**Federal State Budget Educational Establishment of the Higher Education “Kursk State Medical University”of the Ministry of Health of the Russian Federation**

**The Department of the Latin Language and the Basics of the Medical Terminology**

**T.A. Kostromina**



**THE LANGUAGE OF MEDICINE AS A MEANS  
OF PROFESSIONAL COMMUNICATION**

**Guide in the Latin Language**

**for Students of the Medical Department of the International faculty**

**Курск - 2018**

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**Reader:**

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Medical terminology is the basis for the professional language of physicians and, by an old tradition, makes use of the Greek and Latin languages as sources of term formation. International nomenclatures of a number of sciences became an inseparable part of the medical terminology in English, German, French and other languages. This allows to use terms of Greek and Latin origins as a means of international communication of physicians.

In the situation of bilingualism and multilingualism the study of the Latin medical terminology may become one of the mechanisms to overcome problems occurring in the course of professional communication. It may also facilitate the process of adaptation of foreign students to a new social environment.

This book is a practical course of the basics of the international language of communication of physicians for bilingual students.

Alongside with the study of the basics of the Language of medicine – Latin – students have a chance to improve and develop their medical English.

It starts with the study of the basiсs of the Latin grammar on the material of the International Anatomical Nomenclature.Then the problems of word building in the medical terminology are studied on the basis of the Clinical terminology and the Nomenclature of Drugs with Latin prescription sum up the study of the Latin course.

A great deal of training exercises helps to form firm skills and habits in analysis, interpretation and comprehension of the medical terms.

The book is supplied with Latin-English and English–Latin Medical Vacabularies.

The book is intended for foreign students of the medical department getting their professional education in English.

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**Кафедра латинского языка и основ терминологии**

**Т.А. Костромина**



**ЯЗЫК МЕДИЦИНЫ КАК СРЕДСТВО ПРОФЕССИОНАЛЬНОГО ОБЩЕНИЯ**

**Учебное пособие по латинскому языку   
для студентов международного факультета**

**(Специальность «Лечебное дело» )**

**(на английском языке)**

**Курск - 2018**

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Рекомендуется Учебно-методическим объединением по медицинскому и фармацевтическому образованию вузов России в качестве учебного пособия для студентов, обучающихся по специальности – Лечебное дело.

**Костромина,** **Т.А.** Язык медицины как средство профессионального общения. Учебное пособие по латинскму языку для студентов международного факультета (специальность «Лечебное дело») (на английском языке) - Издание 5-е исправленное и дополненное. Курск, КГМУ, 2018. –  
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**Рецензент:**

**Т.Е. Сазонова** – доктор филологических наук, профессор, заведующая кафедрой английского языка КГУ,.

Медицинская терминология, являющаяся основой профессионального языка врачей, традиционно использует древнегреческий и латинский языки как источники для образования терминов. На основе древнегреческого и латинского языков созданы международные номенклатуры целого ряда наук, они органично вошли в медицинскую терминологию английского, немецкого, французского и других языков. Всё это позволяет использовать термины древнегреческого и латинского происхождения в качестве языка международного общения врачей. В условиях двуязычия и многоязычия изучение медицинской терминологии может служить одним из механизмов преодоления затруднений при профессиональном общении и облегчать процесс адаптации иностранных студентов к новой для них социальной среде.

Наряду с изучением основ языка медицины – латинского языка – студенты получают возможность изучения медицинского английского языка.

Данное учебное пособие является практическим курсом по формированию основ международного языка общения врачей у студентов-билингвов. Курс начинается с изучения международной анатомо-гистологической номенклатуры с привлечением элементов латинской грамматики. Затем изучаются основы общемедицинской терминологии и номенклатура лекарственных средств.

Большое количество тренировочных упражнений способствует форми-  
рованию у студентов устойчивых умений и навыков по анализу и переводу медицинских терминов. Пособие снабжено латинско-английским и англо-латинским медицинскими словарями.

Предназначено для иностранных студентов лечебного факультета, обучающихся на английском языке.

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ENGLISH-LATIN MEDICAL VOCABULARY………………………….

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Literature………………………… ………………………………… **INTRODUCTION**

It is well known that one can master a profession only in the process of mastering the language of this profession and particularly the system of special conceptions and of the terms designating them.

Hundreds of thousands of words and word combinations are included into the professional language which is considered to be one of the means of international communication of the representatives of the medical profession. The modern medical terminology is one of the most complicated term systems due to the traditional use of the Greek and Latin languages in it.

In our course we shall pay attention to those elements of the Latin language, which are necessary and satisfactory for mastering the language of medicine. You will study those elements of the Latin grammar, which will help you to understand the structure of medical terms and the correlation between the words within a term. You will learn to construct medical terms according to the Latin grammar rules and to give the definitions to the scientific notions, expressed through medical terms in English.

The word “term” is Latin by origin (“terminus”) and means “a limit, a boundary”.

The main function of a term is to denote exactly and in a full and concrete form some conception in the field of science, technology, etc.

Each scientific notion has its definition, which explains the essence of it.

For example, being non specialists you will say, that “a tablet” is a drug, round in form, bitter or sweet, and so on. On the other hand, a specialist will define “a tablet” as a scientific term, and you will read here: “A tablet is a solid dosage drugform obtained by pressing and forming a special mixture of medical and additional substances”.

So you see, that in a definition the language of medicine gives an exact, concrete and full description of a scientific notion, expressed through a scientific medical term.

“Terminology” is a system of concepts. It is a combination of names, words and combinations of words used to denote exactly and in a concrete way scientific notions in the system of concepts of a given science.

The vast subsystems of terms within the medical terminology are: 1. The Terminology of Anatomy and Histology – The International Anatomo-Histological Nomenclature.

2. The Clinical Terminology (general medical terminology), which unites the terminologies of sciences concerned with the prevention, diagnostics and treatment of diseases or pathological conditions.

3. The Terminology of Pharmacy including the terminologies of the sciences concerned with the exploration, production and testing the effect of medical substances and drugs.

In this course of Latin you will get acquainted with all these systems of terms and you are to begin with the study of the terms used in Anatomy.

The English language of medicine has Greek and Latin words in abundance. There is a famous saying in Latin which sounds as follows: “Invia est in medicina via sine lingua Latina”, which means: “There is no way into medicine without the Latin language”.

The modern language of physicians and pharmaceutists is a product of development of world medicine which lasted for centuries.

As far back as in the 5th century B. C. there lived and worked in Greece the famous Hippocrates. His scientific work laid the foundation to the scientific medical terminology, which was later on developed and enriched by Aulus Cornelius Celsus in the 1st century A. D. He is considered to be the founder of the medical terminology in the Latin language. So you see that from the very beginning the medical terminology has been developing on the basis of two languages: Greek and Latin.

In the epoch of Renaissance the foundation for the international medical terminology in Latin was laid.

Nowadays Latin is an international language of physicians and pharmaceutists. The majority of new medical terms are constructed on the basis of the building material taken from the Latin language.

So, we wish you success in mastering the language of your future profession!

**ANATOMICAL TERMINOLOGY**

**LESSON ONE**

**THE LATIN ALPHABET**

There are 25 letters in the Latin alphabet:

Aa [a], Bb [be], Cc [tse], Dd [de], Ee [e], Ff [ef], Gg [ge], Hh [gha], Ii [i], Jj [jot], Kk [ka], Ll [el’], Mm [em], Nn [en], Oo [o], Pp [pe], Qq [ku], Rr [er], Ss [es], Tt [te], Uu [u], Vv [ve], Xx [iks], Yy [ypsilon], Zz [zeta].

Proper names, the names of the months, nations, and geographic names are written with the capital letter in the Latin language.

The Classification of the Sounds

The letters a, e, o, u, i, y are vowels;

The letters b, c, d, f, g, h, j, k, l, m, n, p, q, r, s, t, v, x, z are consonants.

The vowels are subdivided into monophthongs and diphthongs.

The pronunciation of the vowels and of the consonant j

Ee is pronounced like the English sound [e].

e. g. vértebra [vertebra]

Ii is pronounced like the English sound [i]

e. g. inferior [inferior]

intérnus [internus]

At the beginning of a word before a vowel and in the middle of a word between two vowels it is pronounced like [j] and the letter J is

usually used in these positions instead of the letter i:

e. g. juguláris [jugula:ris]; major [major]

The letter **j** is not written in the words of the Greek origin:

e. g. iatria (treatment) [iatria];

Iodum (iodine) [ iodum]

Yy (ypsilon, French –i grec) is pronounced like the English sound [i]

e. g. tympanum [timpanum]

The letter Yy is used only in the words of the Greek origin. Memorize some frequently used prefixes and roots to correctly spell the medical terms with the letter “y”:

dys - bad, painful, difficult, disturbance, disfunction.

e. g. dystopía – faulty or abnormal position of a part or organ;

dystrophía – defective nutrition of a tissue or organ

hypo - deficient or below the normal

e. g. hypodynamía – diminished power hypofunctio – reduced,

low or inadequate function

hyper - excessive or above the normal;

e. g. hyperalgesía – extreme sen sitiveness to painful stimuli

hyperplasía – an increase in number of cells in a tissue

or organ;

syn-, sym - together, with, joined

e. g. synostósis – connection of bones with bone tissue

myo- - relating to a muscle

e. g. myológia – the branch of science concerned with

muscles.

**Diphthongs**

A diphthong is a combination of two vowels pronounced like two vowel sounds and making one syllable. There are four diphthongs in the Latin language**:**

**ae, oe, au, eu,** the first two of which are pronounced like one sound, therefore they are called digraphs.

The digraph ae is pronounced like [e]

e. g. peritonaéum [peritonéum]

vértebrae [vértebre]

The digraph oe is pronounced like [e]

e. g. oedéma [ e´dema ]

oesóphagus [ ezófagus]

For separate reading of vowels of the mentioned above digraphs, in case they belong to different syllables, the demarcation mark (") is used:

e. g. díploë [díploe] (spongious substance of flat bones)

áër [áer] ( air)

The diphthong au is pronounced like [‘au]

e. g. áuris [auris] (ear)

The diphthong eu is pronounced like [eu]

e. g. pneumonía [pneumonia ]

### The pronunciation of the consonants

Cc - [ts] - before the sounds [e], [i], expressed through e, ae, oe, i, y.

- [k] - before consonants,

- before vowels a,o,u

Exercise: Read the words. Explain the pronunciation of the letter **c**:

Medicína, cérebrum, cylíndricus, coélia, caécus, coróna, cáncer, acútus, dúctus, sic, cránium, sácer, vértebra coccygéa, córnu coccygéum, fáscia cervicális, dúctus hepáticus commúnis, fascículus cuneátus, crísta seu pécten.

Hh is pronounced like a sound intermediate between the English [h]

and [g]

e. g. hómo [(g)homo ] (a human being)

hiátus [(g)hiatus] (an aperture, opening or foramen)

Ll is pronounced very softly,

e. g. lábium [l’abium] (lip)

pelvínus [pel’vinus]

Ss - [s] – in most cases, i. e. at the beginning and at the end

of words, before consonants and vowels;

- [z] - between two vowels;

between a vowel and consonants m, n, r, l

Double s – (“ss”) – is read like [s].

Exercise: Read the words paying attention to the pronunciation of the letter “s”:

Búrsa, cápsula, os, músculus, discus, adipósus, fibrósus, compósitus, pulpósus, exténsio,transitórius, os sácrum, básis óssis sácri, procéssus supérior, transvérsus, ánser, tuberósitas, cápsula fibrósa, fóssa incisíva.

**Zz** - [z] – in the words of Greek origin

-[ts] – in the words borrowed from modern languages for

example: Zíncum [tsinkum] (German)

influénza [influentsa ] (Spanish)

**Qq** – is always used in the combination with letter u and is pronounced like [kw]

e. g. squáma [skwama ]

quadrátus [kwadrat ngu

**ngu** - [ngu] – before consonants

- [ngv] - before vowels

e. g. língua [lingva], sánguis [sangvis],

but língula [lingula], ángulus [angulus]

**ti-** + vowel – [tsi]

+ consonant – [ ti], but after s, x before vowels - [ti]

e. g. articulátio [artikulatsio]

eminéntia [eminentsia ]

but: óstium [ostium]

míxtio [mikstio]

##### Greek combinations of consonants – digraphs

ch – is pronounced like [kh], e. g. núcha [nukha ]

ph – is pronounced like [f], e. g. xiphoídeus [ksifoideus]

rh – is pronounced like [r], e. g. rháphe [rafe]

th – is pronounced like [t], e. g. thorax [toraks]

The combination of consonants sch is pronounced like [skh]

e. g. íschium [ishium]

##### Exercise: Read the terms paying attention to their pronunciation:

##### Embryológia, histológia, ócciput, viscera, zygóma, Zincum,

máximus, fléxio, sacrum, basis óssis sácri, coccyx, colúmna, tubérculum, cartilágo, músculus, grácilis, óssa, tuberósitas, subscapuláris, transversárius, cáudam, aër, dyspnóë, oedéma, líneae transvérsae, oblíquus, unguis, articulátio, inaequális, linguláris, aërátio, schema, phárynx, ánthropos, thyreoideus, circumdúctio, rháphe.

**LESSON TWO**

TASKS FOR CONTROL

I. Answer the questions:

1. What is a term?
2. What is the function of a definition?
3. What is "terminology"?
4. What pecularities has the modern language of physicians?
5. What systems of terms are included into the medical terminology?
6. What scientists made contribution into the development of the international medical terminology?

II. Fill in the blanks:

1. In Latin the sound [e] is expressed through the vowel "e" and the

diphthongs. . . …

1. To denote the sound [j] at the beginning of a word before a vowel or between two vowels the letter “…” is used.

3. The sound [k] is mostly expressed through the letter …

4. "C" is pronounced like [ts] only before the two vowel-sounds…

5. In the term "caput costae" the letter "c" is read like …

6. In the word "spatium" the combination of letters "ti" is read like …

7.The combination of sounds [kw] is expressed through the letters …

8. The sound [f] is expressed either through the letter … or the digraph …

9. "S" between vowels is read like …

10. The combination of letters "ngu" is pronounced like … before a vowel.

EXERCISES

I. Read the terms, explain the pronunciation of vowels and consonants:

Anatómia, embryológia, histológia, cytológia, hómo sápiens, cáput, vértex, ócciput, cóllum, trúncus, dórsum, abdómen, víscera, pes, crus, fémur, mánus, pálma, córpus, cóstae, vértebrae;

forámen vertebrále, incisúrae verbtebráles, procéssus spinósus, sácer, sacra, sacrum, basis ossis sacri, tubérculum antérius, arcus postérior, coccygéus, vértebrae coccygéae, pediculus arcus vértebrae.

2. Read the terms:

Línea dorsális fixus

Massa médius húmidus

Dens hiátus trapézius

Fóvea tuberósitas interspinális

Apex intervertebrális conjúngere

Pars hepar jácere

Spinósus cervix juxta

Forámen transvérsus Zoológia

Supérior radix tubérculum május

Déntes próminens círculus májor

3. Read and explain the pronunciation of diphthongs:

Cóstae vérae caécus, caeca, caecum

Cóstae spúriae aurícula

Aegrótus aponeurósis

Aegrótae oe´dema

Incisúrae costáles aéger

Fóveae costáles inaequális

líneae transvérsae junctúrae cartilagíneae

álae sácri coelíacae

cellúlae mastoídeae dýspnoë

semicanális túbae auditívae aёrátio

4. Write out the words in which the combinations of letters "qu" and

"ngu" are pronounced correspondingly like [kw] and [ngv]:

1. Aquaedúctus 9. inaequális

2. língua 10. ángulus mandíbulae

3. squáma 11. quadrátus

4. fóvea sublinguális 12. pars squamósa

5. únguis 13. trianguláris

6. línea oblíqua 14. sánguis

7. fréquens 15. linguláris

8. inguinális 16. úngula

**ACCENTUATION (STRESS)**

In the Latin language the stress is dynamic, that is, the syllable under stress is pronounced with a greater force of voice. The last syllable is never stressed. The second or third from the end syllable is under stress which depends on whether the second from the end syllable is short or long.

If it is long, then it is under stress, if not – the stress shifts to the previous syllable. So, one must know, which syllable is short and which is long to correctly put stress on it.

The vowel is considered long if:

1. it contains a diphthong:

e. g. glu-taé-us (glutaeus) – pertaining to buttock

o-zaén-a (ozaena) - bad cold in the head

2. the vowel of the second from the end syllable is followed by two consonants, by "x" or "z":

e. g. pro-céss-us (processus) – process

re-fléx-us (reflexus) - reflex

The vowel is short if:

1. the vowel of the second from the end syllable is followed by another vowel :

e. g. lí-ne-a (linea) – line

an-té-ri-or (anterior)

2. ***the vowel of the second from the end syllable is followed by the combination of letters "b, p, t, g, d, c", plus "r" or "l":***

e. g. vér-tebr-a

pál-pebr-a

**NB! DICTIONARY CASE**

When the vowel of the second from the end syllable is followed by one consonant, the syllable may be either stressed or unstressed. In this case a dictionary will be of help.

