III. Add the feminine form, translate:

dexter	latus	anterior	acer	occipitālis	simplex
palatīnus	longus	minor			

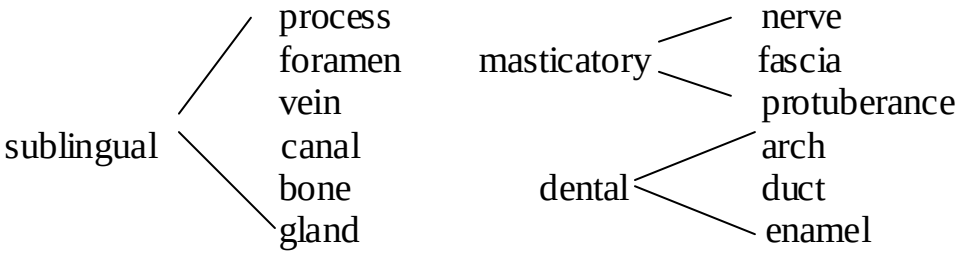
IV. Add the neutral form, translate:

puter	durus	sublinguālis	par	major	brevis
profundus	articulāris	fibrōsus			

V. Explain the model of the following terms:

os occipitāle
meātus acustĭcus
tubercŭlum majus

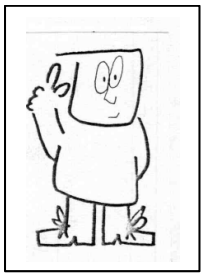
VI. Agree the adjective with the noun according to the scheme S_nA_n:



VII. Translate:

wisdom tooth, molar tooth, premolar tooth, permanent tooth, hyomandibular fissure, periodontal fissure, petrotympanic fissure

Do you know that…



…Roman surgeons carried a tool kit which contained forceps, scalpels, catheters and arrow extractors. The tools had various uses and were boiled in hot water before each use. Surgeons used painkillers such as opium and scopolamine for treatments, and acetum (the acid in vinegar) was applied to wash wounds.

Romans didn't believe in the supernatural as much as the Greeks. The Greeks used temples and religious belief to cure patients. Yet the Romans developed specific hospitals which enabled patients to rest and relax so that they could completely recover. By staying in hospitals, the doctors were able to observe the illness rather than rely on the supernatural to cure patients

Aphorisms and quotations:

Et fumus patriae dulcis. *– Sweet is the smoke of one's native land.*
Tempus est optĭmus medĭcus. *– Time is the best healer.*
Bonum initium est dimidium facti. *– Well begun is half done.*
Ars longa, vita brevis. *– Art is long, life is short.*
Ira furor brevis est*. – Anger is a short madness.*
Plenus venter non studet libenter*. – A full stomach is deaf to learning.*
Magna res est amor. *– Love is a great thing.*

De lingua stulta incommŏda multa
Many troubles have sprung from a foolish tongue

UNIT V

THEME : The morphological structure of binomial and polynomial anatomical terms with different modifiers

OBJECTIVE: - *to practise formation of binomial and polynomial anatomical terms with different modifiers*

§ 17 The polynomial terms

In anatomical and histological terminology the non-agreed modifier usually follows the agreed modifier ***($S_n A_n S_g$)***:

facies costālis scapŭlae – costal surface of scapula

tunĭca fibrōsa bulbi – fibrous tunic of eyeball.

But there are some exceptions ***($S_n S_g A_n$)***:

cavĭtas oris propria – proper oral cavity

lamĭna dentis mediālis – middle layer of a tooth.

In clinical and pharmaceutical terms the agreed modifier usually follows the non-agreed one ***($S_n S_g A_n$)***:

diverticŭlum vesīcae urinariae congenĭtum – congenital diverticula of urinary bladder

extractum Frangulae fluidum – fluid extraction of Black Elder.

Generally, if the noun has more than one modifier, the most important modifier will be put in the first place:

systēma nervōsum peripherĭcum – peripheral nervous system.

Adjectives with the meaning *"space"* (left, right), *"direction"* (anterior, posterior), *"colour"* (red, yellow), *"size"* (big, small), *"form"* (round, square) usually are the last. Each Latin term, unlike English, starts with a noun.

$S_n A_n A_n$:

arteria pulmonālis dextra – left pulmonary artery,
processus articulāris superior – superior articular process.

$S_n S_g A_n$:

medulla ossium (Gen. pl.) flava – yellow bone marrow,
apertūra pelvis inferior – inferior aperture of the minor pelvis.

Other examples ***($S_n A_n S_g A_g$)***:

facies articulāris ossis temporālis – articular surface of temporal bone,
lamĭna mediālis processus pterygoidei – medial layer of pterygoid process.

§ 18 The structure of anatomical terms

muscŭlus palmāris brevis	short palmar muscle	$S_n\ A_n\ A_n$
muscŭlus rectus femŏris	direct muscle of femur	$S_n\ A_n\ S_g$
septum nasi osseum	osseous septum of nose	$S_n\ S_g\ A_n$
muscŭlus erector spinae	erector muscle of spine	$S_n\ S_n\ S_g$
forāmen apĭcis dentis **forāmen apĭcis radīcis**	apical foramen of tooth	$S_n\ S_g\ S_g$
ligamentum mallei laterāle	lateral ligament of malleus	$S_n\ S_g\ A_n$
dura mater spinālis	dura mater of spinal cord	$A_n\ S_n\ A_n$
pia mater encephăli **dura mater encephăli**	pia mater of brain dura mater of brain	$A_n\ S_n\ S_g$

§ 19 The structure of anatomical terms

ligamentum metacarpāle transversum superficiāle	superficial transverse metacarpal ligament	$S_n\ A_n\ A_n\ A_n$
muscŭlus obliquus externus abdomĭnis	external oblique muscle of abdomen	$S_n\ A_n\ A_n\ S_g$
facies articulāris tubercŭli costae	anterior or inferior costal facet	$S_n\ A_n\ S_g\ S_g$
muscŭlus sphincter ani externus	external sphincter muscle of anus	$S_n\ S_n\ S_g\ A_n$
muscŭlus extensor carpi ulnāris	ulnar extensor muscle of wrist	$S_n\ S_n\ S_g\ A_n$
muscŭlus depressor angŭli oris	depressor muscle of angle of mouth	$S_n\ S_n\ S_g\ S_g$
fovea capĭtis ossis femŏris	fovea of head of femur	$S_n\ S_g\ S_g\ S_g$
sulcus sinus petrosi superiōris	sulcus of superior petrosal sinus	$S_n\ S_g\ A_g\ A_g$
vagīna muscŭli recti abdomĭnis	vagina of direct muscle of the abdomen	$S_n\ S_g\ A_g\ S_g$
septum intermusculāre cruris anterius	anterior, crural intermuscular septum	$S_n\ A_n\ S_g\ A_n$
vasa sanguinea auris internae	blood vessels of inner ear	$S_n\ A_n\ S_g\ A_g$

§ 20 The structure of anatomical terms

muscŭlus rectus capĭtis posterior major	posterior big direct muscle of the head	$S_n\ A_n\ S_g\ A_n\ A_n$
muscŭli intertransversarii posteriōres laterāles cervīcis	posterior lateral inter-transverse muscles of neck	$S_n\ A_n\ A_n\ A_n\ S_g$
arcus tendineus muscŭli levatōris ani	tendinous arch of levator ani muscle	$S_n\ A_n\ S_g\ S_g\ S_g$
muscŭlus extensor carpi radiālis longus	long radial extensor muscle of wrist	$S_n\ S_n\ S_g\ A_n\ A_n$
muscŭlus flexor digĭti minĭmi brevis	short flexor muscle of a little finger	$S_n\ S_n\ S_g\ A_g\ A_n$
hiātus canālis nervi petrōsi majōris	hiatus of canal for greater petrosal nerve	$S_n\ S_g\ S_g\ A_g\ A_g$
bursa subtendinea muscŭli tricipĭtis brachii	anconeal bursa of triceps muscle	$S_n\ A_n\ S_g\ A_g\ S_g$
bursa trochanterĭca muscŭli glutēi maxĭmi	trochanteric bursa of gluteous maximus muscle	$S_n\ A_n\ S_g\ A_g\ A_g$
rami cruris posteriōris capsŭlae internae	branches of posterior crus of internal capsule	$S_n\ S_g\ A_g\ S_g\ A_g$

§ 21 The structure of anatomical terms

facies articulāris partis calcaneonaviculāris ligamenti bifurcāti	articular surface of calcaneonavicular part of bifurcate ligament	$S_n\ A_n\ S_g\ A_g\ S_g\ A_g$
sulcus tendĭnis muscŭli flexōris hallūcis longi	sulcus of tendon of flexor hallucis longus	$S_n\ S_g\ S_g\ S_g\ S_g\ A_g$
vagīna tendĭnis muscŭli extensōris digĭti minĭmi brevis	vagina of tendon of short extensor muscle of little finger, the tendon sheath of the extensor digiti minimi muscle	$S_n\ S_g\ S_g\ S_g\ S_g A_g\ A_g$

Exercises:

I. Translate and explain the structure of the following terms:

Canālis nervi faciālis
muscŭlus longus colli
ligamentum metacarpeum transversum profundum
fovea costālis processus transversi
forāmen apĭcis dentis
bursa subtendinea muscŭli latissimi dorsi
plica venae cavae inferior
apex ossis sacri
facies articulāris capĭtis costae
arcus tendineus fasciae pelvis
musculus transversus perinei superficiālis
rete venōsum dorsāle pedis
vena intercostālis superior dextra
plexus venōsus vertebralis externus anterior

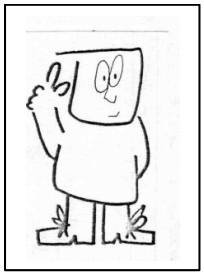
II. Translate and explain the structure of the following terms:

External occipital crest
articular surface of tubercle of rib
anterior surface of petrous part
oval fovea of wide fascia of femur
cribriform plate of cribriform bone
sulcus of middle temporal artery
transverse spinal articular process
internal cavernous venous plexus
superior cerebellar veins
trochanteric bursa of gluteus maximus muscle
levator muscle of upper lip
internal acoustic duct
posterior margin of petrous part
superficial palmar venous arch

III. Translate and explain the structure of the following terms:

a) into English:
Facies articulāris tubercŭli costae
sulcus palatīnus major
apertūra thorācis superior
incisūra ischiadĭca major
incisūra ischiadĭca minor
incisūra pterygoidea
lamĭna laterālis processus pterygoidei

b) into Latin:
Round foramen
major (greater) trochanter
minor (lesser) trochanter
sternal articular surface
inferior vertebral incisure
internal acoustic duct
superior articular process
inferior costal fossa
cubic articular surface
internal occipital tuberosity



Do you know that...

...Geophyl Chalcedonian (335-280 A.D.), a Greek physician, is considered to be the first to carry out investigations on human corpses. The particular attention was focused on studying the activity of the brain, nervous system, vessels and eyes. He ascertained the difference between nerves, the appliance of chylus-vessels to the digestive system, the dependence of vessel's pulsation on the heart activity.

Aphorisms and quotations:

Amor et tussis non celatur. *– Love and cough cannot be hidden.*
Post nubile sol. *– Sun after clouds.*
Ad opus. *– Set to work.*
Pabulum animi*. – Man does not live by bread alone.*
Sine labore non erit panis in ore. *– No pains, no gains.*
Fit fabricando faber*. – Practice makes perfect.*

Scientia potentia est
Science is power

UNIT VI

THEME: The 1st noun declension *(Declinatio prima)*

OBJECTIVES: *- to learn the definition of the 1st declension nouns*
- to learn how to decline the1st declension nouns
- to practise the translation of sentences

§ 22 The 1st declension of nouns

Read and translate:

1. ***Incisūra scapŭlae***.
2. ***Tunica mucosa linguae***.
3. ***Papillae linguam*** tegunt (cover).
4. ***Substantia costārum*** verārum et ***costārum spuriārum*** dura est (is).
5. Specta (see) varias ***tunĭcas arteriārum***, ***tunĭcam*** intimam, mediam, externam.

Vocabulary:

tonsilla, ae f	tonsil, *n*
lingua, ae f	tongue, *n*
varius, a, um	various, *adj.*
arteria, ae f	artery, *n*
medius, a, um	middle, *adj.*
substantia, ae f	substance, *n*
verus, a, um	true, *adj.*
durus, a, um	hard, *adj.*
papilla, ae f	papilla, *n*
etiam	also, *adv.*
tunĭca, ae f	tunic, *n*
intĭmus, a, um	deep, *adj.*
externus, a, um	external, *adj.*
costa, ae f	rib, *n*
spurius, a, um	false, *adj.*

Nouns with the ending ***-a*** in Nom. sing., in Gen.sing. ***-ae*** belong to the 1st declension**,** e.g.:

vena, ae f – vein
cellŭla ae f – cell
calvaria, ae f – calvaria
bucca, ae f – cheek
planta, ae f – plant

The endings of the 1st declension nouns

sing.		**pl.**	
Nom	**-a**	Nom	**-ae**
Gen.	**-ae**	Gen.	**-ārum**
Dat.	**-ae**	Dat.	**-is**
Acc.	**-am**	Acc.	**-as**
Abl.	**-ā**	Abl.	**-is**

Example of declination:

sing.		**pl.**	
Nom.	ven-**a**	Nom.	ven-**ae**
Gen.	ven-**ae**	Gen.	ven-**ārum**
Dat.	ven-**ae**	Dat.	ven-**is**
Acc.	ven-**am**	Acc.	ven-**as**
Abl.	ven-**ā**	Abl.	ven-**is**

§ 23 The Greek nouns of the 1st declension

Latinized Greek nouns with the ending **-a** belong to the 1st declension, e.g.: **arteria** – artery, **trachea** – trachea. Besides, the feminine nouns with the ending **-e** in Nom., in Gen. sing. **-es,** are also referred to the 1st declension, e.g.: ***raphe, es f*** – suture.

§ 24 Word formation. The suffixes of the 1st declension nouns

Suffix	**Meaning**	**Example**
-ŭl, (ĭ) cŭl- **-ŏl-**	little, small	***fossŭla*** – small hole, small fossa ***cuticŭla*** – ''little'' skin, a horny secreted layer ***arteriŏla*** – small artery
-īn-	occupation	***medicīna*** – medicine ***officīna*** – drugstore
-ūr-	activity	***sutūra*** – suture ***apertūra*** – aperture
ia, -ntia	abstract notions	***energia*** – energy ***patentia*** – patience

§ 24 The preposition *(Praepositio)*

Latin prepositions are divided into two groups. The first group is used with Accusativus while the second one – with Ablativus. Some of them are used both with Accusativus and Ablativus, depending on the meaning.

Accusatīvus is used with:

Preposition	Meaning	Example
ad	for, against	***ad hypertoniam*** – for hypertension ***ad ollam*** – in a bottle
ante	before	***ante cenam*** – before meals, before eating
apud	near	***apud collum*** – near the neck
contra	against	***contra malariam*** – for malaria
inter	between	***inter costas*** – between ribs
infra	under	***infra scapŭlam*** – under the scapula
intra	inside	***intra venam*** – inside the vein
per	through	***per tracheam*** – through the trachea
post	after	***post cenam*** – after a meal, after eating
super, supra	above	***super scapŭlam*** – above the scapula

Ablativus is used with:

Preposition	Meaning	Example
a (before a consonant) **ab** (before a vowel and **h**)	from	***a corde*** – from the heart ***ab aegrotis*** – from patients
e (before a consonant) **ex** (before a vowel and **h**)	from	***e plantis*** – from plants ***ex aqua*** – from water ***ex herbis*** – from herbs
de	about	***de vertebris*** – about vertebrae (pl.) ***de vitā*** – about life
cum	with	***cum collegā*** – with a friend
sine	without	***sine causa*** – without a cause
pro	for	***pro officīna*** – for drug store ***pro aegrōta*** – for a patient

Prepositions **in** – "in" and **sub** – "under" are used with either Accusativus or Ablativus.

1) Tabuletta ***in aqua*** solvitur. (Abl.) The tablet is dissolved in water.
2) Pone tabulettam ***in aquam***. (Acc.) Put the tablet into water.
1) Pone tabulettam ***sub linguam***. (Acc.) Put the tablet under the tongue.
2) Tabuletta ***sub lingua*** est. (Abl.) The tablet is under the tongue.

§ 25 The nouns with the meaning of prepositions

Nouns ***causa*** – *cause* and ***gratia*** – *grace* are used with Genitive as prepositions with the meaning "for": ***amicitiae gratia*** – for friendship, ***pecuniae causa*** – for money.

The 1st declension nouns in anatomical nomenclature

ala, ae f	wing
apertūra, ae f	aperture
caverna, ae f	cavern
commissūra, ae f	commissure
coxa, ae f	coax
fibra, ae f	fibre
fissūra, ae f	fissure
gingīva, ae f	gingiva
mandibŭla, ae f	lower jaw
maxilla, ae f	upper jaw
orbĭta, ae f	orbit
palma, ae f	palm
patella, ae f	patella
pulpa, ae f	pulp
retĭna, ae f	retina
sella, ae f	saddle
tibia,ae f	tibia
tonsilla, ae f	tonsil
tunĭca, ae f	tunic
urethra, ae f	urethra
valvŭla, ae f	valve

Some professional medical expressions with prepositions:
ante reconvalescentiam – before convalescence
per horam – during an hour
per vagīnam – through vagina
in tabulettis – in tablets
sine mora – without delay
ab ante – from the previous
mania persecutīva – mania of persecution
praeter natūram – against nature

Abbreviations:

A. – arteria (artery)
Aa. – arteriae (pl.) (arteries)

V. – vena (vein)
Vv. – venae (pl.) (veins)

Assignments for self-control:

- *What is the ending of the 1st declension nouns in Nom. sing?*
- *What is the ending of the 1st declension nouns in Gen. sing?*
- *What does the dictionary form of a Noun consist of?*
- *What prepositions are used with Acc.?*
- *What prepositions are used with Abl.?*
- *What prepositions are used both with Acc. and Abl.?*

Exercises:

I. Decline

sutūra squamōsa – squamous suture,
linqua foliāta – foliate tongue,

II. Define the case and translate:

scapŭlis (2)
scapulārum
scapŭlā
scapŭlae (3)
scapŭlas
scapŭla

III. Transform the number:

vertebrā
fibulārum
maxilla
fossas
costis

IV. Translate the following terms:

arteria interna	fossa canīna maxillae
vena portae	lingŭla mandibŭlae
vena cephalĭca	incisūra mandibŭlae

V. Translate the following terms according to the scheme S_nA_n; ($S_nA_nA_n$):

Oblique line, compact substance, lymphatic vessel, deep vein, canine fossa, white commissure, pterygopalatine incisure, petrosal fossula, incisive suture, cribral (sieve-like) layer, right coronary artery, subcutaneous mucous bursa, internal gluteal vein, gullet suture, cuneomandibular suture, perineal suture, dark nucleus of suture, suture of cerebellum.

VI. Translate the following terms:

inter costas
in calvaria
sub linguam
supra spinam
in scapŭla
in columna

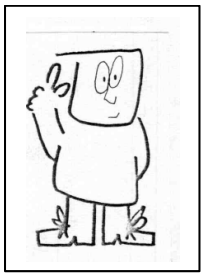
VII. Translate terms with abbreviations:

A. coronaria sinistra / dextra
A. hepatĭca propria
A. thyroidea superior
A. poplitea
Aa. membri superiōris
Aa. caroticotympanĭcae
Aa. mesencephalĭcae
Aa. nutriciae humĕri
V. cardiăca magna
Vv. cardiăcae minĭmae
V. brachiocephalĭca
Vv. pericardiacophrenĭcae
V. profunda linguae
Vv. thyroideae mediae

In aula anatomĭca

In aula anatomĭca professor scapŭlam monstrat (shows). In mensa anatomĭca duas scapŭlas jacent (lie): scapŭla dextra et scapŭla sinistra. Professor dicit (speaks): Demonstra (show), collega, scapŭlas. Studiōsa scapŭlas demonstrat (shows) et de scapŭlis narrat (tells). In scapŭla spina scapŭlae et duae fossae sunt (are): fossa supraspināta et fossa infraspināta. Fossa supraspināta supra spinam est (is), fossa autem infraspināta infra spinam est. Professor quoque incisūram scapŭlae monstrat (shows).

Do you know that...



...Claudius Gallen (129-200 A.D.) was a prominent ancient Greek physician and probably the most accomplished medical researcher of the Roman period. He was court physician to Marcus Aurelius, a surgeon to gladiators, and a practicing anatomist. His scholarly heritage includes 125 philosophical and 131 medical treatises on anatomy, physiology, aetiology and treatment of diseases. Besides, many books on preparation, dispensing and proper utilization of drugs are attributed to this physician. The term "galenicals (galenics)" still remains in modern pharmacy.

He made many important discoveries regarding the movement of blood in the body including the differences between veins and arteries, and the anatomy of the heart. Galen used dissection to examine the brain and spinal cord, including the

spinal nerves. Considering that Galen had absolutely no technology to assist him and could only use his eyes and simple instruments to carry out dissections and experiments, it is amazing that he was able to ascertain such vast amounts of knowledge about the human body.

Aphorisms and quotations:

Via est vita. *– Road is the life.*
Persōna grata. *– An acceptable person.*
Persōna non grata. *– An unacceptable or unwelcome person.*
Cum ventis litigare. *– To fight with one's own shadow.*
De gustibus et coloribus non est disputandum. *– There is no accounting for tastes.*
Sine ulla exceptiōne. *– Everyone with no exception.*
Pro captu meo. *– From my point of view.*

Libri amīci, libri magistri
Books are friends and teachers

UNIT VII

THEME: The 2nd noun declension *(Declinatio secunda)*

OBJECTIVES*:* *- to learn the definition of genders*
- to learn how to decline the 2nd declension nouns
- to learn the vocabulary

§ 26 The 2nd declension of nouns. Masculine and neutral genders

Read and translate:

1. *Glandŭlae* ***ventricŭli succum*** *gastrĭcum elabōrant (elaborate);* ***succus*** *gastrĭcus* ***cibum*** *concŏquit (digests).*
2. *Inter* ***muscŭlos*** *saepe multi* ***nervi*** *sunt (are).*
3. ***Studiōsi*** *stomatologiae* ***angŭlum*** *mandibŭlae spectant (see).*
4. *Multa* ***verba*** *anatomĭca Graeca sunt (are) ut raphe,* ***encephălon, orgănon, colon, skelĕton***.
5. *Collegae* ***intestīnis*** *student (learn).*

Vocabulary:

studiōsus, i m	student, *n*
glandŭla, ae f	gland, glandula, *n*
succus, i m	juice, *n*
cibus, i m	meal, *n*
morbus, i m	disease, *n*
saepe	often, *adv.*
nervus, i m	nerve, *n*
angŭlus, i m	angle, *n*
encephalon, i n	brain, *n*
stomatologia, ae f	dentistry, *n*
muscŭlus, i m	muscle, *n*
ventricŭlus, i m	ventricle, *n*
gastrĭcus, a, um	gastric, *adj.*
digĭtus, i m	finger, *n*
humĕrus, i m	humerus, *n*
multus, a, um	multiple, *adj.*
colon, i n	colon (intestine), *n*
orgănon, i n	organ, n
intestīnum, i n	intestine, n

Masculine and neutral nouns with the ending ***-i*** in Gen. sing. belong to the 2nd declension. In Nom. sing. masculine nouns have endings ***-us, -er***, neutral nouns end in ***-um*,** e.g.:

muscŭlus, i m – muscle
cancer, cri m – cancer
paediāter, tri m – paediatrician
ligamentum, i n – ligament

Exceptions

feminine gender:

diaměter, tri f – diameter
crystallus, i f – crystal

N.B. *diaměter obliqua(oblique diameter)*

§ 27 The endings of masculine nouns

	sing.		**pl.**
Nom.	**-us, -er**	**Nom.**	**-i**
Gen.	**-i**	**Gen.**	**-ōrum**
Dat.	**-o**	**Dat.**	**-is**
Acc.	**-um**	**Acc.**	**-os**
Abl.	**-o**	**Abl.**	**-is**

Examples of declination

masculine nouns with the ending **-us**

	sing.		**pl.**
Nom.	ocŭl-**us**	**Nom.**	ocŭl-**i**
Gen.	ocŭl-**i**	**Gen.**	ocŭl-**ōrum**
Dat.	ocŭl-**o**	**Dat.**	ocŭl-**is**
Acc.	ocŭl-**um**	**Acc.**	ocŭl-**os**
Abl.	ocŭl-**o**	**Abl.**	ocŭl-**is**

§ 28 The endings of neutral nouns

	sing.		**pl.**
Nom.	**-um (-on)**	**Nom.**	**-a**
Gen.	**-i**	**Gen.**	**-ōrum**
Dat.	**-o**	**Dat.**	**-is**
Acc.	**-um (-on)**	**Acc.**	**-a**
Abl.	**-o**	**Abl.**	**-is**

Examples of declination

	sing.		pl.
Nom.	labi-**um**	**Nom.**	labi-**a**
Gen.	labi-**i**	**Gen.**	labi-**ōrum**
Dat.	labi-**o**	**Dat.**	labi-**is**
Acc.	labi-**um**	**Acc.**	labi-**a**
Abl.	labi-**o**	**Abl.**	labi-**is**

	sing.		pl.
Nom.	gangli-**on**	**Nom.**	gangli-**a**
Gen.	gangli-**i**	**Gen.**	gangli-**ōrum**
Dat.	gangli-**o**	**Dat.**	gangli-**is**
Acc.	gangli-**on**	**Acc.**	gangli-**a**
Abl.	gangli-**o**	**Abl.**	gangli-**is**

Peculiarities of the declination of neutral nouns:

1. Accusative is similar to the Nominative (both in singular and plural).
2. Nominative and Accusative plural forms end in **-a.**

§ 29 The Greek nouns of the 2nd declension

There are borrowings of Greek origin among the neutral nouns of the 2nd declension. They take the ending **-on**, e.g.:

colon, i n	colon (intestine)
encephălon, i n	encephalon
ganglion, i n	ganglion, a knot, a knot-like mass
acromion, i n	acromion
olecrănon, i n	olecranon
basion, i n	basion
opisthion, i n	opisthion
skelĕton, i n	skeleton

§ 30 The most commonly used medical expressions

ab ovo – from the beginning
ad infinītum – till the infinity
ex officio – on duty
experimentum in vitro – experiment in vitro (in glass)
experimentum in vivo – experiment carried out in the living organism
in dubio – doubtfully
sine dubio – without doubt
in pleno – completely

in concrēto – specifically
in abstracto – abstractly
in loco – on its place
loco typĭco – on typical place
per rectum – through rectum
post cibum – after meals, after eating
modus curandi – the way of treatment
per obĭtum – because of death
per modum – for example
per abusum – because of abuse
primo loco – in the first place

§ 31 The abbreviations used in anatomy

Lig. – ligamentum
Ligg. – ligamenta (pl.)
M. – musculus
Mm. – musculi (pl.)
N. – nervus
Nn. – nervi (pl.)
R. – ramus
Rr. – rami (pl.)

§ 32 The nouns of the 2nd declension used in anatomical nomenclature

bulbus, i m	eyebulb, bulb of eye
cubĭtus, i m	elbow
fundus, i m	bottom
fascicŭlus, i m	fascicle
humĕrus, i m	humerus
lobus, i m	lobe
radius, i m	radius
truncus, i m	trunk
acetabŭlum, i n	acetabulum
atrium	atrium
brachium, i n	shoulder
rostrum, i n	rostrum
cerĕbrum, i n	cerebrum
cingŭlum, i n	girdle
dentīnum, i n	dentine
dorsum, i n	dorsum, back
enamēlum, i n	enamel
frenŭlum, i n	frenulum
genion, i n (Greek)	chin

labium, i n	lip
membrum, i n	extremity, limb
ostium, i n	opening
palātum, i n	palate
vestibŭlum, i n	vestibule

Assignments for self-control:

- *What is the ending of the 2nd declension masculine nouns Nom. sing.?*
- *What can be determined by the ending of Gen. sing.?*
- *What cases have the ending **-i**?*
- *What case is Abl. pl. similar to?*
- *What ending have neutral nouns in Nom. sing.?*
- *What is the ending of Acc. sing. for neutral nouns?*
- *What is the ending of Nom. pl. for neutral nouns?*

Exercises:

I. Decline:

muscŭlus digastrĭcus – digastric muscle
intestīnum crassum – large intestine
skelĕton humānum – human skeleton, skeleton of the human body

II. Translate the following terms:

Profound transverse muscle, metacarpal sulcus, venous sulcus, anterior fonticulus, lymphatic node, transverse nerve, fibrous rings, vestibule of nose, transverse colon, vegetative node, nucleus of accessory nerve, angle of the lower jaw, branches of the lower jaw, palatine sulcus, mandibulohyoid sulcus.

III. Translate:

Sulcus carpeus, fundus ventriculi, digitus minimus, oculus dexter, bulbus oculi.

IV. Add the endings and translate:

intra corōn… dent…
per fissūr… oss…
apud coll… dent…

V. Define the case and translate:

ligamenta
gangliōrum
septi
tubercŭlis
dentīnum

VI. Transform the number and translate:

atriōrum
cavo
intestīna
colli
ligamentis
labii
acromion
ganglia

VII. Add endings and translate:

atrium dextr…
arteria brachi… profund…
labium intern…

VIII. Comment on abbreviations:

R. saphēnus
R. profundus
Rr. calcanei
M. planus
Vv. externi bulbi ocŭli
M. massēter
Mm. dorsi
N. olfactorius
Nn. caroticotympanĭci
R. musculi stylopharyngei
Rr. cardiăci thoracĭci
N. transversus colli
Ligg. flava
Ligg. costoxiphoidea

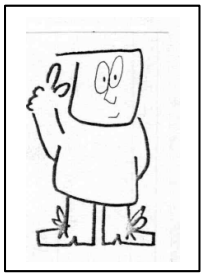
IX. Render into English:

Musculus rectus, collum uteri, labium externum, musculus transversus, collum scapulae.

Cranium

Skelĕton capĭtis cranium nominātur (called). Cranium in cranium cerebrāle (neurocranium) et cranium viscerāle (viscerocranium) dividĭtur (divides). Nervi, arteriae et venae cranium perforant (perforate) et in cerebrum et cerebellum penetrant. In cranio distinguuntur (distinguish): norma verticālis (seu calvaria), norma basilāris (seu basis cranii) externa et interna, norma faciālis, norma laterālis et norma occipitālis. Cranium encepălon defendit (protects). Encephălon in cavo cranii situm est (placed) . Varii muscŭli cranium tegunt (cover).

Do you know that...



...in ancient days books were written on papyrus or vellum. The sheets were pasted together and "rolled" on a stick for convenience in handling and filing away. This process is contained in the word "volume" from the Latin word "volumen", which in turn derives from "volvo", meaning "turn about" or "roll". There were said to have been more than 700,000 of t hese papyrus volumes in the ancient Alexandrian library in Egypt.

...the first completely survived handbook on Anatomy is a treatise "About parts of human body" written by Rufus of Ephes (100 B.C.). Besides, this physician is known for his works "About diseases of kidney and urinary bladder" and "Questions of the physician for the patient".

Aphorisms and quotations:

Qui discit sine libro, is aquam haurit cribro. *– A room withot books is a body without soul.*
Alit lectio ingenium*. – Reading nourishes the mind.*
Liber est mutus magister*. – A book is a mute teacher.*
Habent sua fata libelli. *– Books have their destiny.*
Aiunt multum legendum esse, non multa*. – Books and friends should be few but good.*
Verba volant, scripta manent*. – Words fly, letters stay.*

Honesta vita beāta est
Honest life is blessed

UNIT VIII

THEME: The adjectives of the 1st and 2nd declension

OBJECTIVES: - *to learn the dictionary form and declination of adjectives*
- *to learn how to decline the nouns of the 2nd declension*
- *to learn the rules on agreement*

§ 33 The adjectives of the 1st and 2nd declension

Read and translate:

1. *Medulla* ***ossea rubra*** *et* ***flava*** *est (is).*
2. *Fascia* ***propria*** *sive* ***profunda*** *e tela* ***fibrōsa compacta*** *constat (consists).*
3. *Nervus* ***optĭcus, vagus, trigemĭnus.***
4. *Ramus* ***dexter*** *arteriae* ***hepatĭcae propriae.***
5. *Oculi* ***magni*** *aut* ***parvi*** *sunt, plerumque* ***oblongi***, ***raro rotundi***.

Vocabulary:

osseus, a, um	osseous, *adj.*
ruber, bra, brum	red, *adj.*
flavus, a, um	yellow, *adj.*
proprius, a, um	proper, *adj.*
profundus, a, um	profound, *adj.*
tela, ae f	tissue, *n*
fibrōsus, a, um	fibrous, *adj.*
compactus, a, um	compact, *adj.*
optĭcus, a, um	optical, *adj.*
rotundus, a, um	round, *adj.*
vagus, a, um	vague, *adj.*
trigemĭnus, a, um	trigeminal, triple, *adj.*
ramus, i m	branch, *n*
hepatĭcus, a, um	hepatic, *adj.*
magnus, a, um	big, *adj.*
parvus, a , um	small, *adj.*
plerumque	mostly, *adj.*
oblongus, a, um	oblong, *adj.*
raro	rarely, seldom, *adj.*
vel	or, *conj.*

Adjectives of the 1st and 2nd declensions belong to the 1st group of adjectives. Masculine and neutral adjectives are declined according to the rules of the 2nd declension, and feminine adjectives are declined according to the 1st one. These adjectives have the same endings as nouns of corresponding declensions.

m	***f***	***n***
long-***us***	long-***a***	long-***um*** (**longus, a, um**) – long
aeg-***er***	aegr-***a***	aegr-***um*** (**aeger, gra, grum**) – sick
lat-***us***	lat-***a***	lat-***um*** (**latus, a, um**) – wide
nig-***er***	nigr-***a***	nigr-***um*** (**niger, gra, grum**) – black
lib-***er***	libĕr-***a***	libĕr-***um*** (**liber, ĕra, ĕrum**) – free

The adjective agrees with the noun in gender, case and number.

Example of declination: longus, a, um – long

	sing.				**pl.**		
	m	**f**	**n**		**m**	**f**	**n**
Nom.	long-**us**	long-**a**	long-**um**	**Nom.**	long-**i**	long-**ae**	long-**a**
Gen.	long-**i**	long-**ae**	long-**i**	**Gen.**	long-**ōrum**	long-**ārum**	long-**ōrum**
Dat.	long-**o**	long-**ae**	long-**o**	**Dat.**	long-**is**	long-**is**	long-**is**
Acc.	long-**um**	long-**am**	long-**um**	**Acc.**	long-**os**	long-**as**	long-**a**
Abl.	long-**o**	long-**ā**	long-**o**	**Abl.**	long-**is**	long-**is**	long-**is**

sinister, tra, trum – left

	sing.		
	m	**f**	**n**
Nom.	sinist-**er**	sinistr-**a**	sinistr-**um**
Gen.	sinistr-**i**	sinistr-**ae**	sinistr-**i**
Dat.	sinistr-**o**	sinistr-**ae**	sinistr-**o**
Acc.	sinistr-**um**	sinistr-**am**	sinistr-**um**
Abl.	sinistr-**o**	sinistr-**ā**	sinistr-**o**

	pl.		
	m	**f**	**n**
Nom.	sinistr-**i**	sinistr-**ae**	sinistr-**a**
Gen.	sinistr-**ōrum**	sinistr-**ārum**	sinistr-**ōrum**
Dat.	sinistr-**is**	sinistr-**is**	sinistr-**is**
Acc.	sinistr-**os**	sinistr-**as**	sinistr-**a**
Abl.	sinistr-**is**	sinistr-**is**	sinistr-**is**

§ 34 Substantivization of adjectives

Sometimes the adjectives become substantivized. In this case they have the functions of nouns (some or all) in the sentence, but their adjectival origin is still generally felt. They are divided into wholly substantivized and partially substantivized adjectives. Wholly substantivized adjectives have all the characteristics of nouns, namely the plural form, the genitive case. Partially substantivized adjectives acquire only some of the characteristics of nouns.

intestīnum, i n – intestine
caecum, i n (typhlon, G.) – caecum
rectum, i n (proctos, G.) – rectum
duodēnum, i n – duodenum
ileum, i n – ileum
jejūnum, i n – jejunum
colon, i n – colon

N.B.! Besides, some terms are still used with the noun:
intestīnum crassum – large intestine
intestīnum tenue – small intestine

§ 35 The most commonly used suffixes

Suffix	Meaning	Example
-ōs-	sufficiency	***fibrōsus, a, um*** – fibrous ***venōsus, a, um*** – venous ***nervōsus, a, um*** – nervous
-ĭc-	belonging	***thoracĭcus, a, um*** – thoracic ***gastrĭcus, a, um*** – gastric
-īn-	- " -	***pelvīnus, a, um*** – pelvic ***palatīnus, a, um*** – palatine
-e-	tissue	***osseus, a, um*** – osseous ***coccygeus, a, um*** – coccygeal
(o)-īde-	similarity	***arachnoideus, a, um*** – arachnoid ***pterygoideus, a, um*** – pterygoid

The most commonly used prefixes

Prefix	Meaning	Example
infer-	under	***inferodexter***
infra-	under	***infratemporālis***
inter-	between	***interosseus***
intra-	inside	***intrajugulāris***
pre-	before	***prechiamatĭcus***
super-	above	***superodexter***
supra-	above	***supramastoideus***
sub-	under	***subarcuātus***

Sometimes the compound adjectives are used in the anatomical terminology:
tibiocalcaneus, a, um – tibiocalcaneal
petrotympanicus, a, um – petrotympanic
tympanosquamosus, a, um – tympanosquamous

§ 36 The adjectives of the 1st and the 2nd declension used in anatomical nomenclature

palatīnus, a, um	palatine
rotundus, a, um	round
obturatorius, a, um	obturatory
spinōsus, a, um	spinous
pelvīnus, a, um	pelvic
carotĭcus, a, um	carotid
xiphoideus, a, um	xiphoid
mastoideus, a, um	mastoid
sacer, cra, crum	sacral
interosseus, a, um	interosseous
incisīvus, a, um	incisive
lymphatĭcus, a, um	lymphatic
optĭcus, a, um	optical
profundus, a, um	profound
serotĭnus, a, um	late
hypoglossus, a, um	sublingual
zygomatĭcus, a, um	zygomatic
odontoideus, a, um	odontoid
mediānus, a, um	middle, median
dentifrĭcus, a, um	dentifrice
odontotechnĭcus, a, um	odontotechnique
canīnus, a, um	canine
dexter, tra, trum	right
sinister, tra, trum	left
liber, ĕra, ĕrum	free

§ 37 The Participle Passive *(Participium perfecti passīvi)*

The Participle Passive is widely used in anatomical nomenclature. Its grammatical form is similar to the adjectives of the 1st and 2nd declension, e. g.: ***affixus, a, um, circumflexus, a, um.***

Similar to the adjectives passive participle agrees with the noun in gender, case and number, e.g.: ***ligamentum transversum*** – transverse ligament.