The sign of length is ̅ over the long vowel; the sign of brevity is

̆ over the short vowel:

e. g. tým-pǎn-um, but mem-brān-a

But if one remembers some suffixes with a short vowel, he will be better orientated in correct reading.

***NB! = Nota bene = Pay attention!***

Suffix is a morpheme, which takes position after the root of the word and before its ending, i. e. it takes second from the end of the word position and thus may be either stressed or unstressed.

**Long suffixes:**

**-ūra (noun) - Engl. –ure; -tion**

incisura, fissura, natura, fractura, aperture;Adjective suffixes:

**-āt (us, a, um) - Engl. -ate; -ated**

oblongatus digitatus, medicatus;

**-ōs ( us, a, um) - Engl. –ous**

tuberosus, squamosus, fibrosus, petrosus,

spinosus;

**-īv (us, a, um) - Engl. –ive**

incisivus, conjunctivus, progressivus, auditivus;

**-īn (us, a, um) - Engl. – ine; -ic**

caninus, pelvinus, anserinus, equinus;

**-āl (is, e) - Engl. – al**

costalis, temporalis, lacrimalis, lateralis;

**-ār (is, e) - Engl. – ar; -ary; -al**

angularis, articularis, clavicularis, maxillaris.

**Short suffixes:**

**-ĭc (us, a, um) (adj. ) - Engl. – ic**

e. g. caroticus, tympanicus, lymphaticus, acusticus;

**-ŭl- (noun) – Engl. – ule; -cle**

**-cŭl-** e. g. angulus, musculus, pediculus, clavicula,

capsula;

**-ŏl-** e. g. alveolus, foveola.

EXERCISES:

I. Put stresses and explain:

Incisura lineae columna

Angulus processus xiphoideus

Costale facies mandibularis

Clavicularis petrosus appendix

Tuberculum dorsalis depressor

Fovea cerebrum connexus

Crista apertura ligamentum laterale

Jugularis eminentia tuberculum costae

Posterior spatium spatia intercostalia

Articularis palpebra costae spuriae

2. Read the terms, minding the stress; memorize the terms:

1. caput – head 9. facies – face, surface

2. cranium – skull 10. tuberculum – tubercle

3. clavicula – clavicle 11. dexter, dextra, dextrum – right

4. maxilla – upper jaw 12. sinister, sinistra, sinistrum – left

5. mandibula – lower jaw 13. major, majus – major, greater

6. articulatio – joint 14. minor, minus – minor, lesser

7. costa – rib 15. medianus(a)um – in the middle of

8. musculus – muscle 16. profundus(a)um – deep, profound

**LESSON THREE**

Tasks for Control:

1. Answer the questions:

1. What syllable is usually stressed in a Latin word?

2. Say, when the vowel is long. Give examples.

1. Say, when the vowel is short. Give examples.
2. Enumerate noun and adjective suffixes with a long vowel.
3. Enumerate suffixes with a short vowel.

2. Put stress in the following words. Give the necessary explanation:

*Variant I Variant II*

1. transversus 1. externus

2. xiphoideus 2. pterygoideus

3. vertebra thoracica 3. glandula ciliaris

4. incisura angularis 4. canalis opticus

5. facies superior 5. fovea trochlearis

3. Give Latin equivalents to the following words:

1. mandible 1. tubercle

2. head 2. rib

3. articulation 3. muscle

4. right 4. left

5. face 5. clavicle

**THE STRUCTURE OF AN ANATOMICAL TERM**

We are going to study basics of the Latin Grammar on the basis of the Anatomical Terminology.

**The aim is** to be able to analyze the terms from the point of view of their structure, to construct Latin terms in accordance with the rules of the Latin Grammar.

Exercise I – 1) Read the anatomical terms in Latin:

*(Mind, that they are for the most part combinations of words, consisting of a noun – the nucleus of any term - and some attributes to it, which may be expressed either by nouns ( no agreement with the nucleus), or by adjectives, having agreement in number, Gender and Case with the corresponding noun)*

Tuberculum majus, caput costae, canalis profundus, facies medialis, tuberculum humeri, caput humeri.

2) Give English equivalents of the above given terms:

**N B!** In Latin any term starts with a noun;

attributes, expressed by nouns or adjectives, *follow it.*

e. g. Lat. - os frontale (noun + adj.) – Engl. – frontal bone

Lat. - os cranii (noun + noun.) – Engl. - bone of the skull

In English all the *attribute*s precede the noun, except the cases with attributes expressed by an “of-phrase”:

e. g. Lat. phalanx media (adj.) – Engl. (adj.)*middle* phalanx

ossa cranii (noun) (adj.) *cranial* bones

cavum nasi (noun) (adj.) *nasal* cavity

fundus gastris (noun) fundus *of the stomach* (noun)

The principal structure of Latin anatomical terms may be presented by the following models:

**1) noun (N) Adjective (Adj.) 2 ) noun (1) (**what?**) (*agreed attribute*)**

**noun (2) (**of what?)

**(*non-agreed attribute*)**

The terms may include any number of words, but more frequent models of their structure are the following:

N + Adj. + Adj. Facies articularis superior

(superior articular surface)

*The noun has two agreed attributes expressed by*

*adjectives.*

*They have agreement with the noun in gender,*

*number and case.*

Articulatio capitis costae

N1 + (The joint of the rib head (of the head of the rib)

N2 + *The noun has two non-agreed attributes expressed*

N3  *by nouns in Genitive.*

Sulcus arteriae occipitalis

N1 + (groove of occipital artery)

N2 + ADJ. 2 *This term begins with a noun (N1) and has a non-*

*agreed attribute expressed by noun (N 2) -of*

*what?.*

*The second noun has in its turn an agreed attribute*

*expressed by an adjective, with which it has*

*agreement in Gender, Number and Case.*

Attributes, having agreement with nouns are translated into English as adjectives as a rule; attributes, having no agreement with nouns may be translated into English as nouns preceding the nucleus of the term, by an "of-phrase" or by adjectives.

So, from the above given examples you see, that the nucleus of any term is a noun (N1).

**NOUN**

A noun is characterized by the following Grammar categories:

**I. – NUMBER** It may be singular (singularis) or plural (pluralis). The difference between them is in their flexions (endings).

**II. – GENDER:**

masculine (masculinum) - **m**

feminine (femininum) - **f**

neuter (neutrum) - **n**

The gender in Latin is defined from the noun endings in the **Nominative Case singular.**

**III. – CASE**

There are six Cases used in the declination of the Latin nouns, but only two of them find their reflexion in the Anatomical terminology. That is why we study only the Nominative Case (Nominativus) and the Genitive Case (Genetivus).

**Nominativus**

1) The noun in the Nominative Case answers the

question"what?" and it is usually the nucleus, that

is, the main word in a term. It corresponds to the

Common Case in English.

2) It always takes the first position in any term.

3) Gender is defined from the word-ending in

The Nominative Case: **m:** -us, -er; **f:** -a, -es; **n:** -um, -on, -u

**Genetivus**

1) The noun in the Genitive Case answers the question "of what?"

It corresponds to the Possessive Case in English.

2) It is usually *a non-agreed attribute* in a term.

3) It takes any position in a term except the first one.

4) The ending in the Genitive Case shows, to what **declension** this

or that noun is attributed.

**IV. – DECLENSION**

There are five declensions of nouns. The declension is defined from the ending in the Genitive Case, presented in the dictionary form of a noun.

**THE DICTIONARY FORM** is the form in which a part of speech is represented in a dictionary. As for a noun, its Dictionary form **consists of the Nominative Case, Genitive ending and gender designation (see the table)**

**Noun in the Singular**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Decl. | gender | Nom. | Gen. | Dictionary Form: 1)Nom. 2) Gen/end. 3) gender |
| 1 | f | **-a** | **-ae** | costa, ae f (rib) |
| 2 | m  n | **-us, -er**  **-um,-on** | **-i**  **-i** | sulcus, i m (groove)  septum, i n (septum) |
| 3 | m  f  n | **various** | **-is** | pulmo, onis m (lung)  radix, icis f (root)  corpus, oris n (body) |
| 4 | m  n | **-us**  **-u** | **-us**  **-us** | sinus, us m (sinus)  genu, us n (knee) |
| 5 | f | **-es** | **-ei** | facies, ei f (surface) |

**NB**! 1) Nouns of the feminine gender usually have the endings **-a**, **-es,**

e. g.: clavicula, costa (1st declension), facies (5th declension)

2) The nouns of the masculine gender have endings **–us,** **–er,**

e. g.: sulcus, musculus (2nd declension), processus (4th declension),

magister (2nd declension), vomer (3rd declension)

3) Nouns with the ending **–us** in the Nominative Case may have different dictionary forms, which depends on the type of the declension *– see the dictionary*.

e. g.: musculus, i m, *but*

processus, us m

4) Nouns of the neuter gender may have the endings **–um, -on, -u,**

e. g.: cranium, skeleton (2nd declension),

cornu (4th declension).

**NB! The base / stem** – The base or the stem of a word – is this word without the ending. In the Latin language the stems in the Nominative and Genitive Cases often do not coincide (The Genitive Case may have an extra syllable). That is why, the ***stem is defined from the form of the Genitive by dropping the ending***. From the Dictionary form of a noun one may define the stem of a word.

e. g.: cancer, cri m – stem – **cancr-**

pulmo,onis m – stem – **pulmon**- (lung)

EXERCISES

I. Define the declension of nouns:

ala, ae f; facies, ei f, pars, partis f; nervus, i m; magister, tri m; sphincter, eris m; plexus, us m; ramus, i m; colon, i n; ligamentum, i n; dens, dentis m; foramen, inis n; genu, us n; cartilago, inis f; tuber, eris n; cervix, icis f; articulatio, onis f.

2. Distribute the following nouns according to their declensions:

Vertebra, ae f; tympanum, i n; systema, atis n; arcus,us m; tempus, oris n; linea, ae f; facies, ei f; sella, ae f; diaphragma, atis n; pubes, is f; cornu, us n; ostium, i n, incus, udis f; sulcus, i m, corpus, oris n.

3. Write the endings of the Genitive singular; define the gender where possible :

Septum – sept… (II) ganglion, gangli… (II)

Zygoma – zygomat… (III) nasus, nas… (II)

Clavicula – clavicul… (I) genu – gen… (IV)

Caput, capit… (III) axis – ax… (III)

Plexus, plex… (IV) canalis, canal… (III)

Os – oss… (III) superficies – superfici… (V)

4. Finish the construction of the dictionary form of the nouns:

Septum (partition, membrane) lympha (lymph)

Encephalon (brain) concha (turbinated bone,a shell)

ductus, us ( duct) nasus, i (nose)

Arcus, us (arch) tuberculum (tubercle)

Mandibula ( mandible) ramus, i (branch)

Cranium (skull) ganglion ( neural knot )

Incisura (incision; notch) vertebra (vertebra)

Skeleton (skeleton) sinus, us (cavity, channel)

Cornu (horn) cerebrum ( cerebrum)

palatum (palate) humerus, i (humerus)

5. Analyse the terms: define the Case of each noun. Translate them into English and give the dictionary form of the nouns in Genitive:

Spina scapulae, skeleton membri, os cranii, crista tuberculi, caput fibulae, angulus mandibulae, basis cranii, tuber maxillae, sulcus sinus, facies acromii, caput radii, ligamentum patellae, collum dentis, tuberculum dentis.

6. Write the dictionary form of each noun. Translate the terms into Latin.:

A. 1. body of a vertebra 2. head of rib 3. aortic (of the aorta)\* arch

4. base of the skull 5. nasal (of nose)\* cavity 6. neck of the scapula 7. nasal (of nose)\* passage 8. mandibular (of mandible)\* notch 9. muscle of neck   
10. head of humerus 11. cranial (of the skull)\* suture 12. base of patella   
13. neck of radius

B. 1. crest of neck of rib 2. ligament of tubercle of rib 3. plate of

vertebral arch (arch of vertebra)\*

**NB*!****\* In Latin anatomical terminology these terms are designated by non-agreed attributes.*

7. Make analysis of the Latin terms: define the Case of each noun. Translate them into English: 1. Collum radii 2. caput humeri 3. os digiti 4. sulcus sinus 5. sulcus arteriae 6. basis patellae 7. vagina (sheath) musculi

8. arteria genus 9. facies maxillae 10. os cranii 11. caput mandibulae 12. foramen mandibulae.

MEMORIZE THE TERMS

1st Declension

1. ala, ae f – wing
2. aorta, ae f – aorta
3. arteria, ae f – artery
4. costa, ae f – rib
5. concha, ae f – shell
6. lamina, ae f – plate
7. crista, ae f – crest, ridge
8. lingua, ae f – tongue, language
9. mandibula, ae f – mandible, lower jaw

10. maxilla, ae f – maxilla, upper jaw

11. scapula, ae f – scapula

12. spina, ae f – spine, a thorn, backbone

13. patella, ae f – patella, knee cup

14. sutura, ae f – suture

15. tibia, ae f – tibia

16. fibula, ae f – fibula

17. incisura, ae f – notch

18. vertebra, ae f – vertebra

19. sella, ae f – saddle

20. fascia, ae f – fascia, a band or fillet – a sheet of fibrous tissue that envelops the body beneath the skin; it also encloses muscles and groups of muscles, and separates their several layers or groups.

2nd Declension

1. angulus, i m – angle 8. digitus, i m – finger

2. cavum, i n – cavity, channel 9. humerus, i m – humerus

3. cranium, i n – skull 10. radius, i m – radius

4. ligamentum, i n– ligament 11. membrum, i n - extremity,

limb

5. musculus, i m – muscle 12. nasus, i m – nose

6. septum, i n – septum, partition 13. collum, i n – neck, neck like

7. sulcus, i m – groove, sulcus; portion of an organ

14. tuberculum, i n – tubercle

3rd Declension

1. corpus, oris n – body
2. foramen, inis n – foramen; an aperture or perforation; opening
3. os, ossis n – bone
4. tuber, eris n – tuber; protuberance, eminence
5. caput, itis n – head
6. basis, is f – base
7. canalis, is m – canal; some tubular structure
8. dens, dentis m - tooth

4th Declension

1. arcus, us m –an arc; arch – in anatomy - any vaulted or arch-like structure,

2. ductus, us m – duct; canal, a tubular structure,

3. meatus, us m – a passage (as for air) or channel

4. processus, us m – process, a projection or outgrowth

5. sinus, us m – sinus; cavity or channel

6. cornu, us n – horn

7. genu, us n – knee

5th Declension

facies, ei f – face, surface

MEMORIZE LATIN PROVERBS AND PROFESSIONAL SAYINGS:

1. Non est medicina sine lingua Latina – There is no medicine without the Latin language.
2. Lapsus linguae – The slip of the tongue
3. Lapsus memoriae – Absent-mindedness; (error of memory)
4. Modus vivendi – The mode of life

**LESSON FOUR**

Tasks for Control

I. Give Latin equivalents of the following terms in their dictionary form:

Variant I Variant II

1. rib 1. cavity

2. groove 2. extremity, limb

3. tongue 3. crest

4. wing 4. nose

5. angle 5. suture

6. finger 6. body

7. foramen 7. bone

8. horn 8. knee

9. passage 9. duct

10. arch 10. tuber

II. Translate the terms into Latin:

Variant I Variant II

1. bone of the skull 1. arch of vertebra

2. head of mandible 2. foramen of mandible

3. ligament of scapula 3. head of radius

III. Answer the questions:

1. What does a dictionary form of a noun consist of?
2. How many declensions of nouns are there in Latin?
3. How can one determine the declension of a noun?
4. How can one recognize each of the five declensions?
5. How can one determine the gender of Latin nouns?
6. What is the gender of nouns ending in "-a" ? What is their ending in Genitive? Give examples.
7. What is the gender of nouns ending in "-um, -on"? What is their

ending in Genitive? Give examples.

1. What is the gender of most nouns ending in "-us"? What endings

may nouns in masculine have in Genitive and to what declensions may they belong?

9. How can one determine the stem of a noun of the 3rd declension?

EXERCISES

I. Write the dictionary form of each noun. Translate the terms into Latin using non-agreed attributes:

1. nasal septum 2. depression (fovea) of process 3. mandibular notch 4. pedicle (pediculus, i m) of arch of the vertebra 5. surface of the tubercle of the rib 6. plate of process 7. nucleus (nucleus,i m) of horn 8. bone of the skull.

2. Translate the terms into English, making their Grammar analysis:

1. Collum radii 2. caput humeri 3. os digiti 4. sulcus sinus 5. basis patellae 6. arteria genus 7. musculus corporis 8. arcus aortae 9. caput mandibulae 10. foramen mandibulae 11. facies maxillae 12. tuberculum humeri.

Answer the questions:

1. What is the function of a noun in Genitive within an anatomical term?

2. In what ways is it translated into English?

**ADJECTIVE**

An attribute, expressed by an adjective, MUST HAVE AGREEMENT in number, gender and Case with the corresponding noun. As a rule, it is translated into English by an adjective.

**NB!** In the Latin language the word order in the terms with agreed attributes expressed by adjectives is reverse as compared with the term in English; that is, an adjective follows a noun in a Latin term.

e. g. *English*: pulmonary artery (adjective + noun)

*Latin*: arteria pulmonalis (noun + adjective)

*English*: occipital bone

*Latin*: os occipitale

Like nouns, adjectives have such grammar categories as number and Case, i. e. they are declined.

*Latin adjectives are declined according to the 1st, 2nd and 3rd declensions* and they have generic endings for masculine, feminine and neuter genders. For example: longus (m), longa (f), longum (n)

**The Dictionary form** of adjectives shows the form of an adjective in the masculine gender of the Nominative Case, then the endings of the feminine and neuter genders follow in the Nominative Case singular.

e. g.: longus, a, um (long)

liber, era, erum (free)

dexter, tra, trum (right)

**NB!**

Most adjectives ending in "-er" keep the letter "e" only in Nom. sing. of the masculine gender. In all other Cases and genders this letter is omitted, which means, that the stem of the word (the base) changes. In such case the Dictionary form of an adjective reflects the final part of the stem.

e. g.: sinist**er**, **tr**a, **tr**um (left) – stem – **sinistr**-

There are two groups of adjectives in Latin, which depends on the character of generic endings in the Nominative singular.

There are adjectives with three, two and one generic endings in Latin. The majority of Latin adjectives used in anatomical terms, are adjectives with endings "-us, -a, -um" and "-is, -e" (See the table)

**Adjective in the singular**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Group | Decl. | **Nominative**  m f n | **Genitive**  m f n | Dictionary Form (**DF**):  1) Nom. m, 2) f, 3) n. |
| 1 | 1  2 | **-a**  **-us -um**  **-er** | **-ae**  **-i -i** | longa (f)  longus (m)  longum (n)  ***DF: longus,a,um***  ruber (m)  rubra (f)  rubrum (n)  ***DF: ruber,bra,brum*** |
| 2 | 3 | **-is -is -e** | **-is -is -is** | brevis (m, f)  breve (n)  ***DF: brevis,e*** |

**NB!** Most of the adjectives in the Anatomical Nomenclature, having two generic endings "-is, -e", are formed from nouns with the help of the suffixes **"-al, -ar",** which have the meaning "pertaining to the structure, named in the root":

e. g. : costa + al + is, e - costalis, e - costal (relating to a rib)

vertebra + al + is, e - vertebralis, e - vertebral (relating to a

vertebra)

maxilla + ar + is, e - maxillaris, e - maxillary (relating to the

upper jaw)

***These suffixes are borrowed by the English medical language and became productive to designate relation to anatomical formations through adjectives*** (agreed attributes).

Besides suffixes -**al, -ar** mentioned above, it is worth while discussing some suffixes of the 1st group used in the medical terminology.

Compare their Latin and English equivalents; mind their meanings :

**-at** (us, a, um) **-- *possessing (*Engl. -- ate)**

**-os** (us, a, um) **-- *having plenty of (*Engl. - ous)**

**-iv** (us, a, um) **-- *able to* *do something*(Engl. - ive)**

**-id+e** (us, a, um) **-- *resembling* (Engl. - oid (al))**

**-id+al** (is, e) **-- *in the shape of* (Engl. - oid (al))**

**-in** (us, a, um) **-- *pertaining to* (Engl. - ine)**

**-ic** (us, a, um) **-- *pertaining to* (Engl. - ic)**

**-e** (us, a, um) **-- 1*) pertaining to* (Engl. – eal)**

***2) consisting of a substance (Engl. – eous)***

EXERCISES

I. Write the dictionary form of adjectives:

transversus, spinosus, latus, cervicalis, osseus, spinalis, ethmoidalis, obliquus, costalis, vertebralis, zygomaticus, orbitalis.

2. Construct adjectives in their neuter gender form:

longus, costarius, palatinus, sphenoidalis, frontalis, articularis, nutricius, ovalis, pelvinus, cerebralis.

3. Construct adjectives in their feminine gender form:

medianus, thoracicus, spongiosus, pterygoideus, mastoideus

4. Find adjectives, define their gender; comment on the use of suffixes in them; translate the terms into English:

Substantia compacta et substantia spongiosa, os temporale (of the temple), columna vertebralis, foramen vertebrale, facies articularis, processus articularis, processus transversus, cornu sacrale, crista sacralis, foramen sacrale pelvinum (pelvic), linea transversa, sutura squamosa, palatum durum (solid,hard).

5. Form Genitive singular of the adjectives:

Spinosus (m), spinosa (f), spinosum (n), spinalis (m), spinalis (f), spinale (n), transversus (m), transversa (f), transversum (n), osseus (m), ossea (f), osseum (n), ethmoidalis (m), ethmoidalis (f), ethmoidale (n), pterygoideus (m), pterygoidea (f), pterygoideum (n), sphenoidalis (m), sphenoidalis (f), sphenoidale (n).

6. Make analysis of the terms: define the part of speech and Case of every word. Translate the terms into English:

1. vertebra thoracica 2. corpus vertebrae thoracicae 3. sinus petrosus

4. sulcus sinus petrosi 5. os palatinum 6. lamina horizontalis ossis palatini 7. os ethmoidale 8. lamina orbitalis ossis ethmoidalis 9. arteria temporalis media 10. sulcus arteriae temporalis mediae 11. pars petrosa (pars, partis f - part) 12. facies partis petrosae 13. os occipitale 14. pars lateralis ossis occipitalis, 15. os sacrum 16. basis ossis sacri 17. caput fibulae 18. facies articularis capitis fibulae.

**AGREEMENT OF ADJECTIVES WITH NOUNS**

**Sequence of actions on agreement:**

1. Define the part of speech, Case and number of each word in the term.

2. Define the word order in the Latin term.

3. Write the Dictionary form of every word in the order corresponding to the Latin term.

4. Make agreement of adjectives with the corresponding nouns:

Choose the generic form of the adjective, keeping in mind, that adjectives, ending in ***–us, -er, -is*** may be used with the nouns of masculine gender; those ending in ***–a,* *–is* –** with the nouns of the feminine gender; and finally, adjectives, ending in ***–um, -e*** are used with the nouns of the neuter gender.

5. If you have more than one noun in the term, define the declension of the second noun in order to form its Genitive (from its Dictionary form).

6. If this second noun has an agreed attribute, expressed by an adjective, define the declension of this adjective in order to form its Genitive, keeping in mind, that the adjectives of the 1st group with the endings **us(-er), -a, -um** *obey the 1st and the 2nd declensions*, and the adjectives of the 2nd group with the endings -**is, -e** *obey the 3rd declension* (see the table).

7. Construct the term in the required form.

For example: Translate into Latin:*transverse ligament*

1. ligament (1) transverse(2)

noun, Nom. sing. (1) + adjective Nom. Sing. (2)

1. ligamentum, i **n**

2. transversus, a, **um**

ligament**um** transvers**um**

1 3 2

2*. squama of occipital bone*

Nom. Gen.

noun, Nom. sing.(1) + noun Gen. sing.(2) + adjective Gen.sing. (3). 1.squama, ae f - Nom.sing. - squama

2. os, ossis n - Gen. sing. - ossis

3. occipitalis, e - Gen sing. - occipitalis

Squama oss**is** occipital**is**

# EXERCISES:

1. Translate into Latin, making agreement between nouns and

adjectives:

Transverse (groove, line, ligament),

vertebral (canal, notch, foramen),

articular (process, surface, tubercle),

pterygoid (muscle, fossa),

palatal (process, bone, groove),

mastoid (process; part ),

frontal (angle, suture, tuber)

1. Translate the terms into English making agreement between nouns and adjectives:

Tuber (occipitalis, e; externus, a, um;), facies (articularis, e; carpeus, a, um), foramen (occipitalis, e; magnus, a, um), musculus (intercostalis, e; externus, a, um), ligamentum (dorsalis, e; profundus, a, um), ductus (hepaticus, a, um; communis, e), substantia (albus, a, um; niger, gra, grum).

3. Translate the terms into English; give the Dictionary forms of adjectives; Put the terms into the Gen.Case:

Scapula dextra, vena profunda, processus spinosus, processus articularis, foramen spinosum, foramen vertebrale, os nasale, os ethmoidale, facies articularis acromii.

4. Write the dictionary form of every word. Translate the terms into Latin :

A. oval foramen, middle temporal artery, transverse palatine suture, sacral horn, articular surface, iliac spine, iliac tubercle, medial sacral crest,

B. palatal tuber of the maxilla, articular tuber of the vertebra, articular process of the vertebra, jugular notch of the sternum,

C. ligament of the vertebral column, groove of the occipital artery, aperture (apertura, ae f) of the frontal sinus, squama of the occipital bone, arch of the thoracic passage (duct), groove of the radial nerve.

**NB!**

As you know, Latin and English adjectives are very much alike, the English ones preserving Latin roots and borrowing suffixes directly from the Latin language after dropping the Latin endings. It is especially typical for adjectives with the suffixes –**al /-ar; -ic; -iv-; -os-(ous); -at-; -oid.**

***Compare Lat/ Engl.*** : cervicalis – cervical; mandibularis - mandibular;

pelvicus – pelvic; progressivus – progressive; cystosus – cystous;

digitatus – digitate(d); mastoideus – mastoid, etc.

So, the usual rule for translating Latin adjectives into English is just dropping Latin endings *(-us,a,um* or *-is,e).*

Nevertheless, in some cases there is no direct correlation between Latin and English adjectives and you cannot rely on your knowledge of Latin suffixes. It happens when we either find no suffix in a Latin adjective (I)\*, or it contains a suffix, which is not recognized by the English language as an adjective determinant (like suffix **–gen-** (I) or -***e-***: II,III)\*. In this case the choice of a suffix in English is in favor of suffixes ***–al/-ar;-ous; -ic****, (see the examples*), which are recognized as adjective suffixes both in Latin and in English.

\*Examples:

1. Internus, a, um – intern**al**

Externus, a, um – extern**al**

homo**gen**us, a, um – homogen**ic** / homogen**ous**

1. *relating to some organ:*

Laryng**e**us, a, um - laryng**eal**

Pharyng**e**us, a, um - pharyng**eal**

Oesophag**e**us, a, um – esophag**eal**

Calcan**e**us,a, um - calcan**eal**

Interphalang**e**us, a, um – interphalang**eal**

Peron**e**us, a, um - peron**eal**

1. *Containing some tissue:*

Oss**e**us,a, um- oss**eous**

Cutan**e**us, a, um **-** cutan**eous**

Tendin**e**us, a, um - tendin**ous**

Cartilagin**e**us**,** a, um – cartilagin**ous**

MEMORIZE THE WORDS:

Nouns

1. clavicula, ae f - clavicle

2. squama, ae f - squama; scale

3. nucha, ae f - nape, back of the neck

4. ulna, ae f - ulna; the bone of the elbow

5. columna, ae f - column

6. fossa, ae f - fossa - trench, ditch, a depression

longitudinal in shape;

7. fovea, ae f - fovea - a cup-shaped depression or pit;

8. palatum, i n - palate – roof of the mouth;

9. vestibulum, i n - vestibule – enclosed space like a lobby;

10. pars, partis f - part

11. nervus, i m - nerve

Adjectives, group 1

1. osseus, a, um - osseous, bony

2. palatinus, a, um - palatal, palatine

3. pterygoideus, a, um - pterygoid - wing-shaped;

4. thyreoideus, a, um - thyroid - in the shape of a shield;

5. spinosus, a, um - spinous; thorny

6. rectus, a, um - straight

7. sinister, tra, trum - left

8. dexter, tra, trum - right

9. thoracicus, a, um - thoracic

10. transversus, a, um - transverse

11. venosus, a, um - venous

12. zygomaticus, a, um - zygomatic

13. albus, a, um - white

14. niger, gra, grum - black

15. sacer, cra, crum - sacral (for “bone”)

16. liber, era, erum - free

17. iliacus, a, um - iliac

18. mastoideus, a, um - mastoid; breast shaped

19. obliquus,a,um - oblique, slanted

20. internus, a, um - internal

21. externus, a, um - external

Adjectives, group 11

1. alaris, e - relating to a wing, winged - alar

2. articularis, e - relating to a joint - articular

3. cervicalis, e - relating to the neck - cervical

4. cerebralis, e - relating to the larger brain - cerebral

5. ethmoidalis, e - resembling a sieve - ethmoid

6. frontalis, e - referring to the frontal bone - frontal

7. mandibularis, e - relating to the lower jaw - mandibular

8. maxillaris, e - relating to the upper jaw - maxillary

9. nasalis, e - relating to the nose - nasal

10. occipitalis, e - relating to the occiput - occipital

11. sphenoidalis, e - resembling a wedge - sphenoid

12. temporalis, e - relating to the temple - temporal

13. vertebralis, e - relating to a vertebra - vertebral

14. jugularis, e - relating to the throat or neck - jugular

15. sacralis, e - relating to the sacrum - sacral

16. spinalis, e - spinal - 1. relating to any spine or spinous

process; 2. relating to the vertebral column.

MEMORIZE LATIN SAYINGS AND PROFESSIONAL

EXPRESSIONS:

1. Exitus letalis - lethal exit, death

2. Casus ordinarius - an ordinary case

3. Casus extraordinarius - an extraordinary case

4. Omne principium difficile - every beginning is difficult

**LESSON FIVE**

TASKS FOR CONTROL

1. Give Latin equivalents of the following terms ( in their Dictionary form):

Variant I Variant II

1. relating to the sacrum 1. osseous

2. ethmoid 2. sphenoid

3. white 3. black

4. straight 4. transverse

5. temporal 5. nasal

6. frontal 6. occipital

7. articular 7. sacral (bone)

8. right 8. left

9. pterygoid 9. alar

10. thyroid 10. free

II. Write the dictionary form of every word. Translate the terms into Latin:

Variant I Variant II

1. spinous foramen 1. temporal bone

2. transverse line 2. sacral horn

3. articular surface 3. vertebral column

4. sacral bone 4. squamous suture

5. squama of the occipital bone 5. arc of the thoracic duct

III. Answer the questions:

1. What grammar categories has an adjective?

2. What information can be obtained from the Dictionary form of an adjective?

3. What is the difference between the two groups of adjectives?

4. How many and what generic endings may adjectives have?

5. What is the word order in the terms having agreed attributes?

EXERCISES:

I. a) Distribute the Latin names of bones into three groups:

1) One-word names;

* 1. Names with agreed attributes;
  2. Names with non-agreed attributes.

Os parietale, os temporale, maxilla, os frontale, os palatinum, os pubis (pubes, pubis f), os occipitale, humerus, ulna, os coxae, os lacrimale, calcaneus, os hyoideum, os zygomaticum, radius, os coccygis (coccyx, ygis m), os sacrum, os nasale, os sphenoidale, patella, os ethmoidale, os scaphoideum, (os naviculare), os ischii.

b) Recollect English equivalents of the terms given above.

2. a) Define the gender of the adjectives in the Nominative singular, construct their Dictionary form:

Mastoideus, brevis, alveolare, ruber, propria, obliquum, parva, planus, intermuscularis, cerebrale, album.

b) Put the adjectives given above into the Genitive Case singular.

**THE COMPARATIVE DEGREE OF ADJECTIVES**

Like in English, there are three Degrees of Comparison of adjectives in Latin: the Positive degree, the Comparative degree and the Superlative degree. Only qualitative adjectives may have Degrees of Comparison: e. g. small, profound, round, good, etc.

The Comparative degree of adjectives is formed by adding the suffix **-ior** for masculine and feminine and the siffix **-ius** for the neuter gender to the base of the Positive degree.

e.g.: longus, a, um - longior (m, f); longius (n)

ruber, bra, brum - rubrior (m, f); rubrius (n)

brevis, e - brevior (m, f); brevius (n)

**NB!** The sign of the Comparative degree is the suffix **-ior** for the masculine and feminine genders and the suffix **-ius** for the neuter gender.

**The Dictionary form** ***of the Comparative degree is represented by the Nominative Case of the masculine and feminine genders (-ior) and the ending of the neuter gender (-ius),***

e. g.: longior, ius - longer

brevior, ius - shorter

In the medical terminology the Comparative degree of the adjectives “large, small, superior, inferior, anterior and posterior” is often used. There are some pecularities in the formation and use of these adjectives.

1. The Comparative degree of adjectives “ large” - magnus,a, um; and “small” – parvus, a, um is formed in a different way, i. e. by changing their stems (like that of the adjectives “good” and “bad” in English). Memorize the forms of the Positive and Comparative degrees of these adjectives:

Positive - magnus, a, um (great); parvus a, um (small/little)

Comparative - major,ius (greater); minor, minus (lesser)

2. *In the Anatomical terminology* the Comparative degree of these adjectives denotes *twin anatomical formations* (ala major et ala minor; tuberculum majus et tuberculum minus) and when describing an *odd anatomical formation*, we use the Positive degree of these adjectives. (foramen occipitale magnum).

*Remember, that the majority of anatomical formations are twins, that is the reason for extensive use of the adjectives major,ius (greater) and minor,us (lesser) in Anatomy.*

3. In Latin the adjectives with the meaning “superior, anterior, posterior, inferior” have no form of the Positive degree. They have the form of the Comparative degree and designate the localization of one anatomic formation in relation to another one.