§ 38 The Participle Passive in anatomical nomenclature

affixus, a, um	affixed (affigo, ĕre)
circumflexus, a, um	circmflexed (circumflecto, ĕre)
compactus, a, um	compacted (compingo, ĕre)
composĭtus, a, um	composed (compōno, ĕre)
conjunctus, a um	conjunct (conjungo, ĕre)
cruciātus, a, um	cruciate (crucio, āre)
fissus, a, um	furcated (findo, ĕre)
fixus, a, um	fixed (figo, ĕre)
oblongātus, a, um	oblongatal (oblongo, āre)
obtūsus, a, um	obtuse (obtundo, ĕre)
perforātus, a, um	perforated (perfŏro, āre)
transversus, a, um	transverse (transverto, ĕre)

§ 39 Phrases used in medical terminology:

loco frigĭdo – in a cold place
in capsŭlis gelatinōsis – in gel capsules
in charta cerāta – in waxed paper
in vitro nigro – in black glass
in vitro fusco – in dark glass
ex adverso – on the contrary
post factum – after the fact
post scriptum – written after
aequo anĭmo – quietly

Assignments for self-control:

- *What is the dictionary form of adjectives belonging to the 1st group?*
- *What is the ending of neutral adjectives in Nom. sing. and in Gen. sing.; in Nom. pl. and in Gen. pl.?*
- *What is the agreed modifier?*

Exercises:

I. Decline:

palātum durum – hard palate
tonsilla palatīna – palatine tonsil
nodŭlus lymphoideus – lymphatic node

II. Agree the adjectives with the nouns:

crest – middle, intermittent, pubic

angle – mastoid, external, internal

ligament – interosseous, wide, long

III. Form Gen. sing. for the following adjectives:

palatīnus, a, um
rotundus, a, um
intermedius, a, um
obturatorius, a, um
spinōsus, a, um
tympanĭcus, a, um
pelvīnus, a, um
carotĭcus, a, um
xiphoidĕus, a, um

IV. Add the ending and translate:

sulcus carotĭc…
membrāna obturatori…
tubercŭlum obturatori…
crista mediān…

V. Agree the adjectives with the nouns:

ocŭlus (sinister, tra, trum)
ganglion (autonomĭcus, a, um)
pleura (diaphragmatĭcus, a, um)

diaměter (obliquus, a, um)
orgăna (uropoëtĭcus, a, um)
nucleus nervi (vagus, a, um)
virus (mortĭfer, ĕra, ĕrum)
sulcus arteriae (subclāvius, a, um)

VI. Form adjectives using the following suffixes:

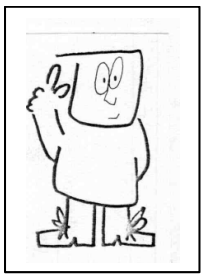
-ĭc- *:*
tympănum, i n
pylōrus, i m

-al-*:*
radius, i m
cauda, ae f

-os-*:*
arteria, ae f
fibra, ae f

VII. Transform the number:

aorta thoracĭca
costas spurias
sutūrae squamōsae
lamĭna affixa
nodŭli lymphatĭci
ligamentis cruciātis
fossas canīnas
musculōrum transversōrum



Do you know that...

...the name of the first cervical vertebra – "atlas, atlantis m" comes from the proper name of Greek mythological hero – Atlant. According to the myth, Atlant was punished for rebelling against Zeus (the ruler of all the gods on Olympus) and for this offence he was forced to hold up the Sky perpetually. Also, he was considered to be an expert in Geography, therefore collection of geographical maps is called "atlas". According to the myth, Atlant dwelt on the West. Consequently, the western Ocean was called "Atlantic".

Aphorisms and quotations:

Disce, sed a doctis, indoctos ipse docēto. *– Learn from experts, and teach beginners.*
Alea jacta est. *– The die has been cast.*
Verĭas vincit*. – The truth always prevails.*

Nihil est perfectum. *– There is nothing perfect in the world.*
Exceptio probat regŭlam. *– The exception proves the rule.*

Ut medicīna, sic et veritas saepe aspĕra est
Medicine and truth sometimes can be sharp

UNIT IX

THEME: The 3rd declension nouns *(Declinatio tertia)*

OBJECTIVES: - *to learn how to identify the 3rd declension nouns and their type*
- *to learn how to agree the 3rd declension nouns with adjectives*

§ 40 The nouns of the 3rd declension

Read and translate:

1. ***Sanguis** arteriōsus rubro **colōre**, **sanguis** venōsus fusco **colōre** est.*
2. ***Ossa** membri superioris.*
3. *Muscŭlus **flexor** digitōrum quattuor **tendĭnes** habet (has).*
4. *Per **laryngem** et tracheam **aër** in **pulmones** intrat.*
5. ***Renibus** urīna secernĭtur.*

Vocabulary:

sanguis, ĭnis m	blood, *n*
arteriōsus, a, um	arterial, *adj.*
ruber, bra, brum	red, *adj.*
color, ōris m	colour, *n*
venōsus, a, um	venous, *adj.*
fuscus, a, um	dark, *adj.*
os, ossis n	bone, *n*
superior, ius	superior, *adj.*
muscŭlus, i m	muscle, *n*
flexor, ōris m	flexor, *n*
digitus, i m	digit, finger, *n*
quattuor	four, *num.*
tendo, ĭnis f	tendon, *n*
per + Acc	through, *prep.*
larynx, ngis m	larynx, *n*
trachea, ae f	trachea, *n*
aër, aëris m	air, *n*
in + Acc.	in, *prep.*
pulmo, ōnis m	lung, *n*

Nom. sing.	Gen. sing.	Gender	Meaning	Stem
apex	**apĭc**-is	m	apex	***apic-***
dens	**dent**-is	m	tooth	***dent-***
pars	**part**-is	f	part	***part-***
radix	**radīc**-is	f	root	***radīc-***
os	**or**-is	n	mouth	***or-***
os	**oss**-is	n	bone	***oss-***

Nouns of all genders with different endings in Nom. sing., and with the ending ***-is*** in Gen. sing. belong to the 3rd declension.

§ 41 The endings of the 3rd declension nouns:

sing.		pl.	
Nom.	different endings	**Nom.**	***-es*** (m, f); ***-a,- ia (n)***
Gen.	***-is***	**Gen.**	***-um (ium***)
Dat.	***-i***	**Dat.**	***-ĭbus***
Acc.	***-em*** (m, f); **n = Nom.**	**Acc.**	***-es*** (m, f); **n = Nom**.
Abl.	***-e (i)***	**Abl.**	***-ĭbus***

All nouns of the 3rd declension are divided into three groups: consonant type, vowel type and mixed.

§ 42 The consonant group

The consonant group is the basic one that includes nouns of different genders with different number of syllables in Nom. and Gen. sing. and with only one consonant at the end of a stem: ***os, oris n*** – mouth; ***apex, ĭcis m*** – apex; ***cartilāgo, ĭnis f*** – cartilage.

Examples of declination:

sing.

	m	**f**	**n**
Nom.	apex	cartilag-***o***	os
Gen.	apĭc-***is***	cartilagĭn-***is***	or-***is***
Dat.	apĭc-***i***	cartilagĭn-***i***	or-***i***
Acc.	apĭc-***em***	cartilagĭn-***em***	os
Abl.	apĭc-***e***	cartilagĭn-***e***	or-***e***

pl.

	m	**f**	**n**
Nom.	apĭc-***es***	cartilagĭn-***es***	or-***a***
Gen.	apĭc-***um***	cartilagĭn-***um***	or-***um***
Dat.	apic-***ĭbus***	cartilagin-***ĭbus***	or-***ĭbus***
Acc.	apĭc-***es***	cartilagĭn-***es***	or-***a***
Abl.	apic-***ĭbus***	cartilagin-***ĭbus***	or-***ĭbus***

§ 43 The vowel group

The vowel group comprises only neutral nouns with the endings ***-e, -al, -ar,*** in Nom. sing**,** in Gen. sing. ***-is, -ālis, -āris***, e.g.: ***rete, is, n*** – net, ***calcar, āris n*** – spur, ***animal, ālis n*** – animal.

Difference in declination: ***Abl.sing. -i***
Nom. pl. -ia
Gen. pl. -ium

sing.

Nom.	ret-***e***	calc ***-ar***
Gen.	ret-***is***	calcār-***is***
Dat.	ret-***i***	calcār-***i***
Acc.	ret-***e***	calc ***-ar***
Abl.	ret-***i***	calcār-***i***

pl.

Nom.	ret-***ia***	calcar-***ia***
Gen.	ret-***ium***	calcar-***ium***
Dat.	ret-***ĭbus***	calcar-***ĭbus***
Acc.	ret-***ia***	calcar-***ia***
Abl.	ret-***ĭbus***	calcar-***ĭbus***

§ 44 The mixed group

The mixed group contains nouns with equal number of syllables in Nom. and Gen. sing.*:* ***auris, is f*** – ear, ***cutis, is f*** – skin. Nouns with two or more syllables at the end of a stem belong to this type as well: ***dens, dentis m*** – tooth; ***os, ossis n*** – bone; ***pars, partis f*** – part.

Difference in declination:
Abl. sing. ***-e***
Nom. pl. (n) ***-a***
Gen. pl. ***-ium***

Examples of declination:

	sing.		
	f	**m**	**n**
Nom.	auris	dens	os
Gen.	aur-***is***	dent-***is***	oss-***is***
Dat.	aur-***i***	dent-***i***	oss-***i***
Acc.	aur-***em***	dent-***em***	os
Abl.	aur-***e***	dent-***e***	oss-***e***

	pl.		
	f	**m**	**n**
Nom.	aur-***es***	dent-***es***	oss-***a***
Gen.	aur-***ium***	dent-***ium***	oss-***ium***
Dat.	aur-***ĭbus***	dent-***ĭbus***	oss-***ĭbus***
Acc.	aur-***es***	dent-***es***	oss-***a***
Abl.	aur-***ibus***	dent-***ĭbus***	oss-***ĭbus***

Assignments for self-control:

- *What is the definition of the 3rd declension nouns?*
- *How to define the stem of a noun?*
- *What is the definition of the consonant group?*
- *What is the definition of the vowel group?*
- *What is the definition of the mixed group?*

Exercises:

I. Decline:

mucilāgo flava – yellow mucilage
forāmen caecum – blind opening
dens cariōsus – carious tooth
rete arteriōsum – arterial network

II. Define the group of the following nouns:

glomus, ĕris n – glomus
forāmen, ĭnis n – foramen
rete, is n – nerwork, rete
cartilāgo, ĭnis f – cartilage
tempus, ŏris n – time
phalanx, ngis f – phalanx (pl. phalanges)
unguis, is m – nail
frons, frontis f – forehead
pancreas, ătis n – pancreas
pecten, ĭnis m – pecten

III. Add the endings to the following terms and translate:

corpus lingu…
corpus uter…
caput mandibul…

apex capit…
basis pulmon…
caput pancreat…
cartilago cricoidea laryng…
cuspis corōnae dent…

IV. Translate into Latin:

root of tongue
basis of the lower jaw
canal of the lower jaw
blood plasma
head of pancreas
nasal part
cause of surdity
heart disease
apical foramen of root of a tooth
treatment of ulcer of the stomach
apex of tooth root (or root apex)

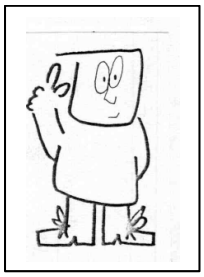
V. Translate into English and explain:

calcar avis
rete testis
vestibŭlum oris
fovea capĭtis femŏris
caput ossis metacarpi
forāmen apĭcis dentis

VI. Transform the number:

flexiōnum
articulatiōnes (pl.)
tendinis
dentis
cuspem
foramĭne
capĭta
pharyngis
fornix
retĭbus
partis
pulmōnes
marginĭbus
corpus

Do you know that…



there are a lot of terms in clinical terminology derived from mythology. The term ''Medusa's head'' is applied to dilated cutaneous veins around the umbilicus, seen mainly in the newborns and in patients with cirrhosis of the liver. The name of this disease comes from the name of a mythological creature, the snake-haired Medusa Gorgona. She was endowed with snakes instead of hair. Similarly, symptoms of the disease (blue collaterals) appear like snakes around the umbilicus.

…

Aphorisms and quotations:

Medĭcus amīcus et servus aegrotōrum est. *– Doctor is a friend and a slave of a patient.*
Bona valetūdo melior est. *– Good health is above wealth.*
Hygiena amīca valetudĭnis. *– Hygiene is a friend of health.*
Vis medicatrix natūrae. *– Healing power of nature.*
Tempus omnia sanat*. – Time cures all things.*
Optĭmum est pati quod emendāri nequit*. – What cannot be cured must be endured.*
Optĭmum medicamentum quies est. *– Quietness is the best medicine.*

Labor homĭnem firmat
The labour strengthens the human being

UNIT X

THEME: The masculine nouns of the 3rd declension

OBJECTIVES: *- to learn how to determine the gender of a noun*
- to learn how to agree masculine nouns with adjectives

§ 45 The masculine nouns of the 3rd declension

Read and translate:

1. ***Pulmōnes*** *sunt orgăna respiratoria.*
2. *Muscŭlus* ***sphincter*** *ani internus et externus.*
3. *Numĕrus* ***radīcum dentium*** *varius est.*
4. *Studiōsi* ***rete*** *calcaneum spectant.*

Vocabulary:

pulmo, ōnis m	lung, *n*
respiratorius, a, um	respiratory, *adj.*
sphincter, ēris m	sphincter, *n*
internus, a, um	internal, *adj.*
externus, a, um	external, *adj.*
rete, is n	rete, network, *n*
specto, āre	see, *v*
numĕrus, i m	number, *n*
radix, īcis f	root, *n*
dens, dentis m	tooth, *n*
varius, a, um	different, *adj.*
studiōsus, i m	pupil, *n*
calcaneus, a, um	calcaneal, *adj.*

Masculine nouns of the 3rd declension possess the following endings:

Nom. sing.	Gen. sing.	Examples
-o	***-ōnis***	***pulmo, ōnis m*** – lung
	-ĭnis	***homo, ĭnis m*** – human being
-or	***-ōris***	***buccinātor, ōris m*** – buccinator muscle, muscle of a cheek
-os	***-ōris***	***flos, floris m*** – flower
-er	***-tris***	***venter, tris m*** – venter
	-ĕris	***vomer, ĕris m*** – vomer
	-ēris	***urēter, ēris m*** – ureter
-es	***-ĭtis***	***poples, ĭtis m*** – poplite
(unequal syllables)	***-ĕtis***	***paries, ĕtis m*** – wall
	-ĕdis	***pes, pedis m*** – foot
		stapes, ĕdis m – stapedius
-ex	***-ĭcis***	***apex, ĭcis m*** – apex
		cortex, ĭcis m – cortex

§ 46 Exceptions of the gender

Feminine:

-er ***gaster, tris f*** – stomach
mater, tris f – mother, layer

Neutral:

-or ***cor, cordis n*** – heart
-os ***os, ossis n*** – bone
os, oris n – mouth
-er ***tuber, ĕris n*** – tuber

The most commonly used expressions:

gaster sana – healthy stomach
quies absolūta – absolute quiet
lex dura – harsh law
cor humānum – human heart
os leporīnum (labium leporīnum) – cleft lip
lege artis – according to all the rules
lex non scripta – un unwritten law
Dr. med.= Doctor medicinae – Doctor of medicine

§ 47 The masculine nouns of the 3rd declension used in anatomical nomenclature

adductor, ōris m	adductor
compressor, ōris m	compressor
constrictor, ōris m	constrictor
cortex, ĭcis m	cortex
dilatātor, ōris m	dilatator
erector, ōris m	erector
extensor, ōris m	extensor
flexor, ōris m	flexor
humor, ōris m	humidity
index, ĭcis m	index finger
levātor, ōris m	elevator
obturātor, ōris m	obturator
pollex, ĭcis m	thumb
pronātor, ōris m	pronator
sphincter, ēris m	sphincter
supinātor , ōris m	supinator
urēter, ēris m	ureter
vertex, ĭcis m	vertex

Assignments for self-control:

- *What endings do masculine nouns of the 3rd declension possess?*
- *What is the gender of the following nouns: os, oris; os, ossis; cor, cordis?*
- *What is the gender of the following nouns: caro, carnis; gaster, tris; lex, legis?*

Exercises:

I. Decline:

muscŭlus levātor – levator muscle

II. Translate the following terms into Latin:

rotator muscle
masticatory muscle
apex of lung
fingers of the foot
tubercle of the upper jaw
hard tunic of the brain
soft tunic of the brain
cardiac incisure of lung

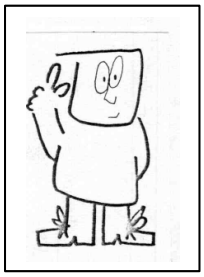
midde part of the left lung
long erector muscle of thumb
oblique fissure of lung

III. Agree the adjectives with the nouns:

auris + internus, a, um
canālis + cardiăcus, a, um
tuberosĭtas + pterygoideus, a, um
phalanx + medius, a, um
pars + petrōsus, a, um
pancreas + accessorius, a, um
tuber + ischiadĭcus, a, um
cartilāgo + thyroideus, a, um
sanguis + venōsus, a, um

IV.Transform the number:

os planum, pulmōne dextro, ossa cranii, muscŭli rotatōres, ossa digitōrum, durae matris, lobi pulmōnum, in abductōres, ossis cuboidei, tubĕris calcanei, muscŭlos sphinctĕres, paries externus.



Do you know that...

...the ancient Greek school of medicine was highly developed. Two directions of medical science were introduced by different philosophical inflows. The first one, known as dogmatic, was based on the Stoic teaching. This direction implied mandatory investigation of latent causes of each disease. According to this teaching, the character of any disease and the nature of any individual were considered to be important grounds for healing. The second direction, called empiric, was grounded on the Epicureanism. Due to the teaching, external symptoms of the disease were supposed to be the physician's prime considerations.

Aphorisms and quotations:

Dura lex, sed lex. *– The law is harsh but the law should prevail.*
Homo ornat locum, non locus homĭnem. *– The man decorates the place, not the place decorates the man.*
Honōres mutant mores. *– Honour changes manners.*
Honōris causa. *– For the sake of honour.*
Pro mundi beneficio. *– For the benefit of the world.*

Arte et humanitāte, labōre et scientia
By art and humanity, by labour and science

UNIT XI

THEME: The 3rd declension of nouns. The feminine gender of nouns.

OBJECTIVES:
- *to learn how to determine the gender of a noun*
- *to learn how to agree the feminine nouns with adjectives*
- *to learn how to translate terms with agreed and non-agreed modifiers*

§ 48 The feminine nouns of the 3rd declension

Read and translate:

1. ***Tuberosĭtas*** *masseterĭca et* ***tuberosĭtas*** *pterygoidea.*
2. ***Cartilāgo*** *cricoidea* ***laryngis.***
3. ***Cutis*** *homĭnum ex* ***epiderme****, e* ***cute*** *propria, sive e corio, e* ***subcūte*** *sive e tela subcutanea constat (consists).*
4. ***Creatiōnes cutis*** *pili et* ***ungues*** *sunt.*
5. *In pilo* ***radīcem*** *pili, scapum pili* ***apicem****que pili sunt.*

Vocabulary:

tuberosĭtas, ātis f	tuberosity, *n*
pterygoideus, a, um	pterygoid, *adj.*
cricoideus, a, um	cricoid, *adj.*
cutis, is f	skin, *n*
epidermis is f	epidermis, *n*
sive	or, *conj.*
corium, i n	corium, *n*
subcutis, is f	underskin, *n*
subcutaneus, a, um	subcutaneous, *adj.*
pilus, i m	hair, *n*
radix, īcis f	root, *n*
apex, ĭcis m	apex, *n*
masseterĭcus, a, um	masseteric, *adj.*
cartilāgo, ĭnis f	cartilage, *n*
larynx, ýngis m	larynx, *n*
homo, ĭnis m	human being
proprius, a, um	proper, *adj.*
tela, ae f	tissue, *n*
creatio, ōnis f	creation, *n*
unguis, is m	nail, *n*
scapus, i m	shaft, *n*

The feminine nouns of the 3rd declension have the following endings:

Nom. sing.	Gen. sing.	Examples
-as	**-ātis**	***extremĭtas, ātis f*** – extremity
-es (with equal number of syllables in Nom. and Gen.)	**-is**	***pubes, is f*** – pubes
-is	**-is**	***auris, is f*** – ear
	-ĭdis	***glottis, ĭdis f*** – glottis
-us	**-ūdis**	***incus, ūdis f*** – incus
-s (with a previous consonant)		***frons, frontis f*** – forehead
-x (except-ex)	**-cis**	***radix, īcis f*** – root
		calx, cis f – heel
	-gis	***phalanx, āngis f*** – phalanx
-do	**-ĭnis**	***longitūdo, ĭnis f*** – length
-go	**-ĭnis**	***cartilāgo, ĭnis f*** – cartilage
-io	**-ōnis**	***secretio, ōnis f*** – secretion

§ 49 Exceptions

Masculine gender:

-as	***atlas, ntis m***	atlant
- is	***sanguis, ĭnis m***	blood
	axis, is m	axis
	canalis, is m	canal
	unguis, is m	nail
-s	***dens, dentis m***	tooth
	fons, fontis m	source
-x	***larynx, ngis m***	larynx
	pharynx, ngis m	pharynx
	thorax, ācis m	thorax
	coccyx, ўgis m	coccyx
	hallux, ūcis m	great toe
	fornix, ĭcis m	fornix
	varix, ĭcis m	varix
-do	***tendo, ĭnis m***	tendon
-go	***margo, ĭnis m***	margin

Neutral gender:

-as	***vas, vasis n***	– vessel
	pancreas, ătis n	– pancreas

Memorize the following terms:

sanguis venōsus – venous blood
dens serotĭnus – serotinous tooth
tendo (Achillis) calcaneus – calcaneal tendon
margo interosseus – interosseous margin
vas sanguineum – blood vessel

§ 50 The feminine nouns of the 3rd declension used in anatomical nomenclature

appendix, īcis f	appendix
calx, cis f	heel
cervix, īcis f	neck
cutis, is f	skin
decussatio, ōnis f	decussation
epidermis, is f	epidermis
epiglottis, ĭdis f	epiglottis
fauces, ium f pl.	yawn
glottis, ĭdis f	glottis
iris, ĭdis f	iris
junctio, ōnis f	junction
lens, lentis f	lens
meninx, ngis f	meninx
naris, is f	naris
pelvis, is f	pelvis
pyrămis, ĭdis f	pyramid
regio, ōnis f	region
tuberosĭtas, ātis f	tuberosity

The most commonly used expressions:

Functio laesa – malfunction
Ab origĭne – from the beginning
In observatiōne – under observation
Post mortem – after death
Post mortem medicīna – after death the doctor
Sanatio per primam intentiōnem – healing by first intention
Sanatio per secundam intentiōnem – healing by second intention

Conditio sine qua non – indispensable condition
Ex necessitāte – of necessity
Ultĭma ratio – the final urgument
Restitutio ad integrum – full restitution
Indicatio vitālis – vital evidence
Sedes morbi – the dwelling of disease
Sub operatiōne – during operation

Assignments for self-control:

- *What is the gender of the following nouns:* ***canalis, axis, margo, sanguis****?*
- *What is the gender of the following nouns:* ***vas, pancreas****?*
- *What is the gender of the nouns:* ***pars, partis****?*
- *What is the Gen. sing. of feminine nouns with the ending* ***-us*** *in Nom.?*
- *What is the gender of nouns with the ending* ***-s*** *in Nom.?*

Exercises:

I. Decline:
radix profunda – deep root
tendo calcaneus – calcaneal tendon

II. Agree the adjectives with the nouns according to the scheme SnAn and translate:

a) margo + interosseus, a, um
thorax + paralytĭcus, a, um
pancreas + accessorius, a, um
vas + lymphatĭcus, a, um
pars + peripherĭcus, s, um
canālis + hyaloideus, a, um

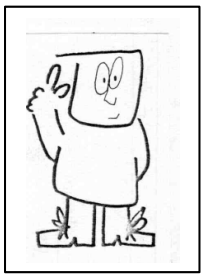
b) dens + serotĭnus, a, um
canālis + incisīvus, a, um
articulatio + interphalangeus, a, um
tuberosĭtas + masseterĭcus, a, um
cavĭtas + nasalis, e + osseus, a, um

III. Combine the terms according to the scheme S_nS_g and translate:
aponeurōsis + lingua
canālis + carpus
axis + lens

pyrămis + penis
os + pubes
glandŭla + cutis
substantia + lens
cortex + lens

Dentes

Dentes inter vestibŭlum et cavum oris locāti sunt (are located). In dente corōna dentis, collum dentis et radix dentis distinguuntur (are distinguished). Intra corōnam dentis cavum locātur (is located). In apĭce radīcis dentis est forāmen apĭcis dentis. Per forāmen apĭcis dentis in cavum dentis, ubi pulpa dentis est vasa sanguinea et nervi intrant (enter). Dentes formā corōnae sunt; dentes incisīvi, dentes sapientiae (serotīni) etc.



Do you know that...

...the expression ''Achilles' heel'' means a fatal weakness in spite of overall strength, that can actually or potentially lead to downfall. According to a myth, Achilles' mother had dipped the infant Achilles in the river Styx, holding him by his heel, and he became invulnerable where the waters touched him – that is, everywhere except the areas of his heel that were covered by her thumb and forefinger. Achilles was said to have died from a heel wound which was the result of an arrow, possibly poisoned.

The use of "Achilles' heel" as an expression used for "area of weakness, vulnerable spot" dates only to 1855.

Aphorisms and quotations:

Doctrīna multiplex, verĭtas una. *– Different sciences, single truth.*
In vino verĭtas, in aqua sanĭtas. *– In wine there is truth, in water there is health.*
Vanĭtas vanitātum et omnia vanĭtas. *– Vanity of vanities. All is vanity.*
Senectus insanabĭlis morbus est. *– Senility is an incurable illness.*

Mens sana in corpŏre sano
A sound mind in a sound body

UNIT XII

THEME: The 3rd declension nouns. The neutral gender of nouns

OBJECTIVES: - *to learn how to determine the gender of a noun*
- *to learn how to agree the feminine nouns with adjectives*
- *to learn how to translate terms with agreed and non-agreed modifiers*

§ 51 The neutral nouns of the 3rd declension

Read and translate:

1. *In* ***capĭte*** *fibŭlae apex* ***capĭtis*** *est.*
2. *Extremĭtas superior fibŭlae* ***caput*** *fibŭlae format.*
3. ***Cor*** *centrum* ***systemătis*** *sanguinei est.*
4. ***Caput*** *homĭnis, caput animālis, caput insecti varia sunt.*
5. ***Corpus*** *homĭnis ex* ***capĭte****, trunco et extremitatĭbus constat (consists).*
6. *In* ***cavitāte abdomĭnis viscĕra*** *locata sunt:* ***hepar****, ventricŭlus,* ***renes, lien****, intestīna et cetĕra.*
7. ***Pectus*** *ab* ***abdomĭne diaphragmăte****, membrana musculōsa sejungĭtur (is separated).*
8. *In* ***apĭce*** *radīcis dentis est* ***forāmen*** *apĭcis dentis.*

Vocabulary:

hepar, ătis n	liver, *n*
caput, ĭtis n	head, *n*
cor, cordis n	heart, *n*
centrum, i n	centre, *n*
systēma, ătis n	system, *n*
corpus, ŏris n	body, *n*
abdōmen, ĭnis n	abdomen, *n*
cystis, is f	bladder, *n*
vas, vasis n	vessel, *n*
fibŭla, ae f	fibula, *n*
ren, renis m	kidney, *n*
lien, ēnis m	spleen, *n*
pectus, ŏris n	chest, *n*
diaphragma, ătis n	diaphragm, *n*
viscus, ĕris n	viscus, *n*
situs, a, um	situated, *adj.*
forāmen, ĭnis n	foramen, *n*

Neutral nouns of the 3rd declension have the following endings:

Nom. sing.	Gen. sing.	Examples
-ma	**-ătis**	***stroma, ătis n*** – stroma
-e	**-is**	***rete, retis n*** – kidney
-c	**-tis**	***lac, lactis n*** – milk
-l	**-lis**	***fel, fellis n*** – bile
-en	**-ĭnis**	***forāmen, ĭnis n*** – foramen
-t	**-ĭtis**	***caput, ĭtis n*** – head
-ar	**-āris**	***calcar, āris n*** – spur, calcar
	-ătis	***hepar, ătis n*** – liver
-ur	**-ŏris**	***femur, ŏris n*** – femur
	-ūdis	***incus, ūdis n*** – incus
-us	**-ŏris**	***corpus, ŏris n*** – body
	-ĕris	***glomus, ĕris n*** – glomus
	-ūris	***crus, cruris n*** – crus

§ 52 Exceptions

Masculine gender:

aden, ĕnis m – gland
splen, enis m – spleen
ren, renis m – kidney
pecten, ĭnis m – pecten

§ 53 The neutral nouns of the 3rd declension used in anatomical nomenclature

abdōmen, ĭnis n	abdomen
calcar, āris n	spur
chiasma, ătis n	chiasm(a)
crus, cruris n	crus (the leg, from knee to foot)
culmen, ĭnis n	culmen
diaphragma ătis n	diaphragm
diastēma, ătis n	diastem(a)
femur, ŏris n	femur
forāmen, ĭnis n	foramen
glomus, ĕris n	glomus
hepar, ătis n	liver
limen, ĭnis n	limen
occĭput, ĭtis n	nape, occiput
pectus, ŏris n	pectus, chest
prisma, ătis n	prism(a)
pulvīnar, āris n	pulvinar, pillow
rete, is n	rete, network
stroma, ătis n	stroma
tempus, ŏris n	temple
viscus, ĕris n (pl. viscĕra, um)	viscus (pl. viscera)

The most commonly used expressions:

in corpore – as a whole, on the whole
sui genĕris – of own gender
a pedĭbus usque ad caput – from head to foot
ius natūrae – natural law

Assignments for self-control:

- *What is the ending of neutral nouns in Nom. pl.?*
- *What is the ending of neutral nouns in Acc. sing.?*
- *What is the gender of a noun ren, renis?*

Exercises:

I. Decline:

rete venōsum – venous network
caput longum – long head

II. Add endings to the following terms:

orgăna systemătis respiratorĭ… – organs of respiratory system
forāmen rotund… – round opening
caput plan…– plain head
stroma vitre…– vitreous stroma
corpus adipōs…. orbĭtae – adipose body of orbit
corpus ossis hyoide…– body of hyoid bone

III. Define the number:

stigmăti
femŏrum
foramĭna
cruris
abdominĭbus
capĭta
cordis
calcāri
reti

IV. Form anatomical terms:

a) $S_n A_n$
crus + longus, a, um
corpus +callōsus, a, um
os + sacer, cra, crum

tuber + ischiadĭcus, a, um
systēma + digestorius, a, um
forāmen + palatīnus, a, um

b) $S_n A_n S_g$
corpus + adipōsus, a, um + bucca
forāmen + caecus, a, um + lingua
tunĭca + mucōsus, a, um + os
centrum + tendineus, a, um + diaphragma

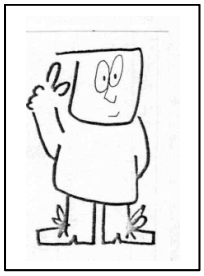
c) $S_n S_g S_g$
forāmen + apex + dens
ligamentum + caput + femur
corpus + os + ischium

V. Translate into Latin:
Hepatic sphincter
body of cerebellum
pillow of thalamus
optic chiasm
segmentation of the liver
bleft part of the liver
head of epigastrium
blind foramen of medulla oblongata
body of metatarsal
head of metatarsal
hole of head of femur

De abdomĭne

Corpus homĭnis e capĭte, trunco et membris constant (consist). Abdōmen inter pectus et pelvim situm est. Varii muscŭli cavum abdomĭnis tegunt (cover), ut muscŭlus rectus abdomĭnis, muscŭlus externus, internus, transversus abdomĭnis et cetĕri. In cavo abdomĭnis viscĕra sita sunt (are located): hepar, stomăchus, renes, lien, intestīna et cetĕra.

Do you know that...



...the payment for treatment was set up long before Hippocrates. Public physicians received fixed payment from the city government, while private physicians were paid directly by patients. The payment varied depending on the patient.

Aphorisms and quotations:

Ovem in fronte, lupum in corde gerit. *– A wolf in sheep's clothing.*
Ubi mel, ibi fel. *– No sweet without some bitter.*

***Lapis offensiōnis**. – The rock on which we split.*
***Vitae sal amicitia.** – Friendship is the salt of life.*

Viribus unītis
Union makes strength

UNIT XIII

THEME*:* The peculiarities of the 3rd declension nouns

OBJECTIVES: *- to learn the rules of declining the nouns* ***vas, vasis n, pelvis, is f***
*- to learn the rules of declining the nouns with the ending "-**sis**"*
- to learn new words

§ 54 The peculiarities of the 3rd declension nouns

Read and translate:

1. ***Basis*** *cranii interna et externa.*
2. ***Syndesmōsis*** *est junctūra ossium fibrōsa.*
3. *Inter cava thorācis et abdomĭnis* ***diaphragma*** *est.*
4. *Morbi* ***systemătis*** *nervōsi varii sunt.*
5. *In* ***stromăte*** *irĭdis fibrae musculāres sunt.*
6. *In ossĭbus longis corpus,* ***diaphўsis*** *et* ***epiphўsis*** *distinguuntur.*

Vocabulary:

basis, is f	base, *n*
syndesmōsis, is f	syndesmosis, *n*
junctura, ae f	junction, *n*
fibrosus, a, um	fibrous, *adj.*
cavum, i n	cave, *n*
diaphragma, ătis n	diaphragm, *n*
systema, ătis n	system, *n*
stroma, ătis n	stroma, *n*
iris, idis f	iris, *n*
fibra, ae f	fibre, *n*
diaphўsis, is f	diaphysis, *n*
epiphysis, is f	epiphysis, *n*

The noun ***vas, vasis n*** – vessel is declined according to the 3rd declension in singular and according to the 2nd declension in plural.

	sing.	**pl.**
Nom.	vas	vas-**a**
Gen.	vas-**is**	vas-**ōrum**
Dat.	vas-**i**	vas-**is**
Acc.	vas	vas-**a**
Abl.	vas-**e**	vas-**is**

Borrowings of Greek origin of neutral gender with the ending ***-ma*** in Nom. sing. *and* ***-ătis*** in Gen.sing. have the ending ***-is*** in Dat. and Abl. pl., instead of ***-ĭbus.***

	s i n g.	**p l.**
Nom.	prisma	prismăt-***a***
Gen.	prismăt-***is***	prismăt-***um***
Dat.	prismăt-***i***	prismăt-***is***
Acc.	prisma	prismăt-***a***
Abl.	prismăt-***e***	prismăt-***is***

§ 55 The Greek nouns

The Greek and Latin nouns of feminine gender with the ending –**sis** (***basis, is f***, ***diaphўsis, is f***) have the following peculiarities:

Acc. sing.-***im***
Abl. sing.-***i***
Gen. pl. -***ium***

	s i n g.	**p l.**
Nom.	bas-***is***	bas-***es***
Gen.	bas-***is***	bas-***ium***
Dat.	bas-***i***	bas-***ĭbus***
Acc.	bas-***im***	bas-***es***
Abl.	bas-***i***	bas-***ĭbus***

The most commonly used expressions:

prognōsis bona – **favourable prognosis**
pro dosi – **for one dose**
pro narcosi – **for narcosis**
pro analўsi – **for analysis**
theoria cum praxi – **theory with practice**
vis vitālis – **vital force**
vis legis – **power of law**
vi rescripti – **under the order; by order**
vis major – **superior force**
vis probandi – **power of proof**

§ 56 The nouns with the ending ''-sis'' used in anatomical nomenclature

adenohypophўsis, is f	adenohypophysis, anterior part of hypophysis
amphiartrōsis, is f	amphiarthrosis, movable joint
anastomōsis, is f	anastomosis
aponeurōsis, is f	aponeurosis
apophўsis, is f	apophysis, outgrowth
basis, is f	basis
diaphўsis, is f	diaphysis, the body of a bone
gomphōsis, is f	gomphosis, consolidation
metaphўsis, is f	metaphysis, the part of a bone
synchondrōsis, is f	synchondrosis, cartilaginous junction
syndesmōsis, is f	syndesmosis, osseous junction
symphўsis, is f	symphysis

Assignments for self-control:

■ *What peculiarities do the nouns with the ending* ***-sis*** *possess?*
■ *How are the nouns with the ending* ***-ma*** *declined?*
■ *How is the noun* ***-vas*** *declined?*

Exercises:

I. Decline:

vas lymphatĭcum – lymphatic vessel
symphўsis pubĭca – pubic symphysis
systēma peripherĭcum – peripheral system

II. Agree the adjectives with the nouns according to the scheme S_nA_n:

chiasma + optĭcus, a, um
aponeurōsis + plantāris, e
symphysis + pubĭcus, a, um
systēma + nervōsus, a, um
vas + sanguineus, a, um
anastomōsis + arteriovenosus, a, um

III. Build terms according to the model S_n S $_{g.}$:

stroma + iris
stroma + ovarium
cavĭtas + pelvis
vasa + vasa
vasa + nervi

plasma + sanguis
parenchўma + testis
chiasma + tendĭnes

IV. Translate into Latin:

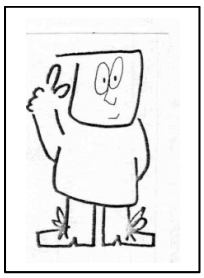
sinusoidal vessel
pelvic fascia
tendinous schiasm
deep lymphatic vessel
cuneopetrous synchondrosis
base of the arytenoid cartilage

V. Translate into English:

Syndesmōsis cranii
aponeurōsis muscŭli bicipĭtis brachii
fascia superior diaphragmătis pelvis
aponeurōsis muscŭli erectōris spinae
vas lymphatĭcum profundum
vasa sanguinea choreoidea
vasa sanguinea auris internae

VI. Change the following nouns into singular or plural:

bases
vasis
vasa
pelvim
parenchymătis
vasōrum
lordosium



Do you know that...