Superior, ius - superior (higher)

inferior, ius - inferior (lower)

anterior, ius- - anterior (in front of)

posterior, ius - posterior (behind)

**NB!** The above mentioned adjectives may *sometimes* take the final position in a term (the so-called “anatomical” word order), but they have agreement with the first noun (in Nominative):

e. g.: foss**a** cranii anter**ior** (Nom., feminine gender)

The adjectives in the Comparatives degree are declined according to the 3rd declension, that is, they take the ending –**is** in Genitive, which is added to the form of the Nominative Case, ending in **-ior:**

e. g.: longior (m, f) – Gen. sing — long**ioris**

long**ius** (n) - Gen. sing — long**ioris**

**NB!** 1. The form of the Genitive singular is the same for all three genders in the Comparative degree (see the examples);

2. a) the base of an adjective in the Comparative degree is defined from the form in the Genitive singular;

* 1. it is the same for all the three genders.
  2. it coinsides with the form in the Nominative singular for

masculine and feminine genders:

e. g: Nom. sing. **major** (m, f) majus (n)

Gen. sing. **major**is (m, f, n)

Base: **major-**

**Adjectives in the Comparative degree:**

|  |  |  |  |
| --- | --- | --- | --- |
| Declension | **Nominativus**  **m f n** | **Genetivus**  **m f n** | **Dictionary form:**  Nom. m, f, n |
| **3** | ***Base of the***  -**ior -ior -ius**  longior, longior, longius | ***Positive degree*** *+*  -**ioris -ioris -ioris**  long**ioris**  *m,f,n* | **long**us,a,um  (long)  long**ior, ius**  *m,f n*  (long**er**) |

EXERCISES:

I. Make up the dictionary form of the adjectives in the Comparative degree:

Minor, major, anterior ,superior, inferior, posterior, simplicior, longior, brevior, albior, rubrior

2. Form Genitive singular of the adjectives in three genders; single out the base:

Major, ius; minor, us; inferior, ius; superior; ius; posterior, ius; anterior, ius; brevior,ius; longior, ius; latior,ius; albior,ius; nigrior,ius.

3. Put the terms into the Genitive singular. Translate them into English:

Processus superior, incisura superior, foramen superius,arcus posterior, facies posterior, ligamentum posterius, sulcus major, ala major, caput majus, cornu majus et minus, incisura ischiadica major, tuberculum obturatorium posterius.

4. Make agreement between adjectives and nouns:

Superior (process, notch, foramen);

posterior (arch, surface, ligament);

greater (groove, wing, head, horn);

anterior (tubercule, groove, crest, ligament, foramen);

inferior (sinus, spine);

lesser (tubercle, foramen, fossa, horn).

5. Make Grammar analysis of the terms. Translate them into English:

**A.** Spina nasalis anterior, sulcus palatinus minor, fissura orbitalis superior, vena laryngea inferior, facies articularis anterior, linea temporalis superior, tuberculum posterius atlantis (atlas,atlantis f – atlas,1st cervical vertebra), processus articularis superior, linea nuchae superior, fossa cranii anterior, ala major ossis sphenodalis, foramen ischiadicum minus, arcus posterior atlantis, ligamentum capitis fibulae posterius, tuberculum humeri minus, ligamentum transversum scapulae superius.

**B.** Sulcus sinus petrosi inferioris, facies temporalis alae majoris, ramus dexter venae portae, processus articularis superior vertebrae lumbalis, ostium venae cavae inferioris, sulcus nervi petrosi majoris, skeleton membri superioris, ala minor ossis sphenoidalis, ligamentum capitis fibulae anterius, meatus nasi inferior.

6. Write the Dictionary form of each word. Translate the terms into Latin:

**A.** Greater palatine canal, inferior nasal shell, anterior lacrimal crest, lesser petrosal (petrous) nerve, inferior thyroid tubercle, posterior longitudinal ligament, inferior laryngeal artery, greater palatine groove, superior transverse ligament.

**B.** Greater palatine foramen, posterior fibular (of fibula) surface, superior thyroid artery, superior cervical ganglion, greater petrosal nerve, posterior ethmoid foramen, greater sciatic notch, anterior gluteal line (gluteus,a,um), inferior articular process, posterior superior iliac spine.

# MEMORIZE THE WORDS

Nouns

1st declension

1. bursa, ae f - bag
2. vena portae, (Gen. – venae portae) - portal vein
3. medulla spinalis - spinal cord

2nd declension

1. cerebellum, i n - cerebellum

1. cerebrum, i n - cerebrum, larger portion of the brain
2. encephalon, i n - brain
3. ganglion , i n - ganglion - knot, node (neural),
4. oculus, i m - eye
5. ostium, i n - orifice, entrance

7. ramus, i m - branch

Adjectives

1st group

1. cavus, a, um - hollow
2. laryngeus, a, um - laryngeal
3. pharyngeus, a, um - pharyngeal
4. profundus, a, um - deep, profound
5. cutaneus, a um - cutaneus, relating to the skin
6. ischiadicus, a um - ischial or sciatic
7. squamosus, a, um - squamous; squamate; scaly - covered

with scales;

1. petrosus, a, um - petrous - relating to the petrous portion

of the temporal bone, petrosal

1. trapezoideus, a um - trapezoid - resembling a trapezium

10. magnus, a um - large, great

11. parvus, a, um - small

12. latus, a ,um - broad

13. longus, a, um - long

2nd group

1. dorsalis, e - dorsal - pertaining to the back;
2. ventralis, e - ventral - pertaining to the front;
3. parietalis, e - parietal –relating to the wall of any cavity;
4. facialis, e - facial – pertaining to the surface or face;
5. muscularis, e - muscular – pertaining to a muscle.

Adjectives in the Comparative Degree:

1. major, ius - greater; major
2. minor, us - lesser; minor
3. superior, ius - superior (above)
4. inferior, ius - inferior (below)
5. anterior, ius - anterior (in front of)
6. posterior, ius - posterior (behind)

Learn Latin sayings and professional expressions:

1. Status quo - the existing (present) state;

2.Tabula rasa - a clean board (may be addressed to a person,

who knows nothing in a certain field of

knowledge);

3. Terra incognita - an unknown land (an unknown field of

knowledge is implied).

**LESSON SIX**

# TASKS FOR CONTROL

I. Give Latin equivalents of the following terms in their Dictionary form:

Variant 1 Variant II

1. brain 1. larger brain

2. pharyngeal 2. laryngeal

3. mastoid 3. sciatic

4. dorsal 4. ventral

5. deep 5. petrous

6. neural knot 6. nerve

7. eye 7. orifice

8. squamous 8. trapezoid

9. muscular 9. facial

10. hollow 10. cutaneous

# II Write the Dictionary form of each word. Translate the terms into Latin and put them into the Gen. sing.:

1. spinal cord 1. portal vein

2. greater palatal canal 2. lesser petrosal nerve

III. Translate into Latin, form the Positive and Comparative degrees of the adjectives:

1. small 1. large

2. long 2. broad

IV Answer the questions:

1. How can one recognize the form of the Comparative degree of adjectives?
2. What does the Dictionary form the Comparative degree consist of?
3. According to what declension is the form of the Comparative degree of adjectives changed?
4. How is the base of an adjective in the Comparative degree singled out?

5. Recollect adjectives having no form of the Positive degree. What is their meaning?

#### EXERCISES:

# I. Fill in the blanks, put the terms into the Gen. Sing, translate them into English:

Fissura orbital … infer…

Foramen ethmoidal…anter…

Processus articular… infer…

Ligamentum longitudinal…anter…

Spina tympanic…min…

Linea glute…anter…

Tuberculum thyroide…super…

1. Write the dictionary form of each word. Translate the terms into Latin

Orifice of the inferior vena cava, large occipital foramen, anterior surface of the ulna, anterior horn of the spinal cord, anterior iliac spine, superior head of the pterygoid muscle, groove of the inferior petrosal sinus, greater wing of sphenoid bone.

# **THE SUPERLATIVE DEGREE OF ADJECTIVES**

The Superlative degree of all the adjectives, besides those ending in –**er, a, um**\*, is formed by adding the suffix **–issim**- and the endings **–us, a, um** to the base of the Positive degree, for example:

Longus, a, um - long +-**issim** +us, a, um - long**issim**us, a, um

Brevis,e - brev + **-issim** +us, a, um - brev**issim**us, a, um

**NB!** The Superlative degree has the same generic endings and the same dictionary form as the adjectives of the 1st group in the Positive degree. The adjectives in the Superlative degree are therefore declined according to the 1st and 2nd declension.

For example:

Nom. Sing. - musculus longissimus (the longest muscle)

Gen. Sing. - musculi longissimi (of the longest muscle)

Nom. Sing. - linea longissima (longest line)

Gen. Sing. - lineae longissimae (of the longest line)

**Memorize** three Degrees of Comparison of the adjectives with the meanings “small” and “large”:

**Positive Comparative Superlative**

***magnus, a, um - major, ius -maximus, a, um (****the greatest ,*

*highest)*

***parvus, a, um; -minor, us -minimus, a, um*** *(the smallest,*

*the least)*

The Superlative degree or the adjective **“superior, ius”** is

**“ *supremus, a, um “(****supreme, the highest).*

Compare: dosis maxima ( the highest dosage);

linea suprema ( the highest line)

Sometimes, the adjectives “maximus, a ,um” and “supremus, a, um” are translated into English in the same way: “the highest”. But “maximus” is used when the highest quantity or amount is characterized, and “supremus” – when the position is meant.

**NB!** \* The Superlative Degree of adjectives ending in –**er, a, um** is formed by adding the suffix **–rim-** to the form of the masculine gender, for example:

ruber,bra,brum – ruber **+ rim** + us,a,um - ruber**rim**us,a,um.

EXERCISE 1

Write the dictionary form of each word. Translate the terms into Latin:

Broadest muscle of the back, bag of the broadest muscle of the back, supreme line of the nape, longest muscle of the head, highest turbinated bone (nasal shell), gluteus maximus muscle, gluteus minimus muscle, longest muscle of the neck, little (the smallest) finger,short muscle of the little finger.

**COMPOUND ADJECTIVES**

Compound adjectives include two or three roots (bases) and are used to denote anatomical formations (nerve, vessel, etc), connecting two organs or belonging to two organs. The combining vowel *“-o-”* is used to connect the bases of compound adjectives, for example, - nervus musculocutaneus ( musculocutaneous nerve).

*Mind, that Latin bases are preserved in the English equivalents of such adjectives followed by English equivalents of Latin suffixes:*

Compare: Latin: plexus lumbosacr**al**is**;** musculus sternothyr**oide**us**.**

English: lumbosacr**al** plexus; sternothyr**oid** muscle.

# EXERCISE 2

Analyze the structure of the terms, translate them into English:

Plexus lumbosacralis, ganglion pterygopalatinum, sutura zygomaticomaxillaris, ductus nasolacrimalis, musculus sternothyroideus, sinus sphenoparietalis, sulcus parietooccipitalis, musculus stylopharyngeus, plexus cervicobrachialis, ligamentum sacrococcygeum dorsale profundum.

# **SUBSTANTIVATION OF ADJECTIVES**

The transition of adjectives and adverbs into the category of nouns is called substantivation. The substantivates preserve the gender of the nouns, with which the “former” adjective had an agreement.

There are several groups of substantivates used in the anatomical terminology, two of them are the following :

1. ***The names of the intestines:***

They are substantivated adjectives of the neuter gender:

e. g. : rectum, i n - rectum, the straight gut;

The word kept in mind is “intestinum, i n”

Thus, ***in Latin all names of intestines are nouns of the neuter gender of the second declension.***

***Exception:*** noun + adjective word combinations:

***small intestine*** - **intestinum tenue**

***large intestine*** - **intestinum crassum**

***2.******The names of membranes\*.***

They are nouns of the feminine gender, first declension:

**Arachnoidea, ae f** ( the word kept in mind here is – mater, tris f )

– English - **arachnoid membrane;**

**Conjunctiva, ae f** ( tunica conjunctiva )

– English – **conjunctive tunic**.

**Cornea, ae f** - English *-* ***cornea*** – tough transparent part of

the eyeball, covering the pupil and iris;

**Mucosa, ae f** – English – **mucous tunic**.\*\*

**(tunica mucosa )**

**N.B.!** \* **A membrane** – skin or membrane that covers parts of the body.In the medical language there are several equivalents for the English term “membrane”. They are: *membrana, ae f* - a thin sheet or layer of tissue; the lining of a cavity, septum or partition; *tunica, ae f* – coat, covering; *septum, i n* – a thin wall dividing two cavities; *mater, tris f* – medullary tunic.

**\*\*The English term “mucous tunic (or membrane)” has two equivalents in Latin!** When used in the first position in a term **(Nom.)** , it is translated into Latin as a combination of the noun “tunica,ae f” with the djective “mucosus,a,um” **– tunica mucosa.**

If it takes any position in a term, except the first one **(Gen.)** – it is translated by the noun **–** mucosa, ae f **– Gen. - mucosae**

Compare: *tunica mucosa* tracheae (Nom.)

lamina muscularis *mucosae* oesophagi (Gen.)

**ADJECTIVES WITH ONE GENERIC ENDING** are included into the 2nd group of adjectives,as they are declined according to the 3rd declension, but they have the same form for three genders in the Nominative Case singular and change their base in the Genitive Case singular. Mind their usage!

Nom. sing. **simplex** (m, f, n) Gen. sing. **simplicis** (m, f, n) (simple)

**teres** (m, f, n) **teretis** (m, f, n) (round)

**biceps (**m, f, n) **bicipitis** (m, f, n) (biceps)

EXERCISES:

I. Put the terms into the Gen. sing, write the dictionary form of adjectives:

Os longum, os breve, ligamentum teres, ligamentum latum, cornu majus, musculus teres major, crus (limb, leg-like structure) osseum simplex, musculus quadriceps, ductus sublingualis major, glandula alveolaris simplex.

2. Make Grammar analysis: define the part of speech and the Case of each word. Translate the terms into English:

Arcus palatoglossus, lamina muscularis mucosae oesophagi, musculus latissimus dorsi, cavum peritonei, tunica muscularis oesophagi, tunica mucosa tracheae, caput breve musculi bicipitis brachii, corpus ossis hyoidei, spina iliaca anterior superior, tuberculum humeri minus, caput longum musculi bicipitis femoris, flexura duodenojejunalis.

3. Translate the terms into English, define the gender and Case of adjectives. Mind that the base of an adjective with one generic ending is changed in the Gen. sing:

Musculus triceps, musculus teres minor, bursa musculi teretis majoris, musculus biceps femoris, caput longum musculi tricipitis brachii, glandula alveolaris simplex, intestinum tenue.

4. Write the Dictionary form of each word. Translate the terms into Latin:

Ampule of the rectum (ampulla, ae f), fold of the duodenum, muscular membrane of the small intestine, sigmoid colon (sigmoideus, a, um), right flexion of the colon, iliac tubercle, gastroduodenal artery, supreme line of the nape, greater round muscle, round ligament of the uterus, simple joint, iliac crest, intestinal surface of the uterus, stylohyoid muscle, right jugular trunk, sacral flexion of the rectum, bottom of the uterus, transverse ligament of the perineum.

# MEMORIZE THE TERMS:

Nouns:

1. mucosa, ae f – mucous tunic or membrane

2. tunica, ae f – any tunic

3. conjunctiva, ae f – conjunctive tunic

4. plica, ae f – fold, crease

5. flexura, ae f – flexion

6. plexus, us m – plexus; a brade (a network or interjoining

of nerves and blood vessels or of lymphatic

vessels)

7. colon, i n – colon

8. duodenum, i n – duodenum

9. ileum, i n - ileum; the third portion of the small

intestine

10. intestinum, i n – intestine

11. oesophagus, i m – esophagus – the portion of the digestive

canal between the pharynx and stomach.

12. periton(a)eum, i n – peritoneum (membrana abdominis)

13. rectum, i n – rectum, the straight gut

14. uterus, i m – uterus, womb

15. ventriculus, i m – ventricle (of the heart, brain, etc. )

16. anus, i m – anus

17. caecum, i n – cecum, the blind gut

18. jejunum, i n - jejunum, the empty gut

19. fundus, i m – bottom

20. truncus, i m - trunk

21. brachium, i n – shoulder

22. dorsum, i n – the back of the body

23. glandula, ae f - gland

24. perineum, i n - perineum – the area between the thighs

extending from the coccyx to the pubis

and lying below the pelvic diaphragm.

25. ampulla, ae f - ampule; ampoule; a hermetically sealed

container, usually made of glass.

26. capsula, ae f - capsule; 1.a fibrous tissue layer enveloping a tumor, esp. if benign; 2. a solid dosage form in which a drug is enclosed in a soluble container or “shell”

27. articulatio, onis f - articulation, joint.

Adjectives

1st group

1. hyoideus, a um – hyoid (denoting *os hyoideum*)\*

2. hypoglossus, a, um – hypoglossal (denoting *nervus*

*hypoglossus*)\*

3. iliacus, a, um – iliac, relating to the ilium (groin, flank)

4. maximus, a, um – maximum, the greatest; the highest

5. minimus, a, um - minimum, the least, the smallest

6. mucosus, a, um - mucous

7. supremus, a, um - supreme, the highest

8. gluteus, a, um - gluteal, relating to the buttocks

9. sigmoideus, a, um - sigmoid, resembling the Greek letter “σ”

10. rotundus, a, um - round

2nd group

1. intestinalis, e - intestinal

2. vaginalis, e – vaginal

3. sublingualis, e – sublingual\*

4. tenuis, e – thin (used in the name of the small

intestine).

5. biceps,bicipitis - biceps; bicephalous (adj). (bi – two;

cephalo- head);

6. triceps,tricipitis - triceps (adj); tricephalous;

7. quadriceps, quadricipitis - quadriceps (adj); fourcephalous;

8. simplex, icis - simple

9. teres, etis - round\*\*

\* ***NB!*** Latin adjectives *hyoideus, hypoglossus, sublingualis* have the common meaning: “ located under the tongue”, but the first one designates “the bone located under the tongue”, the second one – “the nerve located under the tongue”, and the third one has a more general meaning of “any structure located under the tongue, except the two mentioned above”.

Compare: os *hyoideum* (hyoid bone)

nervus *hypoglossus* (hypoglossal nerve)

canalis *sublingualis* (sublingual canal)

***\*\**** *English adjective “round” has two equivalents in Latin: in the medical terminology they use the adjective “teres,etis“ in the names of muscles and ligaments; and the adjective “rotundus,a um” – in the names of structures, esp.openings*

Compare: ligamentum *teres* uteri

Foramen *rotundum* ossis sphenoidalis

MEMORIZE LATIN SAYINGS AND PROFESSIONAL

EXPRESSIONS:

1. Status praesens aegroti - the present state of the patient;

2. Usus est optimus magister - experience (usage) is the best teacher;

3. Ars longa, vita brevis est - art is eternal, and life is passing (short).

**LESSON SEVEN**

TASKS FOR CONTROL:

1. Give Latin equivalents of the following terms in their Dictionary form

Variant I Variant II

1. the largest 1. the smallest

2. intestine 2. stomach

3. fold, crease 3. mucous membrane

4. flexion 4. bottom

5. plexus 5. esophagus

6. large intestine 6. hyoid

7. uterus 7. small intestine

8. tooth 8. duodenum

9. hypoglossal 9. trunk

10. shoulder 10. the back

II. Write the Dictionary form of each word. Translate the terms into Latin:

# Variant I Variant II

1. round ligament 1. simple gland

2. the broadest muscle of the back 2. greater round muscle

3. simple alveolar gland 3. groove of the

smallest tubercle

# III. Make Grammar analysis of the terms. Translate them into English:

Caput longum musculi tricipitis Caput breve musculi bicipitis

IV. Answer the questions:

1. What is the sign of the Superlative degree of adjectives?
2. In what way are adjectives in the Superlative degree declined?
3. What adjectives are called compound?
4. What is the result of substantivation of adjectives?
5. Why are the names of intestines related to the neuter gender?
6. What gender are the names of membranes?

**REVISION OF THE MATERIAL OF LESSONS 3-6**

**Latin Adjective Singular**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Group | Decl. | Nominativus m f n | Genetivus m f n | Dictionary Form:Nom. m,f,n |
| 1 | 1,2 | **-us -a -um** **-er -a -um** | **-i –ae -i** | longus,a,um niger,gra,grum |
| 2 | 3 | **-is -is -e** | **-is -is -is** | brevis, e |
| The Comparative Degree | 3 | *Base of the***-ior -ior -ius** | *Positive Degree +***ioris -ioris -ioris** | longior,iussuperior, ius |
| The Superlative Degree | 1,2 | *Base of the* *+ suffix*  -**us -a -um** | *Positive Degree +****-issim- +*** **-i -ae -i** | longissimus, a,um |

# EXERCISES

### 1. Define the declension of nouns:

Area, ae f; canalis, is m; eminentia, ae f; tuberositas, atis f; carpus, i m; acetabulum, i n; superficies, ei f; ganglion, i n; pectus ,oris n; auditus,us m; vomer, eris m; fonticulus, i m; cornu, us n; recessus, us m; chorda, ae f.

2. Write the dictionary form of the nouns:

Orbita, periosteum, colon, genu, ostium, vagina, encephalon, bursa, stratum, junctura, tympanum, os, corpus, foramen, pars, caput, crus, dens; ganglion.

3. Write the dictionary forms of the adjectives:

Anatomicus, arteriosus, facialis, cavus, spinalis, transversus, transversalis, costarius, costalis, tenuis, gastricus, ulnaris, palatinum, canina, molare, dentale, communis, teres, biceps, triceps, simplex, duplex.

4. Form Genitive singular of each generic form of the adjectives;

Rectus, a, um; tympanicus, a, um; incisivus, a, um; superficialis, e; mentalis, e; pyramidalis, e; sphenoidalis, e; major, jus; minor, us; anterior, ius; posterior, ius; superior, ius; inferior,ius.

5. Make agreement between nouns and adjectives in brackets;

Vertebra ( cervical, thoracic, sacral, dorsal)

Bone (frontal, palatine, nasal, ethmoid, occipital, hyoid, zygomatic,

sacral)

Process (transverse, articular, ethmoid, palatine, frontal, temporal,

sphenoid)

Foramen (round, occipital, spinous, vertebral, ethmoidal, frontal,

greater, palatine);

Crest (transverse, tympanic, sphenoid, nasal, iliac, ethmoid);

Depression (oval) (iliac, jugular, lesser, supraclavicular, mandibular,

mastoid, petrosal, pterygoid);

Fovea (superior, anterior,articular,ethmoid,temporal)

Surface (lateral, medial, dorsal of scapula, cerebral, inferior,

articular, temporal)

Spine (anterior, nasal, posterior iliac)

Muscle (teres major, teres minor, articular, biceps, brachioradial,

brachial,cephalopharyngeal, the longest)

Ligament (gastrocolic, iliofemoral, thyrohyoid, posterior,

sacrococcygeal, round, transverse)

Horn ( anterior, sacral, superior)

Groove (aortic, ethmoidal, superior, frontal, mediane, frontal,

palatine, temporal, transverse, occipital)

6. Make agreement between nouns in brackets and adjectives:

Greater (wing, tubercle, foramen)

Inferior (sinus, notch, foramen)

Lesser (nerve, artery, body)

Anterior (plate, ligament, part)

Superior (passage, surface, foramen, shell, line)

7. Analyze the structure of the terms. Translate them into English:

**A.** Facies maxillaris, tuber maxillae, tunica mucosa tracheae, sulcus sinus petrosi inferioris, foramen palatinum minus, facies temporalis alae majoris, processus maxillaris conchae nasalis inferioris, caput superius musculi pterygoidei lateralis.

**B.** meatus nasi inferior, ligamentum longitudinale anterius columnae vertebralis, linea nuchae superior, flexura sacralis recti, sulcus lacrimalis processus frontalis maxillae, fovea articularis processus superioris, skeleton membri inferioris liberi, crista tuberculi minoris, spina ossis sphenodalis,ostium venae cavae inferioris.

8. Write the Dictionary form of each word. Translate the terms into Latin:

**A**. Temporal bone, greater round muscle, body of thoracic vertebra, frontal bone, lesser round muscle, zygomatic process of the frontal bone, palatine bone, petrosal sinus, groove of the petrosal sinus, lateral pterygoid muscle, anterior spinal artery, venous plexus, a greater straight muscle of the head, a broad ligament of the uterus, a superior cervical neural knot/

**B.** muscular plate of the mucous membrane of the esophagus, right jugular trunk, sciatic bag of the gluteus maximus muscle, greater sciatic foramen, a lesser tubercle of the humerus, a lateral horn of the spinal cord, superior and middle nasal shell, alar process of the ethmoid bone, mandibular notch (non-agreed attr.), ethmoid crest of the frontal process of the upper jaw.

**LESSON EIGHT**

## THE THIRD DECLENSION OF NOUNS

As you remember, we define the gender of the nouns of the 1, 2, 4, and 5th declensions from their endings in the Nominative case singular. It is more difficult to define the gender of the nouns of the 3rd declension due to a large number of pecularities.

They are:

1. Nouns of three genders with the ending -**is** in the Genitive singular are attributed to the 3rd declension:

e. g. : pars, partis f ;

crus, cruris n

apex, icis m

2. In the Nominative singular they may have various endings, though they are related to the same gnder:

e. g. : pulmo (m)

cortex (m)

paries (m)

3. Most nouns have different bases in the Nominative and Genitive singular,

e. g. : Nom. cort-ex: rad-ix: cap-ut

Gen. cortic-is;radic-is capit-is

The Dictinory form of such nouns shows the base ending before the ending **-is;**

e. g. : apex, icis m (base –apic-)

tempus, oris n (base –tempor-)

cartilago, inis f (base –cartilagin- )

You won’t be able to change the Case and number of the noun without defining the base of it in the Genitive singular. Thus, *the base of a noun of the 3rd declension corresponds to its form in the Genitive Case singular but without the ending –****is.*** The noun endings in all the Cases and numbers are attached to this base.

4. There are nouns with an equal number of syllables in the Nominative and Genitive singular, and there are nouns which have an extra syllable in the Genitive as compared to the Nominative. The last mentioned group includes this extra syllable into its Dictionary form as the base ending, e. g. : rete, is n (*equal number of syllables*), but

apex, icis m (*non equal number of syllables*)

EXERCISE

Single out the bases of the nouns with an equal and unequal number of syllables:

Os,ossis n; os,oris n; foramen, inis n; canalis, is m; regio, onis f; dens, dentis m; cutis, is f; radix, icis f; aponeurosis, is f; terminatio, onis f; tuber, eris n; tuberositas, atis f; cor,cordis n; axis, is m; vas, vasis n; pars, partis f; mors, mortis f; auris, is f; incus, udis f; crus, cruris n.

# **NOUNS OF THE MASCULINE GENDER**

The nouns of the 3rd declension having the endings:**-o, -or, -os, -er, -es, -ex** in the Nominative singular are attributed to the masculine gender. All of them have an unequal number of syllables in the Nominative and Genitive Singular, which is reflected in their Dictionary forms (see the table):

**Nouns of the Masculine Gender**

|  |  |  |
| --- | --- | --- |
| Nominative | Genitive | Dictionary Form |
| **-o**  **-or**  **-os**  **-er**  **-ex**  **-es (uneq. )** | **-onis**  **-inis**  **-oris**  **-oris**  **-(e)ris**  **-icis**  **-etis,-edis** | pulmo, onis m  homo, inis m  tumor, oris m  flos, oris m  vomer, eris m  venter, ntris m  apex, icis m  paries, etis m;  pes, pedis m |

N.B! There are some exceptions among the nouns of the 3rd declination. They are nouns having endings typical for one gender but attributed to some other gender by exception. The exceptions should be particularly well studied.

**MEMORIZE:**

**The exceptions from the masculine gender:**

**-os:** os, ossis n (bone)

os, oris n (mouth)

**-or:** cor, cordis n (heart)

**-er:** tuber, eris n (tuber)

gaster, tris f (stomach)

mater, tris f (1- mother, 2- medullary tunic)

dura\* mater = pachymeninx – hard medullary tunic

(Gen. – durae matris) – Engl. dura mater

pia\*\* mater = leptomeninx - soft medullary tunic

(Gen. - piae matris) - Engl. pia mater

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\* durus, a, um - solid, hard

\*\* pius, a, um – soft

# EXERCISES:

1. Form Genitive singular of the nouns and single out their bases:

Pulmo, carbo, embryo, sapo, mos, flos, tumor, humor, rubor, calor, dolor, doctor, tuber, masseter, sphincter, paries, apex, liquor, aёr, gaster.

## 2. Make agreement of adjectives with nouns, paying attention to their gender. Put the terms into the Genitive Case singular and translate them into English:

## Paries (anterior, ius; mastoideus, a, um; jugularis, e)

## Tuber (ischiadicus, a, um; frontalis, e; parietalis, e)

## Pes ( calcaneus, a, um; planus, a, um)

## Tronchanter (major, jus; minor, us)

## Venter (posterior, ius; frontalis, e)

Humor (vitreus, a, um; aquosus, a, um)

Liquor (cerebrospinalis, e; flavus, a, um)

Pulmo (dexter, tra, trum; sinister, tra, trum)

Cor (adiposus, a, um)

3. Make Grammar analysis of the terms. Give the Dictionary forms of the nouns of the 3rd declension; translate the terms into English:

**A.** Apex cordis, apex nasi, apex linguae, angulus oris, tunica mucosa oris, liquor cerebrospinalis, paries mastoideus, homo sanus\*, cor sanum, gaster sana, cortex cerebelli, ala vomeris, cortex cerebri, vertex cranii, os zygomaticum, os lacrimale, os pedis, os ischii, dura mater spinalis.

**B.** Pulmo dexter, pulmo sinister, apex pulmonis dextri, cortex glandulae suprarenalis, facies pulmonis, lobus pulmonis superior, fissura horizontalis pulmonis dextri, tuber frontale, tuber parietale, atrium cordis, os frontale, os parietale, os hyoideum, os nasale, apex pulmonis sinistri, paries mastoideus, paries tympanicus ductus cochlearis, dura mater encephali, tunica mucosa gastris, ventriculus sinister cordis, trochanter major, cor pulmonale, pia mater encephali, tuber ossis ischii, vertex cranii.

\* sanus,a,um - healthy

4. Write the Dictionary form of each word. Translate the terms into Latin:

Cortex of the lymph node (nodus lymphaticus), greater and lesser trochanter, the apex of the heart, right and left lung, hyoid bone, dura mater of the brain, frontal tuber, groove of the vomer, medial surface of the lung, cardiac notch of the lung, sphenoid bone, anterior wall of the stomach, lesser horn of the hyoid bone, temporal process of the zygomatic bone, ethmoid groove of the nasal bone, notch of the apex of the heart, anterior venter, ischial tuber, cerebrospinal liquid, jugular wall, apex of the posterior horn, wing of the vomer.

MEMORIZE THE TERMS:

(Masculine Gender of the 3rd declension)

1. apex, icis m – apex - summit, tip (the extremety of

a conical structure);

2. cortex, icis m – cortex, bark

3. flos, oris m – flower

4. homo, inis m – man; a human being;

5. liquor, oris m – any liquid or fluid

6. humor, oris m – humor; any clear fluid (one of the

elemental body fluids)

7. paries, etis m – wall

8. pulmo, onis m – lung

9. venter, tris m – venter; ( the wide swelling part of

a muscle) ;

10. vertex, icis m – vertex – top, the topmost point (as

of the vault of the skull)

11. vomer, eris m - vomer; ploughshare (flat bone,

forming nasal septum)

12. index, icis m – index finger or the forefinger,

13. pes, pedis m – foot

14. pollex, icis m – thumb

15. stapes, edis m – stapes – stirrup (the smallest of the three auditory ossicles)

16. ureter, eris m – ureter - urinary canal

17. trochanter, eris m - trochanter ( a runner) – one of the bony prominences developed from independent osseous centres near the upper extremety of the femur.

***LEARN THE EXCEPTIONS MENTIONED ABOVE***

**NAMES OF MUSCLES ACCORDING TO THEIR FUNCTION**

The suffix **-or** is used to form nouns of the masculine gender of the 3rd declension from the verb–bases. The meaning of an acting agent is attached to the derived nouns. It is convenient to define a function of a muscle with the help of such terms, which are used in myology.

Latin terms – names of muscles according to their function – consist of two nouns in the Nominative case; the first is “musculus” usually abbreviated as “m.”, and the second one is a noun of the masculine gender of the 3rd declension with the suffix **-or** (sometimes**, -er** - in the words of Greek origin). The number and Case of these two nouns always coinside, for example:

Nom. sing. Musculus supinator - Gen. sing. Musculi supinatoris

Musculus sphincter Musculi sphincteris

The names of muscles according to their function are interpreted into English with the word order opposite to that in Latin,

e. g.: Lat. musculus abductor - Engl. abductor muscle

musculus constrictor constrictor muscle

In any Latin mutiple–word term a noun denoting an organ which experiences the action of a muscle, is always used in the Genitive Case (non-agreed attribute). It is interpreted into English either with the help of an “of – phrase” put at the end of the term, or by preserving Latin name of the organ put after the noun designating function and before the noun “muscle”:

e. g.: Lat. Musculus tensor tympani (Gen. )

Engl. Tensor tympani muscle (tensor muscle of the tympanum)

Lat. Musculus depressor labii inferioris (Gen. )

Engl. Depressor labii inferioris muscle (depressor muscle of the lower lip)

Such approach to the naming of muscles in accordance to their function in the English Anatomical terminology demonstrates the importance of studying *Latin* names of organs and tissues which promotes comprehensive study of the medical terminology.