…in the 1st century A.D. the Roman encyclopaedist Aulus Celsus wrote extensively about various dental diseases, including bleeding gums and ulcers of the oral cavity, as well as dental treatment. In his book we find recommendations on the relief of toothache and the importance of oral hygiene.
In addition to the treatment of the oral diseases and performing tooth extractions, the ancient Roman physicians were skilled enough in restoring carious teeth with gold crowns and in replacing the missing teeth with fixed bridgework.

Aphorisms and quotations:

Diagnōsis bona – curatio bona*. – Good diagnosis – good cure.*
Magna est vis consuetudĭnis*. – Great is the power of habit.*
Credi non potest*. – Too good to be true.*
Ex ore parvulōorum verĭtas*. – Truth comes out of the mouths of babes and sucklings.*

Verĭtas odium parit. – *Truth hurts.*
Aetāte sapīmus rectius. – *Time brings wisdom.*

Omne initium difficĭle est
The beginnings are always hard

UNIT XIV

THEME: The adjectives of the 3rd declension *(Adjectīva declinatiōnis III).*
The Participle Present Active *(Participium praesentis actīvi)*

OBJECTIVES:
- *to gain practice in identifying the 3rd declension adjectives*
- *to learn the peculiarities of building terms with an agreed modifier*
- *to learn the rules on agreement of the Participle Present Active with nouns*

§ 57 The adjectives of the 3rd declension. The Participle Present Active

Read and translate:

1. *Multi termĭni anatomĭci studiōsi jam noti sunt velut muscŭlus* ***gracĭlis****, muscŭlus* ***teres****, forāmen* ***mentāle****.*
2. *Cranium dividĭtur in cranium* ***cerebrāle*** *et cranium* ***viscerāle.***
3. *Muscŭli levatōres costārum* ***breves*** *et longi sunt.*
4. *Dens* ***molāris permanens*** *primus maxĭmus est.*

Vocabulary:

multus, a, um	multiple, *adj.*
termĭnus, i m	term, *n*
anatomĭcus, a, um	anatomical, *adj.*
studiōsus, a, um	student, *n*
iam	now, *adv.*
notus, a, um	known, *adj.*
velut	as, *prep., adv., conj.*
gracĭlis, e	gracile, slender, *adj.*
teres, ĕtis	round, *adj.*
forāmen, ĭnis n	foramen, *n*
mentālis, e	mental, *adj.*
cranium, i n	cranium, *n*
permănens, ntis	permanent, *adj.*
primus, a, um	first, *adj.*
maximus, a, um	greatest, maximum, maximal, *adj.*
divido, ĕre	divide, *v*
in (with Acc., Abl.)	in, *prep.*
cerebrālis, e	cerebral, *adj.*
viscerālis, e	visceral, internal, *adj.*
levator, ōris m	levator, *n*

costa, ae f	rib, *n*
brevis, e	short, *adj.*
longus, a, um	long, *adj.*
dens, ntis m	tooth, *n*
molaris, e (dens)	molar, *n*

Adjectives of the 3rd declension are declined according to the vowel group of the 3rd declension. They have the following endings: Abl. sing**.** ***-i***; Nom. and Acc. pl. ***-ia (n),*** Gen. pl. ***-ium*.**

Examples of declination

	***sing*.**		
Nom.	ac**er**, acr**is**, acr**e**	brev**is** (m, f) brev**e** (n)	simplex (m, f, n)
Gen.	acr**is**	brev**is**	simpl**ĭcis**
Dat.	acr**i**	brev**i**	simpl**ĭci**
Acc.	acr**em** (m, f) acr**e** (n)	brev**em** (m,f) brev**e** (n)	simpl**ĭcem** (m, f) simple**x** (n)
Abl.	acr**i**	brev**i**	simpl**ĭci**

	pl.		
Nom.	acr**es** (m, f) acr**ia** (n)	brev**es** (m, f) brev**ia** (n)	simpl**ĭces** (m, f) simpl**icia** (n)
Gen.	acr**ium**	brev**ium**	simpl**icium**
Dat.	acr**ĭbus**	brev**ĭbus**	simplic**ĭbus**
Acc.	acr**es** (m, f) acr**ia** (n)	brev**es** (m, f) brev**ia** (n)	simpl**ĭces** (m, f) simpl**icia** (n)
Abl.	acr**ĭbus**	brev**ĭbus**	simplic**ĭbus**

§ 58 Frequently used suffixes of the 3rd declension adjectives

Suffix	Meaning	Example
-ālis, -āris	belonging (to), appliance	*pector**ālis, e*** – pectoral *maxill**āris, e*** – maxillary

§ 59 The adjectives of the 3rd declension in anatomical nomenclature

■ **with two endings:**

abdominālis, e	abdominal
alveolāris, e	alveolar
apicālis, e	apical
articulāris, e	articular
basālis, e; basilāris, e,	basal

bronchiālis, e	bronchial
buccālis, e	buccal
caecālis , e	caecal
caudālis, e	caudal
centrālis, e	central
cerebrālis,e	cerebral
cervicālis, e	cervical
costālis, e	costal
dentālis, e	dental
lacrimālis, e	lacrimal

■ **with one ending:**

biceps, bicipĭtis	two-headed
teres, ĕtis	round
simplex, ĭcis	simple
impar, imparis	impar, unpaired, azygous

§ 60 The Participle Present Active *(Participium praesentis actīvi)*

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

§ 61 The most commonly used participles

abdūcens, ntis	abducent
affĕrens, ntis	afferent
communĭcans, ntis	communicans, communicating
comitans	comitant
descendens, ntis	descendent
effĕrens, ntis	efferent
fluctuans, ntis	fluctuant
oppōnens, ntis	opponent
perfŏrans, ntis	perforant
permănens, ntis	permanent

The most commonly used phrases:
in brevi – shortly
praesente aegrōto – while the patient is present
diagnōsis ex juvantĭbus – diagnosis based on subsidiary material

Assignments for self-control:

■ *What does the dictionary form of an adjective consist of?*
■ *How many groups are adjectives divided into?*
■ *What are the endings of the 1st type of the 3rd declension adjectives?*
■ *What are the endings of the 2nd type of the 3rd declension adjectives?*
■ *What are the endings of the 3rd type of the 3rd declension adjectives?*
■ *According to what group are nouns declined?*
■ *What are the endings of Present Participle Active?*

Exercises:

I. Decline:

concha nasālis – nasal concha
cranium viscerāle – visceral cranium
musculus teres – musculus teres

II. Agree the adjectives with the nouns:

vertebra + cervicālis, e; sacrālis, e; thoracālis, e
os + nasālis, e; occipitālis, e; sublinguālis, e
foramen + parietālis, e; ethmoidālis, e; caecus, a, um
muscŭlus + biceps; triceps; teres
margo + mediālis, e; laterālis, e; dorsālis, e

III. Add the ending and translate:

canālis intraorbitāl…
cartilāgo alār…
glandŭlae maxillār…
trigōnum retromolār…
capsŭla articulār…
pariĕtes laterāl…
alveŏlae dentāl…
tuberculum mentāl…

IV. Name the nouns from which these adjectives are formed:

linguālis
sternālis
occipitālis
tibiālis
renālis
dentālis
femorālis
pectorālis

scapulāris
maxillāris
mandibulāris
costālis

V. Translate the following terms:

arrow-shaped sulcus
renal artery
cervical canal of uterus
vertebral column
oval foramen
short crus
head of mandible
frontal region

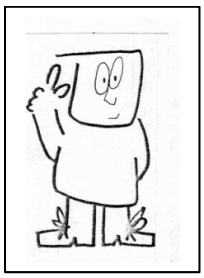
VI. Translate into Latin:

perforanting rami
descendending artery
comitant artery
recurrent artery
permanent teeth
ascending colon

De cavo oris

Orgăna systemătis respiratorii et digestorii cavum oris in capĭte situm est. Paries cavi oris in capĭte situm est. Paries cavi oris anterior e labio oris inferiōre et superiōre, paries superior e palato duro et molli, paries inferior e diaphragmăte musculōso, latĕra e buccis constant. In loco pariĕtis posteriōris cavum oris per isthmum faucium cum systemăte respiratorio et digestorio reliquo iunctum est.

Do you know that…



…Hippocrates established the facts that any disease was a natural process, and its symptoms were the reactions of the body to the disease. Consequently, the primary function of the physician was to aid the natural forces of the body. He noted the effects of food, occupation, and, especially, of climate in causing disease. The body, according to Hippocrates, has the means of cure within itself. Hippocrates advised to use proper diet, exercise, message and sea bathing for the treatmen t.

Aphorisms and quotations:

Sapientia est regīna, homĭni servit scientia. *– Wisdom is a queen, and science serves human being.*

Ad cogitandum et agendum homo natus est. *– Human being is born to think and act.*

Satius est equo labi, quam lingua. *– Better the foot slip than the tongue.*

Nimia familiarĭtas parit contemptum. *– Familiarity breeds contempt.*
Voluntas sine labōre non valet. *– Good acts are better than good intentions.*

Spero meliōra
I hope for better things

UNIT XV

THEME: The degrees of comparison of adjectives
(Gradus comparatiōnis adjectivōrum)

OBJECTIVES: - *to learn the comparative and superlative degrees of adjectives*
- *to form Gen. sing. of different degrees of adjectives*
- *to agree adjectives in the comparative and superlative degrees with nouns*
- *to learn the rules on forming the degrees of comparison in anatomical nomenclature*

§ 62 The degrees of comparison of adjectives

Read and translate:

1. Os sacrum skeléti femĭnae ***latius*** *et* ***brevius*** *est quam viri.*
2. Nomĭna musculōrum sunt: muscŭlus gluteus ***maxĭmus*** *et* ***minĭmus****, muscŭlus* ***latissĭmus*** *dorsi, muscŭlus tibiālis* ***anterior*** *et* ***posterior****.*
3. Dentes molāres ***majōres*** *et* ***latiōres*** *sunt, quam cetĕri dentes.*
4. Dens molāris permanens primus ***maximus*** *est.*
5. Dentes premolāres ***minōres*** *sunt, quam ceteri dentes.*
6. Dens premolāris ***superior*** *secundus unam radīcem habet.*

Vocabulary:

helix, ĭcis f	helix, *n*
sacer, cra, crum	sacral, *adj.*
major, jus	big, *adj.*
minor, minus	small, *adj.*
tibialis, e	tibia, *n*
anterior, ius	anterior, *adj.*
posterior, ius	posterior, *adj.*
cetĕri, ae a	rest, *n*
premolāris, e (dens)	premolar, *n*
superior, ius	superior, *adj.*
secundus, a, um	second, *num.*
unus, a, um	one, *num.*
habeo, ēre	have, *v*
quam	as, *conj.*
humĭlis, e	low, *adj.*
intellego,ĕre	think, *v*
hic, haec, hoc	this, *dem.pron.*
nomen, ĭnis n	name, *n*
gluteus, a, um	gluteal, *adj.*
minĭmus, a, um	smallest, *adj.*

§ 63 The degrees of comparison

In Latin, like in English, qualitative adjectives have degrees of comparison. There are three degrees of comparison ***(gradus comparationis)***:

gradus positīvus – positive degree
gradus comparatīvus – comparative degree
gradus superlatīvus – superlative degree

Gradus Comparatīvus is formed by adding the suffix ***-ior*** for masculine and feminine genders and the suffix ***-ius*** for neutral gender. These suffixes are added to the stem of an adjective in the positive degree. The adjectives are declined according to the consonant type of the 3rd declension, e.g.:

	sing.		**pl.**	
	m, f	**n**	**m, f**	**n**
Nom.	longior	longius	longiōr **-es**	longiōr **-a**
Gen.	longiōr **-is**		longiōr **-um**	
Dat.	longiōr **-i**		longior **-ĭbus**	
Acc.	longiōr **-em**	longius	longiōr **-es**	longiōr **-a**
Abl.	longiōr **- e**		longior **-ĭbus**	

Gradus superlatīvus is formed by adding suffix ***-issĭm-*** and endings ***-us, -a, -um*** to the stem of an adjective in the positive degree, e.g.:

Positive *(Positīvus)*	**Comparative** *(Comparatīvus)*	**Superlative** *(Superlatīvus)*
longus, a, um (long)	long-***ior***, long-***ius*** (longer)	long-***issĭm-us, a, um*** (longest)
brevis, e (short)	brev-***ior***, brev-***ius*** (shorter)	brevi-***issĭm-us, a, um*** (shortest)
simplex, ĭcis (simple)	simplic-***ior***, simplic-***ius*** (simpler)	simplic-***issĭm-us, a, um*** (the simplest)

Some adjectives form their degrees from another stem, e.g.:

Positive *(Positivus)*	**Comparative** *(Comparativus)*	**Superlative** *(Superlativus)*
magnus, a, um	***major, majus***	***maximus, a, um***
parvus, a, um	***minor, minus***	***minimus, a, um***

1. A great number of adverbs are formed from adjectives.
2. Certain adverbs can change for degrees of comparison.
3. The degrees of comparison of adverbs are formed in the same way as those of adjectives.

Adverb	Comparativus	Superlativus
ante – before	***anterior, anterius***	-
post – after	***posterior, posterius***	***postrēmus, a, um***
supra – above	***superior, superius***	***suprēmus a,um***
infra – below	***inferior, inferius***	***infĭmus,a,um;***
extra – extra	***exterior, exterius***	***extrēmus, a,um***

The most commonly used phrases:

prognōsis optĭma – the best prognosis
prognōsis pessĭma – the worst prognosis
a posteriōri – by the experience
a priōri – without experience
in summa – in result
in optĭma forma – in the best condition
locus minōris resistentiae – the place of the least resistance

Exercises:

I. Decline:

tubercŭlum minus – lesser tubercle
circŭlus major – greater circle

II. Form comparative and superlative degrees of adjectives:

latus, a, um – wide
pius, a, um – soft
simplex, icis – simple

III. Translate into English:

palātum superius
dentes posteriōres
pars anterior
pelvis minor
bucca inferior
arteria thoracĭca suprēma
incisūra ischiadĭca major
tubercŭlum anterius et posterius
dens canīnus inferior
ductus sublinguālis major et minor
musculus constrictor pharyngis inferior
arcus dentālis superior
arcus dentālis inferior
muscŭlus rectus capĭtis posterior minor

muscŭlus levātor labii superiōris
muscŭlus depressor labii inferiōris

IV. Form Genitivus singulāris:

cornu majus
pelvis minor
arteria superior
vena inferior
radix anterior
crista posterior
ganglion superius
muscŭlus teres minor
muscŭlus teres major
rami intercostāles anteriōres

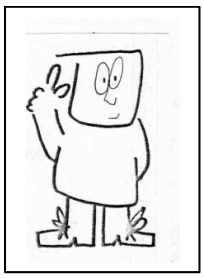
V. Translate into Latin:

superior cardiac muscle
superior margin
inferior labial artery
anterior nasal calculus
small muscles of head
foramen of inferior vena cava

VI. Agree the adjectives with the nouns:

trochanter, ēris m + major, majus
cartilāgo, ĭnis f + major, majus
cartilāgo, ĭnis f + minor, minus
bronchus, i m + inferior, ius
digĭtus, i m + minĭmus, a, um
meātus, us m + suprēmus, a, um
tunica, ae f + intĭmus, a, um

Do you know that...



...the "Oedipus complex", in psychoanalytic theory, is a group of largely unconscious ideas and feelings which centre around the desire to possess the parent of the opposite sex and eliminate the parent of the same sex. The complex is named after the Greek mythical character Oedipus, who (albeit unknowingly) killed his father and marred his mother.

Aphorisms and quotations:

Recta linea est brevissĭma, recta via est tutissĭma *. – The direct line is the shortest, the straight way is the safest.*

Ut quique est doctissĭmus, ita est modestissĭmus*. – The cleverest is the modest.*

Veterrĭmus homĭni optĭmus amīus est*. – An old friend is better than two new ones.*

Melior est apertus inimīcus quam falsus amīcus. *– Better an open enemy than a false friend*.
Vacua vasa plurĭmum sonant. *– Empty vessels make the greatest sound*.
Melius est nomen bonum quam magnae divitiae. *– A good name is better than riches.*

Nulla dies sine linea
Not a day without a line drawn

UNIT XVI

THEME: The 4th and 5th declension of nouns *(Declinatiōnes quarta et quinta)*

OBJECTIVES: *- to learn the nouns of the 4th and the 5th declension*
- to agree the1st and the 2nd declension adjectives with 4th and the 5th declension nouns
- to learn the Greek equivalents of the 4th and the 5th declension

§ 64 The 4th and 5th declension of nouns

Read and translate:

1. ***Sinus*** *coronarius cordis.*
2. ***Arcus*** *aortae prope columnam vertebrālem situs est.*
3. *Atrium* ***meātus*** *nasi medii.*
4. ***Ductus*** *hepatĭcus commūnis cum* ***ductu*** *cystĭco conjungĭtur.*
5. *Magnum numĕrum* ***processuum, sinuum, tractuum, ductuumque*** *professor studiōsis explicat.*
6. *Manus* ***faciem*** *dorsālem et* ***faciem*** *palmārem habet.*
7. *In* ***superficie*** *cutis epidermis est.*
8. *Frons, oculi, nasus, os partes* ***faciēi*** *sunt.*

Vocabulary:

sinus, us m	sinus, *n*
coronarius, a, um	coronary, *adj.*
arcus, us m	arch, arc, bow, *n*
prope + Acc.	near, *adv.*
situs, a, um	site, position, *adj.*
est	is, *v* (3rd pers. sing.)
meātus, us m	duct, *n*
medius, a, um	middle, *adj.*
ductus, us m	duct, *n*
hepatĭcus, a, um	hepatic, *adj.*
commūnis, e	common, *adj.*
cystĭcus, a, um	cystic, *adj.*
conjungo, ĕre	join, *v*
processus, us m	process, *n*
tractus, us m	tract, *n*
professor, ōris m	professor, *n*
studiōsus, i m	student, *n*
explico, āre	explain, *v*
manus, us f	hand, *n*
facies, ēi f	face, surface, *n*

dorsālis, e	dorsal, *adj.*
palmāris, e	palmar, *adj.*
habeo, ēre	have, *v*
superficies, ēi f	external surface
epidermis, is f	epidermis, *n*
frons, ntis m	forehead, *n*
sunt	are, *v*

The 4th declension comprises masculine nouns with the endings ***-us*** and neutral nouns with the ending ***-u*** in Nom. sing. In Gen. sing. they end in ***-us***:

textus, us m – tissue
meātus, us m – duct
processus, us m – process
sinus, us m – sinus
cornu, us n – horn
genu, us n – knee

Exception:

manus, us f – hand

Declination of the 4th declension nouns:

	sing.		**pl.**	
Nom.	**-us (m)**	**-u (n)**	**-us (m)**	**-ua (n)**
Gen.	**-us**	**-us**	**-uum**	**-uum**
Dat.	**-ui**	**-u**	**-ĭbus**	**-ĭbus**
Acc.	**-um**	**-u**	**-us**	**-ua**
Abl.	**-u**	**-u**	**-ĭbus**	**-ĭbus**

Examples:

	sing.		**pl.**	
	m	***n***	***m***	***n***
Nom.	process-**us**	corn-**u**	process-**us**	corn-**ua**
Gen.	process-**us**	corn-**us**	process-**uum**	corn-**uum**
Dat.	process-**ui**	corn-**u**	process-**ĭbus**	corn-**ĭbus**
Acc.	process-**um**	corn-**u**	process-**us**	corn-**ua**
Abl.	process-**u**	corn-**u**	process-**ĭbus**	corn-**ĭbus**

Exception: The noun ***arcus, us m*** – arc in Dat. and Abl. pl. have ending ***-ŭbus***.

The 5th declension comprises feminine nouns with the endings ***-es*** in Nom. sing. and ***-ēi*** in Gen. sing., e.g.: ***facies, ēi f*** – face, surface.

The declination of the 5th declension nouns:

	sing.	pl.
Nom.	**-es**	**-es**
Gen.	**-ēi**	**-ērum**
Dat.	**-ēi**	**-ēbus**
Acc.	**-em**	**-es**
Abl.	**-e**	**-ēbus**

Example:

	sing.	pl.
Nom.	faci-**es**	faci-**es**
Gen.	faci-**ēi**	faci-**ērum**
Dat.	faci-**ēi**	faci-**ēbus**
Acc.	faci-**em**	faci-**es**
Abl.	faci-**e**	faci-**ēbus**

§ 65 The 4th and 5th declination nouns used in anatomical nomenclature

adĭtus, us m	entrance, approach
arcus, us m	arc
aqueductus, us m	aqueduct, conduit, canal
ductus, us m	duct
hiātus, us m	hiatus
flexus, us m	bend
meātus, us m	duct
plexus, us m	plexus
recessus, us m	recess
sinus, us m	sinus
tractus, us m	tract
facies, ēi f	face, surface

The most commonly used phrases:

in situ – in the original place, appropriate position, or natural arrangement
in statu nascendi – in the process of creation
in statu quo – in the previous status
status commūnis – common status
status locālis – local status
status naturālis – natural status
status praesens aegrōti – present state (condition) of a patient
natūra rerum – nature of things
ad rem – in the matter
ad absurdum – to the point of absurdity
post partum – after childbirth, after delivery
exitus letālis – fatal outcome, fatal termination

facies Hippocratĭca – Hippocratic face
casus extraordinarius – extraordinary case
casus ordinarius – ordinary case
ad usum externum – for external use (application)
ad usum internum – for internal use (application)
propria manu – by one's own hand
sensu largo – in the broad sense
sensu stricto – in the narrow sense
dosis pro cursu – dose for the course of treatment
pro die – for a day
in die – every day
per diem – during the day

Assignments for self-control:

■ *What is the gender of the 4th declension nouns?*
■ *What ending do nouns have in Gen. sing.?*
■ *What are the endings of neutral nouns?*
■ *What is the gender of nouns with the ending* ***-es****?*
■ *What is the gender of nouns with the ending* ***-u****?*

Exercises:

I. Decline:
arcus venosus – venous arch
facies palmāris – palmar surface

II. Translate and agree the adjectives with the nouns:

duct
- common hepatic
- accessory hypogastric
- left lymphatic

sinus
- superior petrosal
- inferior sagittal
- cuneiform

meatus
- superior nasal
- internal acoustic

III. Define the case and translate:
arcus

cornua
processuum
genibus
arcubus

IV. Add the ending Nom. and Gen sing. and pl.

facies palmar…
facies extern…
os faci…
facies articular… oss… temporal…
facies medial… dent… incisive…

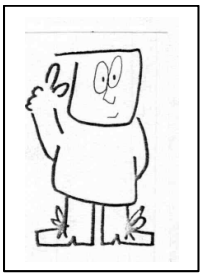
V. Translate the following terms:

facies linguālis
facies palatīna
facies articulāris posterior
facies infratemporālis
facies dorsāles digitōrum

VI. Translate into Latin:

external surface of frontal bone
palmar surface of hand
surface of spleen
facial bones
anterior region of face
deep vein of face
lingual surface
medial surface of a tooth
upper teeth

Do you know that…



*…the ancient Greek artist Apelles was held in such high esteem by ancient writers on art that he continues to be regarded as the greatest painter of antiquity even though none of his work survived. Pliny the Elder attributes the maxim "**Nulla dies sine linea**" (Not a day without a line drawn) to Apelles, since he was known for his diligence at practising his art every day.*

Aphorisms and quotations:

Usus magister optĭmus omnium rerum est. *– Practice is the best teacher.*
Larga manu. *– With an open hand.*
Unus dies gradus est vitae. *– Each day is a step of life.*
Dum vita est, spes est. *– There is hope as long as there is life.*
Amīcus certus in re incerta cernĭtur. *– A friend in need is a friend indeed.*

Lapsus calami. – *A slip of the pen.*
Lapsus linguae. – *A slip of the tongue.*

Non curātur, qui curat
Those who are not treated, must be too busy
(inscription on Roman bath-houses)

UNIT XVII

THEME: The verb. The basic forms of the verb. The Imperative Mood.
The Present Indicative Active and Passive.
The Present Subjunctive Active and Passive.
The verb *sum, esse*. **The verb** *fio, fiĕri.*

OBJECTIVES:
- *to acquire skills in identifying verb stems and determining verb conjugations*
- *to learn the way of verb formation (the Present tense, the 3rd person singular and plural)*
- *to learn making the verb forms of the Imperative Mood (I-IV conjugations) and acquire skills in applying them in the pharmaceutical terminology*
- *to learn forming the Present Indicative Active and the Present Indicative Passive*
- *to learn forming and using the verb forms used in prescriptions and in the pharmaceutical terminology*
- *to gain practice in translating simple sentences, expressions and aphorisms of deontological and general education value*

§ 66 The verb

Read and translate:

1. ***Audīte*** *et* ***intellegĭte****!*
2. ***Auscultāre disce****!*
3. ***Noli nocēre****!*
4. ***Nolīte nocēre****!*
5. *Crystallus* ***solvĭtur****.*
6. *Aegrōtus* ***auscultātur*** *et* ***palpātur****.*
7. *Medĭcus bene* ***diagnoscit,*** *bene* ***curat****.*
8. *Instrumentum* ***sterilisātur****.*
9. *Mixtūra bis* ***repetĭtur****.*
10. ***Dentur*** *tales doses.*
11. *Misce,* ***fiat*** *pasta.*
12. ***Misceātur. Detur. Signētur.***

Vocabulary:

audio, īre	hear, *v*
intellĕgo, ĕre	understand, comprehend, conceive, *v*
ausculto, āre	listen (to), auscultate, *v*
disco, ĕre	learn, study, *v*
noceo, ēre	harm, injure, hurt, *v*
crystallus, i f	crystal, *n*
bene	well, *adv.*
solvo, ĕre	dissolve, resolve, *v*
dignosco, ĕre	recognize, identify, discern, *v*
aegrōtus, i m	ill, sick, unwell, *adj.*
curo, āre	treat, medicate, heal, cure, *v*
instrumentum, i n	instrument, toll, *n*
palpo, āre	palpate, *v*
steriliso, āre	sterilize, *v*
medĭcus, i m	physician, doctor, *n*
mixtūra, ae f	mixture, liquid medicine, potion, *n*
bis	twice, *adv.*
repĕto, ĕre	repeat, *v*
signo, āre	denote, designate, mark, *v*
do, are	give, dispense, *v*
misceo, ēre	mix, *v*

§ 67 The basic verb properties

Latin verbs possess the following properties:

1. **Tense (Tempus)** – there are six tenses in Latin. We shall study only the Present tense *(Praesens)*.
2. **Number (Numĕrus):**
   numĕrus singulāris – singular;
   numĕrus plurālis – plural.
3. **Person (Persona):**
   persōna prima – the 1st person;
   persōna secunda – the 2nd person;
   persōna tertia – the 3rd person.
4. **Mood (Modus):**
   modus indicatīvus – the Indicative Mood;
   modus conjunctīvus – the Subjunctive Mood;
   modus imperatīvus – the Imperative Mood;
   infinitīvus – the Infinitive.
5. **Voice (Genus):**
   genus actīvum – the Active Voice;
   genus passīvum – the Passive Voice.

§ 68 The dictionary verb forms

Latin verbs are given in a dictionary in four main forms. We shall study only two main forms, namely:

1. the 1st person singular of the Present Indicative Active ***(praesens indicatīvi actīvi)*** with the personal ending **-o**;
2. the indefinite verb form ***(infinitīvus praesentis actīvi)*** with the ending ***-re;***

curo, āre – to cure
misceo, ēre – to mix
solvo, ĕre – to dissolve
linio, īre – to lubricate

§ 69 The identification of the verb conjugation

Latin verbs are divided into four conjugations (conjugation – ***conjugatio***).

Verbs with the stem ending ***-ā*** are referred to the I conjugation. Verbs with the stem ending ***-ē*** belong to the II conjugation. Verbs with the stem ending in a consonant and in a vowel ***-ŭ*** belong to the III conjugation. Verbs with the ending ***-ī*** are referred to the IV conjugation.

The stem of the Present tense ***(praesens)*** is determined by means of cutting the suffix ***-re*** in the indefinite verb form for the verbs of the I, II, IV conjugations and the suffix ***-ĕre*** for the III conjugation:

Conjugation	***Infinitivus***	***Praesens stem***	***Praesens stem ending***
I	*curāre*	***curā -***	*ā*
II	*miscēre*	***miscē-***	*ē*
III	*solvĕre* *diluĕre*	***solv-*** ***dilu-***	*consonant* *- ŭ*
IV	*linīre*	***linī-***	*-ī*

§ 70 The Imperative Mood (Modus Imperativus)

The Imperative Present is used in the 2nd person (singular and plural). The Imperative Mood for the verbs of the I, II, IV conjugations in the 2nd person singular coincides with the verb stem of the Present tense. The Imperative Mood for the verbs of the III conjugation in the 2nd person singular is formed by adding the ending ***-e*** to the verb stem. The 2nd person plural of the Imperative Mood of the I, II, IV conjugations is formed adding the ending ***-te*** to the stem in the Present tense. In the III conjugation the combining vowel ***-ĭ*** is added between the stem and the ending.

Conjugation	Infinitivus	Praesens stem	Imperativus	
			2nd person singular	**2nd person plural**
I	**curāre**	**curā-**	Cura! **Cure!**	Curāte! **Cure!**
II	**miscēre**	**miscē-**	Misce! **Mix!**	Miscēte! **Mix!**
III	**solvĕre diluĕre**	**solv- dilu-**	Solve! **Dissolve! Dilute!**	Solvīte! **Dissolve! Diluĭte!**
IV	**linīre**	**linī-**	Lini! **Lubricate!**	Linīte! **Lubricate!**

Negation in the indefinite verb form for the 2nd person singular is expressed by the word *noli* + *infinitivus:* **Noli nocēre!** For the 2nd person plural: *nolīte* + *infinitīvus*: **Nolīte nocēre!**
In prescriptions verbs are used in the Imperative Mood:
Recĭpe: Take:
Sterilĭsa! Sterilize!
Misce! Mix!
Da. Dispense!
Da tales doses numĕro… – Dispense the following doses…
Signa. – Sign. (Denote)**.**

§ 71 The Present Indicative Active and Passive *(Praesens indicatīvi actīvi et passīvi*)

Latin verbs can be used in two voices: active and passive. Transitive verbs can be used both in the Active and Passive Voices. Intransitive verbs can only be used in the Active Voice. Transitive verbs require using the Accusative case (Acc.). The Present Indicative is formed by adding the ending of the Active and Passive Voices to the stem of the Present tense.

Personal endings of the Present Indicative

Person	Active Voice		Passive Voice	
	sing.	**plur.**	**sing.**	**plur.**
1.	-o	-mus	-or	-mur
2.	-s	-tis	-ris	-mini
3.	-t	-nt	-tur	-ntur

In the I, II, IV conjugations personal endings are added directly to the verb stems, but in the verbs belonging to the IV conjugation in the 3rd person plural the combining vowel **–u** is added between a stem and a personal ending: **lini-u-nt, lini-u-ntur**.

In the III conjugation the personal ending is added to a stem by means of the combining vowel **–ĭ** (in the 2nd person singular **praesens indicatīvi passīvi** by means of **–ĕ**). In the 3rd person plural the combining vowel **–u** is added.

NB! *As a rule, personal pronouns in Latin are not used with the verbs.*

	I	II	III	IV
Main verb forms	curo, āre	misceo, ēre	solvo, ĕre diluo, ĕre	linio, īre
Verb stem	curā-	miscē-	solv- dilŭ-	linī-

The Present Indicative Active and Passive

Activum			
S i n g u l a r i s			
3 rd person sing. ***cura-t*** (he, she, it) treats	***misce-t*** mixes	***solv-i-t*** dissolves ***dilu-i-t*** dilutes	***lini-t*** lubricates
P l u r a l i s			
3 rd person pl. ***cura-nt*** (they) treat	***misce-nt*** mix	***solv-u-nt*** ***dilu-u-nt*** dissolve dilute	***lini-u-nt*** lubricate
Passivum			
S i n g u l a r i s			
3rd person sing. ***curā-tur*** (he, she, it) is treated	***miscē-tur*** (he, she, it) is mixed	***solv-ĭ-tur*** ***dilu-ĭ-tur*** (he, she, it) is dissolved (diluted)	***linī-tur*** (he, she, it) is lubricated
P l u r a l i s			
3 rd person pl. ***cura-ntur*** (they) are treated	***misce-ntur*** (they) are mixed	***solv-u-ntur*** ***dilu-u-ntur*** (they) are dissolved (diluted)	***lini-u-ntur*** (they) are lubricated

§ 72 The Subjunctive Mood *(Modus conjunctīvus)*

Unlike the Imperative Mood ***(imperatīvus)***, denoting a direct order, and the Indicative Mood ***(indicatīvus)***, denoting real actions, the Subjunctive Mood ***(conjunctīvus***) represents actions that are possible, doubtful, supposed or desired.

The Present Subjunctive is formed by means of replacing the stem ending **–a** with **–e** in the verbs of the I conjugation. In the verbs belonging to the II, III, IV conjugations the Present Subjunctive is formed by adding the vowel **–a** and personal endings to the verb stems.

Personal endings of the Subjunctive Mood

	Active Voice		**Passive Voice**	
	singular	**plural**	**singular**	**plural**
1.	-m	-mus	-r	-mur
2.	-s	-tis	-ris	-mini
3.	-t	-nt	-tur	-ntur

§73 The Present Subjunctive Active *(Praesens conjunctivi actīvi)*

I	**II**	**III**	**IV**
S i n g u l a r i s			
3rd person sing. ***cure-t*** would cure let (him/her/it) cure	***misce-a-t*** would mix let mix	***solv-a-t*** ***dilu-a-t*** would dissolve (dilute) let dissolve (dilute)	***lini-a-t*** would lubricate let lubricate
P l u r a l i s			
3rd person pl. ***cure-nt*** would cure let (them) cure	***misce-a-nt*** would mix let mix	***solv-a-nt*** ***dilu-a-nt*** would dissolve would dilute let dissolve let dilute	***lini-a-nt*** would lubricate let lubricate

§ 74 The Present Subjunctive Passive *(Praesens conjunctivi passīvi)*

S i n g u l a r i s				
3rd person sing. ***curē-tur*** (he/ she/it) would be cured let (him/ her/it) be cured	***misce-ā-tur*** would be mixed let be mixed	***solv-ā-tur*** would be dissolved let be dissolved	***dilu-ā-tur*** would be diluted let be diluted	***lini-ā-tur*** would be lubricated let be lubricated

P l u r a l i s				
3rd person pl. ***cure-ntur*** (they) would be cured let (them) be cured	***misce-a-ntur*** would be mixed let be mixed	***solv-a-ntur*** would be dissolved let be dissolved	***dilu-a-ntur*** would be diluted let be diluted	***lini-a-ntur*** would be lubricated let be lubricated

NB! The 3rd person singular and plural praesens conjunctīvi passivi can be translated in the pharmaceutical terminology as the indefinite verb form, meaning an order, e.g.,

Misceātur. – Mix.
Detur. – Dispense.
Signētur. – Sign. (Denote).

Besides the Imperative Mood, one can use in prescriptions the verb forms of the Subjunctive Mood, meaning virtually the same:

Misceātur. Dētur. Signētur. – *Let be mixed! Let be dispensed! Let be denoted! (Mix! Dispense! Denote!)*
Dentur tales doses numĕro… – *Let the following doses be dispensed! (Dispense such doses!)*
Repetātur! – *Let be repeated! Repeat!*
Sterilisētur! – *Let be sterilized! Sterilize!*

§ 75 The verb *sum, esse* – to be

The Present Indicative *(Praesens indicatīvi)*

Singularis	**Pluralis**
1. sum – I am	sumus – we are
2. es – You are	estis – you are
3. **est** – he, she, it is	**sunt** – they are

The verb **esse** possesses functions of:

- simple predicate;
- link-verb.

As a simple predicate the verb *esse* means *"to exist, to be"*.
For example:
In cliniča oculistae sunt. – There are oculists at the hospital.

The nominative part of the compound predicate is used in the Nominative case:
Medicīna disciplīna antiqua est. – Medicine is an ancient science.

§ 76 The lexical minimum of the verbs

praeparo, āre	prepare, make ready
sano, āre	treat, improve health
servo, āre	keep, preserve, maintain
formo, āre	form, shape
labōro, āre	work, labour
adhibeo, ēre	use, apply
contineo, ēre	contain
noceo, ēre	harm, injure, hurt
doceo, ēre	teach, instruct
doleo, ēre	suffer (feel, have) pain
valeo, ēre	be healthy
video, ēre	see
habeo, ēre	have, possess
bibo, ĕre	drink
scribo, ĕre	write
dignosco, ĕre	recognize, identify, discern
divido, ĕre	divide
sumo, ĕre	take, accept, receive
infundo, ĕre	pour in(to), fill
vivo, ĕre	live
scio, īre	know
dormio, īre	sleep
sentio, īre	feel, sense
finio, īre	finish, end, complete
tussio, īre	cough
venio, īre	come, arrive
nutrio, īre	nourish, feed

§ 77 The verb *fio, fiĕri* – to form, to become

The verb *fio, fiĕri* belongs to the irregular verbs. It possesses the ending of the Active Voice with the passive meaning. The verb *fio, fiĕri* is conjugated according to

the IV conjugation. In prescriptions it is used in the Subjunctive Mood (the 3rd person singular and plural).

Present Indicative (indicativi)		**Present Subjunctive (conjunctivi)**	
sing.	**pl.**	**sing.**	**pl.**
fit	*fiunt*	*fiat*	*fiant*

Memorize prescription expressions:

Misce, fiat pasta.	*Mix to form a paste.*
Misce, fiat unguentum.	*Mix to make an ointment.*
Misce, fiat linimentum.	*Mix to form a liniment.*
Misce, fiat emulsum.	*Mix to form an emulsion.*
Misce, fiat pulvis.	*Mix to form a powder.*
Misce, fiant pilŭlae.	*Mix to form pills.*
Misce, fiant species.	*Mix to form species.*

Professional medical expressions:

Non licet.– is not permitted.
Quod licet Iovi, non licet bovi. – What is allowed to Jupiter, is not allowed to the ox).
Primum non nocēre, or noli nocēre. – First, not to harm.
Respĭce finem. – Look to the end.