MEMORIZE THE NAMES OF THE FOLLOWING MUSCLES ACCORDING TO THEIR FUNCTION:

**m. abductor - abductor muscle** (taking away)

**m. adductor - adductor muscle** (bringing together)

**m. buccinator - buccinator muscle** (cheek muscle)

**m. constrictor - constrictor muscle** (shortening)

**m. depressor - depressor muscle** (bringing down)

**m. levator - elevator muscle** (raising)

**m. masseter - masseter muscle** (chewing muscle)

**m. rotator - rotator muscle** (turning round)

**m. tensor - tensor muscle** (straining)

**m. corrugator - corrugator muscle** (wrinkler muscle)

**m. dilatator - dilator muscle** (widening)

**m. extensor - extensor muscle** (stretching)

**m. flexor - flexor muscle** (bending)

**m. sphincter - sphincter muscle** (narrowing)

**m. pronator - pronator muscle** (turning inward –face

downward)

**m. supinator - supinator muscle** (turning outward –face

upward)

EXERCISES:

1. Make Grammar analysis. Translate the terms into English;

Musculus levator scapulae, musculus rotator cervicis, musculus constrictor pharyngis, musculus depressor anguli oris, musculus extensor indicis, musculus flexor pollicis longus, musculus sphincter ani, musculus abductor digiti minimi, musculus pronator teres, musculus corrugator supercilii (eyebrow), musculus dilatator pupillae (pupil of the eye).

2. Write each word in its Dictionary form. Translate the terms into Latin:

1. Elevator muscle of the scapula

2. elevator muscle of the thyroid gland

3. cervical (of the neck ) rotator muscle

4. depressor muscle of the lower lip

5. middle constrictor muscle of the pharynx (pharynx, ngis m)

6. short abductor muscle of the thumb

7. abductor muscle of the little finger

8. long adductor muscle of the forefinger

9. external sphincter muscle of the anus

10. wrinkler muscle of the eyebrow

11. cheek muscle

12. elevator muscle of the upper lip

13. depressor muscle of the nasal (of nose) septum

14. dilator muscle of the pupil of the eye

15. short adductor muscle of the forefinger

16. short radial extensor muscle of wrist (carpus, i m)

17. round pronator muscle

18. elevator muscle of the rib

MEMORIZE LATIN SAYINGS AND PROFFSSIONAL EXPRESSIONS:

1. Alma mater – “nursing mother’’- an educational establishment

providing one with a profession;

2. Arbor vitae – “tree of life’’ - in anatomy – a tree-like structure;

3. Homo sapiens - wise man; modern man;

4. per os – by mouth routes of

administration

5. per rectum – through rectum of drugs;

**LESSON NINE**

## TASKS FOR CONTROL

## I. Give Latin equivalents of the following terms in their dictionary form:

Variant I Variant II

1. summit, tip 1. thumb

2. tuber 2. foot

3. wall 3. bone

4. any clear fluid 4. the top

5. forefinger 5. cortex

6. flower 6. stomach

7. stirrup 7. lung

8. mouth 8. heart

9. urinary canal 9. any liquid

10. ploughshare 10. medullary tunic

I. Translate the terms into Latin:

Variant I Variant II

1. cortex of lymph node 1. groove of the vomer

2. apex of the posterior horn 2. notch of the heart apex

3. abductor muscle of thumb 3. elevator muscle of the thyroid

gland

III. Answer the questions:

1. What are the pecularities of the 3rd declension?
2. What endings are characteristic for the masculine gender?
3. Recollect the exceptions from the rule on the masculine gender of

the 3rd declension.

1. What is the way to single out the base of the noun of the 3rd

declension?

1. Describe the structure of anatomical terms denoting muscles

according to their functions in Latin and in English.

# EXERCISES:

I. Analyse the terms. Give the Dictionary forms of the nouns of the 3-rd declension. Translate the terms into English:

Pulmo sinister, apex pulmonis sinistri, lobus pulmonis superior, paries ductus cochlearis (cochlear duct), paries lateralis orbitae, ala vomeris, dura mater spinalis, os parietale, apex ossis sacri, pars lateralis ossis occipitalis, musculus rotator thoracis, musculus pronator teres, musculus sphincter ductus choledochi (common bile duct)

2. Translate the names of muscles into Latin:

1. extensor muscle of the little finger
2. depressor muscle of the eyebrow (supercilium, i n)
3. wrinkler muscle of the eyebrow
4. depressor muscle of the lower lip

5. masseter muscle

1. short radial extensor muscle of the wrist (carpus, i m )
2. ulnar flexor muscle of the wrist
3. long flexor muscle of the thumb

9. elevator muscle of the rib

10. sphincter muscle of the urinary bladder (vesica(ae) urinaria(ae))

**IIIrd DECLENSION OF NOUNS (continued)**

**NOUNS OF THE FEMININE GENDER**

The nouns of the 3rd declension are considered to be of the feminine gender if in the Nominative singular they have the following endings:

**-s** (excluding -***os; -es***(with unequal number of syllables)- m)

**-us** (with ***-oris***, ***-eris*** in Genitive - n)

**-x** (excluding *–* ***ex* -** m)

**-do**  (which gives the English suffix **–tude** as in “magnitude” – from

Lat. “magnitudo”)

**-go** (which gives the English suffix - **age** as in “cartilage” – from

Lat. “cartilago”)

**-io**  (which gives the English suffix **-tion** as in “articulation” - from

Lat. “articulatio”)

Among the nouns of the feminine gender there may be found nouns both with equal and unequal number of syllables. Mind, that nouns with unequal number of syllables ending in **-is**, have the base ending in **-id**,

e.g.: iris, iridis f - the base **-irid**– (Engl. *rainbow,* the iris of the eye);

pyramis, idis f -the base -**pyramid**- (Engl. pyramid).

Nouns with equal number of syllables have the same base in the Nominative and Gentive singular,

e.g.: auris, **aur**is f (ear)

cutis, **cut**is f (skin )

basis, **basi**s f (base )

Pay attention to how the bases of nouns of the feminine gender change in the Genitive Case (*See the table*):

**Nouns of the Femine Gender**

|  |  |  |
| --- | --- | --- |
| Nominativus | Genetivus | Dictionary form |
| **-as**  **-es(equal)**  **-is**  **-us**  **-rs, -ns**  **-ax**  **-ix**  **-ux**  **-nx**  **-lx**  **-do**  **-go**  **-io** | **-atis**  **-is**  **-is**  **-tis,- dis**  **-tis, -dis**  **-rtis, -ntis**  **-acis**  **-icis**  **-ucis**  **-ngis**  **-lcis**  **-inis**  **-inis**  **-ionis** | cavitas, atis f (cavity)  pubes, is f (the genitals)  auris, is f (ear)  iris, iridis f (iris)  salus, utis f (health)  pars, partis f (part); frons, ntis f (forehead)  pax, pacis f (peace)  radix, icis f (root)  lux, lucis f (light)  phalanx, ngis f ( phalanx)  calx, calcis f (heel)  magnitudo, inis f (magnitude)  cartilago, inis f (cartilage)  regio, onis f ( region) |

**NB!** ***MEMORIZE the exceptions from the rule on the feminine gender:***

**NOUNS OF THE MUSCULINE GENDER:**

1. axis, is m - axis; the second cervical vertebra
2. canalis, is m - canal
3. dens, dentis m - tooth
4. margo, inis m - margin, border
5. sanguis, inis m - blood
6. tendo, inis m - tendon
7. fornix, icis m - fornix; arch, vault – an arch-shaped

structure; often an arch-shaped roof of

an anatomical space;

1. hallux, ucis m - the great toe;
2. thorax, acis m - thorax; breastplate, the chest;
3. pharynx,ngis m - pharynx; the throat; the joint

opening of the gullet and

windpipe;

1. larynx, ngis m - larynx; the organ of voice production.

**NOUNS OF THE NEUTER GENDER:**

1. pancreas, atis n - pancreas, salivary gland of the

abdomen;

2. vas, vasis n - vessel.

EXERCISES

1. Form Genitive singular of the nouns and single out their bases:

Tuberositas, sanitas, salus, ars, pars, dens, thorax, appendix, fornix, radix, meninx, tendo, cartilago, margo, articulation, regio, a. carotis (unequal), iris (unequal), frons, cutis(equal), unguis(equal), pelvis(equal), pubes(equal).

2. Make agreement of adjectives with nouns paying attention to the gender; put the terms into the Genitive singular:

Cavity (proper, medullary, pleural, tympanic, articular)

tuberosity (costal, deltoid, iliac, pterygoid, masseteric)

ear (external, internal)

part (abdominal, alar, anterior, cardiac, cervical, clavicular, costal,

right, horizontal, inferior, mastoid, osseous, petrous)

cartilage (costal, greater alar, lesser alar, articular, thyroid)

joint (composite, fibrous, simple, synovial)

canal (pterygoid, optic, mandibular, vertebral, sacral, carotid, facial)

vessel (lymphatic, capillary, collateral, blood)

region (deltoid, anterior, femoral, lateral, calcaneal)

root (medial, lateral)

axis (transverse, horizontal, thoracic, optic, mandibular, long)

margin (anterior, right, frontal, lateral, mastoid, occipital, squamous)

3. Make Grammar Analysis of the terms. Give the dictionary form of the nouns of the 3rd declension. Translate the terms into English,

Cavitas medullaris, basis cranii externa, cartilago thyroidea, pars thoracica, pyramis medullae oblongatae, glandula parotidea accessoria, cartilago alaris major, margo inferior pulmonis sinistri, auris externa, tuberositas phalangis distalis, phalanx media, basis phalangis mediae, apex patellae, pyramis renalis, basis pyramidis renalis, margo uteri dexter, musculus adductor hallucis, cortex lentis, axis lentis, facies posterior lentis, pancreas accessorium, pars endocrina pancreatis, radix dentis, cervix dentis.

4. Write the Dictionary form of each word. Translate the terms into Latin:

1. carotid\* canal
2. external carotid\* artery
3. vault of the stomach
4. canal of the greater petrous nerve
5. capsule of the pancreas
6. tympanic cavity of the middle ear
7. cartilage of the nasal(of nose) septum
8. posterior region
9. the lower opening of the pelvis

10. notch of the pancreas

11. cardiac impression

12. abdominal part of the aorta

13. right margin of the uterus

14. canal of the uterus neck

15. tuberosity of the distal phalanx

16. anterior region of the knee

17. long abductor muscle of the great toe

18. inferior constrictor muscle of the pharynx

19. base of the right lung

20. base of the heart

**\*NB!** English adjective *“carotid”* has two equivalents in Latin. When used in the name of *“the carotid artery”* it corresponds to the Latin noun *“carotis, idis f”* – “arteria carotis”. When used with the names of other structures, excluding the artery, it corresponds to the Latin adjective *caroticus, a, um*, as for example, “canalis caroticus”.

MEMORIZE THE TERMS:

1. THE EXCEPTIONS MENTIONED ABOVE;

2. Nouns of the feminine gender of

the 3rd declENSion

1. appendix, icis f - appendage; specifically, the

*appendix vermiformis*;

1. arteria carotis

(Gen. arteriae carotidis) - carotid artery;

1. articulatio, onis f - *articulation*; joint;
2. atlas, atlantis f - *atlas*; the first cervical vertebra;
3. auris, is f - ear;
4. basis, is f - base;
5. cavitas, atis f - cavity;
6. cervix, icis f - 1. *cervix* (of the uterus, urinary

bladder, tooth); 2. *neck;*

1. cutis, is f - skin;
2. frons, ntis f - forehead;

11. meninx, ngis f - *meninx,* medullary tunic;

usually pl. *meninges*

1. pars, partis f - part;

13. radix, icis f - root;

14. pelvis, is f *- pelvis,* basin;

15. pelvis renalis *- renal pelvis;*

16. pyramis, idis f *- pyramid;*

17. regio, onis f *- region;*

18. tuberositas, atis f *- tuberosity* (elevation,esp.

from the surface of the bone);

19. bilis, is f *- bile;*

20. impressio, onis f - *impression*, deepening;

21. iris, idis f - *the iris* of the eye – rainbow;

22. lens, ntis f - *lens* – transparent part of the

eye, behind the pupil, through

which light is refracted;

23. phalanx, ngis f - *phalanx* – bone in a finger or

toe;

24. proprius, a, um - proper;

25. accessorius, a, um - accessory, additional.

MEMORIZE LATIN SAYINGS AND PROFESSIONAL EXPRESSIONS:

1. Diagnosis bona – curatio bona

- Good diagnosis makes good treatment

1. Anamnesis vitae

- The medical history of a patient, describing his physical,

psychic and social development.

1. Anamnesis morbi

- The medical history of a patient, describing the etiology,

pathogenesis and ways of treatment of the disease.

4. Hygiena amica valetudinis

- Hygiene is a friend of health

5. Consuetudo est altera natura

- Habit is second nature

6. Salus aegroti-suprema lex medicorum

- Health of a patient is the highest law for a physician

**LESSON TEN**

TASKS FOR CONTROL

1. Give Latin equivalents of the following terms (in their Dictionary form):

Variant I Variant II

1. medullary tunic 1. root

2. skin 2. joint

3. ear 3. cavity

4. forehead 4. part

5. basin 5. region

6. elevation 6. bile

7. rainbow 7. lens

8. border 8. tooth

9. vault 9. tendon

10. vessel 10. the great toe

II. Translate the terms into Latin :

Variant I Variant II

1. articular cartilage 1. internal ear

2. lateral root 2. cardiac impression

3. right margin of the uterus 3. lower foramen of the pelvis

III. Answer the questions:

1. What endings are characteristic for the feminine gender?
2. What are the exceptions from the rule on the feminine gender?
3. What nouns of the 3rd declination did you come across in the

Latin sayings and professional expressions? Give their dictionary forms.

**III-rd DECLENSION OF NOUNS**

# **NOUNS OF THE NEUTER GENDER**

Nouns of the 3rd declension are aatributed to the neuter gender if in the Nominative singular they have the following endings:

**NB! -** the base of a noun is taken into consideration

|  |  |
| --- | --- |
| Endings  Nom. Gen. | Dictionary form |
| **-en -inis**  **-us -o/e/u+ris**  **-ur -o/u+ris**  **-ma -atis**  **-e -is**  **-l -ll/alis**  **-ar -atis/ -aris**  **-ut -itis** | abdomen, inis n (belly,abdomen)  corpus, oris n (body)  femur, oris n (hip)  stroma, atis n (the framework)  rete, is n (network)  animal, alis n (animal), fel,fellis n (bile)  hepar, atis n (liver)  caput, itis n (head) |

**NB!** 1. You come across the ending –**us** both in the feminine and in

the neuter genders. The choice of gender depends on the last consonant of the base: **-t/-d** - feminine gender; **-r** – neuter gender:

🡪-us, u**t**is, -u**d**isf

🡪 -us, o**r**is, e**r**is, n

2. You should differentiate between the terms of the 1st and 3rd declensions ending in –ma; the majority of them being of the neuter gender of the 3rd declension. Remember, that “squama, ae f” (squama, scale ) belongs to the feminine gender of the 1st declension.

MEMORIZE THE EXCEPTIONS FROM THE NEUTER GENDER:

**1*. ren, renis m* - kidney**

1. ***lien, lienis m* - spleen**
2. ***splen, splenis m -* spleen**

EXERCISES:

1. Form Genitive singular of the nouns and single out their bases:

abdomen, semen, nomen, foramen, tegmen, pecten, genus, pectus, tempus, crus, pus, glomus, viscus, sulfur, femur, jecur, stroma, systema, carcinoma, zygoma, squama, rete, ile, mel, fel, pulvinar, calcar, hepar, caput, occiput, sinciput.

2. Make agreement of nouns with adjectives in the brackets:

Foramen ( internal, oval, round, incisive, alveolar, palatine,

greater, lesser, sphenoid, mastoid)

leg; anything resembling a leg (right, left, lateral, short, long, medial,

simple, anterior)

head (long, short, deep, slanting, transeverse, lateral)

body (adipous, ciliary, cavernous)

kidney (right, left, mobile, lobous)

spleen (accessory, mobile)

network (articulary, arterial, lymphatic)

system (central nervous, lymphatic)

liver (mobile, lobous/lobate)

# 3. Make Grammar analysis of the terms. Translate them into English:

**A**. Glomus caroticum, ren accessorius, systema lymphaticum, cavitas

abdominis, glomus pulmonale, caput superius musculi pterygoidei,

pancreas accessorium, foramen palatinum majus, tegmen tympani,

foramen venae cavae, lobus hepatis dexter/ sinister/

**B.** crus anterius capsulae internae, stroma ganglii, hepar mobile, appendix fibrosa hepatis, rete venosum, cortex renis, musculus longus capitis, caput ossis femoris, corpus adiposum, crus membranaceum simplex, systema nervosum centrale, corpus medullare, caput et crus stapedis, stroma iridis, diaphragma urogenitale.