Assignment for self-control:

■ *How many conjugations do Latin verbs possess?*
■ *How is the verb conjugation determined?*
■ *How is the verb stem identified?*
■ *Name the personal endings in the 3rd person singular praesens indicatīvi actīvi.*
■ *What are the personal endings in the 3rd person plural praesens indicatīvi actīvi?*
■ *Identify the personal endings in the 3rd person singular praesens indicatīvi passīvi.*
■ *Enumerate the personal endings in the 3rd person plural praesens indicatīvi passīvi.*
■ *How is the Subjunctive Mood of the verbs belonging to the I, II, III, IV conjugations formed?*

Exercises:

I. Form imperativus praesentis activi of the following verbs:

	sing.	pl.	negative form
finīre			
bibĕre			
scribĕre			
imperāre			
dividĕre			
habēre			
valēre			
nominăre			
dormīre			

II. Identify the stem and conjugation of the verbs:

	stem	conjugation
praeparo, āre		
ausculto, āre		
do, āre		
vivo, ĕre		
repeto, ĕre		
disco, ĕre		
video, ēre		
misceo, ēre		
debeo, ēre		
scio, scīre		
nutrio, īre		
sentio, īre		

III. Fill in missing vowels in the indefinite form of the verbs:

percut___re 3 – to percuss
mun___re 4 – to strengthen
intr___re 1 – to enter
doc___re 2 – to teach
solv___re 3 – to dissolve
impl___re 2 – to fill
par___re 1 – to prepare

IV. Render into English:

Misce. Da. Signa.

Repĕte bis!
Repetĭte bis!
Bene miscēte, filtrāte, date!
Da cito!
Salvēte, amĭcae! Salve, magistra!
Noli sanāre! Nolite sanāre!
Verte! Vertĭte!

V. Render into Latin:

Give immediately!
Repeat three times!
Repeat!
Prepare quickly!

VI. Form the 3rd person singular and plural of the Present Indicative Active and the Present Indicative Passive:

sanāre	_____	dividĕre	_____
servāre	_____	scīre	_____
venīre	_____	habēre	_____
sumĕre	_____	palpāre	_____
movēre	_____	vivĕre	_____

VII. Change the number of the verbs:

repetunt	_____	colant	_____
filtratur	_____	coquitur	_____
miscetur	_____	infundit	_____
nutritur	_____	floret	_____
macerat	_____	finiuntur	_____

VIII. Fill in missing vowels in the 3rd person singular and plural of the Present Indicative Active and the Present Indicative Passive:

val…t	_____	macer…t	_____
add…t	_____	doc…nt	_____
nomin…tur	_____	senti…nt	_____
d…tur	_____	dol…t	_____
solv…ntur	_____	constitu…t	_____

IX. Make the 3rd person singular and plural of the Subjunctive Active and the Subjunctive Passive:

dāre	_____	miscēre	_____
sterilisāre	_____	dignoscĕre	_____
parāre	_____	studēre	_____
finīre	_____	recipĕre	_____
curāre	_____	filtrāre	_____

X. Change the number of the following verbs:

filtratur	_____	diluat	_____

reficiantur	_____	curent	_____
sit	_____	audiatur	_____
fiat	_____	formentur	_____
adhibeantur	_____	recipite	_____

XI. Fill in missing vowels in the 3rd person singular and plural of the Subjunctive Active and the Subjunctive Passive:

sign…t	_____	bib…nt	_____
misce…tur	_____	muni…ntur	_____
col…nt	_____	noce…t	_____
contine…nt	_____	auscult…ntur	_____
injici…nt	_____	defend…t	_____

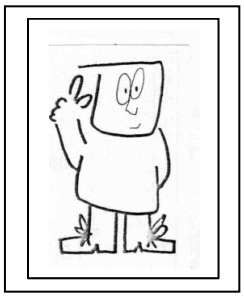
XII. Render into English:

1. Misceātur. Detur. Signētur.
2. Repĕtant ter.
3. Sterilisent instrumenta.
4. Statim parētur.
5. Detur in vitro nigro.
6. Misce, ut fiant species.

XIII. Translate into Latin:

Dispense such doses. Let such doses be dispensed.
Make a paste (Let a paste be made).

Do you know that…



…the first pharmacies emerged since Galen. The word "pharmacy" is of Greek origin. It initially denoted a storeroom, a warehouse, a shop. The appearance of pharmacies was necessitated by physicians' indispensability to have a special place for storing and making drugs. Galen himself possessed a pharmacy in Via sacra in Rome. Later pharmacies became separate institutions.

Aphorisms and quotations:

Dictis facta respondeant. *– Practice what you preach.*
Carpe diem! *– Enjoy the present.*
Noli dare verba ventos. *– Deliver your words not by number but by weight.*
Transeat a me calyx iste. *– Let this cup pass from me.*
Nolīte mittĕre margarītas ante porcos. *– Do not cast pearls before swine.*
Fiat lux! *– Let there be light!*
Sis felix! *– May success attend you!*

Medĭca mente non medicamentis
Cure with wit, not with medications

UNIT XVIII

THEME: **The Latin chemical nomenclature.**
The names of chemical elements, acids, oxides, salts, ethers

OBJECTIVES: *– to learn the way of forming and writing Latin chemical names in prescriptions*

§ 78 The Latin chemical nomenclature

Read and translate:

1. *Tabulettae* ***acĭdi glutaminĭci*** *obductae.*
2. ***Acĭdum hydrochlorĭcum*** *dilūtum.*
3. ***Sulfur*** *depurātum et Sulfur praecipitātum.*
4. ***Unguentum Hydrargўri*** *oxўdi flavum.*
5. *Solutio* ***Acĭdi borĭci****.*
6. ***Hydrargўrum****, seu Hydrargўrum praecipitātum album.*
7. ***Acĭdum borĭcum*** *remedium antiseptĭcum est.*

Vocabulary:

obdūctus, a, um	covered by a membrane
dilutus, a, um	diluted, *adj.*
depurātus, a, um	purified, clarified, *adj.*
praecipitātus, a, um	precipitated, *adj.*
unguentum, i n	ointment, *n*
flavus, a, um	yellow, *adj.*
albus, a, um	white, *adj.*
antiseptĭcus, a, um	antiseptic, disinfectant, decontaminating, *adj.*

Chemical nomenclature is the system of naming chemical elements *(e.g., zinc, sulfur)* and compounds *(e.g., acids, oxides, salts)* which serve as medical substances. In prescriptions one denotes Latin names instead of chemical element symbols or instead of compound formulas.

§ 79 The names of chemical elements

The names of chemical elements are II declination nouns of the neuter gender (Nom. sing. ending **–um**), e.g., ***Argentum, i n*** – silver, ***Bromum, i n*** – bromine, ***Ferrum i n*** – iron, ***Iodum i n*** – iodine, ***Zincum, i n*** – zinc.

Exceptions: ***Phosphŏrus, i m*** – phosphorus, ***Sulfur, ŭris n*** – sulphur.

Aluminium	Al	aluminium
Argentum	Ag	argentums, silver
Arsenĭcum	As	arsenic
Aurum	Au	aurum, gold
Barium	Ba	barium
Bismuthum	Bi	bismuth
Borum	B	boron
Bromum	Br	bromine
Calcium	Ca	calcium
Carboneum	C	carbon
Chlorum	Cl	chlorine
Cuprum	Cu	copper
Ferrum	Fe	iron
Hydrargўrum	Hg	mercury
Iodum	I	iodine
Kalium	K	potassium
Lithium	Li	lithium
Magnesium seu Magnium	Mg	magnesium
Manganum	Mn	manganese
Natrium	Na	sodium
Nitrogenium	N	nitrogen
Oxygenium	O	oxygen
Phosphorus	P	phosphorus
Plumbum	Pb	lead
Silicium	Si	silicon

Stibium	Sb	surma
Sulfur	S	sulphur
Thallium	Tl	thallium
Zincum	Zn	zinc

§ 80 The names of acids

Latin names of acids comprise the noun ***acĭdum, i n*** and an adjective. Acids ***(acida)*** are classified as *oxygen-containing* and *oxygen-free*. The names of oxygen-containing acids are formed by adding the suffix ***-ĭcum***, denoting the oxidation degree, to a stem of the acid-forming element. For instance:

Acĭdum sulfurĭcum (H_2SO_4) – sulphuric acid;
Acĭdum nitrĭcum (HNO_3) – nitric acid.

The suffix ***-ōsum*** indicates a lower degree of oxidation. For example:

Acĭdum sulfurōsum (H_2SO_3) – sulphurous acid;
Acĭdum nitrōsum (HNO_2) – nitrous acid.

If there are more than two oxidation degrees, each of them is expressed by corresponding prefixes and suffixes. For example:

Acĭdum per-chlor-ĭcum ($HClO_4$) – perchloric acid;
Acĭdum hypo-chlor-ōsum (HClO) – hypochlorous acid.

The names of oxygen-free acids are formed by means of the prefix ***hydro-*** and the suffix ***-icum***. For example:
Acĭdum hydro-chlor-ĭcum (HCl) – hydrochloric acid
Acĭdum hydro-sulfur-ĭcum (H_2S) – hydrosulphuric acid

§ 81 The most essential acid names

I

Acĭdum acetĭcum – acetic acid
Acĭdum acetylsalicylĭcum – acetylsalicylic acid
Acĭdum ascorbĭcum – ascorbic acid
Acĭdum benzoĭcum – benzoic acid
Acĭdum borĭcum – boric acid
Acĭdum carbolĭcum – carbolic acid
Acĭdum carbonĭcum – carbonic acid
Acĭdum citrĭcum – citric acid
Acĭdum folĭcum – folic acid

Acĭdum glutaminĭcum – glutami(ni)c acid
Acĭdum lactĭcum – lactic acid
Acĭdum nicotinĭcum – nicotinic acid
Acĭdum salicylĭcum – salicylic acid

II

Acĭdum arsenĭcum – arsenic acid
Acĭdum arsenicōsum – arsenitic acid
Acĭdum bromĭcum – hydrobromic acid
Acĭdum sulfurōsum – sulphurous acid
Acĭdum nitrōsum – nitrous acid

III

Acĭdum hydrochlorĭcum - hydrochloric acid

§ 82 The names of oxides

Oxides (''*oxide''* is derived from the Greek ''*oxys*'' – acid, sour) comprise: *oxides, peroxides, hydroxides, suboxides*:

oxide – ***oxўdum, i n***
peroxide – ***peroxўdum, i n***
hydroxide – ***hydroxўdum, i n***
suboxide – ***oxydulātus, a, um*** (adjective)

Names of oxides, peroxides, hydroxides contain two nouns:
– ***cation name*** (always comes first in ***Gen. sing***);
– ***anion name*** (follows the cation name in ***Nom. sing***.), e.g., ***Calcii oxўdum*** – calcium oxide, ***Hydrogenii peroxўdum*** – hydrogen peroxide, ***Calcii hydroxўdum*** – calcium hydroxide.

Suboxide is expressed by the adjective ***oxydulātus, a, um***, which agrees with the name of the cation, e.g., ***Nitrogenium oxydulātum*** – nitrogen suboxide.

§ 83 The names of salts

Salts are classified as *oxygen-containing* and *oxygen-free*. The salt name contains a cation name (the most commonly, metal) in Gen. sing., and an anion name (acid residue) in Nom. sing.

The anion name of oxygen-containing acid salts with the highest oxidation degree is expressed by a noun of the 3rd declension, which in Nom. sing. ends in ***-as***, and in Gen. sing. has the ending ***-atis***, e.g.:

Natrii sulfas (Nom. sing.) – sodium sulphate;
Natrii sulfātis (Gen. sing.) – sodium sulphate;
Codeini phosphas (Nom. sing.) – codeine phosphate;
Codeini phosphātis (Gen. sing.) – codeine phosphate.

The anion name of oxygen-containing acid salts with a lower oxidation degree is expressed by a noun of the 3rd declension, which in Nom. sing. has the ending ***-is***, and in Gen. Sing. ends in ***-itis,*** e.g.:

*Natrii nitr**is*** (Nom. sing.) – sodium nitrite;
*Natrii nitr**ītis*** (Gen. sing.) – sodium nitrite;
*Kalii arsen**is*** (Nom. sing.) – potassium arsenite;
*Kalii arsen**ītis*** (Gen. sing.) – potassium arsenite.

Anion names with the ending ***-as, -is*** are nouns of the masculine gender (not feminine).

The anion name of oxygen-free acid salts is expressed by a noun (neuter gender, II declension) with the suffix ***-id***, e.g.:

Kalii iodĭdum (Nom. sing.) – potassium iodide;
Kalii iodĭdi (Gen. sing.) – potassium iodide;
Natrii bromĭdum (Nom. sing.) – sodium bromide;
Natrii bromĭdi (Gen. sing.) – sodium bromide.

To form the names of acid salts and oxygen-free acids with organic bases the prefix ***hydro-*** is added to the anion name. For example:

Ephedrini hydrochlorĭdum – ephedrine hydrochloride;
Natrii hydrocarbōnas – sodium hydrocarbonate.

A numeral, indicating the number of hydrogen atoms, and the root ***-hydrogen*** are added in the names of salts formed by acids with three and more hydrogen atoms, e.g., ***Natrii Hydrogenphosphas*** (monohydrogenphosphas) – sodium hydrophosphate – Na_2HPO_4 or ***Natrii dihydrogenphosphas*** – sodium dihydrophosphate – NaH_2PO_4.

The names of basic salts are formed from middle salts names by adding the prefix ***sub-*** to the anion base, e.g., ***Bismuthi subnitras*** – bismuth basic nitrate.

If there are more hydroxyl groups in the basic salt, a numeral, indicating the number of these groups, is added to the salt name, e.g.: ***Bismuthi (III) dihydroxonitras*** ($Bi(OH)NO_3$) – bismuth dihydroxonitrate (III).

§ 84 The names of potassium and sodium organic salts

Latin names of sodium and potassium organic salts comprise two nouns in the Nominative case: the base name and the hyphen-attached word ***natrium*** or ***kalium*** (the way of writing *potassium* and *sodium* with a small letter is the exception to the rule concerning the capitalization of chemical elements names). Initially the anion name is written in a capital letter, followed by the cation name written in a small letter, e.g.: ***Norsulfazolum-natrium*** – sodium norsulphazole, Gen. sing. ***Norsulfazoli-natrii.***

§ 85 The names of hydrocarbon and acid radicals

Names of hydrocarbon and acid radicals are formed by adding the suffix ***-yl*** (from the Greek word *''hyle''* – substance) and the ending ***-ium*** to the hydrocarbon or acid roots, e.g.:

acetyl – ***acetylium***
ethyl – ***aethylium***
methyl – ***methylium***

§ 86 The names of ethers

Latin names of ethers comprise two words, like the names of salts, e.g.: ***Methylii salicўlas*** – methylsalicylate, ***Amylii nitris*** – amylnitrite.

Assignments for self-control:

■ *Anion names of oxygen-containing acid salts with the highest degree of oxidation possess the suffix _____.*
■ *Anion names of oxygen-containing acid salts with a lower degree of oxidation have the suffix_____.*
■ *Names of oxides are expressed by the noun_____.*
■ *The anion name of oxygen-free acid salts is expressed by the noun_____.*
■ *Names of acid and hydrocarbon radicals are formed by means of the suffix _____.*
■ *Latin names of ethers are formed in the same way as the names _____.*

Exercises:

I. Render into Latin:
acetic acid

potassium sulphite
ammonia bromide
magnesium peroxide
sodium nitrite
acetylsalicylic acid
lead oxide
diluted hydrochloric acid
salicylic acid
potassium bromide

II. Provide cations names in oxides names:

magnesium peroxide _____ peroxўdum
calcium hydroxide _____ hydroxўdum
calcium oxide _____ oxўdum
lead oxide _____ oxўdum
zinc oxide _____ oxўdum

III. Render into English:

solutio Atropīni sulfātis in spritz-tubŭlis
pulvis Natrii benzoātis
lamellae ophthalmĭcae Pilocarpīni hydrochlorīdi
Barii sulfas pro roentgeno
Solutio Kalii bromĭdi cum sirŭpo fructuum

IV. Render into Latin:

iron lactate
potassium iodide
codeine phosphate
basic bismuth nitrate
basic sodium carbonate
calcium chloride

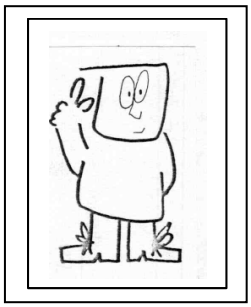
V. Render into Latin:

ophthalmic composition containing atropine sulphate
sodium gluconate tablets
suppositories containing papaverine hydrochloride
potassium orotate tablets for infants
potassium citrate ointment
isotonic sodium chloride solution for injections

VI. Add the corresponding suffixes in acid names:

Acĭdum phosphor____um – phosphoric acid
Acĭdum nitr____um – nitric acid
Acĭdum tellur____um – telluric acid
Acĭdum citr____um – citric acid

Do you know that…



… in the olden days iron was valued as a more expensive metal than gold. Only the nobility were entitled to adorn themselves with iron embellishments, not rarely being gold-mounted. The ancient Egyptians were the first to apply iron as medications. They were convinced that one could become immortal by means of a magnet and recommended ill persons iron filings for internal use. Galen, the theoretician of ancient medicine, believed that magnet possessed laxative properties, while Avicenna treated hypochondriacs with iron.

Aphorisms and quotations:

Graviōra quaedam sunt remedia pericŭlis. *– The remedy is worse than the disease.*
Quod habet, non numĕrat. *– Health is not valued till sickness comes.*
Stultitia non sanātur. *– He who is born a fool is never cured.*
Fortior est meta medicīnae certa diaeta. *– Diet cures more than the lancet.*
Potius mori quam foedāri. *– A bad wound is cured, not a bad name.*
Cura, ut valeas. *– Look after one's health.*

Ex nihĭlo nihil fit!
Nothing comes from nothing!

UNIT XIX

THEME: The word-forming elements indicating chemical composition of medications. The word-forming elements indicating pharmacological groups of medications. The word forming elements indicating pharmacological effects of medical substances. Herb names in the Crude Drug Nomenclature

OBJECTIVES: - *to acquire skills in identifying and memorizing the names of medicines*
- *to learn word-forming elements of terms*
- *to learn the word order in pharmaceutical terms*

§ 87 The pharmaceutical terminology

Read and translate:

1. *In chemia praeparāta hormonōrum efficiuntur: Adrenocorticotropīnum, Oxytocīnum, Cortinum, Cortosōnum, Synoestrōlum et cetĕra.*
2. *Praeparāta oestrogena synthetĭca, ut Synoestrōlum, Aethinyloestradiōlum in medicīna late adhibentur.*
3. *Servāte Hydrogenii peroxўdum in vitris flavis loco frigĭdo et obscŭro.*
4. *Chinīnum, Cinchonīnum, Chinidīnum alcaloĭda plantae Cinchōna (China) sunt.*

Vocabulary:

efficio, ĕre	produce, *v*
hormōnum, i n	hormone, *n*
oestrogĕnus, a, um	estrogenous, *adj.*
late	widely, *adv.*
Hydrogenium, i n	hydrogen, *n*
peroxўdum, i n	peroxide, *n*
alcaloĭdum, i n	alkaloid, *n*
Cinchōna (China), ae f	quina, *n*

Pharmaceutical terms are predominantly formed by elements of Greek origin, which indicate medicine chemical composition, origin, therapeutic effect, etc.

Pharmaceutical terms are mainly coined by adding several components (roots), by means of the combining vowel **-o**. For instance, ***Acĭdum hydrochlorĭcum*** – hydrochloric acid (chemical composition is revealed), ***Chinocĭdum*** – (the origin is indicated: quinocide is produced from a quinquina bark), ***Chologōnum*** – chologon, bile-expelling medication (therapeutic effect is indicated).

Components of complex terms possessing clearly established stable meanings and forming several group terms are known as *word-forming elements.*

Proper learning of the pharmaceutical terminology requires profound knowledge of etymology and meanings of Latin and Greek word-building elements which clarify and determine meanings of terms.

Medicine names of plant, animal and chemical origin make up the core of the pharmaceutical terminology. If the name of a chemical compound is convenient in usage, it is preserved in the name of the medicinal substance. However, the majority of medicines of chemical origin possesses two namings: systemic and trivial. The systemic name is of scientific character and denotes the chemical structure of a medicinal substance. However, it is not very applicable due to some cumbersomeness. Hence, a short trivial name is used, e.g., ***1-phenyl-2-3-dimethyl-4-metiaminopyrazolone-5-N-potassium-metylsulfonat*** – is well-known analgin.

The trivial name is formed mainly by combination of word-forming elements.

If a trivial name is latinized, it ends in ***-um***. The following suffixes: ***-an, in, -ol, -id*** are used in forming trivial names, e.g., *Urosulf**an**um, Vasopress**in**um, Tocopher**ol**um, Pyoc**id**um*. The majority of Latin medicine names are II declension nouns of the neutral gender. In the chemist's there are medicines with proprietary names which do not have the Latin ending. These names are written as proprietary ones in the Nominative case, but in prescriptions these names possess the ending of the Genitive case.

§ 88 The names of hydrocarbon and acid radicals

Latin word	**Greek word**	Word-forming element	**Meaning and characteristics**	**Examples**
aqua, ae f	hýdor	**-hydr(o)-**	water; water- and hydrogen-containing agents	**Hydr**ocodeonum
acĭdus, a, um	óxys	**-oxy, ox-**	acid; presence of oxygen	**Oxy**codōnum
aether, ĕris m	aíther	**-aeth-**	ether; indicates ethyl- and ethynil-radical	**Aeth**aminālum

materia, ae f	hýle	**-(h)yl-**	substance; forms hydrocarbon- and acid radicals names	Acet**yl**cholīnum
sulfur, ŭris n	theion	**-sulf-,** **-sulph-** **-thi(o)-**	sulphur; in names of sulfuric acid salts, as well as sulfanilamids in the names of chemical compounds, containing sulfur atom	**Sulf**alēnum **Thio**pentālum
	phósphŏrus	**-phosph-**	phosphorus and its compounds	**Phosph**acōlum
	naphtha	**-phthal-**	petroleum; derivatives of phthalic acid	**Phthal**azōlum
	phaino	**-phen-**	to light; indicates the presence of phenyl or phenylen	**Phen**amīnum
	methy	**-meth-**	vine; indicates the presence of methyl radical	**Methyl-** testosterōnum
	azote (Fr.)	**-z-, -zol-,** **-zin-,** **zon-,** **-ziol-**	nitrogen; nitrogen-containing compounds	Amina**zīn**um Phthala**zōl**um Pipera**zīn**um

§ 89 The word-forming elements indicating pharmacological groups of medicines

Latin word	**Greek word**	**Word-forming element**	**Meaning and characteristics**	**Examples**
fungus, i m	myces, etis m	**-myc-,** **-mycin-,** **-mycetin-**	fungus; antimycotics (fungicides); antibiotics produced by primarily radiant fungus (Actinomyces) or by related	**Myc**oseptīnum Strepto**myc**īnum Chloro**mycet**īnum

			microorganisms	
circŭlus, i m	cyclos	**-cycl-, -cyclin-**	circle; round; completed raw; tetracycline antibiotics	**Cycl**odōlum Tetra**cyclīn**um
penicillium, i n		**-cillin-**	mildew fungus; penicillin antibiotics	Ampi**cillīn**um
vir, viri m	anér, andros	**-andr-**	male; male sex hormones agents and their analogues	**Andr**ofortum
testis, is m		**-test-**	testicle (male sex gland); male sex hormone agents	**Test**osterōni propionas
cortex, ĭcis m		**-cort-, -cortic-**	cortex; cortical substance of adrenal glands	**Cort**īnum **Cortic**otropīnum
folium, i n	phyllon	**-phyll-**	leaf; often substances extracted from plant leaves	Eu**phyll**īnum
thea, ae f		**-the-**	tea; tea alkaloids; may indicate presence of alkaloids, produced from chocolate tree seeds (theobroma cacao), mainly theobromine	**The**ophyllīnum **The**obromīnum
oestrus, i m	oistros	**-oestr-**	estrus; sexual arousal in animals; female sex hormones and their synthetic analogues	**Oestr**adiōlum

§ 90 The word-forming elements indicating pharmacological effects of medicinal forms

Latin word	**Greek word**	**Word-forming element**	**Meaning and characteristics**	Examples
cor, cordis n	cardia	**-cor-, -cord-, -card(i)**	heart; cardiovascular agents	**Cor**azōlum **Cardi**otrastum
vas, vasis n	angeion	**-vas-,-angi-**	vessel; spasmodics and vasodilators	**Angī**tol Troxe**vās**in
dolor, ōris m	algos	**-dol-; -alg-**	pain; analgesics	**Alg**opyrin Cyclo**dōl**um
acĭdum barbiturĭcum		**-barb-**	barbituric acid; barbiturates: derivatives of barbituric acid with sedative, hypnotic effects	**Barb**itālum
flamma, ae f	phlox, phlogos	**-phlog-, -flog-**	flame; anti-inflammatory agents	**Phlog**ex **Flog**istin
premo, ĕre, pressi, pressum		**-press-**	to press; hypotensive agents	De**press**īnum
sedo, āre		**-sed-**	to sedate; sedatives	**Sed**algīnum
Cocainum, i n		**-cain-**	cocaine (alkaloid of cocaine bush leaves); topical analgesics	Novo**caīn**um
sensus, us m	aesthesis	**-aesthes-**	sense; sensitivity; analgesics; anaesthetics	An**aesthes**īnum

§ 91 The group names of medicines according to their pharmacological effects

Remedia	Medicines
amāra	bitters, stimulating appetite
anaesthetĭca	anaesthetics; reduce or eliminate sensitivity
analeptĭca	analeptics; stimulate activity; revivify
analgetĭca	analgesics; painkillers
androgĕna	androgens, male sex hormones agents
anorexigĕna	anorexigenics, reduce appetite
anthelminthĭca	antihelminthics
antibiotĭca	antibiotics
anticoncipientia	contraceptives
antiemetĭca	antiemetics
antihistamīna	antihistamines
antipyretĭca	antipyretics
antiseptīca	antiseptics, antiputrefactives, antibactericides
bactericīda	bactericidal
barbiturĭca	barbiturates; derivatives of barbitural acid
cardiāca	cardiac agents
cholagōga	choleretics, bile-expelling agents
cytostatĭca	cytostatics
diuretĭca	diuretics
fungicĭda	fungicides, antifungals, antimycotics
haemostatĭca	haemostatics
heroĭca	potent
hypnotĭca	hypnotics
hypoglycaemĭca	hypoglycaemics
hypotensīva	hypotensives
laxatīva (purgatīva)	laxatives
narcotĭca	narcotics
neuroleptĭca	neuroleptics
obvolentia	mucilaginous agents
oestrogĕna	estrogenics
psychotrōpa	psychotropics
sedatīva	sedatives
somnifĕra	hypnotics
spasmolytĭca	spasmotics
sulfanilamidea	sulfanilamides
thyreostatĭca	thyrostatics

§ 92 The word order in pharmaceutical terms

In pharmaceutical terms there is the following word order:

■ a noun is followed by an adjective, e.g.: ***Helichrўsum arenarium*** – Helichrysum arenarium

■ an attribute, indicating a substance or a herb, is expressed by a noun in ***Genitīvus singulāris,*** e.g.: ***oleum Anīsi*** – Anise oil

■ namings of stone seeds are written in ***Genetīvus plurālis,*** e.g.: ***Oleum Persicōrum*** – Peach oil

■ commercial namings are written in **Nominatīvus** with a capital letter in converted comas, e.g.: ***Tabulettae "Citramōnum"***

■ in compound pharmaceutical terms, a medicinal form comes first followed by names of medicinal substances or herbs, then the attribute comes, accordingly, e.g.: ***Infusum Sennae compositum*** – Senna complex infusion

§ 93 The herb names in Crude Drug Nomenclature

Herb names used in Pharmacopoeia, pharmacology and prescribing, i.e. in medicinal nomenclature, commonly differ from herb namings from the botanical nomenclature.

In the botanical nomenclature, according to the principles of a Swiss scientist K.Linney, every herb possesses two names:

1) generic (expressed by a noun);
2) specific (most commonly expressed by an adjective, rarely by a noun);

In the botanical terminology the gender name is commonly written with a capital letter and the species name with a small one.

In the pharmaceutical terminology herbs typically possess either a generic or a specific name. For example:

Botanical herb name	**Pharmaceutical herb name**	**English herb name**
Arnĭca montāna	Arnĭca	Arnica
Betŭla verrucōsa	Betŭla	Birch (pendent, white (weeping)
Sambūcus nigra	Sambūcus	Elder (common, golden (European)
Urtīca dioĭca	Urtīca	Stinging nettle
Achillea millefolium	Millefolium	Yarrow
Artemisia absinthium	Absinthium	Absinth, absinthium, sage-brush, common wormwood
Artemisia cina	Cina	Levant wormseed, santonica, artemisia cina
Atrŏpa belladonna	Belladonna	Belladonna, banewort, deadly nightshade, dwale, death's herb
Matricaria chamomilla	Chamomilla	Camomile, chamomilla, chamomile

However, pharmaceutical herb names may consist of several (mainly two) words like in Botany. For example:

Botanic name	**Pharmaceutical name**	**English name**
Helichrўsum arenarium	Helichrўsum arenarium	Helichrўsum arenarium
Mentha piperīta	Mentha piperīta	Mentha piperita
Rubus idaeus	Rubus idaeus	Rubus idaeus, raspberry

Sometimes, names of herbs used in Pharmacy differ from botanical herb names. For example:

Botanical name	**Pharmaceutical names**
Cassia angustifolia	Senna
Cinchōna succirubra	China

§ 94 Memorize the names of herb parts

bulbus, i m	onion	***legŭmen, ĭnis n***	pod
cortex, ĭcis m	bark	***radix, īcis f***	root
flos, floris m	flower	***rhizōma, ătis n***	rhizome
folium, i n	leaf	***semen, ĭnis n***	seed
fructus, us m	fruit	***stigma, ătis n***	stigma
gemma, ae f	bud	***strobĭlus, i m***	cone
herba, ae f	herb	***tuber, ĕris n***	tuber

Assignments for self-control:

- *What does the term "word-forming element" imply?*
- *Which word-forming elements do names of antibiotics contain?*
- *What word-forming elements do hormonal medicine names comprise?*

Exercises:

I. Translate into English, underline the familiar word-forming elements:

Oxacillini-natrii
Tabulettas Methandrosterōni
Solutiōnis Desoxycorticosterōni
Monomycīni
Natrii thiosulfātis
Hydrargўri salicylātis
Tabulettas Oleandomycīni phosphātis
Unguenti Sulfacўli-natrii

II. Render into Latin:

Norsulfazol(e)
Penicillin ointment
Sinestrol oil solution
Ephedrine hydrochloride
Phenoxymethylpenicillin for suspension
Tetracycline dragee
Oxycort-aerosol
Platifilline hydrotartrate
Anaesthesine ointment
Mycoseptin ointment
Apressine tablets
Soluble streptocide
Cocaine hydrochloride
Antipyrine tablets

III. Read and explain the meanings of word-forming elements:

Vasculat	Lidocain
Morphocyclīnum	Synoestrōlum
Dolargan	Testosteronum
Apressinum	Algolysin
Acetazinum	Rondomycin
Oxytetracyclinum	Androfort

IV. Render into Latin:

Rhubarb root
Nettle liquid extract

Buckthorn bark decoction
Peach oil emulsion
Plantain juice
Cameton aerosol
Albumin solution
Peppermint oil
Tannin alcohol solution
Belladonna dry extract
Plantain leaf-cut

V. Provide pharmaceutical herb names and translate into English:

Botanical	Pharmaceutical	Translation
Zea mays	_____	_____
Viburnum opŭlus	_____	_____
Tritĭcum vulgāre	_____	_____
Tilia cordāta	_____	_____
Helianthus annuus	_____	_____
Achillea millefolium	_____	_____
Artemisia cina	_____	_____
Arnĭca montāna	_____	_____

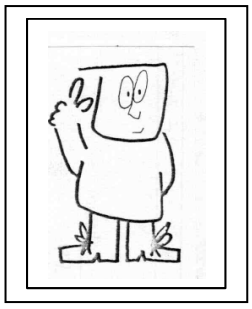
VI. Translate pharmaceutical herb name and provide botanical name:

Pharmaceutical name	Translation	Botanical name
Arnĭca, ae f	_____	_____
Belladonna, ae f	_____	_____
Cina, ae f	_____	_____
Aloë, ës f	_____	_____
Frangŭla, ae f	_____	_____
Glycyrrhīza, ae f	_____	_____
Chelidonium, i n	_____	_____
Junipĕrus, i f	_____	_____

VII. Translate into Latin:

Birch buds
Buckthorn bark
Peppermint leaves
Flax seed
Maize stigmas
Althea root
Hypericum herb
Chamomile flowers
Coriander seeds

Do you know that…



…Democritus of Abdera (460-370 B.C.), a Greek philosopher, was the first to state that everything in nature, including the body and the soul, is made up of atoms of different sizes and shapes, the movement of which are the cause of life and mental activity. Democritus' only influentional Greek follower was Epicurus (341-270). Their mechanistic, atomistic and Epicurean school of Philosophy corresponds roughly to Empiric School of medicine.

Aphorisms and quotations:

Sapientia ars vivendi putanda est. *– Wisdom should be considered the art of living.*
Scientia nihil est quam veritātis imāgo. *– Science is nothing other than the image of truth.*
Sapiens solus beātus est. *– Wisdom is the wealth of the wise.*
Diligentia sine scientia est flamma sine luce. *– Zeal without knowledge is fire without light.*
Littĕrae thesaurus sunt. *– Science is the salt of life.*

Quae medicamenta non sanat, ferrum sanat;
quae ferrum non sanat, ignis sanat;
quae vero ignis non sanat,
insanabilia reputāre oportet (Hippocrătes)

What is not cured with medicines, is cured with iron,
what is not cured with iron, is cured with fire,
what is not cured with fire, should be
considered incurable. (Hippocrates)

UNIT XX

THEME: The prescription. The prescription structure.
The Latin part of the prescription

OBJECTIVES:
- *to learn the prescription structure*
- *to acquire skills in compiling prescriptions*
- *to learn the most essential abbreviations used in prescriptions*

§ 95 The prescription

***Read and translate*:**

1. *In receptis composĭtis post basim remedium adjŭvans sequĭtur.*
2. *Partes recepti sunt: prima est inscriptio, secunda – nomen et aetas aegrōti, tertia – nomen medĭci, quarta – invocatio, quinta - designatio materiārum, sexta – subscriptio, septĭma – signatūra, octāva – nomen et sigillum medĭci proprium.*
3. *Pharmacopoea doses maxĭmas remediōrum venenōrum et remediōrum heroicōrum probe notat "pro dosi" et "pro die".*
4. *In receptis composĭtis post verbum contractum "Rp.:" locum primum remedium basis occŭpat.*
5. *Deinde remedium corrĭgens addĭtur, quod sapōrem, odōrem et colōrem medicamenti corrĭgit.*
6. *Loco postrēmo remedium constituens stat, quod formam medicamenti constituit.*

Vocabulary:

addo, ĕre	add, *v*
adjuvans, ntis	auxiliary, subsidiary, accessory, *adj.*
aegrōtus, a, um	sick, unwell, ill, *adj.*
composĭtus, a, um	complicated, complex, intricate, *adj.*
constituens, ntis	forming, *adj.*
constituo, ĕre	construct, form, create, constitute, establish, *v*
contractus, a, um	short, lapidary, brief, *adj.*
corrigens, ntis	correcting, *adj.*
corrĭgo, ĕre	correct, put in order, *v*
deinde	after, afterwards, then, consequently, later on, *adv.*
designatio, ōnis f	definition, determination, designation, *n*
dies, ēi m, f	day, *n*
dosis, is f	dose, dosage, *n*
forma, ae f	form, shape, configuration, appearance, look, *n*
receptum, i n	prescription, *n*
remedium, i n	medication, medicine, remedy, drug, *n*
sapor, ōris m	taste, *n*
secundus, a, um	the second, *num.ord.*
septĭmus, a, um	the seventh, *num.ord.*
sequor, sequi	follow, *v*
sextus, a, um	the sixth, *num.ord.*
sigillum, i n	stamp, seal, *n*
signatūra, ae f	denotation, designation, sign, *n*
sto, āre	stand, *v*
subcriptio, ōnis f	prescription, *n*
tertius, a, um	the third, *num.ord.*
venēnum, i n	poison, toxin(e), *n*
verbum, i n	word, vocable, *n*

Memorize the following words:

pro (Abl.)	for, instead, *adv.*
probe	right(ly), correctly, accurately, well, *adv.*
proprius, a, um	own, proper, *adj.*
quartus, a, um	the fourth, *num.ord.*
quintus, a, um	the fifth, *num.ord.*
quod	what
heroĭcus, a, um	drastic, potent, *adj.*
inscriptio, ōnis f	inscription, *n*
invocatio, ōnis f	address, appeal, *n*
locus, i m	place, spot, locality, site, *n*
materia, ae f	substance, stuff, material, matter, *n*

medicamentum, i n	medications, medicines, drugs, *n*
noto, āre	denote, mark, register, *v*
occŭpo, āre	occupy, *v*
octāvus, a, um	the eigth, *num.ord.*
odor, ōris m	smell, odour, scent, *n*
pharmacopoea, ae f	pharmacopoeia, dispensatory, *n*
post (Acc.)	afterwards, after, subsequently, *adv.*
postrēmus, a, um	last, past, *adj.*
primus, a, um	the first, *num.ord.*

Drug prescribing is a part of medical science which deals with the rules of prescribing various forms of medications.

Prescription (from Latin *''**recipio, recēpi, receptum, ĕre**'' – to take,* i.e. ''**receptum''** *– taken, received, obtained)* is the physician's written instructions for a pharmacist concerning compounding and dispensing medications with mentioning the route of their administration. Prescription is composed of **superscriprion, inscription, subscription** and **signature**.

Rx* (*invocatio, or **superscription)** is the symbol for prescriptions and generally understood to be a contraction of the Latin verb *''**Recĭpe'',*** meaning *"take thou".*

Inscription (*Inscriptio* or **the body of prescription**) is the main part of the prescription containing the names and quantities of the prescribed drugs.

Designatio materiārum – the constituents of medicine forms, their dosage. Drug constituents are classified into the following types according to their purpose:

a) *basis seu remedium cardināle* – the main substance intended for the primary therapeutic effect;

b) *remedium adjuvans* – an auxiliary substance, which enhances the effect of the main substance and alleviates its side effects;

c) *remedium corrĭgens* – a correcting substance (improves taste, odour or, sometimes, colour of medications);

d) *remedium constituens* – a forming substance, which gives solid, soft or liquid form to medications;

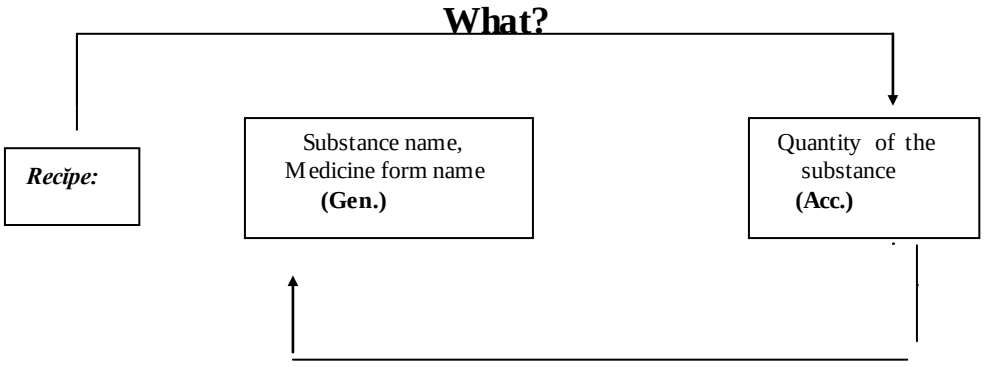
Subscription (***Subscriptio*** *– "what is written below"*) contains prescription directions to the pharmacist: the way of compounding of the medicine, a medicinal form, a number of doses, a packing type. Sometimes the physician uses only the following words: **Misce. Da** (in a detailed prescription) or **Da.** (in a shortened prescription);

Signature (*Signatūra, signa,* or ***sig*)** implies directions to be placed on a prescription label to indicate to the patient how to take or use the medication. This part of the prescription begins with the word **Signa** – *sign* or *denote*. The route and the time of medication administration are given in a state language or in a language clear for a patient. Abbreviations are not admissible in this part of the prescription.

Nomen et sigillum medĭci personāle – a physician's signature and a personal seal.

§ 96 The rules on writing prescriptions

One writes the name of a medicinal substance with an initial capital letter in the Genitive case (which is grammatically correlated with the quantity of a substance) following the verb **Recĭpe**. Each new substance in a complex prescription is written from a new line with an initial capital letter.



With an initial capital letter in the middle of the line one writes:

- names of medicinal substances;
- names of chemical elements;
- names of plants and animals;
- personal names.

With an initial small letter one writes**:**

- parts of herbs (root, fruits, seeds, leaves);
- animal organs (liver, horns)
- the following words: ***oxўdum, i n; peroxўdum, i n; hydroxўdum, i n*** in the names of

oxides, peroxides, hydroxides;

- names of salt anions;
- adjectives.

The quantity of solid and powdery substances is indicated in grams and parts of a gram (e.g., 1,0; 10,0; 100,0; 0,5; 0,01; 0,002). The quantity of liquid substances is indicated in millilitres or grams (e.g., 1 ml, 10 ml, 200 ml) or in drops. Liquid medicinal substances up to 1 ml are usually dosed in drops. A number of drops is marked in Roman figures. The word ***''gutta''*** in a prescription is written in the Accusative case: ***guttam I, guttas X*** (e.g., gtt.I, gtts. X). Antibiotics and some other medicines are dosed and dispensed in effect units (UE), serums and vaccines – in antitoxic units (AU) and in international units (IU).

The number of constituents is denoted on the right in a prescription line. Abbreviations are admissible in prescriptions, provided they meet generally accepted medical and pharmaceutical regulations (details about using abbreviations see further). If two or more substances are prescribed in equal amounts, their amount is

only expressed once, after the last name. Figures are preceded by the adverb ***''ana''*** **(*āā* –** equally).

For instance:

Recĭpe: Tinctūrae Valerianae
Tinctūrae Convallariae ana 15,0 or 15 ml
Misce. Da
Signa. Take 20-30 drops three times daily.

If a patient requires an urgent medicine administration (in emergency), a physician writes the following: ***Cito!*** (quickly), ***Citissime!*** (as quckly as possible) or ***Statim!*** (immediately) at the top part of the prescription.

It is admissible to write out up to three medicines, providing they do not contain potent or narcotic medicines. Prescriptions are separated by means of a horizontal line.

Prescription that do not meet regulations are considered invalid, therefore, medicines cannot be dispensed due to them. These prescriptions are left in a pharmacy, stamped as "invalid prescription", recorded in a special register, with further return to the clinical setting, which issued the prescription.

§ 97 Additional expressions used in prescriptions

Cito!	Quickly!
Statim!	Immediately!
Repĕte!	Repeat!
Repetātur!	Repeat.
Repĕte bis!	Repeat twice!
Bis repetātur!	Repeat twice!
Repĕte ter!	Repeat three times! Thrice!
Ter repetātur!	Repeat three times.
Non repetātur!	Do not repeat!
Pro me!	For me!
seu Pro auctōre!	For the author!
Ad usum proprium	For own application.
Verte!	Turn over!

§ 98 The abbreviations in prescriptions

There are various abbreviations in prescriptions. Typically, one writes out in an abbreviated form the following:

- names of medicine forms;
- names of organs and parts of plants;
- certain instructions to a pharmacist, presription definitions.

It is inadmissible to shorten denotations of similar ingredients, since it may cause ambiguity.

If a word is shortened in a syllable containing two or more consonants, all these consonants are preserved. For example:

extractum – extr.

compositum – comp.

Generally accepted prescription abbreviations commonly form an initial group of letters, or rarely, an initial letter of the word or words. For instance:

In capsŭlis gelatinōsis – in caps.gel.

Da tales doses numĕro … – D.t.d.N.

The most important prescription abbreviations

Abbreviation	Complete form	Translation
āā	ana	equally
ac., acid.	acĭdum	acid
add.	adde	add
ad us. ext.	ad usum externum	for external administration, use
ad us. int.	ad usum internum	for internal administration, orally
ampull.	ampulla	ampoule
aq. purif.	aqua purificāta	purified water
aq. pro inject.	aqua pro injectionĭbus	water for injections
aq. steril.	aqua sterilisāta	sterilized water
aspers.	aspersio	aspersion
bol.	bolus	clay
bals.	balsămum	balsam
col.	collatūra	collature (filtrated solution)
comp. cps.	compositus	complex
concentr.	concentrātus	concentrated
concis.	concīsus, a, um	cut
consp.	consperge	powder
contus.	contūsus, a, um	powdered
cort.	cortex	bark
crystall.	crystallisātus, a, um	cryslalline
D.	Da. Detur. (singular) Dentur (plural)	dispense. To dispense; let it be dispensed
dec., dct.	decoctum	decoction
dep.	depurātus, a, um	purified
dil.	dilūtus, a, um	dissolved
div.	divĭde	divide
div. in. p. aeq.	divĭde in partes aequāles	divide into equal parts
is not abbreviated	Dragee	dragee
D.S.	Da. or Signa Detur. Signētur	Dispense. Sign. To dispense. To sign
D. t. d. N	Da (Dentur) tales	dispense such doses

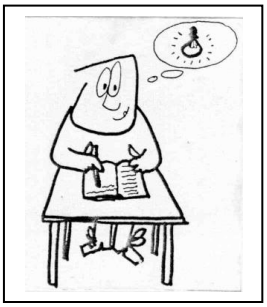
	doses numĕro	in number
empl.	emplastrum	emplastrum, plaster
em., emuls.	emulsum	emulsion
ext.s.lint.	extende supra linteum	spread on the linen
extr.	extractum	extract
f.	fiat (singular), fiant (plural)	let it be formed
fl., flor.	flos	flower
fluid.	fluĭdus, a, um	liquid (about extracts)
fol.	folium	leaf
fr., fruct.	fructus	fruit
gel.	gelatinōsus, a, um	gelatinous
glob.	globŭlus	globule
glob.vagin.	globŭlus vaginālis	vaginal globules
gran.	granŭlum	granule
gtt., gtts	guttam, guttas	drop(s)
hb. , herb.	herba	herb
inf.	infusum	infusion
in ampull., in amp.	in ampullis	in ampoules
in caps.amyl.	in capsŭlis amylaceis	in starch capsules
in caps. gel.	in capsŭlis gelatinōsis	in gelatinous capsules
in caps.operc.	in capsŭlis operculātis	in capped capsules
in ch. cer.	in charta cerāta	in a waxed paper
in ch. paraff.	in charta paraffināta	in paraffined paper
in lag. orig.	in lagēna loriginăli	in an original bottle
in obl.	in oblātis	in cachets
in oll.	in olla	in a jar
in scat.	in scatŭla	in a little box
in sacc. chart.	in saccŭlo chartaceo in sacculis chartaceis	in a paper sack (bag) in paper sacks (bags)
in tab.	in tabulettis	in tablets
in tab. obd.	in tabulettis obductis	in covered tablets
in tub.	in tuba, in tubis	in a tube, in tubes
in vitr.fusc.	in vitro fusco	in a dark glass
in vitr. nigr.	in vitro nigro	in a black glass
lat.	latitudĭne	width
l.a.	lege artis	due to a scientific rule
lin., linim.	linimentum	liniment
liq.	liquor	solution
long.	longitudĭne	length

M.	Misce. Misceātur.	mix. To mix
ml.	millilitrum	millilitre
m.pil.	massa pilulārum	pill mass
mucil.	mucilāgo	mucus
n	numĕro	number
NP	nomen proprium	genuine name *
o.d.	omni die	every day, daily
ol.	oleum	oil
oleos.	oleōsus, a, um	oily, adj
past.	pasta	paste
pil .	pilŭla	pill
pct., praec.	praecipitātus, a, um	precipitated
pro infant.	pro infantĭbus	for infants
pro inject.	pro injectionĭbus	for injections
p.o.	per os	orally
p.r.	per rectum	rectally
p.v.	per vagīnam	vaginally
pulv.	pulvis	powder
pulver.	pulverātus, a, um	powder-like
q.s.	quantum satis	as required
r., rad.	radix	root
rect., rectif.	rectificātus, a, um	purified
Rp.	Recĭpe	take
Rep.	Repĕte!Repetātur!	Repeat! To repeat
rhiz., rh	rhizōma	rhizome
S.	Signa. Signētur.	Sign. Let it be signed
sem.	semen	seed
sicc.	siccus, a, um	dry
simpl.	simplex	simple
sir.	sirŭpus	syrup
sol.	solutio	solution
spec.	species	species
spir.	spirĭtus	alcohol
spiss.	spissus, a, um	dense, thick
succ.	succus	juice
steril.	Sterilĭsa. Sterilisētur.	sterilize. To sterilize
supp.	suppositorium	suppository
susp.	suspensio	suspension
tab.	tabuletta	tablet
t-ra., tinct., tct.	tinctūra	tincture
tr.	tritus, a, um	ground, grated
ung.	unguentum	ointment
vagin.	vaginālis, e	vaginal
V!	Verte!	turn down (a page)
vitr.	vitrum	glass

***Assignments for self-control*:**

- *What components does the prescription comprise?*
- *What prescription parts are written in Latin?*
- *Which case is used for writing names of medicinal plants?*
- *Which word is used for equal quantity of two or more constituents?*
- *Which word does a physician use when medicines must be made immediately?*

Exercises:



I. Render prescriptions into English:

Recĭpe: Infūsi fructuum Anīsi ex 15,0 – 200 ml
Da.
Signa.

Recĭpe: Extracti Frangŭlae fluĭdi 25 ml
Da.
Signa.

Recĭpe: Emulsi olei Ricĭni 180,0
Sirŭpi simplĭcis ad 200,0
Misce. Da.
Signa.

Recĭpe: Olei Vaselīni 100 ml
Olei Menthae guttas II
Misce. Da.
Signa.

Recĭpe: Tinctūrae Convallariae
Tinctūrae Valeriānae ana 10 ml
Solutiōnis Nitroglycerīni 1% - 1 ml
Validōli 2 ml
Misceātur. Detur.
Signetur.

Recĭpe: Chloroformii
Olei Helianthi ana 20 ml

Misce, fiat linimentum. Da.
Signa.

Recĭpe: Cortĭcis Frangŭlae
Foliōrum Urtīcae ana 15,0
Foliōrum Menthae piperītae 10,0
Radīcis Valeriānae 5,0
Misce, fiant species.
Da.
Signa.

II. Translate into Latin, write prescriptions in a shortened form:

Take: Rhubarb syrup 300 ml
Dispense.
Sign.

Take: Acetylsalicylic acid 0,25
Dispense 12 tablets.
Sign.

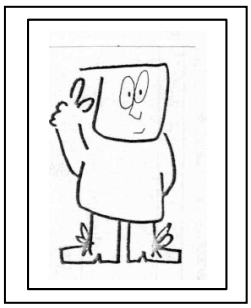
Take: Pyridoxine hydrochloride solution 5% 20 ml
Sterilize!
Dispense.
Sign.

Take: Purified sulfur 2,0
Glycerine
Camphor spirit 5 ml
Purified water 60 ml
Mix. Dispense.
Sign.

Take: Methysalicilate
Chloroform 10,0
Hyoscyamus oil 30,0
Mix. Dispense.
Sign.

Take: Hydropiper liquid extract
Cranberry (Guilder Rose) liquid extract 20 мл.
Mix. Dispense.
Sign.

Take: Pepper oil
Thyme oil
Pine essential oil
Eucalyptus oil 5 ml
Mix. Dispense.
Sign.



Do you know that...

… in the olden days a prescription was denoted as "formŭla medica'' with a mandatory appeal to God: ***Cum Deo****! – God speed! or* ***Iuvante Deo*** *– With God's help. Later instead of these expressions two crosses ++ were put down. Until quite recently this symbol was apllied for separating two prescriptions written out in one form. Nowadays prescriptions are separated by means of a horizontal line.*

Aphorisms and quotations:

Eruditio aspĕra optĭma est. *– Spare the rod and spoil the child.*
Nihil habeo, nihil curo. *– A beggar can never be bankrupt.*
Altissĭma flumĭna minĭmo sono labuntur. *– Still waters run deep.*
Usus est unus legum corrector. *– Experience is the mother of wisdom.*
Oratio veritātis simplex est. *– The language of truth is simple.*
Rem verba sequuntur. *– Keep to the subject and the words will follow.*

Morbi non eloquentia, sed remediis curantur
Diseases are cured with medications, not with eloquence

UNIT XXI

THEME: **The liquid medicinal forms**
(Formae medicamentōrum liquĭdae)

OBJECTIVES: - *to learn types of liquid medicinal forms and their Latin names*
- *to acquire skills in prescribing liquid medicinal forms in complete and abbreviated forms*

§ 99 The liquid medicinal forms

Read and translate:

1. *Sirŭpus coquātur leni calōre, per bihorium digerātur, tum refrigerētur et colētur.*
2. *Liquor Ammonii anisātus remedium internum est, in mixtūris praescribĭtur.*
3. *Recipe solutiōnem Iodi pro usu interno.*
4. *Misce aquam Rosārum cum spirĭtu aethylĭco.*
5. *Infūsum radīcis Taraxăci ut remedium amārum et cholagōgum praescribĭtur.*

Vocabulary:

lenis, e	tender, light, *adj.*
calor, ōris m	heat, fire, *n*
bihorium, i n	two hours
tum	then, later on, *adv.*
refrigĕro, āre	cool (off), *v*
digero, ĕre	infuse, *v*
colo, āre	filter, strain, *v*
liquor Ammonii anisātus	ammonia drops
internus, a, um	internal, *adj.*
praescrībo, ĕre	prescribe, *v*
infūsum, i n	infusion, *n*
Taraxăcum, i n	dandelion, *n*
amārus, a, um	bitter, *adj.*
cholagōgus, a, um	bile-expelling, cholagogic, *adj.*

Liquid medicinal forms comprise:

solutions	***solutiōnes (solutio, ōnis f)***
solutions for injections	***solutiōnes pro injectionĭbus***
infusions	***infūsa (infūsum, i n)***
decoctions	***decocta (decoctum, i n)***
emulsions	***emulsa (emulsum, i n)***
suspensions	***suspensiōnes (suspensio, ōnis f)***
mucilages	***mucilagĭnes (mucilāgo, ĭnis f)***
mixtures	***mixtūrae (mixtūra, ae f)***
tinctures	***tinctūrae (tinctūra, ae f)***
drops	***guttae (gutta, ae f)***
balsams	***balsăma (balsămum, i n)***

Liquid medicinal forms are dosed in milliliters, some – in drops, alcohols and tinctures – in grams.

To prescribe liquid medicinal forms in a full form one writes: **Misce. Da. Signa**. in the *Subscriptio* part. However, in the prescriptions for emulsions, it is necessary to indicate the name of a medicinal form: **Misce, fiat emulsum**.

§ 100 Solutions – *Solutiōnes (solutio, ōnis f)*

Solution is a liquid preparation that contains one or more chemical substances dissolved, i.e., molecularly dispersed, in a suitable solvent or a mixture of mutually miscible solvents. This medicinal form is intended for external application ***(pro gargarismătis*** – for gargle, ***pro enemătis seu clismătis*** – for oenemas, etc); for internal use ***(guttae*** – drops); and parentheral (other than through the digestive tract) administration.

Distilled water ***(aqua purificāta)***, alcohol ***(spirĭtus aethylĭcus)***, glycerin ***(Glycerīnum)*** or oils ***(olea)*** are commonly used as solvents. Solutions can be classified as: aqueous ***(aquōsae)***, spirituous ***(spirituōsae*)**, oily ***(oleōsae)***, or glyceric ***(glycerinātae)***.

Prescriptions for solutions may be written out both in abbreviated and complete forms. In the abbreviated form the word ***"Recipe"*** is followed by: 1) the word ***Solutiōnis***; 2) a medicinal substance name, 3) solution concentration and quantity. In a complete form the word ***"Recĭpe"*** is followed by a medicinal substance name and by a solvent name:

Abbreviated form:
Recĭpe: Solutiōnis Natrii bromĭdi 2% 180 ml
Da.
Signa. Take 1 tablespoonful thrice daily.

Complete form:
Recĭpe: Natrii bromĭdi 3,6
Aquae purificātae ad 180 ml
Misce. Da.

Signa. Take 1 tablespoonful three times daily.

Solution concentration may be given both in per cents and relative units (if it concerns large dilutions):

Recĭpe: Solutiōnis Furacilīni 1:5000 500 ml
Da.
Signa. Bathing of the wounds.

If the solution has an officinal name, the word ***"Recipe"*** is directly followed by a medicinal name:

Recĭpe: Solutiōnis Ammonii caustĭci 10 ml
Da.
Signa. Moisten a gauze tampon, give it to an unconscious patient to inhale.

In abbreviated prescriptions for aqueous solutions intended for internal and external administration the type of solvents is not indicated:

Recĭpe: Solutiōnis Resorcīni 2% 100 ml
Da.
Signa. Bathing of the wounds.

If alcohols or oils are used as solvents, the preparation name is followed by the adjectives ***spirituosa*** or ***oleosa*** accordingly:

Recĭpe: Solutiōnis Menthōli oleōsae 1% 20 ml
Da.
Signa. Introduce 2-3 drops into each nostril twice a day.

Medicines for injections in ampoules and vials are sterile. Solutions for injections compounded in the chemist's must be sterilized.

Expressions ***in ampullis, pro injectionibus*** indicate the sterility of injections. To prescribe non-ampoule solutions one writes the following orders: ***Sterilĭsa! Sterilisētur*!** (Sterilize! Let it be sterilized!).

Recĭpe: Solutiōnis Glucōsi 40 % 20 ml
Da tales doses numĕro 10 in ampullis.
Signa. Introduce 10 ml intravenously.

Recĭpe: Solutiōnis Glucōsi 40 % pro injectionibus 10 ml
Da.
Signa. Take 10 ml intravenously.

Recĭpe: Solutiōnis Glucōsi 5% 200 ml
Solutiōnis Novocaīni 0,5 % 10 ml

Misce. Sterilĭsa! Da.
Signa. Administer intravenously.

Frequently, solutions for injections are prepared directly before administration ***(ex tempŏre)***. In such cases, medicinal substances for injections are prescribed in ampoules ***(in ampullis)*** or in vials:

Recĭpe: Vincristīni 0,05
Da tales doses numĕro 6 in ampullis.
Signa. Dissolve the ampoule content in 5 ml of sodium chloride sterile isotonic solution. Administer intravenously weekly.

Recĭpe: Benzylpenicillīni-natrii 200 000 IU.
Da tales doses numĕro 20.
Signa. Dissolve the vial content in 2 ml of sodium chloride isotonic solution. Administer intramuscularly 20 ml four times daily.

If the injection solution contains substances that are easily destroyed by heating, they should be added aseptically during the sterilization of the main solution. In such cases the expression ***Adde aseptĭce!*** (add aseptically) should be mentioned in the prescription:

Recĭpe: Novocaīni 1,25
Solutiōnis Natrii chlorĭdi 0,9 % ad 500 ml
Misceātur. Sterilisētur!
Adde aseptĭce!
Solutiōnis Adrenalīni hydrochlorĭdi 0,1% guttas XXV
Da.
Signa. For infiltration anaesthesia.

§ 101 Infusions – *Infūsa (infūsum, i n)*

Infusion is the soaking of a solid substance in a solvent, such as water, for the purpose of extracting an active ingredient.

Infusions are aqueous extractions from the medicinal plant material by means of boiling and subsequent infusing powdered leaves, flowers, herbs or dissolving extracts. Infusions are prepared ***ex tempŏre***.

In prescriptions for infusions and decoctions, the word ***"Recĭpe"*** is followed by the word ***"Infūsi"***; by a total amount of medicinal plant material, and a general amount of the infusion.

Recĭpe: Infūsi foliōrum Sennae ex 10,0 : 150ml
Da
Signa. Take 1 tablespoonful in the morning and at bedtime.
Recĭpe: Infūsi foliōrum Uvae ursi 200 ml
Da.

Signa. Take 1 tablespoonful in the morning and at bedtime.

The following officinal infusions are available at the chemist's:
Infūsum Valeriānae (Valeriane infusion),
Infūsum Sennae composĭtum (Complex senna infusion).

§ 102 Decoctions – *Decocta (decoctum, i n)*

Decoctions are solutions of the active (soluble) constituents of crude drugs prepared by boiling the drug in water and straining the resulting solution. They are to be prepared just before using. Prescriptions for decoctions are only written out in an abbreviated form. The name of a crude drug with a general dose and the quantity of decoction follows the word ***"Decocti"***:

Recĭpe: Decocti cortĭcis Frangŭlae ex 10,0 – 200 ml
Da.
Signa. Take 1 tablespoonful in the morning and at bedtime.

§ 103 Mixtures – *Mixtūrae (mixtūra, ae f)*

Mixtures are aqueous liquids containing insoluble solids in suspension and intended for internal use. In practice all mixtures are to be prepared just before using ***(ex tempŏre)***.

Recĭpe: Decocti radīcis Inŭlae ex 20,0-200 ml
Sirŭpi Glycyrrhīzae 10 ml
Misce. Da.
Signa. Take 1 tablespoonful three times daily.

Recĭpe: Infūsi herbae Adonĭdis vernālis ex 6,0 – 180 ml
Elixīris pectorālis 5 ml
Liquōris Ammonii anisāti 4 ml
Natrii hydrocarbonātis 3,0
Misce. Da.
Signa. Take 1 tablespoonful thrice daily.

§ 104 Drops – *Guttae (gutta, ae f)*

Drops are various solutions and mixtures dosed in drops. Due to the solvent drops are classified as ***aqueous, alcoholic, oily.***

Nasal, ophthalmic and ***otic*** drops are available in single-dose or multi-dose containers supplied with an adequate mouthpiece.

Recĭpe: Tinctūrae Belladonnae 20 ml
Da.

Signa. Take 10 drops three times weekly.

Recĭpe: Benzylpenicillīni-natrii 100 000 IU
Solutiōnis Natrii chlorĭdi isotonĭcae sterilisātae ad 5 ml
Misce. Da.
Signa. Drops for eyes. Take 2 drops six times daily into both eyes.

Recĭpe: Solutiōnis Naphthizīni 0,1% 10 ml
Da.
Signa. Take 2 drops into the nose.

§ 105 Suspensions – *Suspensiōnes (suspensio, ōnis f)*

Suspensions are preparations of finely divided undissolved drugs dispersed in a liquid medium. They are used to provide insoluble drugs in a liquid dosage form. Suspensions are obtained by mixing undissolved substances with distilled water, oils and glycerin. They are intended ***ad usum externum, ad usum internum, pro injectionĭbus.*** Suspensions are available in single-dose and multi-dose containers. In the signature one should mention: ***"Shake before using":***

Recĭpe: Suspensiōnis Nifuroxazidi 90 ml
Da.
Signa. Take 1 tablespoonful three times daily. Shake before using.

Magistral suspensions that are prepared on vaseline, oil, and glycerin base (except the distilled water), are only prescribed in the full form.

Recĭpe: Streptomycīni sulfātis 100 000 OO
Olei jecŏris Aselli 20,0
Misce, fiat suspensio.
Da.
Signa. Lubricate wounds. Shake before using.

Recĭpe: Suspensiōnis Flosterōni 1 ml
Da tales doses numĕro 5.
Signa. Take intramuscularly once a week. Shake before using.

§ 106 Tinctures - *Tinctūrae (tinctūra, ae f)*

Tinctures are alcoholic or hydroalcoholic solutions prepared from vegetable materials or chemical substances. Tinctures may be prepared by one of the several extraction methods or by a dissolution method. All tinctures are officinal. In prescriptions for tinctures the amount of crude drugs and tincture concentration are not indicated. The word ***"Recipe"*** is followed by: 1) medicinal form name, 2) plant name, 3) total quantity of the preparation:

Recĭpe: Tinctūrae Valeriānae 30,0
Da.
Signa. Take 15 drops three times daily.

If a mixture of several tinctures is prescribed, they are typically taken in equal parts:

Recĭpe: Tinctūrae Valeriānae
Tinctūrae Convallāriae ana 10 ml
Misce. Da.
Signa. Take 20 drops twice daily.

§107 Extracts – *Extracta (extractum, i n)*

Extracts are concentrated preparations from animal or vegetable drugs obtained by removal of the active constituents with a suitable solvent or solvent mixture, evaporation of all or nearly all the solvent, and the adjustment of the residual mass or powder to prescribed standards. Due to the consistency extracts are classified as: liquid ***(fluĭda)***, dense ***(spissa)*** and dry ***(sicca)***. Dense and dry extracts are prescribed and dispensed in powders, tablets and other medicinal forms. Liquid extracts are concentrated preparations of plant crude. All liquid extracts are officinal. They are prescribed, dosed and administered in the same ways as tinctures.

Due to the extracting liquid one distinguishes:
Extracta aquōsa – aqueous extracts;
Extracta spĭrituōsa – alcohol extracts;
Extracta oleōsa – oily extracts;
Extracta aetherea – ether extracts.

Recĭpe: Extracti Frangŭlae fluĭdi 25 ml
Da.
Signa. Take 1 tablespoonful three times daily.

Recĭpe: Extracti Aloës fluĭdi 1 ml
Da tales doses numĕro 10 in ampullis.
Signa. Take 1 teaspoonful three times daily.

Recĭpe: Tabulettas extracti Valeriānae 0,02 obductas numĕro 50
Da.
Signa. Take 1 tablet three times daily.

Recĭpe: Tabulettas extracti Sennae sicci 0,3 numĕro 25
Da.

Signa. Take 1 tablet thrice daily.

§ 108 Emulsions – *Emulsa (emulsum, i n)*

Emulsions are heterogenous, liquid or semisolid dosage forms containing at least two immiscible liquids or semisolids, one of which is dispersed as small globules throughout the other, usually with the aid of a surfactant. Emulsions can be classified as: ***emulsa oleōsa*** – oily emulsions (non-genuine) and ***emulsa seminalia*** or ***emulsa semĭnum*** (seed genuine emulsions).

Emulsions can be administered externally, internally and parentherally.

Emulsions are prescribed both in complete and abbreviated forms:

Recĭpe: Olei Ricĭni 15 ml
Gelatōsae 7,5 ml
Aquae purificātae ad 150 ml
Misce, fiat emulsum.
Da.
Signa. Should be taken with tablespoonfuls within 30 minutes.

Recĭpe: Emulsi olei Ricĭni 150 ml
Da.
Signa. Should be taken with tablespoonfuls within 30 minutes.

Recĭpe: Emulsi olei Ricĭni ex 15,0-150 ml
Da.
Signa. Should be taken by tablespoonfuls within 30 minutes.

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§ 109 Mucilages – *Mucilagĭnes (mucilago, ĭnis f)*

Mucilages are viscous adhesive preparations made by dissolving or suspending exudates from certain trees and shrubs in water (tragacanth mucilage). Mucilages may also be prepared from hydrated synthetic polymers (methylcellulose mucilage). Mucilages are obtained by means of aqueous processing mucous substances of plant origin. Flax seed contains mucous substances.

Mucilages are intended for oral administration, and sometimes for external use.

They serve as remedium corrigens, when irritating substances for mixtures and oenemas are prescribed:

Recĭpe: Chlorāli hydrātis 3,0
Mucilaginis Amўli 20 ml

Aquae purificātae ad 90 ml
Misce. Da.
Signa. Take a tablespoonful at bedtime.

Exercises:

I. Render the following prescriptions into English:

1. Recĭpe: Solutiōnis Novocaīni 0,25% 200 ml
Da.
Signa.

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2. Recĭpe: Solutiōnis Galanthamīni hydrobromĭdi 1% 1 ml
Da tales doses numero 6 in ampullis
Signa.

---

3. Recĭpe: Natrii bromĭdi
Kalii bromĭdi āā 5,0
Aquae purificātae ad 200 ml
Misce. Da.
Signa.

---

4. Recĭpe: Codeīni phosphātis 0,2
Infūsi herbae Adonĭdis vernālis ex 6,0 180 ml
Natrii bromĭdi 6,0
Misce.Da.
Signa.

---

5. Recĭpe: Infūsi radīcis Valeriānae ex 10,0 - 200 ml
Da.
Signa.

---

6. Recĭpe: Tinctūrae Schizandrae 50 ml
Da.
Signa.

---

7. Recĭpe: Succi gastrĭci naturālis 100 ml
Da
Signa.

8. Recĭpe: Essentiāle 5 ml
Da tales doses numero 5 in ampullis
Signa.

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9. Recĭpe: Liquōris Kalii arsenītis 10 ml
Da.
Signa. 3 drops thrice daily

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10. Recĭpe: Solutiōnis Camphŏrae spirituōsae 2 % 50 ml
Da.
Signa. For rubbing into the skin of the affected joint.

---

11. Recĭpe: Suspensiōnis Griseofulvīni 100 ml
Da.
Signa.

---

12. Recĭpe: Emulsi Synthomycīni 5 % -10,0
Da.
Signa.

II. Write the following prescriptions in a complete form and translate them:

1. Rp: Sol. Atropīni sulfātis 1% 10 ml
D. S.

---

2. Rp: Sol. Cerebrolysīni 5% 1ml
D.t.d. N10 in amp.
S.

---

3. Rp.: Sol.Gentamycīni sulfātis 4% 1ml
D.t.d. N 10 in amp.
S.

---

4. Rp.: Susp. Hydrocortisōni acetātis 2,5% 5 ml
D.t.d. N 5
S. Introduce intramuscularly in 5 ml (Shake the vial thoroughly before using)

---

5. Rp.: Extr. Eleutherococci fluĭdi 50 ml
D.S.

---

6. Rp.: T-rae Capsĭci 10 ml
Naphthalāni
Spir. aethylĭci 96 % āā 100ml
M.D.S.

III. Translate the following prescriptions into Latin:

1. Take: 12 ml of Camphor oil solution (10%)
Dispense 10 doses in ampoules.
Denote.

---

2. Take: 10 ml of Magnesium sulphate (25%)
Dispense 10 doses in ampoules.
Denote.

---

3. Take: 5 ml of pepsin
5 ml of diluted acid
up to 20 ml of distilled water
Mix. Dispense.
Denote.

---

4. Take: 10 ml of isotonic Sodium chloride solution 10%
Sterilize.
Dispense.
Denote.

---

5. Take: 50 ml of Calendula tincture

Dispense.
Denote.

---

6. Take: 20,0: 200 ml of Oak bark decoction
Dispense.
Denote.

---

7. Take: 500 ml of Glucose solution (5%)
2,5 of Potassium chloride
Mix. Sterilize.
Add 6 U of insulin in injections aseptically.
Dispense.
Denote.

---

8. Take: 5 ml of "Sofradex" drops
Dispense.
Denote.

---

9. Take: 200 ml of Paeonia tincture
Dispense.
Denote.

10. Take: 25 ml of Passiflora liquid extract
Dispense.
Denote.

---

11. Take: 250 ml of Plaintain juice
Dispense.
Sign.

IV. Add missing endings, and translate:

1. Recĭpe: Hydrargyr… cyanid…
Novocain… ana 0,2
Aquae pro injection… 20 ml
Misceātur. Sterilisētur.
Detur. Signētur.

2. Recĭpe: Extract… Secāl… cornūt… fluid… 30 ml
Da. Signa.

3. Recĭpe: Tinctūr… Hyperĭc… 20 ml
Da. Signa.

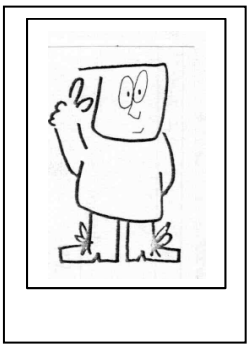
4. Recĭpe: Extract… Urtīc… fluid… 30 ml
Da.Signa.

V. Write out prescriptions for the following:

1. 1000 ml of furacin (0,02%).
2. 25 ml of Passiflora liquid extract.
3. 200 ml of Motherwort infusion (15,0).
4. 40 ml of salicylic acid in alcohol (1%).
5. 100 ml of Aloe syrup with iron.
6. 10 ampoules, 1 ml each, of thiamine bromide solution (5%).
7. 25 ml of Polygonum Hydropepper liquid extract.
8. 200 ml of Birch buds infusion (20,0).
9. 6 ampoules, 1 ml each, of promedole solution (2%).
10. 50 ml of Aralia tincture.
11. 100 ml of magnesium sulfate solution (5%).
12. 30 ml of Yarrow liquid extract.
13. 6 ampoules, 1 ml each, of 1% dyphenylhydramine hydrochloride.
14. 100 ml of ethyl alcohol (96 %).
15. 200 ml of aluminium hydroxide suspension (4%).
16. A solution containing: 5 ml of concentrated peroxide hydrogen , 15 ml of distilled water.
17. A solution, containing: 10 ml of brilliant green, 10 ml of Nystatin, 10 ml of ethyl alcohol, up to 100 ml of distilled water.
18. Mixture, containing: 5 ml of ammonia-ganus drops, 30 ml of Marshmallow syrup, up to 200 ml of distilled water.
19. A suspension, containing: 100 000 U of streptomycin sulphate, 20 g of cod liver oil. Apply for lubricating wounds. Shake before using.
20. 6 containers, each comprising 1 ml of floresteron suspension. Introduce intramuscularly once a week. Shake before using.
21. 25 ml Buchthorn liquid extract.
22. 10 ampoules, each containing 1 ml of Aloe liquid extract.
23. 50 coated tablets, each containing 0,02 g of Valerian extract.
24. 25 tablets of Senna dry extract, 0,3 g each.
25. An emulsion, containing: 15 ml of castor oil, 7,5 ml of gelatose and distilled water. Take a tablespoonful every 30 minutes.

26.90 ml of the mucilage, containing: 3 g of chloral hydrate, 20 ml of starch mucilage, and distilled water. Take 1 tablespoonful at bedtime.

Do you know that…



…the name of the medicinal plant mint ***"mentha, ae f"*** *is of Greek origin. A nymph, the patroness of meadows, forests, woods and rivers, was called Mentha. She was consecrated into the mysteries of life and death. She was able to heal the diseases and foretell the future. The air of the place, where she lived, was pure and transparent; it endowed people with longevity and lucidity of mind. When Aidus, a patron of the underground kingdom, fell in love with Mentha, his jealous wife turned Mentha into a plant. In ancient Rome, at magnificent banquets, there was a tradition to meet guests with a bunch of sweet-smelling mint. The banquet tables were rubbed with fresh mint leaves, the halls were sprinkled with water, infused on mint. It was considered that an aromatic mint had a wholesome effect on people and put them in good spirits. Pliniy the Senior, an outstanding Roman philosopher, advised his pupils to wear mint garlands. He noticed that they stimulated the brain activity.*

Aphorisms and quotations:

Tres faciunt collegium. *– Two heads are better than one.*
Durum est debēre, cui nolis. *– Gratitude is a burden.*
Carum est rarum.*– Rare is precious.*
Melior est invidia, quam misericordia. *– Better be envied than pitied.*
Aurea mediocrĭtas. *– The golden mean.*
Tempŏri parce. *– There is no time like the present.*

Medĭce, cura te ipsum
Physician, heal thyself!

UNIT XXII

THEME: The soft medicinal forms
(Formae medicamentōrum molles)

OBJECTIVES : - *to learn types of soft medicinal forms and their Latin names*
- *to acquire skills in prescribing soft medicinal forms in full and abbreviated forms.*

§ 110 The soft medicinal forms

Read and translate:

1. *Recĭpe Olei Cacao quantum satis, ut fiat suppositorium rectāle.*
2. *Oblātae facĭle et cito parantur.*
3. *Suspensio Benzylii benzoātis 20% contra scabiem adhibētur.*
4. *Oleum Cacao remedium constituens suppositoriōrum et globulōrum est.*
5. *Sapo virĭdis in compositiōnem unguenti Wilkinsoni adhibētur.*

Vocabulary:

oblāta, ae f	cachet, *n*
facĭle	easily, *adv.*
suspensio, ōnis f	suspension, *n*
scabies, ēi f	scab, scabies, *n*
adhibeo, ēre	use, apply, *v*
constituens, entis	form-making, *adj.*
globŭlus, i m	globule, *n*
compositio, ōnis f	composition, *n*
unguentum, i n	ointment, *n*

Soft medicinal forms comprise:

Gels	***gela (gelum, i n)***
Ointments	***unguenta (unguentum, i n)***
Pastes	***pastae (pasta, ae f)***
Liniments	***linimenta (linimentum, i n)***
Plasters	***emplastra (emplastrum, i n)***

§ 111 Gels – *gela (gelum, i n)*

Gels are soft medicinal forms for topical administration. Gels contain one or more substances and auxiliary substances, forming the base.

Gels are applied to skin, wounds, ulcers, and some mucous membranes.

Due to the base, gels are subdivided into: ***hydrophobic*** (oleogel, hydrophobic solvent – vaseline, vaseline oil, paraffin, gel-forming substance, etc); ***hydrophilic*** (hydrogel – water, hydrophilic or non-watery solvent and hydrophilic gel-forming substance).

According to the route of administration gels are subdivided into: 1) *gels for external use*; 2) *gels for oral administration* (the most commonly used in paediatric practice); 3) *nasal gels*; 4) *ophthalmic gels*; 5) *otic (auricular) gels*; 6) *rectal gels*; 7) *vaginal gels*; 8) *cervical gels*; 9) *urethrical gels*; 10) *dental gels* (for gum application, etc).

Recĭpe: Geli "Titriŏlum" 25,0
Da.
Signa. Apply to the skin.