4. Write each word in its Dictionary form. Translate the terms into Latin:

1. Superficial lymphatic vessel
2. Deep lymphatic vessel
3. Posterior nucleus of the trapezoid body
4. Internal carotid artery
5. Base of the heart
6. Tip of the heart
7. Roof of the tympanum
8. Diaphragm of the pelvis
9. Anterior palatine foramen

10. Left lobe of the liver

11. External oblique muscle of the abdomen

12. The longest muscle of the head

13. Interosseous membrane of the leg

14. Tip of the head of the fibula

15. The framework of the thyroid gland

MEMORIZE THE TERMS :

1. LEARN THE EXCEPTIONS MENTIONED ABOVE.

2. Nouns of the neuter gender of the 3rd declENSion

1. abdomen, inis n - abdomen, belly;

2. caput, itis n - head;

3. corpus, oris n - body;

4. diaphragma, atis n - diaphragm; the musculomembranous

partition between the abdominal and thoracic cavities;

5. tegmen, inis n - roof;

6. crus, cruris n - 1- leg, 2 – any structure resembling a leg;

7. hepar, atis n - liver;

8. occiput, itis n - occiput, the back of the head;

9. pectus, oris n - breast; the anterior wall of the chest or thorax;

10. stroma, atis n - the framework (usually of connective tissue);

11. tempus, oris n - 1- temple; 2- time;

12. chiasma, atis n - chiasm; crossing;

13. femur, oris n - femur, hip;

14. systema, atis n - system;

15. rete, is n - network;

16. viscus, eris n - viscera, internal organs;

17. glomus, eris n - glome;a small globular body.

MEMORIZE LATIN SAYINGS AND PROFESSIONAL EXPRESSIONS:

1. Ex tempore – when needed (in a prescription)

2. O tempora, o mores (Cicero) – Such times, such habits!

3. Tempus vulnera sanat – time cures wounds

4. Mens sana in corpore sano bonum magnum est (Juvenalius) –

* Healthy spirit in a healthy body is the greatest benefit

5. Per scientiam ad salutem aegroti

- Through knowledge (science) – to the health of a patient

**LESSON ELEVEN**

**REVISION OF THE MATERIAL OF LESSONS 8 – 10**

**NOUNS OF THE 3RD DECLENSION:**

Masculine Feminine Neuter

N o m i n a t i v e s i n g u l a r

**-os -s -as -en**

**-or -is -us (-oris, eris)**

**-o -us (-tis, -dis) -ur**

**-er -es (eq. numb./syl. ) -ma**

**-ex -x -ux -e**

**-es (uneq. numb./syl.) -ax -l**

**-ix -ar**

**-do -ut**

**-go**

**-io**

E x c e p t i o n s :

**thorax, acis m gaster, tris f pancreas, atis n**

**axis, is m mater, tris f vas, vasis n**

**canalis, is m dura mater - os, ossis n**

**dens, dentis m durae matris os, oris n**

**margo, inis m pia mater - cor, cordis n**

**sanguis, inis m piae matris tuber, eris n**

**tendo, inis m**

**fornix, icis m**

**hallux, ucis m**

**ren, renis m**

**lien, lienis m**

EXERCISES:

I. Using the bases of the nouns of the 3rd declension, form

adjectives:

*1 – with the suffixes –****al, -ar*** *(2nd group):*

lung, wall, tip, breast, forehead, neck, tooth, mouth, belly,

bark, temple, margin, kidney, spleen, back of the head

*2 – with the suffix* ***–e*** *(1st group):*

cartilage, blood, tendon, larynx, pharynx;

*3 – with the suffix* ***-ic*** *(1st group) :*

stomach, pancreas, thorax, liver, diaphragm, urinary canal.

* ***Compare Latin and English bases of the adjectives!***

II. Match the terms in (a) with their meanings in (b):

(a) 1 – margo, inis m; 2 – paries, etis m; 3 – pars, partis f;

4 – apex, icis m; 5 – vertex, icis m

(b) 1 – top; 2 – part; 3 – border; 4 – wall; 5 – tip.

III. Make Grammar Analysis of the terms. Give the Dictionary form

of each noun of the 3rd declension Translate the terms into English:

1. margo anterior 2. os hyoideum 3. vas sanguineum 4. foramen

occipitale magnum 5. fornix pharyngis 6. dura mater encephali 7.

corpus vesicae felleae (vesica fellea – the gallbladder) 8. cavitas nasi

propria 9. apex radicis dentis 10. tuber parietale 11. canalis palatinus

minor 12. musculus rotator thoracis 13. musculus depressor anguli

oris 14. incisura cartilaginis 15. pancreas accessorium 16. medulla

renis 17. caput pancreatis 18. regio thoracis posterior 19. axis

opticus 20. musculus flexor pollicis longus.

IV. Write the Dictionary form of each word. Translate the terms into

Latin:

1. Internal (external) carotid artery
2. Superficial lymphatic vessel
3. The base of the heart
4. The root of the lung
5. Cavity of the uterus
6. Renal pelvis
7. Thyroid cartilage
8. Capsule of the pancreas
9. Cardiac impression of the lung

10. The longest muscle of the head

11. Frontal region of the face

12. Membranous wall of the trachea

13. Lateral margin of the foot

14. Right margin of the heart

**LESSON TWELVE**

**PLURALS**

**THE NOMINATIVE CASE PLURAL OF THE NOUNS OF THE**

**1st- 5th DECLENSIONS**

To form the Nominative plural of nouns it is necessary:

1. to know the Dictionary form of the noun in order to be able to define the declension and gender of the term;

1. to be able to single out the base of the noun in order to attach the corresponding ending in the Nominative plural to it. Memorize the noun endings of all five declensions in the Nominative plural:

**THE NOMINATIVE CASE PLURAL of the Nouns**

|  |  |  |  |
| --- | --- | --- | --- |
| Decl. | gender | Nom. plural ending | Example |
| I | f | **-ae** | vertebrae, bursae |
| II | m  n | **-i**  **-a** | sulci, musculi  ostia, ligamenta |
| III | m  f  n | **Base of the**  **Gen. sing +**  **- es**  **- es**  **- a**  **- ia \*** | pulmones, parietes partes, articulationes  vasa, crura, *but*  retia, animalia |
| IV | m  n | **-us**  **-ua** | processus, sinus  cornua, genua |
| V | f | **-es** | facies, superficies |

**\*-ia** instead of **–a** is typical for the nouns of the neuter gender of the 3rd declension in case their Nominative singular ends in **–*e, -al, -ar.***

# **THE NOMINATIVE CASE PLURAL of the adjectives**

|  |  |  |  |
| --- | --- | --- | --- |
| group /  declination | Nominative plural endings | | |
| m | f | n |
| **I**  /1st and 2nd decl. | **-i**  longi | **-ae**  longae | **-a**  longa |
| **II**  /3rd decl. | **-es**  breves | **-es**  breves | **-ia**  brevia |
| **Comparative Degree**  /3rd decl. | **- iores**  majores  minores | **-iores**  majores minores | **-iora**  majora  minora |

**ABBREVIATIONS USED IN THE ANATOMIC**

**NOMENCLATURE**:

Very often they use abbreviations in the Anatomic Nomenclature to designate singular or plural of names of anatomic structures. The singular and plural abbreviations differ from each other in that the final letter of the plural abbreviation is doubled. for example:

Singular Plural

a. - arteria ( artery) Aa. -arteriae (arteries)

b. - bursa (bag) bb. -bursae (bags)

gl. - glandula (gland) gll. -glandulae (glands)

for. -foramen forr. -foramina (openings)

lig. - ligamentum (ligament) ligg. -ligamenta (ligaments)

m. - musculus (muscle) mm. -musculi (muscles)

n. - nervus (nerve) nn. -nervi (nerves)

r. - ramus (branch) rr. -rami (branches)

vag. -vagina (sheath) vagg. -vaginae (sheaths)

v. - vena (vein) vv. -venae (veins)

EXERCISES

I. Define the declension of the nouns and form their Nom. Plural forms:

Pyramis, idis f; cellula, ae f; dens, ntis m; facies, ei f; os, ossis n; gyrus, i m; cornu, us n; septum, i n; ductus, us m; articulatio, onis f; bursa, ae f; crus, uris n; plexus, us m; appendix, icis f; ligamentum, i n.

2. Give the Dictionary form of the nouns in the Nom. plural; translate them into English:

Palpebrae, tubera, retia, ganglia, cornua, labia, vasa, meninges, dentes, processus, juncturae, alveoli, sinus, musculi, cartilagines, canales, partes, arteriae, rami, aures, radices, tuberositates, alae, venae.

3. Form Nom. plural of the adjectives, given in the singular, minding their group and gender:

Lata, posterior, major, craniale, vertebrale, brevis, flava, liber,

proprium, dorsale, thyroideum, osseus, simplicissimus, bronchialis,

sacrale, zygomaticum, longus, alaris, latissimum, minima, optima.

4. Match adjectives given in brackets with the nouns in the Nom. pl:

Nodi ( lumbales, lymphatici, pectoralia, epigastrici, pulmonales,

dextri, internae, iliaci, occipitales, profunda, mastoidei)

Ligamenta (interosseae, interspinalia, flava, palmaria, intercarpei,

alaria, dorsalia, supraspinalia)

dentes (acustici, longae, incisivi, permanentes, major, brevia,

minores)

plexus (iliaci, rectales, inferiores, gastrici, medii, medianae,

viscerales, vasculares)

foramina (ethmoidalia, minora, nervosae, palatini)

5. Analyse the terms.Translate them into English:

Musculi subcostales, tubercula dentis, pyramides renales, venulae rectae, sinus intermedii, ganglia cardiaca, plicae gastricae, nervi craniales, nervi spinales, venae intercostales inferiores, arteriae ciliares posteriores longae, vasa lymphatica superficialia, cartilagines alares minores, cartilagines nasales accessoriae, gyri temporales transversi, ossa membri inferioris, venae digitales dorsales pedis, vasa sanguinea retinae.

6. Write the Dictionary form of each word. Translate the terms into

Latin:

Inferior veins of the cerebrum, pectoral cardiac branches, lesser

sublingual ducts, dorsal branches of the tongue, anterior superior

alveolar arteries, transverse folds of the rectum, iliac plexuses, lesser

palatine canals, posterior superior alveolar foramina, pelvic ganglia,

pterygoid processes of the sphenoid bone, sinuses of the aorta,

muscles of the back, short gastric veins, interphalangeal articulations

of the foot, synovial bags and sheaths.

7. Read the terms in their full form; translate them into English:

Gll. intestinales, vv. centrales, rr. orbitales,vagg. synoviales, bb.

trochantericae, aa. nutriciae, mm. interspinales, nn. cardiaci, forr.

palatina minora, aa. superiores, mm. interossei, nn. profundi, rr.

oesophagei, aa. sigmoideae, forr. incisiva, vv. cavernosae, nn.

articulares, ligg. interossea.

MEMORIZE THE TERMS:

1. glandula, ae f - gland

2. retina, ae f - retina; nervous tunic of the eyeball

3. plica, ae f - fold

4. palpebra, ae f - eyelid

5. gyrus, i m - gyrus, convolution

6. ramus, i m - branch

7. nucleus, i m - nucleus

8. communis, e - common

**LESSON THIRTEEN**

**PLURALS**

**THE GENITIVE CASE OF THE NOUNS OF THE**

**1st – 5th DECLENSIONS**

The requirements to the construction of the Genitive plural are the same as those for the Nominative plural, i. e. one should know the Dictionary form of a noun and be able to single out its base before attaching the Genitive plural ending (see the table):

**THE GENITIVE CASE PLURAL of the nouns**

|  |  |  |  |
| --- | --- | --- | --- |
| Decl. | Gender | Genitive Plural | Example: D.f. & Gen.pl. |
| I | f | **-arum** | Vertebra, ae f - vertebrarum |
| II | m  n | **-orum**  **-orum** | Sulcus, i m - sulcorum  Ligamentum, i n -  ligamentorum |
| III | m  f  n | **Gen. Base +**  **-um**  **-um**  **-um**  **(-ium\*)** | Pulmo, onis m –pulmonum  Articulatio,onis f  - articulationum  Crus, uris n - crurum |
| IV | m  n | **-uum**  **-uum** | Processus,us m - processuum  Cornu, us n - cornuum |
| V | f | **-erum** | Facies, ei f - facierum |

**\*-ium** is used for: 1. nouns with equal number of syllables,

e. g. auris, is f - Gen. pl. – aur**ium**

2. nouns with the base ending in 2 consonants,

e. g. dens, ntis m – Gen. pl. – dent**ium**

3. nouns of the neuter gender ending in ***–e, -al, -ar***

in Nom. pl. ,

e. g. animal, alis – Gen. pl. – animal**ium**

rete, is n - Gen. pl. - ret**ium**

**N. B!** The noun of the 3rd declension **vas, vasis n (*a vessel*)** forms its

Genitive plural according to the 2nd declension:

**Nom. pl. – vasa;**

**Gen. pl. – vasorum**

**THE GENITIVE CASE PLURAL of the adjectives**

|  |  |  |  |
| --- | --- | --- | --- |
| ***Group /***  ***declension*** | ***Genitive plural endings*** | | |
| m | f | n |
| **I /**  **-orum -arum -orum**  1st, 2nd decl. longorum longarum longorum | | | |
| **II */ the base of the Gen. sing, +***  3rd decl. **–ium -ium -ium**  brevium brevium brevium | | | |
| **Comparative**  **degree** **-iorum -iorum -iorum**  3rd decl. majorum majorum majorum | | | |

EXERCISES

1. Put the terms into the Nominative and Genitive Case plural:

vas sanguineum, valvula semilunaris, nervus spinalis, vena minima,

dens premolaris, papilla lingualis, alveolus dentalis, cornu minus,

septum interradiculare, concha nasalis, facies articularis, glandula

lingualis, ligamentum flavum, canalis alveolaris, processus

transversus.

1. Write the Dictionary form of each word.Translate the terms into

Latin; form their Gen. sing., Nom. and Gen. plural:

a lesser wing; an ethmoid foramen; a minimum vein; a ciliary

process, articular surface, membraneous leg, lymphatic vessel,

anterior margin, anterior surface, mastoid notch, transverse ligament,

posterior horn, pterygoid canal, nasal bone, palatine groove,

transverse palatine fold.

1. Make Grammar analysis of the terms: define the part of speech, Case

and number of each word. Translate the terms into English:

Nuclei nervorum cranialium, vagina synovialis mm. peroneorum

communis, sinus *venarum cavarum*\* atrii dextri, forr. venarum

minimarum, noduli valvularum semilunarium, plexus cavernosi

concharum, tunica conjunctiva palpebrarum, vv. meningeae mediae,

nn. vasorum, retinaculum tendinum musculorum flexorum,

commissura palpebrarum lateralis, vagg. tendinum digitorum pedis,

rr. alveolares superiores anteriores, forr. palatina minora, ganglia

thoracica, aa. ciliares posteriores longae, rr. tractus optici.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\* Lat. **vena cav**a - Engl. **vena cava** (literal translation – *hollow vein*).

Nom. plural – venae cavae (Engl. venae cavae);

Gen. plural – venarum cavarum (Engl. of venae cavae).

1. Write the Dictionary form of each word. Translate the terms into

Latin:

alveolar foramina, long elevator muscles of the ribs, short elevator

muscles of the ribs, chiasm of the tendons (Camper’s chiasm),

retinacula of extensor muscles, ligaments of tendons, vessels of

vessels, red and yellow bone marrow, septum of frontal sinuses,

foramina of pulmonary veins of the left atrium, anterior and posterior

tubercle of cervical vertebrae, sinus of venae cavae of the right

atrium, short extensor muscles of the fingers, superior retinaculum of

the tendons of peroneal muscles, fibrous sheaths of the fingers of the

hand.

MEMORIZE THE TERMS:

Nouns:

1. commissura, ae f – commissure – connection;
2. medulla, ae – marrow, any soft marrow-like structure;
3. medulla ossium – bone marrow;
4. medulla spinalis – spinal marrow; spinal cord;
5. valvula, ae f – valvule; a valve, especially one of the

small size;

1. atrium, i n – atrium;
2. retinaculum, i n – retinaculum; a halter, a band;
3. nodulus, i m – nodule, a small node;
4. tractus, us m – tract ( path, track, way);

Adjectives:

1. ruber, bra, brum – red

2. flavus, a, um – yellow

3. peroneus,a,um – syn. fibularis,e – peroneal; relating to the fibula

**NB!** ***In many cases medical terms are borrowed from Latin into the Endlish medical terminology without any change even in the flexions (direct borrowings). In these cases they preserve Latin rules for forming plurals in English.***

**LATIN PLURALS IN ENGLISH**

The rules for commonly forming plurals of anatomical terms in

medical English are as follows:

1. For words ending in **–a**, retain the **–a** and add **–e:**

*(which corresponds to the 1st declension in Latin):*

singular: vertebra plural: vertebrae

bursa bursae

bulla bullae, etc.

1. For words ending in **– us**, drop the **– us** and add **– i:**

*(which corresponds to the 2nd declension masculine gender in Latin):*

singular: calculus plural: calculi

bronchus bronchi

nucleus nuclei, etc.

Some exceptions to this rule are for the Latin nouns of the *4th declension*: in their Latin variant they retain their form ending in **–us.**  Their English equivalents are *viruses* and *sinuses*:

***Lat.*** singular: sinus plural: sinus

***Engl.*** sinus sinuses, etc.

1. For words ending in **-um**, drop the **-um** and add **– a:**

*(which corresponds to the 2nd declension neuter gender in Latin):*

singular: bacterium plural: bacteria

diverticulum diverticula

ovum ova, etc.