§ 112 Ointments – *(unguentum, i n)*

Ointments are medicated semisolid preparations for external application to the skin or mucous membranes. Ointments may contain one or more active substances and auxiliary substances, forming simple or complex base. Ointment usually has a greasy base.

Due to the base, ointments are classified as ***hydrophobic*** (Vaseline, Vaseline oil, Paraffin base, etc), ***hydrophilic*** (water-soluble base).

Due to the application, ointments are subdivided as: ***nasal, aural, rectal, vaginal, inhaling, ophthalmic.***

Inhaling ointments comprise medicinal and form-making substance called the ointment base, which may be:

- Vaseline ***(Vaselīnum);***
- Lanoline ***(Lanolīnum);***
- purified porcine fat ***(Adeps suillus depurātus, seu Axungia porcīna purificāta)***;
- officinal glycerine ointment ***(unguentum Glycerīni);***
- officinal naphthalanic ointment ***(unguentum Naphthalāni);***
- officinal spermacetic ointment ***(unguentum Cetacei).***

Ointments are subdivided into **officinal** and **magistral**. Magistral ointments may be prescribed in abbreviated and complete forms. The word ***Recĭpe*** is followed by: the name of medicinal form; ***Unguenti*** in the Genitive case; the medication name; its concentration and general quantity of the ointment. In complete prescriptions the ointment base name must be followed by the preposition ***ad*** with indicating the total quantity of medication.

Officinal ointments are only prescribed in an abbreviated form. The ointment name and its total amount should be indicated in prescriptions.

Abbreviated prescription:

Recĭpe: Unguenti Prednisolōni 0,5% - 20,0
Da.
Signa. Apply to the affected skin areas.

Complete prescription:

Recĭpe: Prednisolōni 0,1
Vaselīni ad 20,0
Misce, fiat unguentum.
Da.
Signa. Apply to the affected skin areas.

Prescription for an officinal ointment:

Recĭipe: Unguenti Hydrargўri oxўdi flavi 10,0
Da.
Signa. Apply to the affected skin areas.

Recĭpe: Unguenti "Flucĭnar" 25,0
Da.
Signa. Apply to the affected skin areas.

Officinal ointments comprise: zinc ointment **(*unguentum Zinci*),** yellow mercury ointment ***(unguentum Hydrargўri flavum),*** white mercury ointment ***(unguentum Hydrargўri album),*** glycerine ointment ***(unguentum Glycerīni),*** naphthalanic ointment ***(unguentum Naphthalāni),*** xerophorm ointment ***(unguentum Xeroformii).***

§ 113 Pastes - *Pastae (pasta, ae f)*

Pastes are stiff-drying ointment-like preparations for external application. Pastes are ointment modifications, containing 25 % to 65 % (dental pastes up to 75 %) powdery substances.

Paste bases are identical to ointment bases: ***Vaselīnum, Lanolīnum, Adeps suillus depurātus, unguentum Naphthalāni, unguentum Glycerīni, unguentum Cetacei.***

The following substances are used as fillers: talk ***(Talcum)***, white clay ***(Bolus alba)***, wheat starch ***(Amўlum Tritici)***, maize starch ***(Amўlum Maўdis),*** potato starch ***(Amўlum Solāni)***, rice starch ***(Amўlum Orўzae)***, lycopodium ***(Lycopodium).***

Pastes are only prescribed in a complete form, with mentioning all constituents, their amounts, and the order to the pharmacist: ***"Misce, fiat pasta"*** (M., f. pasta). If the ointment content is included in Pharmacopoeia, the paste is prescribed in an abbreviated form:

Recĭpe: ***Anaethesīni 5,0***
Menthōli 0,5
Talci 12,5
Vaselīni ad 50,0
Misce, fiat pasta
Da.
Signa. Apply to the affected skin areas.

Officinal pastes are prescribed in an abbreviated form:

Recĭpe: ***Pastae antiseptĭcae biologĭcae 10, 0***
Da.
Signa. Apply to gums at bedtime.

§ 114 Liniments – *Linimenta (linimentum, i n)*

Liniments are fluid preparations for application to the skin by friction. Liniment contains one or more active substances and auxiliary substances, forming the base.

Form-building substances used in liniment production are plant and mineral oils – ***oleum Lini*** (linseed or flaxseed oil), ***oleum Hyoscyămi*** (Hyoscyamus oil), ***oleum Olivārum*** (olive oil), ***oleum Amygdalārum*** (Almond oil), ***oleum Helianthi*** (Sunflower oil), ***oleum Persicōrum*** (Peach-kerned or Peach oil), ***oleum Vaselīni*** (Vaseline oil), ***oleum Ricĭni*** (Ricin oil), ***Pix liquĭda*** (tar), ***Ichthyōlum*** (ichthyol or ichthammol) and others. Liniments are prescribed in a full form:

Recĭpe: ***Menthōli 2,0***
Olei Helianthi ad 50,0
Misce, fiat linimentum.
Da.
Signa. Rub (massage) the affected joints.

Officinal liniments, approved by the State Pharmacopeia, are prescribed in an abbreviated form:

Recĭpe: ***Linimenti Synthomycīni 10%-25,0***
Da.
Signa. Apply to the wound margins.

Officinal liniments:

Linimentum Aloës	- Aloe liniment
Linimentum balsamĭcum Wishnewsky	- Vyshnevsky Balsamic Liniment
Linimentum "Sanĭtas"	- liniment **"**Sanitas**"**
Linimentum Streptocidi 5%	- Streptocide liniment
Linimentum "**Alorom**"	- liniment "Alorom"
Linimentum "**Capsici camphorātum**"	- pepper-camphoric liniment

§ 115 Plasters – *Emplastra (emplastrum, i n)*

Plasters are paste-like mixtures which can be spread over the skin and which are adhesive at body temperature. Plasters may be protectant, counterirritant. Besides medicinal plants, plasters contain resins, caoutchouc or (India rubber), fats, waxes, salts of fatty acids, vaseline, paraffin, which after melting easily mix with medicinal plants.

Prescriptions for plasters are only written out in an abbreviated form:

- the quantity of the preparation is indicated in grams, and therefore, the medicinal naming is written in Gen. sing.;
- sizes of the material onto which the plaster is spread is indicated; and the name of the medicinal form is written in Acc. sing.

Recĭpe: Emplastri Plumbi simplĭcis 50,0
Da.
Signa. Slightly warm up, spread upon the flexible material, apply to the affected skin.

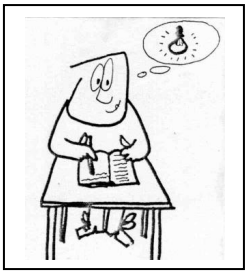
Recĭpe: Emplastrum adhaesīvum bactericīdum 8 cm * 12 cm
Da.
Signa. Fix the wound margins.

Due to the adhesion degree plasters are subdivided into: solid ***(emplasta dura)*** and liquid ***(emplastra fluida)***.

Assignments for self-control:

■ *Which of the following medicinal forms belong to the soft ones: extracta, unguenta, linimenta, decocta, pulveres, pastae, tabulettae?*
■ *Enumerate the officinal ointments, liniments and suppositories familiar to you.*
■ *In prescriptions for officinal ointment the word "Recipe" is followed by the name of medicinal form in …… case.*

Exercises:



I. Translate the following prescriptions into English:

1. Recĭpe: Promedōli 0,025
Olei Cacao 3,0
Misce, fiat suppositorium rectāle.
Da tales doses numĕro 6.
Signa.

---

2. Recĭpe: Unguenti Ichthyōli 10% 25,0

Da.
Signa.

---

3. Recĭpe: Unguenti Oxolīni 0,25% 15,0
Da.
Signa.

---

4. Recĭpe: Unguenti Wilkinsōni 20,0
Unguenti Zinci ad 100,0
Misce.
Da.
Signa.

---

5. Recĭpe: Olei Terebinthīnae
Chloroformii ana 10,0
Linimenti volatĭlis ad 60,0
Misce, fiat linimentum
Da. Signa.

---

6. Recĭpe: Pastae Teimurōvi 50,0
Da.
Signa.

7. Recĭpe: Norsulfazōli 0,5
Boli albae 1,0
Microcīdi 0,5
Misce, fiat pasta.
Da.
Signa.

II. Substitute the abbreviated prescriptions for complete ones:

1. Rp.: Ung. Kalanchoës 25,0
D.S.

---

2. Rp.: Dermatōli
Methylii salicylātis
Ol. Lini āā 15,0
M.f. lin.
D.S.

---

3. Rp.: Ac. salicylĭci 1,0
Zinci oxўdi
Amyli Tritĭci āā 12,3
Vaselĭni ad 50,0
M.f.pasta
D.S.

III. Render the following prescriptions into Latin:

Take: Vishnevsky Balsamic liniment 100,0
Dispense.
Sign.

Take: Composite lead plaster 10,0
Dispense in a jar.
Sign.

Take: Turpentine ointment 50,0
Dispense.
Sign.

Take: Gramicidine paste 30, 0
Dispense.
Sign.

Take: "Sanitas" liniment 50,0
Dispense.
Sign.

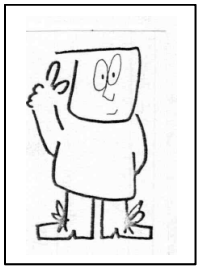
IV. Add missing endings and translate into English:

Recĭpe: Unguent…Tetracyclin…3% - 10,0
Da.
Signa.

Recĭpe: Xeroformi…
Picis liquid… aā 3,0
Ol. Ricĭn… ad 100 ml
M. f. lin.
D.S.

V. Write out prescriptions for the following medicines:

1. 5 g of hydrocortisone ointment (0,5%).
2. 25 g of Kalanchoe ointment.
3. An ointment, containing: 0,5 g of Belladonna liquid extract, 1 g of anaesthesin, 20 g of lanolin.
4. 10 g of erythromycin ointment (1%).
5. 25 g of heparin ointment.
6. Adhesive (lubricated) elastic plaster (10*15 cm).
7. 30 g of streptocide liniment (5%).
8. A liniment, containing: 3 g of tar, 3 g of xeroformium, up to 100 g of ricin oil.
9. 5 g of blue mercurial ointment.
10. An ointment, containing: 0,025 g of brilliant green, 0,2 g of copper sulphate, 0,2 g of white streptocide, 10 g of vaseline.
11. 30 ml of synthomycin liniment (0,1%) with novocaine (0,5%).
12. A liniment, containing: 0,005 g of hexestrol, 1 g of menthol, 7 g of anaesthesin, 20000 IV of retinal acetate, up to 100g of Sunflower oil.
13. An ointment, containing: 10 ml of 5% diphenylhydramine hydrochloride, 2 g of anaesthesin, 5 g of zinc oxide ointment, up to 50 g of lanolin.
14. An ointment, containing: 10 g of yellow mercury oxide and 10 g of highly purified vaseline.
15. 100 ml of Aloe liniment.
16. 50 g of synthomycin liniment with novocaine (0,5%).
17. 25 g of furacin (nitrofurazone) ointment (0,2%).
18. 50 g of gramicidine paste.
19. 4 g of the ointment, containing: 75 % sodium gluoride and glycerine.
20. 25 g of titriol gel for local external application on skin.
21. 50 g of simple lead plaster. To warm slightly, spread upon the flexible material and apply to the affected skin area.
22. Bactericidal adhesive plaster (5*12 cm) for fixing wound margins.



Do you know that…

… Asclepiades of Bithynia (128-56 B.C.), an ancient Greek physician, refuted the efficacy of pharmacotherapy and advocated the idea of combining diet and physiotherapy for the treatment of various diseases, while Claudius Galen insisted on simultaneous using of medicines and following a diet regimen.

***Aphorisms and quotations**:*

Verĭtas magna est et praevalēbit. *– Truth is mighty, and will prevail.*
Te homĭnem esse memento. *– Remember that you are but a human being!*
Omnis ars natūrae imitatio est. *– All art is but imitation of nature.*
Amat victoria curam. *– Victory favours those who take pains.*
Audiātur et altera pars*.– The other part should be heard as well.*
Domus propria domus optima*. – East or West – home is best.*

Per scientiam ad salūtem aegrōti
To heal the sick through knowledge

UNIT XXIII

THEME: The solid medicinal forms
(Formae medicamentōrum durae)

OBJECTIVES: - *to learn types of solid medicinal forms and their Latin names*
- *to learn proper prescribing solid medicinal forms using complete and abbreviated prescriptions*

§ 116 The solid medicinal forms

Read and translate:

1. *Pulvĕres in partes aequāles dividāntur.*
2. *Geněra amylōrum quattuor sunt: amўlum Solāni, amўlum Tritĭci, amўlum Maўdis, amўlum Oryzae.*
3. *Carbo activātus formā tabulettārum etiam "Carbolēnum" nominātur.*
4. *Species sedatīvae e rhizomăte cum radicĭbus Valeriānae, foliis Menthae piperītae et Trifolii fibrīni, strobĭlis Humŭli lupŭli constant.*
5. *Capsŭlae gelatinōsae elastĭcae, durae et operculātae sunt.*

Vocabulary:

pulvis, ĕris m	powder, *n*
aequālis, e	equal, *adj.*

Memorize the following:

amўlum, i n	starch, *n*
Solānum, i n	potato, *n*
Tritĭĭcum, i n	wheat, *n*
Mays, ўdis f	maize, *n*
Oryza, ae f (Greek)	rice, *n*
activātus, a um	activated, *adj.*
nomĭno, āre	name, denote, *v*
forma, ae f	form, *n*
rhizōma, ătis n	rhizome, *n*
folium, i n	leaf, *n*
Mentha piperīta	peppermint, *n*
Trifolium fibrīnum	trefoil, *n*
strobĭlus, i m	cone, *n*
Humŭlus lupŭlus	hop, *n*
consto, āre	contains, consists of, *v, 3rd pers.*
operculātus, a, um	capped, *adj.*
etiam	also, as well, *adv.*
species, ērum f	species, tea, *n*
sedatīvus, a, um	sedative, *adj.*

Solid medicinal forms comprise:

Powders	**pulveres (pulvis, ĕris m)**
Capsules	**capsulae (capsŭla, ae f)**
Tablets	**tabulettae (tabuletta, ae f)**
Dragee	**dragee (dragee, n is not declined)**
Suppositories	**suppositoria (suppositorium, i n)**
Herbal blends	**species (species, erum f (pl))**

§ 117 Powders – ***Pulvĕres (pulvis, ĕris m)***

Powders are solid medicinal forms containing dry, powdery, and finely divided substances, intended for internal and external administration.

Due to the route of administration there are powders for internal application ***(ad usum internum)*** and for external administration ***(ad usum externum***). According to the degree of powdering there are the finest-grained ***(subtilissĭmi)***, fine-grained ***(subtīles)*** and coarse-grained ***(grossi)*** powders. The finest powders are typically designed for internal administration. Fine powders are commonly used for internal administration.

Due to the quantity of substances powders are subdivided into simple ***(pulvĕres simplĭces)***, comprising one substance, and compound ***(pulvĕres composĭti)***, comprising more than two substances.

Powders, divided into separate doses, are termed as divided or dosed ***(pulvĕres divīsi)***. They are commonly used for internal administration. Non-divided or non-dosed ***(pulvĕres indivīsi)*** powders, prescribed from 5 to 100,0 and more, are dosed by patients themselves under physician's instructions. They are commonly intended for external administration. In prescribing simple powders the word ***Recĭpe*** is followed by: the substance name in the Genitive case, and the substance quantity, without mentioning the name of medicinal form:

Recĭpe: Anaesthesīni subtilissĭmi 50,0
Da.
Signa. Powder wounded surface.

In prescriptions for dosed powder, one indicates medicinal substance, its singular dose and number of powders::

Recĭpe: Pancreatīni 0,5
Da tales doses numĕro 24
Signa. 1 powder three times daily, on an empty stomach.

Powders, containing volatile and hydroscopic powders, are dispensed in a waxed paper package ***(charta cerāta*)** or in a paraffined paper package ***(charta paraffinata*)**:

Recĭpe: Camphorae tritae 0,2
Da tales doses numĕro 12 in charta cerāta.
Signa. 1 powder three times daily.

In prescriptions for compound non-dosed powders one denotes all components and their quantities followed by ***"Misce, ut fiat pulvis":***

Recĭpe: ***Natrii hydrocarbonātis 20,0***
Natrii chlorĭdi 10,0
Misce, fiat pulvis.
Da.
Signa. Dissolve one tablespoonful of powder in a glass of warm water.

In prescriptions for compound dosed powders one denotes the quantity of powder substances and the total number of doses:

Recĭpe: ***Platyphyllīni hydrotartrātis 0,005***
Dibazōli 0,02
Sacchări 0,3
Misce, fiat pulvis
Da tales doses N 12
Signa. 1 powder twice daily.

Compound powders are only prescribed in a full form.

Prescribing powders of plant origin begins with the word "Pulvĕris", followed by indication of the herb part, its name and dosage:

Recĭpe: Pulvĕris foliōrum Digitālis 0,05
Da tales doses N 12.
Signa. 1 powder three times daily.

§ 118 Capsules – *Capsŭlae (capsŭla, ae f)*

Capsules are dosage forms made of hard or soft gelatin, and containing a unit dose of a drug formulation. Capsules can be made of starch or wheat flour ***(capsŭlae amylaceae seu oblātae)***, animal glue gelatin ***(capsŭlae gelatinōsae)***, keratine or glutole ***(capsŭlae glutoidāles seu gellodurātae)***. They contain medicinal substances with disagreeable taste, smell, with a destructing impact on teeth, or with irritating effect. Gelatinous capsules are available in solid forms ***(capsŭlae gelatinōsae durae)***, elastic forms ***(capsŭlae gelatinōsae molles seu elastĭcae)***, or they may be capped ***(capsŭlae gelatinōsae operculātae)***. Typically, capsules are administered orally. Capsules also come in a vaginal or rectal form. In prescriptions for capsules, one should indicate the type of capsules:

Recĭpe: ***Olei jecŏris Aselli 1,0***
Da tales doses numĕro 30 in capsŭlis gelatinōsis elastĭcis.
Signa. Take 3 capsules three times daily.

Recĭpe.: Platyphyllīni hydrotartrātis 0,005
Papaverīni hydrochlorĭdi 0,02
Misce, fiat pulvis.
Da tales doses numero 12 in oblatis.
Signa. Take 1 capsule three times daily.

In pharmacological practice there are also: ***capsŭlae forte*** – capsules-forte**,** ***depot capsŭlae –*** depo-capsules**,** ***capsŭlae retard*** – retard-capsules**.**

§ 119 Tablets – *Tabulettae (tabuletta, ae f)*

Tablets are solid medicinal forms for internal use ***(ad usum internum)*** and for external use ***(ad usum externum)*** after previous dissolving ***(tabulettae solubĭles)***. Tablets for sublingual use are called ***tabulettae sublinguāles***; implant tablets (for subcutaneous use) are termed ***tabulettae implantantae seu implantabulettae***; vaginal tablets are entitled ***tabulettae vagināles***. Dissolving tablets are termed ***solublettae***. In the third edition of International Pharmacopoiea, tablets are called ***compressi***.

Presriptions for tablets can be complete and abbreviated:

Abbreviated: ***Recĭpe:*** ***Tabulettas Analgīni 0,5 N 10***
Da tales doses numĕro 10
Signa. 1 tablet for headache

Complete: ***Recĭpe:*** ***Analgīni 0,5***
Da tales doses numĕro 10 in tabulettis
Signa. 1 tablet for headache.

Composite tablets are prescribed in a complete form:

Recĭpe: Codeīni
Natrii hydrocarbonātis
Terpīni hydrātis aā 0,25
Da tales doses N 6 in tabulettis
Signa. Take 1 tablet twice daily.

Composite tablets with a special commercial name are only prescribed in an abbreviated form:

Recĭpe: Tabulettas "Macropen" 0,4
Da tales doses numĕro 16.
Signa. Take 1 tablets three times daily.

Recĭpe: Tabulettas "Coldrex" numĕro 12
Da.
Signa. Take 1 tablet three times daily.

Recĭpe: ***Tabulettas "Lipocerebrīn" 0,15 obductas numĕro 20***
Detur.
Signētur. Take 1 tablet three times daily.

Recĭpe: ***Tabulettas contra tussim numĕro 20***
Da.
Signa.Take 1 tablet three times daily.

New medicinal forms comprise: ***retard compressi*** – retard-tablets (tablets of a prolonged effect), ***film compressi*** – filmed-tablets (tablets covered with indissoluble membrane with an opening) and ***depot compressi*** – depot tablets.

Recĭpe: ***Tabulettas Nitro-Mac retard 0,25***
Da tales doses numĕro 50.
Signa.

Recĭpe: ***Tabulettas Cinnarizīni forte 25***
Da tales doses numĕro 50.
Signa.

§ 120 Dragee – *(Dragee)*

Dragee is a sugar-coated solid dosage form for internal use made by re-covering granules with medicinal and auxiliary (talk, chocolate, sugar, etc.) substances. Dragee are prescribed in complete and abbreviated forms:

Recipe: ***Dragee Diazolīni 0,005 numĕro 20***
Da.
Signa.

§ 121 Suppositories – *Suppositoria (suppositorium, i n)*

Suppository is a solid dosage form that is prepared in various weights and shapes suitable for insertion into a body cavity (usually rectum or vagina), where it melts, dissolves, or disintigrates to produce a desired medicinal effect. Suppositories are classified as rectal ***(suppositoria rectalia)***, vaginal ***(suppositoria vaginalia)*** and sticks ***(bacilli).*** As remedium constituents one applies:

- Theobroma oil ***(oleum Cacao)***
- Butyryl ***(butyrŏlum)*** – hydrogenized fat of various chemical composition)
- Gelatinous mass ***(massa gelatinōsa)*** – mixture of gelatin, glycerine and water
- Synthetic basis ***(polyenthylenoxўdum)***

Rectal suppositories are coned or cylindrical with a rounded tip. Vaginal suppositories are available in globules ***(globŭli)***, egg-like ovuli – ***ovŭli*** or as flat bodies with rounded end (pessaries – ***pessaria)***. Little sticks introduced into the uterus are called ***uretoria***.

Magistral suppositories, made in the chemist's, are prescribed in complete and abbreviated forms.

Complete prescription:

Recĭpe: Dimedrōli 0,01
Olei Cacao 3,0
Misce, fiat suppositorium rectāle.
Da tales doses numĕro 12.
Signa. Insert 1 suppository into the rectum at bedtime, previously removing the covering.

Abbreviated prescription:

Recĭpe: Suppositoria cum Dimedrōlo 0,01
Da tales doses numĕro 12
Signa. Insert 1 suppository into the rectum at bedtime, previously removing the covering.

Some complex officinal suppositories possess commercial names, e.g., ***"Anusolum", "Bethiolum", "Viburcolum", "Osarbonum", "Candibene".*** In prescriptions, medicinal form names are written in the Accusative case, plural, followed by the suppository name and its number. If the suppository name is written in converted comas, it should be used in the Nominative case, singular. If the name is without converted comas, it is written in Genitive case, singular.

Recĭpe: Suppositoria "Anisōlum" numĕro 10
Da.
Signa. Apply 1 suppository into the rectum twice a day, previously removing the
covering.

Recĭpe: Suppositoria "Flurenizĭdum" 0,1 numero 10
Da.
Signa. Apply 1 suppository vaginally at bedtime, previously removing the covering.

Recĭpe: Suppositoria "Apilācum" 0,005 numĕro 12
Da.
Signa. Apply 1 suppository into the rectum three times daily, previously removing the covering.

§ 122 Herbal blends – ***Species, ērum f (pl)***

Herbal blend is a medicinal form consisting of coarse herb powder (flowers, leaves, roots). Herbal blends are available for internal use as infusions or decoctions: ***(ad infūsa seu decocta***), ***species fumāles*** (herbal blends for smoking), herbal blends for gargling ***(ad gargarismăta)***, mixtures for cataplasms ***(ad cataplasmăta)*** or for baths ***(pro balneis)***. In prescriptions for this medicinal form both the route of administration and the mode of medicine preparation are denoted.

Herbal blends can be dosed and non-dosed. Dosed mixtures are prescribed commonly if plant raw material contains potent substances. Each constituent with indicated amount is given in a prescription, followed by ***"Misce, fiant species"*** and by the amount of doses and signature.

Recĭpe: Herbae Adonĭdis vernālis 2,0
Rhizomătis cum radicĭbus Valeriānae 1,5
Misce, fiant species.
Da tales doses N 10.
Signa. Boil a package in one glass of water and infuse for 30 minutes.

Non-dosed herb mixtures are written out in the following way:

Recĭpe: Florum Chamomillae
Herbae Hyperĭci ana 25,0
Misce, fiant species.
Da.
Signa. Boil 1 tablespoonful of the blend in a glass of boiling water, filter, drink
1 tablespoonful four-five times daily.

Officinal herb mixtures are written out in an abbreviated form:
Recĭpe: Speciērum pectoralium 50,0
Da.
Signa. Pour a glass of boiling water on 1 tablespoonful of the blend, boil for 10 minutes, take ½ of it in the morning and in the evening.

Memorize names of the following officinal herbal blends:

species amārae	bitter (appetizing) herbal blend
species antirheumatĭcae	anti-rheumatic herbal blend
species antiasthmatĭcae	antiasthmatic herbal blend
species aperitīvae	anti-obesity herbal blend
species antidiabetĭcae	antidiabetic herbal blend
species antihaemorrhoidāles	antihaemorrhoidal herbal blend
species cardiăcae	cardiac herbal blend
species carminatīvae	antiflatulant herbal blend
species cholagōgae	cholagogue herbal blend
species depuratīvae	blood-purifying herbal blend
species diaphoretĭcae	diaphoretic herbal blend

species diuretĭcae	diuretic herbal blend
species laxantes	laxative herbal blend
species nervīnae	sedative herbal blend
species pectorāles	pectoral herbal blend
species pulmonariae	pulmonary herbal blend
species sedatīvae	sedative herbal blend
species stomachĭcae	gastric herbal blend
species urologĭcae	urological herbal blend
species ad gargarismăta	herbal blend for gargling

Assignments for self-control:

■ *Which of the following medicinal forms are solid: extrata, suppositoria, dragee, tabulettae, mixturae, species, pulveres, decocta?*
■ *Due to the degree of powdering powders are subdivided into:*
■ *Due to the number of constituents powders are classified as:*
■ *in prescriptions, one typically writes after the word "Recipe" ...*
■ *Prescribing tablets with trade name, the name of medicinal form is expressed in…*
■ *In prescriptions for officinal herbal blends one writes after the word "Recipe" the name of medicinal form in……. (case and number)*

Exercises:

I. Translate prescriptions:

1. Recĭpe: Tabulettas Paracetamōli 0,2 numĕro 10
   Da.
   Signa.

---

2. Recĭpe: Dragee Aminazĭni 0,05 numĕro 30
   Da.
   Signa.

---

3. Recĭpe: Phenozepāmi 0,0005
   Da tales doses numĕro 50 in tabulettis.

Signa.

---

4. Recĭpe: Tabulettas “Allochōlum” obductas numĕro 50
Da.
Signa.

---

5. Recĭpe: Acĭdi acetylsalicylĭci 0,5
Da tales doses numĕro 12.
Signa.

---

6. Recĭpe: Acidi ascorbĭci 0,05
Rutīni 0,02
Misce, fiat pulvis.
Da tales doses numĕro 12
Signa.

7. Recĭpe: Florum Chamomīllae
Herbae Hyperĭci ana 50,0
Misce, fiant species.
Da.
Signa.

---

8. Recĭpe: Fructuum Rosae
Fructuum et foliōrum Sambūci ana 20,0
Foliōrum Calendŭlae 25,0
Strobilōrum Lupŭli
Rhizomătis cum radicĭbus Valeriānae ana 15,0
Misce, fiant species.
Da.
Signa.

II. Substitute the abbreviated forms for complete ones and translate them into English:

1. Rp.: Tab. Glaucini hydrochl. obd. 0,05 N. 20
D.S.

---

2. Rp.: Tab. Sustac-forte N. 25
D.S.

---

3. Rp.: Fl. Tiliae
Baccārum Rubi idaei āā 30,0
M.D.S.

---

4. Rp.: Haematogēni sicci 1,0
D.t.d. N. 6 in ch. cer.
S.

---

5. Rp.: Thyreodīni 0,2
D.t. d. N. 20 in tab.
S.

---

6. Rp.: Tab. "Nitro-Mac retard" N.50
D.S.

---

7. Rp.: Validōli 0,05
D.t.d. N. 20 in caps.
S.

---

8. Rp.: Ferri reducti 0,5
Ac. ascorbĭci 0,1
M.f. pulv.
D.t.d. N.50 in caps. gel.
S.

III. Translate the following prescriptions into Latin:

1. Take: Dragee "Festal" number 50
Dispense.
Sign.

---

2. Take: Microfolin-forte 0,00005
Dispense such doses number 50 in tablets.
Sign.

---

3. Take: Tablets “Spasmalgin” number 10
Dispense.
Sign.

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4. Take: Composite powder of glycyrrhiza 50,0
Dispense.
Sign.

---

5. Take: Streptocide 5,0
Penicillin 200 000
Mix to form the finest powder.
Dispense.
Sign.

---

6. Take: White clay 10,0
Dispense.
Sign.

IV. Add the missing endings and translate the prescriptions into English :

Recipe: Tabulett… Antipyrin… 0,25 numĕro 10
Da.
Signa.

Recipe: Pulver… Xeroformi…subtilissim…10,0
Da.
Signa.

Recipe: Acid… acetylsalicylic… 0,24
Phenacetin… 0,18
Coffein… 0,03
Acidi citric… 0,02
Da tal… dos… numero 6 in tabulet…
Signa.

V. Write out prescriptions for the following:

1. 20 tablets of Tavegil in a dosage equal 0,001 g. Apply 1 tablet three times daily.

2. 50 coated tablets of Valerian extract 0,02 g for a dosage. Take 1 tablet three times daily.

3. 10 powders containing: 0,03 g of Rhubarb root powder, magnesium oxide, 0,015 g of dense Belladonna extract. Take 1 powder once a day after meals.

4. 30 gelatinous capsules, each containing 5 ml of fish oil. Take 1 capsule once a day with meals.

5. 12 powders containing: 0,25 g Paracetamol and acetylsalicylic acid, 0,1 g of caffeine. Take 1 powder twice daily.

6. 50 tablets of nitroglycerine, 0,005 g each. Take 1 tablet sublingually if required.

7. 50 "Asparcam" tablets. Take 1-2 tablets three times daily.

8. 50 "Undevit" dragee. Take 2-3 dragee twice daily.

9. Dragee containing: 0,02 g of iodine, 0,2 g of potassium iodide, 0,4 g of phenolbarbital, 1g of Digitalis leaves powder, 4 g Valerian extract, and Glycyrrhiza extract and Glycyrrhiza powder as required.

10. 100 g of sedative herbal blend. One tablespoonful of the tea poure by boiling water, infuse 30 minutes, take 50 ml three times daily.

11. Herbal blend containing: 80 g of Wormwood herb, 20 g of Yarrow herb.

12. 30 "Digestal" dragee .

13. Herbal blend, containing: 200 g of Chamomile flowers, 5 g of Peppermint, 30 g of Flax seed. 1 tablespoonful of the mixture infuse 30 minutes, take 50 ml three times daily.

14. Herbal blend, containing: 80 g of Plantain leaves and Sage leaves, 60 g of Chamomile flowers, 50 g of Peppermint leaves, 30 g of Flax seed.

15. 10 rectal suppositories containing 0,5 g of Anaestesine and 3 g of Theobroma oil, for rectal administration, 1 suppository daily.

16. 12 vaginal suppositories containing 0,25 g of Boric acid and 3 g of Theobroma oil for vaginal administration, 1 suppository at bedtime.

17. Powders containing 1 g of boric acid, 9 g of talk, for powdering damaged skin areas.

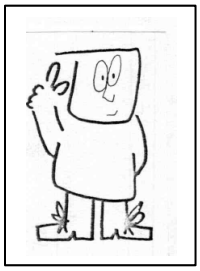
18. 10 suppositories containing 0,3 g of Eufilin, 3 g of Theobroma oil for rectal administration, 1 suppository three times daily, previously removing the covering.

19. 10 suppositories containing 0,02 g of papaverine hydrochloride. Administer 1 suppository rectally three times daily, previously removing the covering.

20. 10 rectal suppositories "Anuzol". Administer 1 suppository rectally three times daily, previously taking off thecovering.

21. 12 suppositories "Apilak" 0,005 g. Apply 1 suppository rectally three times daily, previously removing the covering.

Do you know that…



… the terms "pharmacist", "pharmaceutical", and "pharmacology" are derived from the Greek word "pharmacon", initially meaning: "magic herbs", "healing ointments", "poison". This word is closely connected with ancient quackery, sorcery, and belief in magic that were widely spread in the olden days. The word "pharmaceuta" was applied to people making medicines and treating patients. A druggist filling prescriptions and dispensing medications was referred to as "pharmacopola".

Aphorisms and quotations:

Simĭlis simĭli gaudet. *– Like begets like.*
Mutātis mutandis. *– Make changes if it is necessary.*
Est modus in rebus. *– The great thing is moderation.*
Sine prece, sine pretio, sine pocŭlo. *– Honesty is the best policy.*
Nemo prophēta acceptus est in patria*. – No prophet is accepted in his own country.*
Species decĭpit*. – Appearances are deceptive.*

Extrēmis malis, extrēma remedia
Desperate diseases must have desperate remedies

UNIT XXIV

THEME: **The introduction to clinical terminology.**
The Greek and Latin doublets of the I-II declension nouns.
The endings as word-forming elements of the 1st declension

OBJECTIVES: - *to acquire skills in building clinical terms containing word-forming elements of the I declension*
- *to memorize Latin and Greek doublets of I-II declensions*
- *to gain practice in building clinical terms by means of Greek and Latin doublets and endings serving as word-forming elements*

§ 123 The introduction to clinical terminology

The modern scientific terminology, and particularly, its medical subdivision, reflects centuries-old history of medicine. Medical scientific subsytem appears to be the most unified one. This phenomenon can be accounted for the tradition to use unexhaustible sources of classical languages: both ancient Greek and Latin in the process of term formation.

It is estimated that about three-fourths of our medical terminology is of Greek origin. The first reason for this is that the Greeks were the founders of rational medicine in the golden age of Greek civilization in the 5th century B.C. A second reason for the large number of Greek medical terms is that the Greek language lends itself easily to the building of compounds. When new terms were needed, with the rapid expansion of medical science during the last century, Greek words or Latin words with Greek endings were used to express the new ideas, conditions, or instruments. The new words follow the older models so closely that it is fairly difficult to distinguish the two by their forms. Such recent words as ***appendicitis, creatinine, cystoscope, epinephrine, streptococcus***, and many others do not appear different from the classical terms. The fact is that about one-half of our medical terminology is less than a century old. A third reason for using the classical roots is that they form an international language, easily understood by anyone familiar with the subject matter.

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

The Greek terms came into the English language through Latin. In adapting the Greek words the Romans used the Latin alphabet. Among the most frequently used elements in the formation of terms are ***prefixes***. They consist of one or more syllables

(originally prepositions or adverbs) placed before the words to show various kinds of relationships. In joining the stem, the final letter of the prefix undergoes certain changes. If a prefix ends in a vowel and a stem begins with one, the final vowel of the prefix is usually dropped, e.g., ***epi-encephalon*** becomes ***ep-encephalon; para-otid*** becomes ***par-otid***. The final ***n*** of a prefix becomes ***l*** before following ***l***, as in ***syl-logism*** from ***syn-logism***. It becomes ***m*** before ***b, m, p, ph***, as in ***em-phasis*** from ***en-phasis***. In addition, it is to be noted that the final consonant of the Latin prefixes ***ad-, con-*** and ***ob-*** are usually changed to duplicate the letter which follows, for example: ***ad-cept*** becomes ***ac-cept; con-lapse*** becomes ***col-lapse; ob-ciput*** becomes ***oc-ciput***.

A suffix is a terminal letter or syllable added to the stem to modify or amplify its meaning. If a suffix begins with a consonant and it is joined to a stem ending in a consonant, a ***connecting vowel***, mostly ***o,*** is added to make the junction.

In addition to the words made up of a stem combined with one or more prefixes and suffixes, there are terms which have a second stem as a component part. Some Greek terms may have as many as three stems joined, e.g., ***leuco-cyt-hemia – leucemia***. Nouns, adjectives, and adverbs may be used in various combinations. The first part of a compound word generally indicates its essential meaning which is modified or amplified by the second part. If the second part begins with a consonant, the connecting vowel *o* is usually inserted for the sake of euphony, e.g., ***hepato-melanosis***. If two vowels are juxtaposed by the combination, the first is generally dropped, e.g., ***enter-ectomy***.

Latin is, comparatively speaking, poor in compound words. Instead of doubling up words in Latin, significant prefixes or suffixes are added, or the words-retaining their proper syntactical relations-are simply written together as one word ***(jurisdictio, oaterfamilias, etc.)***. Still, the language contains many genuine compounds of all parts of speech: nouns, verbs and adverbs, e.g., ***ilio-costal*** – relating to the ilium and ribs (costa); ***dextro-manual*** – right-handed; ***funi-form*** – rope-like.

Many medical terms are a mixture of Greek and Latin. Such terms are called ***hybrid*** terms. They may be Greek words with Latin endings, such as ***bacteri-al; derm-al; peri-card-ium***; or Latin words with Greek endings, as ***appendic-itis; tonsill-itis; fibr-oma; granul-oma,*** etc.; or a mixture of Greek and Latin in one compound, such as ***cancer-ology; colori-meter; mono-nuclear; venotomy*** and many others.

§ 124 The Greek and Latin doublets of the I declension nouns

Latin noun	**Greek noun**	**Greek word-forming element**	**Meaning**
aqua, ae f	hýdor	**hydr-**	water
anĭma, ae f	psyché	**psych-**	psyche
causa, ae f	aetía	**aeti-**	cause
cellŭla, ae f	cýtos	**cyt-**	cell
femĭna, ae f	gyné, gynaecós	**gynaec-**	woman, female

gingīva, ae f	úlon	**ul-**	gums
glandŭla, ae f	adén, adénos	**aden-**	gland
hernia, ae f	céle	**-cele**	hernia
lacrĭma, ae f	dácryon	**dacry-**	tear
lingua, ae f	glóssa	**gloss-**	tongue
mamma, ae f	mastós	**mast-**	mammary gland
maxilla, ae f	gnáthos	**gnath-**	maxilla
medulla, ae f	myelós	**myel-**	marrow, medulla
natūra, ae f	phýsis	**physi-**	nature
palpebra, ae f	blépharon	**blephar-**	eyelid
planta, ae f	phýton	**phyt-**	plant
urīna, ae f	úron	**ur-**	urine
salīva, ae f	síalon, ptýalon	**sial-** **ptyal-**	saliva
tuba uterīna	sálpinx, sálpingos	**salping-**	ovarian duct, salpinx, uterine tube
vagīna, ae, f	cólpos	**colp-**	vagina
vena, ae, f	phleps, phlebós	**phleb-**	vein
vertebra ae, f	spóndylos	**spondyl-**	vertebra
vesīca, ae f	cýstis	**cyst-**	bladder, cyst, vasica
vesīca urinaria	cýstis	**cyst-**	urinary bladder
vesīca biliāris (fellea)	chole-cýstis	**cholecyst**	gallbladder
vita, ae f	bíos	**bio-**	life

§ 125 The Greek and Latin doublets of nouns (masculine gender, II declension)

Latin noun	Greek noun	Greek word-forming element	Meaning
calcŭlus, i m	líthos	**lith-**	calculus
cancer, cri m	carcínos	**carcin-**	cancer
digĭtus, i m	dáctylos	**dactyl-**	finger
locus, i m	tópos	**top-**	place, site
medĭcus, i m	iatrós, iatér	**iatr-**	physician, doctor
morbus, i m	nosós	**nos-**	disease, ailment, illness
muscŭlus, i m	mys, myós	**my-**	muscle
nasus, i m	rhis,	**rhin-**	nose

	rhinós		
nervus, i m	néuron	**neur-**	nerve
oculŭs, i m	ophthalmós	**ophthalm-**	eye
pilus, i m	thrix, trichós	**trich-**	hair
somnus, i m	hýpnos	**hypn-**	dream, sleep
succus, i m	chylós	**chyl-**	juice
umbilĭcus, i m	omphalós	**omphal-**	umbilicus navel
utĕrus, i m	hystéra métra	**hyster- metr-**	uterus
vir, viri, i m	anér, andrós	**andr-**	man, male

§ 126 The Greek and Latin doublets (neuter gender, II declension)

Latin noun	Greek noun	Greek word-forming element	Meaning
cerebrum, i n	encéphalos	**encephal-**	brain, cerebrum
intestīnum, i n	énteron	**enter-**	intestine
labium, i n	chéilos	**cheil-, chil-**	lip
ligamentum, i n	sýndesmos	**syndesm-**	ligament
medicamentum, i n	phármacon	**pharmac-**	medicines, drugs
ovarium, i n	oóphoron	**oophor-**	ovary
ovum, i n	oon	**oo-**	ovum, egg
scutum, i n	thyreós	**thyreo- thyro-**	shield
venēnum, i n	tóxon, toxicón	**tox- toxic-**	poison

§ 127 The endings as word-forming elements (I declension)

Ending	Meaning
-aemia	blood condition
-algia	pain (without organic changes)
-odynia	pain, ache
-algesia	pain, excessive sensitivity
-ectasia	dilation of tubular or hollow organ

-ectomia	removal, excision, resection
-ergia	activity of an organism
-graphia	process of recording
-logia	science
-opsia (-opia)	vision, visual examination, microscopic study
-pathia	disease
-plegia	paralysis, apoplexy, stroke
-phobia	fear, morbid fear
-rrhagia	anormal or excessive flow
-rrhaphia	suturing or operative repair
-rrhoea	secretion, excretion of fluid
-scopia	examination (instrumental)
-stomia	drawing out an artificial orifice, fistula
-therapia	treatment, mode of treatment
-iatria	treatment of a disease
-tomia	incision, cut, surgery
-uria	presence of urine
-pepsia	pertaining to digestion
-chylia	pertaining to gastric juice
-iatria	pertaining to treatment
-acusia	hearing
-kinesia	motion, movement, mobility
-orexia	hunger
-osmia	scent, olfaction
-sphygmia	pulse
-geusia	taste
-malacia	softening, mollification
-penia	lack, deficiency, deficit
-philia	disposition, inclination, propensity
-trophia	nourishment, nutrition
-derma (dermia)	disease of the skin
-metria	measuring, measurement, measure
-pexia	attachment, fastening

§ 128 The endings as word-forming elements (II declension)

Ending	**Meaning**
-cytus	cell
-lithus	calculus
-logus	specialist
-tropus	direction of an action
-blastus	embryo
-iater	physician
-spasmus	spasm

§ 129 The most commonly used Greek prefixes

Prefix	Meaning	Example
ana-	upward, backward	***anabolismus*** – anabolism; a metabolic process in which complex molecules are synthesized from simpler ones with the storage of energy
meta-	between, after; transformation or exchange; subsequent	***metabolismus*** – metabolism; the sum total of the chemical processes that occur in living organisms, resulting in growth, production of energy, elimination of waste material, etc. ***metaartritĭcus*** – occurring as a consequence or result of arthritis
cata-	downward	***catabolismus*** – catabolism; a metabolic process in which complex molecules are broken down into simple ones with the release of energy; destructive metabolism ***catarrhus*** – catarrh; 1) inflammation of a mucous membrane with increased production of mucus, 2) the mucus so formed
syn(sym)-	together, with	***synergismus (-synergia)*** – synergism; synergy; the working together of two or more drugs, muscles, etc., to produce an effect greater than the sum of their individual effects

Exercises:

I. Translate clinical terms, determine meaning of word-forming elements:

hydraemia_____ metropexia_____
myopathia _____ gynaecologia_____
hydrophobia _____ mastectomia_____
balneotherapia_____ mammographia_____
phlebectasia_____ dysopsia _____
trichologia_____ tracheotomia_____
tracheostomia _____ glossorrhagia_____
enterorrhaphia _____ biopsia_____
aetiologia_____ uraemia_____
dysuria_____ metropathia_____
blepharorrhaphia_____ glossectomia_____
hydrotherapia _____ encephalographia _____
synergia_____ toxicomania _____
analgesia_____ hemiplegia _____
phleborrhaphia_____ bronchorrhoea _____
hydropathia _____ hyposialia _____
biologia_____

II. Translate the following clinical terms:

suture of nerve, eye, stomach, uterus _____
medicinal plant therapy (phytotherapy) _____
surgical introduction of a tube into trachea_____
presence of calculi in gallbladder _____
pain in the supraabdominal area_____
pathological dilation of bronchi_____
lacrimation, epiphora, secretion of tears _____
respiratory deficiency_____
removal of a vertebra _____
intestinal bleeding _____
removal of a gland _____
reduced reactivity of the organism _____
specialist in gastrointestinal diseases _____

III. Translate and explain the formation of clinical terms:

A) omphalectomia _____ topographia _____
pathologia _____ rhinorrhagia_____
neurorrhaphia _____ salpingographia_____
hypnotherapia _____ omphalocele _____
sialorrhoea_____ polydactylia_____
hysterotomia _____ phlebolithus_____
atrophia _____ trichomalacia_____
metralgia _____ neuralgia _____
neurodynia_____ psychopathia _____
cytopenia_____ rhinoplastica_____

encephalocele_____ rectoscopia_____
oophorectomia_____ colpohysteropexia_____

B) chronic muscular atrophy
resection of the stomach
incarcerated, irreducible hernia
stomach cancer
paralysis of the facial nerve
diaphragmatic hernia
rupture of the uterus
inoperable cancer

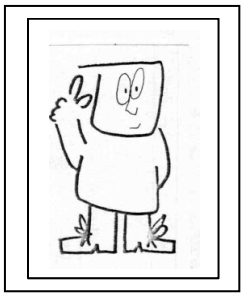
IV. Build medical terms:

uremic calculus _____
disease of a mammary gland _____
suture of the lip _____
specialist dealing with poisons _____
softening of brain tissue _____
attachment of uterus_____
examination of the internal surface _____
of the urinary bladder _____
oxygen therapy_____

V. Translate into English:

extirpation utĕri supravaginalis _____
dyskinesia palpebrārum_____
anteflexio uteri_____
retroflexio uteri_____
dysphagia paralytica_____
dyspepsia hepatica _____
resection ventriculi _____
morbid neonatōrum_____

Do you know that…



…the word "symposium" is based on the Greek term "symposion", from "syn" – "together" and "pino" – "drink". The Greeks of old held their "symposiums" after dinner, when they would drink wine together and mix entertainment with intellectual concersations. The dialogues of the Greek philosopher Plato which he called the "symposium", is an imagined conversation at such a gathering. And so with us a" symposium" has come to mean a collection of comments, opinions, and short essays.

Aphorisms and quotations:

Medĭcus curat, natūra sanat. – *The doctor heals, nature convalesces.*
Cui dolet, memĭnit. *– We forget our pleasures, we remember our sufferings.*
Volens-nolens. *– Willi-nilli.*
Certa amittĭmus, dum inserta petĭmus. *– Catch a shadow and let go a substance.*
Id summa miseria est. *– It is the last straw that breaks the camel's back.*
Per aspĕra ad astra. *– By steep and toilsome ways to the stars.*

Tempŏra mutantur et nos mutāmur in illis
Times change, and we change with them

UNIT XXV

THEME: The Greek and Latin doublets of the adjectives of the 1st group. The Participle Past Passive used in clinical terminology

OBJECTIVES: *- to learn the way of forming clinical terms*
- to learn Greek and Latin doublets of adjectives of the I st group

§ 130 The Greek and Latin doublets of adjectives (I-II conjunctions)

Latin adjective	Greek adjective	Greek word-forming element	Meaning
acĭdus, a, um	oxýs	oxy-, ox-	acid, sour
albus, a, um	leucós	leuc-, leuk-	white
aliēnus, a, um	xénos	xen-	alien
caecus, a, um	typhlós	typhl-	blind
crassus, a, um	pachýs	pachy-	fat, thick
flavus, a, um	xanthós	xanth-	yellow
durus, a, um	sclerós	scler-	hard, solid
humĭdus, a, um	hygrós	hygr-	humid, moist
latus, a, um	platýs	platy-	wide
magnus, a, um	macrós mégas, megále	macr- mega- megal-	large
malus, a, um	cacós	cac-	bad
medius, a, um	mésos	mes-	middle
mortuus, a, um	necrós	necr-	dead
multus, a, um	polýs	poly-	numerous
niger, gra, grum	mélas, mélanos	melan-	black
novus, a, um	néos	neo-	new
parvus, a, um	micrós, olígos	micr- olig-	small, little
rectus, a, um	orthós- proctós-	orth- proct-	straight
ruber, bra, brum	erythrós-	erythr-	red
siccus, a, um	xerós-	xer-	dry
spurius, a, um	pseudés	pseud-	non-genuine, false or spurious
tardus, a, um	bradýs	brady-	slow

§ 131 The adjectives of the I-II declensions used in clinical terminology

sub(acūtus), a, um	(sub)cutaneous
benignus, a, um	benign
chronĭcus, a, um	chronic
contagiōsus, a, um	contagious
hereditarius, a, um	hereditary
infectiōsus, a, um	infectious
(im)plenus, a, um	(un)completed
paralytĭcus, a, um	paralytic
diabetĭcus, a, um	diabetic
toxĭcus, a, um	toxic
spontaneus, a, um	spontaneous
malignus, a, um	malignant
lymphatĭcus, a, um	lymphatic
trigemĭnus, a, um	threefold, triple
rheumatĭcus, a, um	rheumatic
acūtus, a, um	acute
myopathĭcus, a, um	myopathic
calculōsus, a, um	calculous
disseminātus, a, um	disseminated
aseptĭcus, a, um	aseptic
cardiologĭcus, a, um	cardiac, cardiologic
clausus, a, um	close
allergĭcus, a, um	allergic
alimentarius, a, um	alimentary
insulinĭcus, a, um	insulinic
spastĭcus, a, um	spastic
congenĭtus, a, um	congenital, inborn
decompensātus, a, um	decompensated
gangraenōsus, a, um	gangrenous
purulentus, a, um	purulent
ulcerōsus, a, um	ulcerative
trophĭcus, a, um	trophic
siccus, a, um	dry
tuberculōsus, a, um	tuberculous
arteriovenōsus, a, um	arteriovenous
diffūsus, a, um	diffusive, diffuse
humĭdus, a, um	humid
haemorrhagĭcus, a, um	haemorrhagic
hypertrophĭcus, a, um	hypertrophic

§ 132 The Participle Past Passive

acquisītus, a, um	acquired
apertus, a, um	opened
clausus, a, um	closed
contūsus, a, um	contused
(in)complētus, a, um	(in)complete
(in)compensātus, a, um	(non)compensated
(in)complicātus, a, um	(un)complicated
congenĭtus, a, um	congenital, inborn
(in)diffūsus, a, um	(non)diffused
disseminātus, a, um	disseminated
innātus, a, um	innate, inborn
incīsus, a, um	incised, cut
lacerātus, a, um	lacerated
punctus, a, um	punctured
sclopetarius, a, um	gunshot
caesus, a, um	cut
morsus, a, um	sting
mixtus, a, um	mixed
protractus, a, um	lingering
inversus, a, um	inversed
laesus, a, um	damaged, injured

Exercises:

I. Translate and explain the formation of clinical terms:

macrocyti	_____	cacosmia	_____
polyhaemia	_____	polydactylia(hexadactylia)	_____
necrotomia	_____	pseudoanaemia	_____
mesenterium	_____	oligophrenia	_____
xeroophthalmia	_____	microcephalia	_____
macropsia	_____	typhlectomia	_____
leukaemia	_____	megacolon	_____
melanuria	_____	proctospasmus	_____
platyspondylia	_____	microbiologia	_____
polyophagia	_____	megaloglossia	_____
xanthofibroma	_____	macrophagocytus	_____
proctalgia	_____	leucocytus	_____
orthopedia	_____	polyuria	_____
sclerodactylia	_____	pseudoictĕrus	_____
platycrania	_____	erythrodermia	_____
bradycardia	_____	tachycardia	_____

II. Build medical terms:

1. dryness of the eyeball lining
2. possessing more than the normal number of fingers or toes
3. pain in the rectum
4. melanin discharge with the urine; excretion of darkly stained urine
5. surgery of the caecum
6. seeing things diminished
7. excessive breathing rate
8. indigestion (disturbance of digestion)
9. red blood cell
10. leukemoid picture, resembling true leukemia; pseudoleukemia – showing enlargement of the lymph glands and in characteristics which resemble the conditions present in leukemia
11. defective perception of ordinary things in yellow colour
12. decreased urine output
13. thinning of the hair
14. seeing things enlarged
15. instrumental examination of the rectum (including sigmoid area)
16. morbid sensitivity to red colour

III. Translate and explain the formation of the following clinical terms:

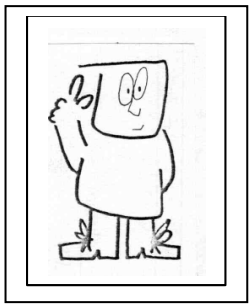
A)

fractūra longitudinālis cruris
immobilĭtas articulatiōnum membrōrum
incarceratio cerebri
lumbāgo acūta
luxatio habituālis traumatĭca
luxatio incomplēta seu subluxatio
luxatio inveterāta
protrusio discōrum intervertebralium
repositio articulatiōnum brachii
sensibilĭtas dolorōsa
trauma cerebri
trepanatio cerebri
ulceratio vulnĕris purulenti
vulnus punctum

B) congenital hernia
removal of the foreign body
open fracture of the rib
intracranial trauma
gunshot injury of the trunk
closed fracture of the shin
treatment of the purulent wound
basophilic malignant leukopenia
intermittent claudication
transverse fracture of the foot

false wart
posttraumatic cyst
strained ligament of the knee
acute, chronic, epidemic, contagious (communicable) diseases
progressive dystrophy of muscles

Do you know that...



...in the ancient world the human health was extremely valued. The most common verbal greetings and good-bye expressions prove this: ***Salve! Vale! Vive valeque!*** *(Hello! Be healthy! Live and be healthy!) Health was being maintained by all possible means. By all possible means people made attempts to preserve health to old age.*

Ancient Greeks and Romans worshiped gods of health, patrons of medicine and physicians. Due to the legend, Apollo, the god of sun, light and patron of arts, bestowed the skill of healing upon people. Apollo was also seen as the god who could bring ill-health and deadly plaque as well as one who had the ability to cure. Medicine was regarded as art not as a craft, and only gifted persons could pursue it. Later medicine was considered as a sister of Philosophy, the mother of all sciences: ***Medicina sofor philosophiae est*** *(Tertulian, I-II B.C.)*

Aphorisms and quotations:

Sic itur ad astra. *– Thus do we reach the stars.*
Pro patria et libertāte. *– For Country and Liberty.*
Non progrĕdi est regrĕdi. *– There is no standing still.*
Scio me nohil scire. *– I know that I know nothing.*
Praemonĭtus, praemunītus. *– Forewarned is forearmed.*
Facĭle dictu, difficĭle factu. *– Easier said than done.*

Non omnia possumus omnes
We can't all do everything

UNIT XXVI

THEME: The Greek and Latin doublets of nouns (III declension, masculine and feminine genders)

OBJECTIVES: - *to learn the way of forming the clinical terms*
- *to learn Greek and Latin doublets of nouns of the III declension*

§ **133 The Greek and Latin doublets of nouns (masculine gender, III declension)**

Latin noun	**Greek noun**	**Greek word-forming element**	**Meaning**
apex, ĭcis m	ácron-	acr-	apex, end
adeps, ĭpis m	lípos; stear, steatos	lip-	fat
calor, ōris m	thérme	therm-	heat, warmth
carbo, ōnis m	ánthrax, ánthracos	anthrac-	coal
color, ōris m	chróma, chrómatos	chrom-, chromat-	colour
dens, ntis m	odús, odóntos	odont-	tooth
dolor, ōris m	odýne, álgos	odyn-, alg-	pain, ache
ignis, is m	pyr, pyrós	pyr-	fire
homo, ĭnis m	ánthropos	anthrop-	human being
mensis, is m	men, menós	men-	month
pavor, ōris m	phōbos	phob-	fear, phobia
pes, pedis m	pus, podós	pod-	food
piscis, is m	ichthýs	ichthy-	fish
pulmo, ōnis m	pnéumon	pneum-	lung
sanguis, ĭnis m	haéma, haématos	haem-, haemat-	blood
sudor, ōris m	hidrós	hidr-	sweat
tendo, ĭnis m	ténon	ten-	tendon, sinew
unguis, is m	ónyx, ónychos	onych-	nail
venter, tris m	gastér, gastrós	gastr-	stomach
sopor, ōris	cóma	com-	deep unconsciousness

§ 134 The Greek and Latin noun doublets (feminine gender, III declension)

Latin noun	Greek noun	Greek word-forming element	Meaning
articulatio, ōnis f	árthron	**arthr-**	joint, articulation
auris, is f	us, otós	**ot-**	ear
caro, rnis f	sarx, sacrós	**sarc-**	meat
cutis, is f	dérma, dérmatos	**derm-, dermat-**	skin
cartilago, ĭnis f	chóndros	**chondr-**	cartilage
feces, ium f pl.	cópros	**copr-**	faeces
mater, tris f	méninx, méningos	**mening-**	meninx
mors, rtis f	thánatos	**thanat-**	death
pelvis renālis	pýelos	**pyel-**	renal pelvis
sectio, ōnis f	tomé	**tom-**	cut, cutting, incision

§ 135 Memorize the III declension nouns

adiposĭtas, ātis f	obesity
rubor, ōris m	reddening
functio, ōnis f	function
herpes, ētis m	herpes
livor, ōris m	bruise
pavor, ōris m	fear, phobia
stupor, ōris m	stupor
tremor, ōris m	tremor
gravidĭtas, ātis f	pregnancy
amputatio, ōnis f	amputation
extractio, ōnis f	extraction
inflammatio, ōnis f	inflammation
curatio, ōnis f	treatment
sanatio, ōnis f	sanation
exacerbatio, ōnis f	exacerbation
complicatio, ōnis f	complication
resectio, ōnis f	resection
transfusio, ōnis f	transfusion

Exercises:

I. Translate and explain the formation of clinical terms:

acrophobia _____
laparotomia _____
haemotransfusio _____
coprolithus _____
ichthyismus (botulismus) _____
tenorrhaphia _____
anthropometria _____
oxygenotherapia _____
paronychia _____
otorhinolaryngologia _____
synchondrosis _____
thanatophobia _____
sarcocele _____
sclerodermia _____
achromatopsia _____
hyperthermia _____
anthropophobia _____
necrotomia _____
thermoplegia _____
hypothermia _____
otorrhoea _____
menometrorrhagia _____
lipuria _____
pharmacotherapia _____
meningotomia _____
odontalgia _____
balneotherapia _____
lipaemia _____
acrodynia _____
hyposialia _____

II. Build medical terms:

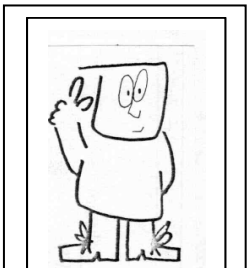
inflammation of the kidney _____
removal of the nail plate _____
vein incision _____
blood in the urine _____

infectious disease transmitted by birds _____
treatment by sunlight _____
malnutrition of cartilages _____
inflammation of the middle ear _____
inflammation of the xiphoid process _____
morbid fear of birds _____
suturing of the tendon _____
benign tumour of dental tissues _____

III. Translate the diagnoses:

a) bronchoectasia congenita _____
cancer pulmonis _____
complicatio pneumoniae bilateralis _____
curatio asthmatis bronchialis _____
curatio pneumoniae chronicae _____
expectoratio sputi implena _____
induratio fusca pulmonum _____
insufficientia cardiopulmonalis _____
intoxicatio phthisica acuta _____
intubatio tracheae _____
murmur respiratorium _____
pneumonia serosa fibrinosa _____
punctio pulmonum _____
tuberculosis pulmonum cavernosa

b) bronchial spasm _____
productive expectoration _____
diffuse abscess of the lungs _____
obstructive bronchitis _____
obturation of the lung _____
apical(apex) pneumonia _____
exacerbation of acute lobular pneumonia _____
catarrh of the upper respiratory tract _____
tuberculosis haemoptysis _____
peritonsillar abscess treatment _____
traumatic or surgical erysipelas _____
purulent sputum _____
bullae of the lungs _____
pulmonary necrosis _____
crepitation in the lungs _____



Do you know that...

... no other plant exists within the Plant Kingdom as mysterious as ***Hypericum Perforatum*** *which is a multi-way healing source. The medicinal property of St. John's wort for many different health problems raised it to a legendary*

level and made it the subject matter of myths and folk beliefs. In ancient Rome they called St. John's wort the "demon scare". It was a talisman hanged in houses for driving away and being protected from the evil spirits. Besides that, Hypericum Perforatum was believed to protect the house from thunderbolt and death. In order to show the extent of their respect, people named the plant after their major Saint John who had been sentenced to death by beheading.

Aphorisms and quotations:

***Nocet empta dolōre voluptas**. – Believe me, for I experienced. (Virgil)*
***Dixi et animam levavi.** – He gave a piece of his mind and unburdened his heart.*
***Homĭnes non sunt simĭles**. – It takes all sorts to make a world.*
***Necessĭtas atrium mater**. – Necessity is the mother of invention.*
***Ne malōrum meminĕris!** – Bear no ill will!*
***Felix, qui sua sorte contentus est**. – He is happy who thanks himself so.*

Similia similibus curantur
Like cures like

UNIT XXVII

THEME: The Greek and Latin doublets of nouns (III declension, neutral gender)
The word-building elements of the III declension

OBJECTIVES: *- to learn the way of translating the clinical terms*
- to learn Greek and Latin doublets of nouns (III declension, neuter gender)

§ 136 The Greek and Latin doublets (neuter gender, III declension)

Latin noun	Greek noun	Greek word-forming element	Meaning
abdomen, ĭnis n	lapára	**lapar-**	abdomen
cadaver, ĕris n	necrós	**necr-**	corpse, cadaver
caput, ĭtis n	cephalé	**cephal-**	head
cor, cordis n	cardía	**cardi-** **cardio-**	heart
corpus, ŏris n	sóma, somatos	**somat-**	body
fel, fellis n	chóle	**chol-**	gall, bile
lac, lactis n	gála, gálactos	**galact-**	milk
lien, liēnis m	splen	**splen-**	spleen
os, oris n	stóma, stomatos	**stomat-**	mouth, oral cavity
os, ossis n	osteon	**oste-**	bone
pus, puris n	pýon	**py-**	pus
ren, renis m	nephrós	**nephr-**	kidney
semen, ĭnis n	spérma, spérmatos	**spermat-**	semen
sol, solis m	hélios	**heli-**	sperm
tempus, ŏris n	chrónos	**chron-**	sun, denoting relationship to time
viscus, ĕris n	splánchnon	**splanchn-**	time
pectus, ŏris n	stéthos	**steth-**	internal organ

§ 137 The word-forming elements of the II declension with the ending -sis

Combining forms (suffix)	Meaning
-emĕsis	vomiting
-genĕsis	origin, formation
-gnōsis	knowledge
-lўsis	separation, loosening, dissolving, destruction
-mycōsis	fungus disease
-necrōsis	death of tissue
-poësis	formation, production
-ptosis	dropping, downward displacement
-praxis	execution
-rrhexis	rupture
-schĭsis	fissure, splitting
-sclerōsis	hardening
-stāsis	suppression, stoppage
-stenōsis	narrowing, constriction
-lithiăsis	calculus formation

§ 138 The lexical minimum of the III declension nouns

glaucōma, ătis n	glaucoma
coma, ătis n	coma
oedēma, ătis n	(o)edema
symptōma, ătis n	symptom
ulcus, ĕris n	ulcer
vulnus, ĕris n	wound

Exercises:

I. Translate and explain the formation of clinical terms:

macrocephalia _____ pyodermia _____
brachycardia _____ sphlanchnologia _____
heliotherapia _____ galactorrhoea _____
laparotomia _____ splenorrhexis _____
spermogenesis _____

somatometria _____ nephropexia _____
anastomosis _____ necrospermia _____
hypostasis _____ erythropoësis _____
hydrolysis _____ pneumonectomia _____
cholaemia _____ phlebosclerosis _____
haematemesis _____ acholia _____
chronognosia _____
galactocele _____ Oesophagogastroduodenoscopia ____

II. Build medical terms:

1. cutting off the necrotic tissue

_____

2. induration of the vascular wall

_____

3. the map of recording the changes of electric potential of the heart

_____

4. blood arrest, arrest of bleeding

_____

5. process of urine formation

_____

6. presence of pus in the urine

_____

7. fungus disease of the skin, fungus infection, mycosis

_____

8. pathologic narrowing of the aorta

_____

9. having a short head

_____

10. necrosis of cells or tissues

_____

11. craniocerebral hernia

_____

12. hepatic calculus (stone in the liver)

_____

13. splenic pain (pain in the spleen)

_____

14. milk production (lactation) in the mammary gland

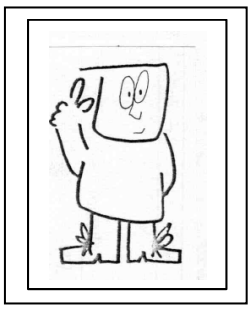
_____

III. Translate:

A) aplasia valvae mitralis aortae
asystolia atriorum
atherosclerosis arteriarum coronariarum et aortae
cor horizontale
cor pendulum
curatio morbi ischaemici cordis
dilatatio marginum cordis

dystonia vasculosa
dystonia vegetovasculosa
extrasystolae ventriculares polytopicae
facies mitralis
hypertrophia myocardii
insufficientia cardiovascularis
mors clinicalis
phthisis pulmonum chronica
ruptura septi interventricularis
vitium cordis congenitum

B) arterial hypertension
bacterial rheumatic carditis
intracardiac (endocardiac) transfusion
intracranial hypertension
coronary hypertension
acute vascular insufficiency or collapse
embolism of pulmonary artery
acquired deficiency of aortic valve
supraventricular tachycardia
heart auscultation
cardiac asthma
chronic arrhythmia



Do you know that...

… *the word ''term'' is derived from the Latin* ***terminus*** *– border, limit. Terminus was a name of the Roman God of boundaries. The cult of this deity was initiated by Numa Pompilium. It was he who built the temple in Rome in honour of this God. The festivities dedicated to Terminus were celebrated on the 28th of February merely and peacefully.*

Aphorisms and quotations:

Luna latrantem canem non timet. *– The Moon does not heed the barking of dogs.*
Nemo amat, quem timet. *– No man loves the one whom he is afraid of.*
Cum grano salis. *– With a grain of salt.*
Nummum verso*. – The reverse side of the medal.*
Verum in caeco est. *– Truth lies at the bottom of a well.*
Ex igne in flammam*. – Out of the frying pan into the fire.*

Omnium artium medicīna nobilissĭma est
Medicine is of all arts the most noble

UNIT XXVIII

THEME: The Greek and Latin doublets of the III declension adjectives. The Participle Present Active used in medical terminology Word-building by means of suffixes

OBJECTIVES: *- to learn the way of forming the clinical terms*
- to learn Greek and Latin doublets of the III declension adjectives
- to acquire skills in forming terms by means of suffixes

§ 139 The Greek and Latin doublets of the III declension adjectives

Latin adjective	**Greek adjective**	**Greek word-forming element**	**Meaning**
aequālis, e	hómoeos homós	**homoeo-** **homo-**	same, unchanging
brevis, e	brachýs	**brachy-**	short
celer, ĕris, ĕre	tachýs	**tachy-**	rapid
dulcis, e	glykýs	**glyc-** **glyk-,gluc-**	sweet
impar, is	ánisos	**aniso-**	unequal, dissimilar
mollis, e	malakós	**malac-**	soft
omnis, e	pas, pantós	**pan-,** **pant-**	all, any
par, paris	ísos	**iso-**	equal, similar
puter, tris, tre	saprós	**sapr-**	rotten, putrid
senex, senis	géron, gérontos	**ger-,** **geront-**	old, senile
virĭdis, e	chlorós	**chlor-**	green

§ 140 The lexical minimum of the III declension adjectives

fibrillāris, e	threadlike, filiform
gravis, e	heavy, weighty
infans, ntis	child's, children's, infantile
homogĕnes, is	uniform, homogenous
letālis, e	lethal, fatal
mortālis, e	mortal
stabĭlis, e	stable, stationary
mollis, e	soft
inaequālis, e	unequal
filiformis, e	filiform, threadlike
celer, ĕris, ĕre	quick, fast
frequens, ntis	frequent

§ 141 The lexical minimum of the Participle Present Active

alternans, ntis	increasing
agĭtans, ntis	trembling
diffĕrens, ntis	different
intermittens, ntis	intermittent
deformans, ntis	deforming
domĭnans, ntis	dominant
incipiens, ntis	initial
migrans, ntis	migratory
penetrans, ntis	penetrating
perforans, ntis	perforative
persistens, ntis	persistent
progrediens, ntis	progressing
recipiens, ntis	recipient
recurrens, ntis	recurrent
serpens, ntis	creeping, serpentine
tremens, ntis	trembling

Word-building by means of suffixes

In word-building of clinical terms, suffixes are classified due to their functions into:

- suffixes, forming terms with new meanings. They are mainly added to the stems of Greek nouns; however, sometimes they may be added to the Latin nouns as well, e.g., ***tonsillītis*** – inflammation of tonsils, ***fibrōma*** – benign tumour of the connective tissue;
- suffixes, forming clinical terms with a new connotation in meaning.

Suffix (including ending)	Meaning	Example
-ītis, itĭdis f	inflammation	***dermatītis*** – inflammation of the skin ***angiītis*** – inflammation of vessels
-ōsis, is f	uninflammatory chronic diseases, abnormal condition	***dermatōsis*** – skin disease ***leucocytōsis*** – excess of leucocytes in the blood
-iăsis, is f	uninflammatory diseases, signs of diseases	***nephrolithiăsis*** – presence of renal calculi ***distichiăsis*** – presence of a double row of eyelashes on an eyelid
-ēma, ătis n	rashes, oedemas, abscesses	***empyēma, ătis n*** – accumulation of pus in the cavity
-ōma, ătis n	tumour	***dermatōma, ătis n*** – skin tumour, ***myoma, ătis n*** – muscle tumour
-ismus, i m	disturbance	***alcoholismus, i m*** – chronic alcoholism ***iodismus, i m*** – poisoning with iodine

Exercises:

I. Translate and explain the formation of clinical terms:

homeopathia _____ panophthalmitis _____
brachydactylia _____ geriatria _____
gerontologia _____ chloroma _____
isotonicus, a, um _____ panotitis _____
anisoreflexia _____ glucosuria _____
tachycardia _____ gerodermia _____
anisoangiotonia _____ sapraemia _____

isothermia _____ gerohygiena _____
hypoglycaemia _____ chlorosis _____

II. Build medical terms:
pathologic ageing of the skin _____
an organism, consuming products of putrefaction_____
progressive allergic dermatitis_____
inflammation of all cardiac layers_____
shaking (trembling) palsy_____
wandering kidney_____
intermittent fever_____

III. Translate:
stethomyositis _____ heliosis _____
adenoma _____ pyosplenitis _____
hepatitis _____ hepatoma _____
odontoma _____ dermatosis _____
polyarthritis _____ trichiasis _____
neurocytoma _____ psychosis _____

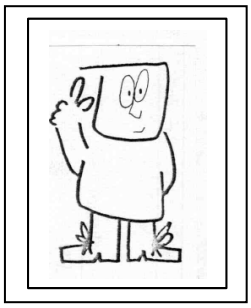
IV. Translate clinical terms and explain their meanings:

a tumour caused by a parasitic worm
inflammation of the vagina
forming calculi in the salivary glands
inflammatory reaction of the tissues surrounding a tooth
cartilage tumour
inflammation of the cartilage
helminthic disease
gallbladder disease

V. Translate diagnoses:
A) osteoma durum
ostitis tuberculosa; deformans ; posttraumatica
psychosis maniaco-depressiva
psoriasis inveterata, verrucosa
punctio canalis vertebralis
cheilitis granulomatosa
febris intermittens, malarica
herpes recidivans; simplex
paresis cerebralis
hysterectomia vaginalis
mononucleosis infectiosa

B) migratory kidney
extraction of a permanent tooth
acute catarrh
pulmonary hypertension
rupture of a maxillary nerve
odontogenic flegmon
renal hypertension
general anaesthesia
paralysis of a facial nerve
bronchial asthma
fracture of a protruding vertebra
threatening glaucoma
trembling paralysis
deformative arthritis
reverse typhus

Do you know that...



... Pyrro, the Greek philosopher, started a new school of thought some three or four centuries before Christ. He and his followers are regarded as the first skeptics. The epithet ''skeptic'' was innocent enough at the beginning. It was taken from Greek word "skeptomal" which merely meant "to look at something carefully; examine or consider something". With the passing of time the word ''skeptic'' was applied to anyone who questioned things too much.

Aphorisms and quotations:

Vim vi repellĕre licet. *– Fight power with power.*
Qui tacent, consentit*. – Silence gives consent.*
Urbi et orbi. *– To the city and to the world.*
Nullum malum sine aliquo bono*. – Every cloud has a silver lining.*
Ignorantia legis nemĭnem excūsat. *– Ignorance of the law is no excuse.*

Vox clamantis in deserto
A voice in the wilderness

UNIT XXIX

THEME: The Greek and Latin doublets of the IV-V declension nouns

OBJECTIVES: - *to learn Greek and Latin doublets of the IV-V declensions nouns;*
- *to acquire skills in forming the clinical terms*

§ 142 The Greek and Latin doublets of the IV declension

Latin noun	**Greek noun**	**Greek word-forming element**	**Meaning**
appetītus, us, m	órexis	**orex-**	appetite
audītus, us, m	ácusis	**acu-, acus-**	hearing
foetus, us, m	émbryon	**embry-**	embryo, fetus
gustus, us m	géusis	**geus-**	taste
manus, us, f	cheir	**chir-**	arm, hand
motus, us m	kínesis	**kines-**	movement
olfactus, us m	osmé	**osm-**	olfaction
partus, us m	tócos	**toco-**	labour, delivery
pulsus, us m	sphygmós	**sphygm-**	pulse
sensus, us m	aésthesis	**aesthes-**	sensation, sense
textus, us m	histós	**hist-**	tissue
visus, us m	ópsis	**ops-**	vision, sight
vomītus, us m	émetos	**emet-**	vomiting
cornu, us n	kéras, kératos	**kerat-**	cornea, corneous membrane
gelu, us n	crýos	**cry-**	cold, ice, frost
genu, us n	goný	**gon-**	knee

§ 143 The Greek and Latin doublets of the V declension nouns

Latin noun	Greek noun	Greek word-forming element	Meaning
facies, ēi, f	prósopon	**prosop-**	face
rabies, ēi, f	lýssa	**lyss-**	rabies
species, ēi, f	eídos	**id-**	species

§ 144 The lexical minimum of the IV declension nouns

abortus, us m	abortion
abscessus, us, m	abscess
collapsus, us m	collapse
complexus, us m	complex
cursus, us m	course
habĭtus, us m	appearance
decubĭtus, us m	bedsore, decubitus
exĭtus, us m	end
gradus, us m	grade
infarctus, us m	infarction
insultus, us m	stroke
prolapsus, us m	prolapse
reflexus, us m	reflex
refluxus, us m	reflux (flow in reverse direction)
singultus, us m	hiccough, hiccup, singultus
situs, us m	position
status, us m	condition

§ 145 The lexical minimum of the V declension nouns

caries, ei f	caries
dies, ei f	day
pernicies, ei f	perdition
rabies, ei f	rabies
scabies, ei f	scabies
sanies, ei f	blood with pus, sanies
facies Hippocratĭca	hippocratic face

Exercises:

I. Translate and explain the formation of clinical terms:

embryologia _____ embryogenesis _____
cryotherapia _____ sphygmogramma _____
chirurgia _____
dysacusia _____ hyperkinesis _____
glycogeusia _____ xanthopsia _____
tocographia _____ toxaemia _____
hemeralopia (nyctopia)_____ lyssophobia _____
xiphoideus, a, um _____ haematemesis _____
ageusia _____ parorexia _____
hyperemesis (vomitus fontaneus)____

II. Build medical terms:

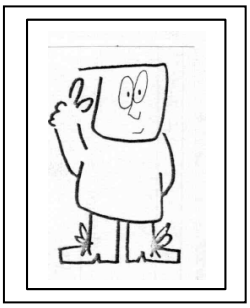
rabies phobia _____
cornea dissection (incision) _____
the process of forming tissues _____
specialist in ana(e)sthetization _____
hearing deficiency _____
records of pulse rate _____
sensation disturbance _____
labour phobia _____
lack of olfaction _____
inflammation of knee joint_____
pain in face area _____

III. Translate:

vomitus biliosus
vomitus gravidarum
decubitus necrotici
difficultas actus defecationis
status post commotionem cerebri
facies Basedovica
facies nephritica
facies phthisica
habitus asthenicus
vulnus sclopetari um manus dextrae

ductus arteriosus Botalli persistens
mycosis hyperkeratotica pedum et manuum
turgor textuum implenus
pastositas textuum faciei
casus vialis
refluxus gastrooesophageus
prolapsus recti
infarctus myocardii recens
erysipelas cruris sinistri cum defectu cutis
vulnera e morsu canis
caries dentium

Do you know that...



...the word "pupil" came from the Latin term "pupilla"(meaning "a little doll"). When we look another person in the eye, we often see a minute image of ourselves there; and this miniature picture also reminded the Romans of a "pupilla" or "little doll". And so "pupilla" contributed the word "pupil" to us with the meaning "the pupil of your eye".

Aphorisms and quotations:

Amīcus Plato, sed magis amīca verĭtas*. – Plato is dear to me, but truth is dearer still. (Aristotle)*
Suum cuique tribue! *– Repay to everyone for his deeds.*
Manus manum lavat. *– One hand washes the other.*
Ex privāta industria. *– On one's own initiative.*
Ratio melior auro est. *– Use sense, not cents.*
Quanti quisque se ipse facit, tanti fit ab amīcis*. – Respect yorself, or no one will respect you.*

Primus inter pares
First among equals

UNIT XXX

THEME: **The Latin and Greek prefixes.**
The numerals and adverbs used as prefixes

OBJECTIVES: *- to learn Latin and Greek prefixes and acquire skills in forming clinical terms*
- to learn numerals and adverbs serving as prefixes

§ 146 Word-building by means of Latin and Greek prefixes

Learning and understanding of the medical terminology requires the profound knowledge of etymology and meaning of the most commonly used Greek and Latin word-forming elements (combining forms, prefixes, suffixes). They make terms concrete and accurate, define their content.

Medical terms may be formed:

- by adding prefixes and suffixes;
- by combining two or more stems (roots).

Prefixes are placed in front of a word in order to add the shade of meaning or to change it insignificantly. Prefixes have developed from prepositions and adverbs. They develop the specific meaning of the appropriate preposition. Besides the primary meaning, prefixes possess literal, direct and figurative meanings, e.g., Greek prefix ***para-*** indicates a capsule or cellular tissue that surrounds an organ, e.g., ***paratonsilītis*** means *inflammation of a tonsil*, but it may have a figurative meaning as well "disturbance, fluctuation from the norm", e.g., ***parageusia*** implies *distortion of the sense of taste*.

Components formed from numerals are also regarded as prefixes. Latin prefixes, unlike the Greek ones, predominate in anatomical terminology. In clinical terminology prefixes of Greek origin are found more frequently.

The last consonant assimilates to the initial root consonant. Some Latin prefixes have exactly the same meaning as the Greek ones.

§ 147 Word-building by means of Latin prefixes

Latin prefix	**Meaning**	**Example**
a-, ab-, abs-	not, without, lack of, absence, away from	**abducens** – abducent **abstinentia** – abstinence
ad-	movement to or toward, near	**adĭtus** – entrance
ante-	before, in front of, prior to	**antebrachium** – forearm
circum-	around	**circumflexus** – circumflexus

com-, col-, cor-,	with, together, joined	**composĭtus** – complex **collapsus** – collapse
con-, co-	with, together	**contorsio** – sprain
contra-	against	**contraindicatio** – contraindication
de-	down, without, removal, loss	**descendens** – descending
dis-, di-	absence, removal, separation	**disseminatio** – dissemination
e-, ex-	away from, outside	**exarthrōsis** – dislocation of a joint
extra-	outside	**extracardiālis** – extracardial
in-	not; movement in (into)	**incrementum** – increment
infra-	below	**infrasternālis** – infrasternal
inter-	between	**intercostālis** – intravertebral, intercostal
intra-	in, within	**intravenōsus** – intravenous
ob-	movement toward, movement around	**oblongātus** – oblongate
per-	through	**perforatio** – perforation
post-	after, behind	**postoperatīvus** – postoperative
prae(pre)-	before, in front of	**praecordium** – precordial
pro-	before, in front of	**prostratio** – exhaustion, weakness, prostration
re-	again, back, movement back	**recurrens** – reverse, recurrence **regeneratio** – regeneration
se-	separation	**separatio** – separation
sub, sus-	below, under, lower degree	**subcutaneus** – subcutaneous **subacūtus** – subacute (neither acute nor chronic)
super-, supra-	above, excess	**superficies** – external surface; superficial **superacidĭtas** – excessive acidity; superacidity
trans-	through, across, beyond	**transversus** – cross, transversal **transfusio** – transfusion

§ 148 Word-building by means of Greek prefixes

Greek prefix	**Meaning**	**Example**
a-, an-	negation, denial	**achylia** – deficiency or absence of pepsin and hydrochloric acid from the gastric juice

amphi-	movement around	**amphiarthrōsis** – amphiarthrosis; immovable joint
ana-	movement up	**anabolismus** – anabolism; assimilation, transformation of foodstuffs into live substance
anti-	opposition	**antidiurēsis** – antidiuresis; decrease in the urine output
apo-	isolation, separation	**apophўsis** – apophysis; any condition marked by aphthae
dia-	through, movement and expansion in space and time	**diathĕsis** – diathesis; disposition of the body to some disease
dys-	abnormal, painful, difficult	**dysosmia** – dysosmia; disturbance of olfaction
ecto(ec)-	excision, surgical removal	**exctoderma** – ectoderm; the outer germ layer of an animal embryo
exo(ex)-	outside	**exostōsis** – exostosis; an abnormal bony outgrowth from the surface of a bone
en-, endo-	in, within	**endocrinologia** – endocrinology: science about glands of internal secretion **enurēsis** – enuresis; involuntary discharging of urine
epi-	upon, over	**epidurālis** – epidural; situated above dura mater of the brain
hemi-	hemi, one side	**hemialgia** – hemialgia; pain affecting one side of the body only
hyper-	over, excess, increased, abnormally high	**hypersalivatio** – hypersalivation, ptyalism; excessive flow of saliva
hypo-	under, below, decreased, abnormally low	**hypogalactia** – decreased excretory function of mammary glands
meta-	change, transition	**metamorphōsis** – metamorphosis; transformation, change of shape or structure
para-	near, beside	**paranephritis** – paranephritis; inflammation of the connective tissue around and near the kidney
peri-	around	**periostītis** – periostitis; inflammation of the periosteum
pro-	before, in front of	**prognōsis** – prognosis; a prediction of the course or outcome of a disease or disorder
syn-	together	**synchondrōsis** – synchondrosis; connection of bones with cartilage tissue

§ 149 The adverbs serving as prefixes

Latin adverb	Greek adverb	Meaning	Example
bene	eu	well	**euthanasia** – euthanasia; an easy or painless death; mercy killing
saepe	pollakis	often	**pollaki(s)uria** – pollakisuria; frequent urination
multum	poly	many	**polyphagia** – polyphagia; an abnormal desire to consume excessive amounts of foof, esp. as the result of a neurological disorder

§ 150 Word-building by means of Latin and Greek numerals

Latin numeral	Greek numeral	Meaning	Word-building element	Example
unus, a, um	heis, mia, hen	one	**un-**	**muscŭlus unipennātus** – unipennate muscle
duo, ae, o	dyo	two	**du-**	**utĕrus septus duplex** – septate uterus
tres, tria	treis, tria	three	**tri-**	**os triquetrum** – triangular bone
quattuor	tettares, tettara	four	**quadr-**	**muscŭlus quadriceps femŏris** – quadriceps muscle of thigh
quinque	pente	five	**quint-,** **pent-**	**quintipăra, ae, f** – a woman who has given birth to a viable infant in each of five pregnancies **pentastōma, ătis n** – Pentastoma
sex	hex	six	**sex-**	**sextipăra, ae f** – gravida VI – a woman who has given birth to a viable infant in each of six pregnancies
septem	hepta	seven	**hex-,** **sept-, hept-**	**Hexamethylentetramīnum** – hexamethylentetramine **septigravĭda, ae f** – pregnant for the seventh time **Heptānum** – heptaene
octo	octo	eight	**oct-**	**Octoestrōlum, i n** – octoestrol
decem	deca	ten	**dec-**	**Decamevītum, i n** – Decamevit
undecim	héndeca	eleven	**unde-, hende-**	**Undevītum, i n** – Undevit **Hendevītum, i n** – Hendevit
mille		thousand	**milli-**	**milligrammma, ătis n** – milligram
duodeni, ae, a		twelve	**duoden-**	**flexura duoděni superior** – superior flexure of duodenum
semis	hémisy	half	**semi-,**	**plica semilunāris** – semilunar fold

		hemi-	**hemi-**	**hemiplegia** – hemiplegia; paralysis of one side of the body
primus, a, un	protos	the first	**prim-, prot(o)-**	**primigravĭda, ae f** – pregnant for the first time **protoplasma, ătis n** – protoplasm
tertius, a, um	tritos	the third	**tert-, trit-**	**malaria tertiāna tritaponia** – tertian malaria **tritaponia** – blue colour-blindness
bis	dis	twice	**bi-, di-**	**muscŭlus bipennātus** – bipennate muscle **muscŭlus digastrĭcus** – biventral, digastric (muscle)
quater	tetrakis	four times	**quarter-** **tetra-**	**syphilis quaternaria** – quaternary syphilis **tetragōnum lumbāle** – lumbar tetragon

Exercises:

I. Complete the terms using prefixes of Greek origin:

absence of tonus _____tonia
an increase of vascular tonus _____tonia
decrease of vascular tonus _____tonia
disturbance of normal intestinal flora _____bacteriosis
inflammation of inner lining of cardiac chambers _____carditis
stoppage of urination_____uria
inflammation of tissues surrounding palatine tonsil_____tonsillitis
increased function of thyroid gland_____thyreosis
inflammation of tissues surrounding bronchi_____bronchitis
pericardium, heart sac_____ cardium
what is induced by external factors_____genes
external germinal layer_____derma
transition of pathogens from one part of the organism into other_____stasis
connection by means of connecting tissue_____desmosis
biological simplification of evolutional organism structure_____genesis
absence of appetite _____geusia
disturbance of nourishing muscles myo_____trophia
concrescence of fingers _____dacrylia

II. Complete the terms using prefixes of Latin origin:

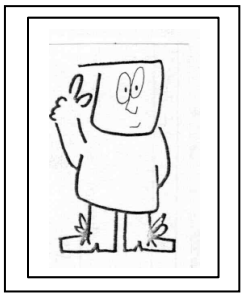
extracellular _____cellularis
situated inferior to the clavicle_____clavicularis
situated within the artery _____arterialis
resembling a crescent or half-moon_____lunaris
pre-labour_____natalis
subacute_____acutus
intracranial_____cranialis
breathing_____spiratio
inhaling, inspiration_____spiratio
invasion any tissues through basic fragments _____positio
additional cutting in the process of incising purulent cavity_____apertura
duality in psychic activity _____valentia
abductor (muscle) _____ducens
adductor (muscle) _____ducens
dispersion, dissemination _____seminatio
overflow, inundation_____ffusio
penetration_____foratio
deficiency, insufficiency_____suffitientia
supraclavicular _____clavicularis
situated below popliteal_____patellaris
single-nucleous, uninuclear, uninucleate_____nuclearis
that makes folds _____rugator
situated on the opposite side_____lateralis
depressor (muscle) _____ pressor
regeneration_____generatio
extract_____tractum
injection_____jectio
incurable_____sanabilis
periaortic_____aortalis

III. Complete medical words using numeral word-forming elements:

_____(i)ceps	four-headed
_____arthritis	inflammation of one joint
_____gastricus	digastric
_____venter	biventral
_____pennatus	unipennate
_____denum	duodenal
_____plegia	paralysis of three extremities
_____dactylia	the presence of six fingers
_____plegia	paralysis of one side of the body
_____lateralis	two-sided, bilateral
_____prosopus	two-faced
_____ocularis	who uses both eyes
_____iodthyroninum	triiodothyronine (thyroid hormone containing three

iodine atoms)

Do you know that…



…in ancient Greece all educational establishments, where future physicians were trained, were the integral parts of temples-asclepions, original public hospitals. Graduates were called asclepiads, spiritual heirs of Asclepius, the idolized physician. At that time, there were about 200 similar temples, but the most notable among them was the Pergam Asclepion. Its foundation is believed to date from the IV century B.C. The Pergam asclepion was generally recognized due to its health-centre, the sacrificial altar to Asclepius, the amphitheatre used for performances, a mineral healing spring, and the library with a rich collection of books. Besides, the future physicians had the opportunity to study in private family schools. Traditionally, the art of medical treatment was handed down from generation to generation. So, Hippocrates, an outstanding Greek physician (459-377 B.C.), was a 17th-generation physician. His father and mother were descendants of Asclepius and Hercules respectively.

***Aphorisms and quotations**:*

Unus pro omnĭbus et omnes pro uno. *– One for all, and all for one.*
Tertium non datur. *– A third is not given.*
Tertius gaudet. *– When two fight, the third enjoys.*
Duos qui lepŏres sequĭtur, neutrum capit. *– If you run after two hares, you will catch none.*
Septem miracŭla. *– The seven wonders of the world.*

Contra spem spero
To hope against hope

UNIT XXXI

THEME: The translation of diagnoses

OBJECTIVE: - *to acquire skills in translating diagnoses*

§ 151 The translation of diagnoses names

Diagnosis is the identification of diseases by the examination of symptoms, signs, and case history (anamnesis) and by other investigations. The term *"diagnosis"* is of Greek origin (Greek *diagnōsis*, meaning distinguishing). It denotes the medical conclusion as to the health condition of a sick person, his/her present illness (trauma) or the cause of death.

Diagnostic nomenclature is an open subsystem of the clinical terminology with numerous functional peculiarities which are stipulated, first of all, by two types of term-formation. In diagnosis name formation, the components commonly used in clinical terminology combine with agreed and non-agreed attributes, which is typical for anatomical terminology. The overwhelming majority of diagnoses names are formed by combining clinical and anatomical terms. The peculiarities of their orthography and orthoepy are based on the rules of the Latin language and borrowings from the ancient Greek.

While translating the diagnostic nomenclature into English a particular attention must be paid to the phonetic variety of some clinical terms (*cephalia – brachycephaly* and *brachycephalism*) and the orthographic variation (*neuro- – neuropathy* and *neurocytoma*). Nevertheless it is inadmissible to misinterpret the terms.

The structure of clinical terms composed of several words

<table>
<tr><th>Type of an attribute</th><th colspan="2">Term structure</th><th>Example</th></tr>
<tr><td>agreed</td><td colspan="2">Noun (Nom.sing./pl.) +
Adjective/ Participle (Nom.sing./pl.)</td><td>fractura complicata</td></tr>
<tr><td>non-agreed</td><td colspan="2">Noun (Nom.sing./pl.) +
Noun (Gen.sing./pl.)</td><td>emphysema pulmonum</td></tr>
<tr><td rowspan="2">mixed</td><td rowspan="2">Noun (Nom.sing./pl.)
+
<u>Noun</u>
<u>(Gen.sing./pl.)</u></td><td>Adjective/Participle (Nom.sing./pl.)</td><td>inflammatio bronchorum acuta</td></tr>
<tr><td>Adjective/Participle (Gen.sing./pl.)</td><td>inflammatio bronchi dextri</td></tr>
</table>

Exercises:

I. Translate dental diagnoses into Latin:
acute chronic granulating periodontitis
acute ulcerative gingivitis
acute superficial caries
localized periodontitis
chronic granulous periodontitis
chronic catarrhal gingivitis
chronic fibrous periodontitis
radicular cyst of the 1st tooth
chronic non-odontogenic mandibular periostitis
chronic odontogenic productive-destructive
mandibular osteomyelitis in remission
odontogenic phlegmon of the right sub-gnathic area
odontogenic abscess of pterygomaxillary area
bilateral ankylosis of temporomandibular joint
mandible microgenia
chronic interstitial exacerbated parotitis
right-sided traumatic mandibular fracture with fragmental disclocation
complete disclocation of the 1st , 2nd teeth
hypertrophic gingivitis

II. Render the therapeutic diagnoses into Latin:
a) **<u>Pulmonology</u>**
- acute bronchitis, pulmonary insufficiency, grade 0
- non-hospital pneumonia in the inferior part of the right lung,
  pulmonary insufficiency, grade I
- chronic exacerbated bronchitis, pulmonary insufficiency, grade II
- chronic obstructive lung disease, III stage, stable condition, pulmonary insufficiency,
  grade III, compensated chronic pulmonary heart
- bronchial asthma, endogenic form, severe persistent exacerbated condition (IV grade),
  insufficient compensation by inhalation corticosteroids (flutycazon 500 / per 24 hours),
  emphysema of lungs, pulmonary insufficiency, grade III

- bronchoectatic disease: cylindrical bronchoectasis in the inferior part of the left lung,
exacerbated phase, haemoptysis, pulmonary insufficiency, grade I
- acute catarrhal rhinitis

B) **Cardiology and Rheumatology**
- ischemic cardiac disease: stable effort-associated angina, III functional class,
- atherosclerosis of coronary cardiac vessels, insufficiency of blood circulation
- ischemic heart disease: sudden coronar death (13.04.07) with reanimation,
- atherosclerosis of coronary cardiac vessels, insufficiency of blood circulation, grade 0
- rheumatism: primary rheumatic carditis, polyarthritis following streptococcal tonsillitis
- systemic scleroderma: sclerodactyly, Reye's syndrome, basal pneumosclerosis,
active phase, activity Grade I

c) **Gastroenterology**
- chronic gastritis, type A with decreased exacerbated secretory gastric function
- ulcerative disease: active peptic ulcer of duodenum with painful syndrome, associated
with Helicobacter infection
- viral cirrhosis of the liver (viruses of hepatitis B+D), portal hypertension (ascytes, splenomegaly) hepatic cellular insufficiency, Grade II, active phase
- chronic pancreatitis with exacerbated external secretion insufficiency following intestinal
dysbiosis, irritative intestinal syndrome
- exacerbation of chronic enterocolitis
- malignant tumour of the liver
- chronic constipation, gastrooesophageal reflux

d) **Urology**
- chronic glomerulonephritis, primary chronic form
- arterial hypertension nephrotic syndrome, chronic renal insufficiency, grade I
- secondary chronic pyelonephritis
- acute renal ascites

e) **Miscellaneous**
- haemolytic coma
- congestive xanthochromia of cerebrospinal fluid
- geromarasmus
- physiologic jaundice of the newborn

III. Render the following diagnoses into Latin:
abscess of lymphatic nodes
intravenous blood transfusion
haematoma of the brain
acute retropharyngeal abscess

constitutional obesity
gum bleeding
multiple haemorrhagic sarcoma
non-specific ulcerative colitis
peritoneal hernia
pyeloretroperitoneal reflux
extraperitoneal laparotomy
chronic muscular atrophy
acetone vomiting
acetonemic vomiting in diabetes mellitus
inspiration of a foreign body
productive cough
congenital ileus
haemolytic disease of newborns
hypoxic acrocyanosis of the extremities
acute diarrhoea
fever
invagination of the ileum
convulsive cough
rachitic myopathy
scarlet fever (measles, chickenpox)
dry chronic cough
swelling (oedema) of the larynx and tonsils
subacute rachitis
progressive hydrocephaly
psychogenic nycturia
symptoms of cough: reddening of the oral cavity
chronic convulsive cough
chronic constipation
cyanosis of the distal parts of extremities

IV. Translate diagnoses into English:

a) **Stomatologia**

- pulpitis purulenta chronica
- caries media chronica
- parodontitis generalisata
- pulpitis chronica
- caries profunda acuta
- gingivitis hypertrophica
- caries secundaria chronica
- periostitis purulenta odontogenes acuta maxillae
- osteomyelitis haematogenes acuta maxillae cum complicatione mediastinite
- phlegmone odontogenes fundi cavitatis oris
- arthroso-arthritis deformans secundaria articulationis temporo-mandibularis dextrae
- parotitis parenchymatosa bacteriosa acuta, cum complicatione abscessu regione parotideomasseterica sinistro

- fractura traumatica bilateralis mandibulae, cum complicatione phlegmone fundi cavitatis oris
- cheiloschisis congenita bilateralis labii superioris, processus alveolaris, palati duri et mollis, protrusio ossis intermaxillaris

B) **Pulmonologia**
- pneumonia innosocomialis crouposa lobi medii pulmonis dextri, insufficientia respiratoria gradus II
- pneumonia nosocomialis polysegmentaria lobi inferioris et lobi medii pulmonis dextri, insufficientia respiratoria gradus II
- morbus obstructivus chronicus pulmonis, stadium II, phasis exacerbationis, insufficientia respiratoria gradus II
- asthma bronchiale, praerogativo forma allergica, decursus persistens gravitatis mediae, status stabilis compensatus corticosteroidis pro inhalationibus (Beclomethasonum 1000 mcg pro die), insufficiencia respiratoria gradus I
- morbus bronchoectaticus: bronchoectasia cylindrica in lobo pulmonis sinistri inferiore, phasis exacerbationis, haemoptoe, insufficientia respiratoria gradus I

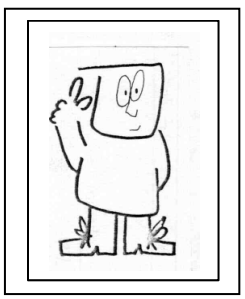
C) **Cardiologia**
- morbus ischemicus cordis: stenocardia tensionis stabilis, classis functionalis III, atherosclerosis vasorum coronarium cordis, insufficentia circulationis sanguinis gradus 0
- morbus ischemicus cordis: mors coronaria subita (13.04.07), cum reanimatione bona, atherosclerosis vasorum coronarium cordis, insufficentia circulationis sanguinis gradus 0

D) **Gastroenterologia**
- gastritis chronica classis A, cum hypofunctione secretoria gastris phasis exacerbationis
- morbus ulcerosus:ulcer pepticum duodeni, phasis activa, cum syndromo doloroso, cum infectione Helicobacteriosa
- cirrhosis hepatis aethiologiae viriosae (vira hepatitidis B+D), hypertensio portalis (ascites, splenomegalia), insufficientia hepatocytica stadium II, phasis activa
- pancreatitis chronica cum insufficientia extrasecretoria, phasis exacerbationis
- diabetes mellitus, classis II, phasis compensationis medicamentosae
- retinopathia oculorum cum visu cadenti
- rheumatismus: rheumocarditis primaria, polyarthritis post tonsillitidem aethiologiae streptococcosae, insufficientia circulationis sanguinis gradus 0-I
- polyarthritis rheumatoida, praecipue cum laesione articulationum subtilium (minorum) manuum et pedum, stadium rhoentgenologicum II, seropositivae (RF+), gradus I, insufficientia functionalis articulationum gradus II
- lupus erythematosus systemicus: erythema faciei lupi, pericarditis, pleuritis excudativa dextrolateralis, lupus-nephritis, phasis active, activitas gradus III
- pyelonephritis chronica phasis exacerbationis, (Escherichia coli secretoria 15.04.07), hypotensia arterialis, insufficientia renalis chronica gradus 0

V. Translate the terms into English:

adipositas communis
allergia medicamentosa
complicationes parotitidis
curatio febris intermittentis
cutis marmorata
defecatio irregularis
desquamatio cutis buccarum
diathesis exsudativa
exacerbatio stomatitidis haemorrhagicae
excoriatio umbilici
expulsio helminthorum
forma latens morbida
glaucoma juvenile
hypotonia rachitica
intertrigines plicarum inguinalium
invasio helminthica
microclysmata ad constipationes
morbi neonatorum
motiones inordinatae
pemphigus neonatorum epidemicus
pertussis acuta
phlegmone necrotica neonatorum
purpura thrombocytopenica
retardatio mentalis
retentio testis seu cryptorchismus
salivatio maxima
signa secundaria morbi
situs viscerum inversus
spasmophilia chronica
syndromum mortis subitae
trauma obstetricum capitis
tussis convulsiva

Do you know that…



…the word "laconic"(meaning "expressing much in a few words") comes from the land of stoicism and simplicity Sparta, with its alternative name Laconia. The best example is the retort of the Sparta magistrates to Philip of Macedon. Philip had sent a message: "If I enter Laconia, I shall level Lacedaemon to the ground". The magistrates replied simply, "If".

Aphorisms and quotations:

Est brevitāte opus, ut currat sententia. *– Brevity is the soul of wit.*
Aut cum scuto, aut in scuto. *– With the shield or on it.*
Contra factum non est argumentum*. – Facts are stubborn things.*
Non fuit in solo Roma peracta die. *– Rome was not built in a day.*
Imperāre sibi – maxĭmum imperium est*. – Learn to control yourself.*
Finis corōnat opus. *– The end crowns the work.*

APPENDIX

Patterns of examination questions for final and content-oriented graded tests

Anatomo-histologic terminology

1. Form word combinations after the model: Nom.sing., Gen. sing., Nom.pl., Gen. pl.:

		sing.	pl.
musculus, i m /	Nom.	_____	_____
articularis, e	Gen.	_____	_____
plexus, us m /	Nom.	_____	_____
cavernosus, a, um	Gen.	_____	_____
cor, cordis n /	Nom.	_____	_____
humanus, a , um	Gen.	_____	_____

2. Translate and make the grammar analysis:

Pars basiliaris ossis occipitalis

_____
_____
_____
_____

facies tuberculi costae

_____
_____
_____
_____

dura mater encephali

_____
_____
_____
_____

vena pulmonalis superior dextra

_____
_____
_____
_____

musculus flexor digiti minimi brevis

_____
_____
_____
_____

3. Translate words in the vocabulary forms:

index finger _____ canal _____
blood _____ sword _____
tree _____ surface _____
forehead _____ corniculum _____
annular _____ chromosome_____
spinal _____ root _____
sinus _____ extensor (muscle)_____
double _____ phalanx _____
circumflex _____ depression _____

4. Translate into Latin after the model Nom. and Gen. (number accordingly to the context):

Descending part Nom. _____
Gen. _____
Deferent ducts of the testicle Nom. _____
Gen. _____
Internal base of the skull Nom. _____
Gen. _____
Transverse ligament of scapula Nom. _____
(superior ligament) Gen. _____

5. Provide medical expressions familiar to you. Translate them.

_____
_____
_____

Medicine prescribing. Fundamentals of Pharmaceutical terminology.

1. **Translate the names of medicines and medicinal plants into Latin and write them in Gen. sing. in full.**

sulfathiazole _____
antipyrine _____
calcium phosphate _____
methyl _____
camphor _____
platyphyllin _____
thiopental _____
xeroformium _____
iodoform _____
polyglycine _____
sea-buchthorn _____
rhubarb _____
adonis _____
poppy _____
mint _____

2. Translate the following expressions into Latin. Add proper endings:

in ampoules	_____	divid__ in part__ aequal__ numer__
turn over!	_____	extract__ fluid__
in capsules	_____	oleum Persic__
aqueous solution	_____	pulver__divis__
aromatic herbal blend	_____	in vitr__nigr__ solution__oleos

3. Translate into English and write in an abbreviated form:

Recĭpe**:** Liquoris Ammonii anisati 2 ml
Sirŭpi Althaeae ad 120 ml
Misce. Da.
Signa. Take 1 dessertspoonful thrice daily.

Recĭpe: Pulvĕris foliōrum Digitālis 0,005
Sacchari ad 0,3
Misce, fiat pulvis.
Da tales doses numĕro 12.
Signa. Take 1 powder thrice daily.

4. Render into Ukrainian and write in a complete form.

Rp.: Sol. Pyrroxani 1% 1 ml
D.t.d. N 20 in ampull.
S. Administer intravenously.

5. Work on prescription tasks.

1. Prescribe 10 g of ophthalmic Benzamone ointment (10%)
_____
containing Benzamine and Vaseline.
_____
Denote: ophthalmic ointment, should be taken into the eyelid at bedtime.
_____

2. Prescribe 10 ml ophthalmic drops, containing sulfacetamide
_____
sodium (30%). Administer 2 drops in both eyes thrice daily.
_____

3. Prescribe 60 g of Etazole in granules for children.
_____
Take 1 teaspoonful every 4 hours.
_____

Clinical Terminology

1. Analyze the morphological composition of terms:

hyperergia _____
kinesitherapia _____
diarrhoea _____
mastectomia _____
hydrophobia _____

2. Build Latin terms:

disturbance of muscle nutrition
morbid fear of poisoning
pain in the rectum
expansion of the vertebral body
foot measuring

3. Translate, add Greek doublets:

	Greek stem	Latin word in the vocabulary form
form (structure)	_____	_____
female	_____	_____
uterus	_____	_____
large intestine	_____	_____
other	_____	_____
heat (warmth)	_____	_____
joint	_____	_____
corpse, cadaver	_____	_____
short	_____	_____
embryo	_____	_____
dead	_____	_____

Render diagnoses into Latin, indicate the vocabulary form of each word:

postnatal condition _____
present condition, previous condition _____
chronic posthaemorrhagic iron deficiency anaemia _____

MODULE 1

Variant 1

1. The sound [k] in Latin is represented by the letter:

a) s b) c c) z d) qu e) x

2. The consonant "C" is pronounced as [ts] before the vowel:

a) a b) u c) e d) au e) a

3. A stress in Latin falls on:

a) the 1st and 2nd syllable from the end of a word
b) the 2nd or 3rd syllable from the end of a word
c) the 3rd syllable from the end of a word
d) the 4th syllable from the end of a word

4. The dictionary form of the noun comprises:

a) Nom. sing.+ ending of Gen. sing. + gender
b) Nom. sing.+ Dat. sing. + gender
c) Nom. sing.+ Gen. pl. + gender
d) Nom. sing.
e) Gen. sing.

5. What endings may the nouns of the masculine gender with the ending –us in Gen. sing. have?

a) -is b) -us or -i c) -ae d) -ei e) –um

6. The dictionary form of the noun "textus" comprises:

a) textus, i m b) textus, is n c) textus, us m
d) textus, ae f e) textus, ei m

7. Define the declension of the noun "encephalon, i n":

a) I declension b) II declension c) III declension
d) IV declension e) V declension

8. Choose the term with a non-agreed attribute:

a) crista conchalis
b) crista tuberculi
c) crista lacrimalis posterior
d) crista iliaca
e) crista lata

9. Adjectives of the III rd declension of masculine gender with the ending –is possess:

a) three generic endings b) two generic endings
c) one generic ending e) four generic endings

10. Adjectives in -um in Gen. sing., possess the ending:
a) -ae b) -i c) -is d) -us e) -ei

11. Define the gender of the adjective "celebrate":
a) masculine b) feminine c) neuter

12. Name the ending of the adjective of the feminine gender "occipitalis".
a) -er b) -a c) -is d) -e e) -um

13. Define the gender of the adjective in the word combination "columna vertebralis":
a) masculine b) feminine c) neuter

14. Indicate the case of the term "palata dura":
a) Nom. sing b) Abl. sing. c) Nom., Acc. plur.
e) Acc. sing.

15. Add a proper ending to the anatomical term "chiasma optic…":
a) -ae b) -a c) -us d) -um

16. Change the number of the anatomical term "os membri inferioris":
a) ossis membri inferioris b) ossia membri inferioris
c) ossibus membri inferioris d) ossa membri inferioris

17. Translate the anatomical terms in Nom. sing.:
lateral cartilage
left hand
stony surface
inferior vein
pubic symphysis
straight muscle
digestive tract, alimentary canal
lower lip
interosseous ligament
nasal septum
right scapula
lymphatic nodule
anterior fontanelle
coccygeal corniculum
upper extremity

18. Match adjectives with nouns according to the model S_n A_n:
Margo occipital…
Sulcus palatin…
Meatus acustic…
Os occipital…
Apertura super…

19. Render the word combinations into Latin:

internal auditory meatus
superior articular process
surface of the fibula
concomitant artery of the sciatic nerve
autonomous nervous system

MODULE 2
Variant 2

1. Latin verbs are divided into:

a) four conjugations; b) five conjugations;
c) two conjugations; d) three conjugations;
f) one conjugation

2. Add the dictionary form for the verb "video, …":
a) are b) ĕre c) ēre d) ire

3. Indicate the verb in the Imperative Mood:
a) docet b) misce c) dant d) solvit e) dormrre

4. Indicate the verb belonging to the Ist conjugation:
a) sumit b) habere c) auscultat
d) solve e) repetunt

5. Match Greek and Latin equivalents:
a) rhin- b) toc- c) osm- d) ops-
a) olfactus b) visus c) partus d) nasus

Keys:
a) aa; ab; ac; ad
b) ba; bb; be; bd
c) ca; cb; cc; cd
d) da; db; dc; dd
e) ad; be; ca; db

6. The dictionary form of the word "diagnostat" is translated as:
a) identifies (3rd person singular)
b) identify (3rd person plural)
c) identify! (2nd person sing)
d) let him identify
e) identify! (2nd person plural)

7. Which of the following forms is translated as "they are treated"?:
a) praeparantur b) sanant c) curantur
d) repetuntur e) videt f) divide et impera
g) disce aut discede

8. Add the verb to the prescription expression: …Detur. Signetur.- Mix. Dispense. Denote.
a) Misce b) Misceatur
c) Miscetur d) Miscete

9. Which gender and conjugation do most Latin names of chemical elements have?

a) masculine; II b) neuter; II
c) neuter; III d) masculine; III

10. What suffix indicates a higher level of oxidation in the names of oxygen-containing acids:

a) -id (um) b) -os (um)
c) -us (um) d) -ic (um)

11. What gender and declension do the nouns meaning anion names of salts of oxygen-free acids possess:

a) neuter; IV b) masculine; II
c) masculine; IV d) neuter; II

12. How many words do the Latin names of ethers comprise?:

a) two b) three c) one d) four

13. Choose the proper form of Gen. sing. for Nitrogenium oxydulatum – nitrous oxide:

a) Nitrogenii oxydulatis b) Nitrogenii oxydulate
c) Nitrogenii oxydulati d) Nitrogenii oxydulata

14. Add the proper endings in Nom. and Gen. sing. to the name of the chemical compound – Nom. sing. Codeini phosph…- codeine phosphate; Gen. sing. – Codeini phosph…

a) Nom. sing. -as Gen. sing. -atis
b) Nom. sing.-as Gen. sing. -adis
c) Nom. sing. -at Gen. sing. -utis
d) Nom. sing. -ut Gen. sing. -udis

15. The prefix "extra-"(beyond) corresponds to the Latin prefix:

a) post- b) super- c) extra- d) sub- e) in-

16. The prefix "para-" corresponds to the Greek prefix:

a) meta- b) peri- c) para- d) amphi- e) dia-

17. Find one-word equivalent for the two-word diagnosis "ruptura uteri":

a) metroptosis b) metrosclerosis
c) metrorrhesis d) metrolyisis

18. Add the proper ending in the diagnosis name "neoplasma faci…malignum":

a) -es b) -e c) -ei d) -ebus e) -um

19. Choose the terminal word-forming element with the meaning "suture":

a) rhinorrhaphia b) rhinorrhagia c) rhinorrhoea

d) rhinitis e) rhinolithus

20. The 3rd person singular, the Indicative Mood, Passive Voice ends in:
a) -or b) -ris c) -tur d) -ntur e) -mur

21. Which of the following words has a doublet meaning:
a) oesophagus b) pharynx c) larynx
d) thorax e) kidney

22. Determine the conjugation of the verb "repeto, ĕre" – to repeat:
a) I conjugation b) II conjugation c) III conjugation
d) IV conjugation e) V conjugation

23. What adverb is used for an additional expression in the prescription:
a) statim b) melius c) optime d) exacte e) raro

24. Add the proper ending to the diagnosis name "abscessus man…" – the abscess of the upper extremity:
a) -i b) -us c) -uum d) -u e) -es

25. Choose the proper suffix in the name of acid "acidum bor…" – boric acid:
a) -osum b) -icum c) -acum d) -as e) -is

26. Choose the proper suffix in the name of salt "Hydrargyri salicyl…" – salicylate:
a) -idum b) -as c) -is d) -icum e) -osum

27. Add the missing ending of the pharmaceutical term "in aplull…":
a) -as b) -es c) -is d) -ibus e) -a

28. Choose the term with the suffix indicating the inflammatory process of an organ:
a) arthrosis b) arthritis c) arthralgia
d) arthrodynia e) arthropathia

29. Choose the term "sapraemia":
a) leukaemia b) sapraemia c) hydraemia
d) polyaemia e) oligaemia

30. Choose the proper translation of the term "suturing of the intestine":
a) enterorrhagia b) enterorrhaphia c) enteropexia
d) enterectasia e) enteroiptosis

31. In what word does a prefix indicate a "dysfunction"?
a) hyposmia b) hyperosmia c) dysosmia
d) anosmia e) parosmia

32. The term "cholecystopexia" is translated as:

a) diseases of the gallbladder
b) incision of the gallbladder
c) fixation of the gallbladder
d) artificial opening of the gallbladder
e) inflammation of the gallbladder

33. Choose the proper translation of the diagnosis "concussion of the retina":

a) commotio cordis b) commotio cerebri
c) commotio retinae d) commotio spinalis
e) commotio thoracis

34. Indicate the Latin name of the medicinal substance "potassium iodide":

a) Kalii iodidum b) Kalii iodidi c) Kalii iodatum
d) Kalii iodati e) Kalium iodidis

35. "Laxative herbal blend (species)" in Latin:

a) species laxantes b) species laxans c) species sedativae
d) species sedativa e) species diureticae

36. Use the word "powder" in a suitable case:

Recĭpe: …….radicis Rhei 0,3
Da tales doses numero 6. Signa.
a) pulvis b) pulveri c) pulveris
d) pulverem e) pulvere

37. Choose the correct translation of the prescription expression: Rp: Paste Lassari 20,0. Detur. Signetur.

a) Pasta b) Pastam c) Pastae d) Pastarum

38. Choose the proper translation of the underlined part of the prescription: Rp.: Extracti Aloes fluidi 2,0: <u>Dispense the following doses No 50 in ampoules. Denote</u>.

a) Da talis dosis N.50 in ampullo
b) Da tales doses N. 50 in ampullis
c) Da tales doses N.50 in ampullam
d) Da tales doses N. 50 ad ampullas

39. Choose the proper translation of the underlined part of the prescription:

Rp.:
Boracis
Natrii hydrocarbonatis aa 20,0
Natrii chloridi 10, 0
Olei Menthae piperitae gtts III
<u>Mix to form a powder.</u>
<u>Dispense. Denote.</u>

a) Misce, fiat pulveris. Da. Signa.
b) Misce, fiat pulvis. Detur. Signetur.
c) Misce, fiant pulvis. Detur. Signetur.
d) Misce, fit pulvis. Da. Signa.

40. In what medication name is there the word-forming element indicating an analgesic effect?:

a) Vasculat b) Dolargan c) Apressinum
d) Rondomycin e) Androfort