1. For words ending in **–on**, drop the **–on** and add **–a:**

*(which corresponds to the 2nd declension neuter gender in Latin):*

singular: ganglion plural: ganglia

spermatozoon spermatozoa,etc.

1. For words ending in **–sis,** drop the **–is** and add **–es:**

*(which corresponds in Latin to the 3rd declension nouns of the feminine gender with equal number of syllables):*

singular : anastomosis plural: anastomoses

metastasis metastases

epiphysis epiphyses

prosthesis prostheses,etc.

1. For words ending in **–ix** and **–ex**, drop the **–ix** or –**ex** and add **–**

**ices: (the 3rd declension in Latin, unequal number of syllables,**

**feminine and masculine genders correspondingly):**

singular: apex plural: apices

varix varices,etc.

**REFERENCE**

**ON THE GRAMMAR OF LATIN NOUN AND ADJECTIVE**

**Noun**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Decl*** |  | ***singularis*** | | ***pluralis*** | |  |
| ***.*** | ***gender*** | ***Nom.*** | ***Gen.*** | ***Nom.*** | ***Gen*** | ***Dictionary Form:  1) Nom. 2) Gen/end. 3) gender*** |
| 1 | **f** | **-a** | **-ae** | **-ae** | **-arum** | **cost**a, ae f (rib) |
| 2 | **m**  **n** | **-us, -er**  **-um,-on** | **-i**  **-i** | **-i**  **-a** | **-orum**  **-orum** | **sulc**us, i m (groove)  **sept**um, i n (septum) |
| 3 | **m**  **f**  **n** | **-o,or,os,**  **-er,es,ex**  **-s,-x,**  **-do,go,io**  **-en,us,ur,**  **-ma,e,l,**  **-ar,ut** | **-is** | **Gen. Base +**  **- es**  **- es**  **- a**  **- ia \*** | **Gen. Base +**  **-um**  **(-ium\*)**  **-um**  **(-ium\*)**  **-um (-ium\*)** | **pulm**o, **on**is m (lung)  (pulmon**es**/  pulmon**um)**  **rad**ix, **ic**is f (root)  (radic**es**/ radic**um**)  **corp**us, **or**is n (body)  (corpor**a**/ corpor**um**) |
| 4 | **m**  **n** | **-us**  **-u** | **-us**  **-us** | **-us**  **-ua** | **-uum**  **-uum** | **sin**us, us m (sinus)  **gen**u, us n (knee) |
| 5 | **f** | **-es** | **-ei** | **-es** | **-erum** | **faci**es, ei f (surface) |

***E x c e p t i o n s*** ***from the 3rd Declension:***

***m f n***

**thorax, acis m gaster, tris f pancreas, atis n**

**axis, is m mater, tris f vas, vasis n**

**canalis, is m dura mater - os, ossis n**

**dens, dentis m durae matris os, oris n**

**margo, inis m pia mater - cor, cordis n**

**sanguis, inis m piae matris tuber, eris n**

**tendo, inis m**

**fornix, icis m**

**hallux, ucis m**

**ren, renis m**

**lien, lienis m**

**splen, splenis m**

**pharynx, ngis m**

**larynx, ngis m**

**Adjective**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | ***singularis*** | | ***pluralis*** | |
| **Group** | **Decl.** | **Nom.** **m f n** | **Gen.** **m f n** | **Nom.** **m f n** | **Gen.** **m f n** |
| **1** | **1, 2** | **-us -a -um** **-er -a -um** | **-i –ae -i** | **-i -ae -a** | **-orum -orum** **-arum** |
| **2** | **3** | **-is is -e** | **-is -is -is** | **-es -es -ia** | **-ium** |
| The Comparative Degree | **3** | ***Base of* -ior -ior -ius** | ***the Positive*** **-ioris -ioris**  **-ioris** | ***Degree+*** **-iores –iora**  **-iores** | **-iorum** |
| The Superlative Degree | **1,2** | ***Base of*** **-us -a -um** | ***the Positive*** ***+ -issim- +*** **-i -ae -i** | ***Degree +*** **-i -ae -a** | **-orum -orum** **-arum** |

**CLINICAL TERMINOLOGY**

**LESSON ONE**

**THE STRUCTURAL TYPES OF CLINICAL TERMS**

The basis of the Clinical terminology is the terminology of the Pathological Anatomy, that is of the science, which studies the material and structural basis of any disease, its morphological essence. This complex of terminologies designates all the problems concerning an organism with any pathology.

The structural types of the Clinical terms are different. According to

their structure Clinical terms may be divided into three main groups:

I. NON-MOTIVATED SIMPLE TERMS:

a**) simple root –words of Greek or Latin origin:**

e. g.**:  *stupor, oris m -****Engl.***stupor** – a state of impaired consciousness in which the individual shows a marked diminution in his reactivity to environmental stimuli;

*- Engl.* ***tremor, oris m* - tremor** – trembling - an involuntary trembling movement;

***thrombus, i m* –** *Engl.* **thrombus** - a clot in the cardiovascular

system.

b**) simple derivatives**. They are words constructed with the help of suffixes and prefixes. In this case we have an original root word, to which either a prefix or a suffix (sometimes both) is attached,

e.g.: **trauma, atis n – *trauma*,** injury – the root word with the

motivying base - ***traumat-****;*

simple derivatives**: *traumaticus, a, um – traumatic*** (adjective, formed from the motivying base –*traumat*- with the help of the suffix

-**ic**us, a, um);

***posttraumaticus, a, um – posttraumatic*** ( adjective, formed from the

motivying base –**traumatic**us,a,um with the help of the prefix **post**-).

Within the scope of modern terminology, some terms appear to be indivisible and they are consequently not motivated. That is why, more often than not they are not translated from one language into another, but they are transcribed by means of national languages:

e. g. ***insultus***(Lat. insulto - to attack) – An injury, attack or trauma –

Engl. ***insult***

***infarctus*** (Lat. in – farcio - to stuff into) – sudden insuficiency of arterial or blood supply that produces a microscopic area of necrosis –

Engl. ***infarction***

***diabetes***(Greek – diabetes – a compass ) – either ***diabetes insipidus*** or ***diabetes mellitus***, diseases having in common the symptom polyuria (abundant excretion of urine).

II. TERMS – WORD COMBINATIONS (MEDICAL DIAGNOSES).

In the Clinical terminology a considerable role belongs to word combinations (medical diagnoses). To construct such terms it is necessary to know grammar rules of the Latin language and especially the rules according to which agreement between nouns and adjectives is achieved.

Each word combination begins with a noun in the Nominative Case singular or plural, which is the nucleus of every term and designates some pathological condition. The attributes are often expressed through adjectives (agreed attributes) or nouns (non-agreed attributes), the role of which is to detalize the information or to show the localization of the pathological process.

e.g.: Lat. ***pneumonia apicalis*** – Engl. ***apical pneumonia:***

pneumonia (inflammation of the lung parenchyma), localized on the upper part of the lungs (the apex).

Lat. ***abscessus appendicis*** – Engl. ***appendiceal abscess***: (collection of pus in the appendix).

Lat. ***ulcus pharyngis*** – Engl. ***ulcer of the pharynx:***

(lesion on the mucous membrane of the pharynx))

Some international Latin word combinations (medical diagnoses) are not translated and included into the scientific texts, written in national languages, in their Latin form.

e.g.: ***genu varum*** – bowleg, bandy leg - an outward bowing of the legs.

***genu valgum* –** knock-knee – a deformity marked by abduction of the

leg in relation to the thigh).

***situs viscerum inversus*** – visceral inversion, a transposition of the

viscera (internal organs).

. III. COMPOUND TERMS (FULLY MOTIVATED). They are of the utmost interest in the study of the basics of the medical terminology. The majority of these terms are constructed on the basis of the words of Greek origin.

Compound terms consist of two or more parts which are called Combining forms.

**A Combining form (CF) is**  ***ANY part of a derivative (a morpheme or a block of morphemes) regularly reproduced without any change in the existing and newly constructed terms and preserving its terminological meaning.***

The final CFs express the essence of the term and have a classifying function. Some of them designate some class of pathological phenomena, others – surgical operations or some diagnostic manipulations. Many of them end in **–ia,** which is a suffix, designating “process, state or condition”. Its English equivalent is the suffix **–y,** preserving the same as in Latin meaning.

e.g.: Lat. stomatolog**ia –** Engl. stomatolog**y**

Lat. somotascop**ia** - Engl. somatoscop**y**

Lat. osteodystroph**ia** – Engl. osteodystroph**y**

In compound terms the Combining forms with anatomical meaning are used as initial motivying bases as a rule. As an example, some of the terms with the initial combining form ***“cardio”-*** (heart) are the following:

**cardiogenesis** - formation of the heart in the embryo;

**cardiogramma** – the graphic tracing made by the stylet of a

cardiograph;

**cadiomegalia** – enlargement of the heart;

**cardiologus**– physician specializing in cardiology;

**cardiometria –** measurement of the dimensions of the heart;

**cardiopathia** – any disease of the heart;

**cardiolysis** – an operation for breaking up the adhesions on the

heart.

Compound terms, constructed from Cfs by composition of bases usually include at least two motivying bases and a combining vowel (usually **–o**, seldom **- i** ) between them.

e.g.: ***cardi-o-tomia***

***haemat-o-logia***

***arthr-o-pathia***

***When we translate a Latin term into English, we transcribe this term from one language into another with the only possible difference in the ending .*** ***(As a rule, English compound terms are the same as Latin ones!)***

***When we explain the meaning of a compound term we start from the second part of the term putting the question “what?’ and then go over to the first part of the term putting the question “of what ?” or “where?”***

e.g.: Lat. osteologia (osteo- *bone*; -logia *science* )

Engl. osteology - “what?” science “of what?” of bones;

Lat. ostealgia (osteo- bone; -algia pain)

Engl. ostealgia - “what?” pain “where?” in a bone

Lat. osteoma (osteo- bone; -oma tumor)

Engl. osteoma - tumor of a bone (a benign slow growing mass

of mature bone)

Lat. osteomalacia– ( osteo- bone; -malacia softening) -

gradual softening of the bones

MEMORIZE CLINICAL TERMS:

***abscessus, us m - abscess*** (collection of pus)

***cancer, cri m - cancer*** (any malignant neoplasm: malignant –

deadly/fatal; neo- -new; -plasm – formed tissue)

***colica, ae f - colic*** (spasmodic pains in the stomach or

abdomen)

***coma, atis n - coma*** (a state of profound unconsciousness)

***comatosus, a, um - comatose*** (in a state of coma)

***cysta, ae f - cyst*** – 1) any bladder; 2) cyst – a pathological

cavity; sac, containing gas, fluid, etc.

***cystosus, a, um - cystous*** (containing cysts); **cystic (**relating to

some bladder)

***diabetes, ae f - diabetes*** - disease having the symptom polyuria

***diabeticus, a, um - diabetic*** - relating to diabetes

***fractura, ae f - fracture*** (a break, esp. the breaking of a bone or

cartilage)

***gangraena, ae f - gangrene*** (mortification; necrosis due to

obstruction, loss, or diminution of blood

supply).

***gangraenosus, a, um - gangrenous*** – (mortified; related to or

affected with gangrene).

***hernia, ae f - hernia*** (rupture; protrusion of a part or structure

through the tissue normally containing it. )

***icterus, im - jaundice*** (yellow colouring of the tissues)

***ileus, i m - ileus*** (obstruction of the bowel)

***infectio, onis f - infection*** (penetration of infectious agents into

the body)

***infectiosus, a um - infectious***

***inflamatio, onis f - inflammation***\*

***morbus, i m - disease***

***oedema, atis n - edema*** (swelling; an accumulation of an

excessive amount of watery fluid in cells, tissues

or serous cavities).

***tumor, oris m*** - any swelling; neoplasm; one of the symptoms of

inflammation

***paralysis, is f - paralysis*** (loss of power of voluntary movement

in a muscle through injury to or disease of its

nerve supply; stop of function)

***paralyticus, a, um - paralytic*** (relating to paralysis)

***paresis, is f - paresis*** - partial or incomplete paralysis (with

the function partially preserved)

***pneumonia, ae f - pneumonia*** (inflammation of the lung

parenchyma)

***glaucoma, atis n - glaucoma*** (a disease of the eye characterized by

increased intraocular pressure)

***spasmus, i m - spasm*** (an involuntary muscular contraction)

***trauma, atis n - trauma*** (an injury; any damage to the body

tissues)

***traumaticus, a, um - traumatic*** (relating to or caused by trauma)

***ulcus, eris n - ulcer*** (a lesion on the surface of the skin

or a mucous surface, caused by superficial loss of

tissue, usually with inflammation)

***ulcerosus, a um - ulcerous*** (relating to, affected with or containing

an ulcer)

***hepar, atis n - liver***

***acutus, a, um - acute*** (sharp and sudden)

***benignus, a,um - benign*** (not harmful for life)

***malignus, a,um - malignant*** (deadly or harmful for life)

***juvenilis, e - juvenile*** (that of young age)

***infantilis, e - infantile*** (that of a child )

***senilis, e - senile*** (that of an old age)

***serosus, a, um - serous*** (relating to, containing, or producing

serum or a substance having a watery

consistency)

***chronicus, a, um - chronic*** (of long duration)

**NB! Memorize!**

* ***Latin: Rubor, tumor, calor, dolor et functio laesa – symptomata inflammationis sunt.***
* ***English: The symptoms of inflammation are: reddening, swelling, fever (heat), pain and worsened function.***

EXERCISES

I. Translate the terms - medical diagnoses into English and explain their meanings:

1. gangraena diabetica
2. ileus paralyticus
3. colica gastrica
4. icterus hepaticus
5. hernia cerebralis occipitalis
6. inflammatio serosa
7. paralysis spastica
8. ulcus gastris
9. paresis cerebellaris

10. hernia diaphragmatica

11. inflammatio acuta

12. coma diabeticum

13. abscessus hepatis ascaridosus

14. paralysis cerebralis juvenilis

15. glaucoma posttraumaticum

II. Translate the terms - medical diagnoses into Latin and explain their meanings:

1. abdominal hernia
2. progressive bacterial gangrene
3. infantile hernia
4. malignant edema
5. embryonic tumor
6. cancer of the lung
7. serous inflammation
8. hepatic jaundice
9. acute abscess
10. juvenile progressive paralysis
11. diabetic coma
12. transverse fracture
13. chronic ulcer
14. infectious jaundice
15. palatal abscess

**LESSON TWO**

**SIMPLE DERIVATIVES: SUFFIXATION**

As it has already been mentioned, non-motivated simple terms include simple derivatives constructed with the help of suffixes. This method of word-building is called suffixation. Thus, suffixation is the attachment of a suffix to a motivying base. Suffixes have a very important classifying function. Thanks to them words are attributed to certain classes of notions; for example, all the nouns with the suffixes **-*ul- (-cul-), -ol-***  belong to the class of diminutives, that is, they have a diminishing meaning, i.e. designate smaller structures:

e. g.: tuber (swelling, protuberance) − tuber

tuber**cul**um − tubercle (small tuber)

The suffix ***–io*** has the meaning of the “process or result of an action” and corresponds to the English ***–tion****,* e. g:

Lat. rotatio – Engl. “rotation” ( the process of turning round)

It is impossible to overestimate the classifying function of a suffix − a Combining form with a certain terminological meaning. Thus, all the nouns with the suffix ***“-itis*”** have the terminological meaning of “inflammation, inflammatory disease”.

This suffix is used only in combination with a motivying base to construct a compound term, and the simple term “inflammatio” is used in terms word-combination.

For example, the terms ***inflammatio hepatis*** and ***hepatitis*** both have the same meaning of ***“inflammation of the liver***”.

MEMORIZE THE SUFFIXES:

ADJECTIVE SUFFIXES

From the Anatomical terminology you’ve already got an idea of some suffixes of adjectives determining "the relation to some anatomical formation". Many of them are used in the clinical terminology as well ***(-al, -ar, -e, -in, -ic)***and retain the same meanings, though suffix ***–ic*** may acquire an additional meaning – that of ***“ characterized or caused by the condition mentioned in the root of the term***, like: ***traumaticus – caused by trauma, comatosus – in a state of coma, etc..***

Compare: (anatomy): pars alveolaris

pelvis renalis

linea glutea

(pathology): cancer alveolaris

anuria renalis

hernia glutea

***Other suffixes are:***

***-id******(-e***us, a, um ) - (Engl. –**oid**) – in the form of, looking like;

***-id******(-al***is,e)

e.g.: **mastoideus, a, um (mastoid)** – looking like breast

**xiphoideus, a, um (xiphoid**) – in the form of a sword

***-os*** (us, a, um) – ( Engl. –ous) – rich in, having plenty of;

characterized by;

e.g.: **fibrosus, a, um (fibrous)** – composed of or

containing fibroblasts;

**mucosus, a, um (mucous)** – relating to mucus;

***-iv* (**us,a,um) - (Engl. –ive) – able to do something;

e.g.: **incisivus,a,um (incisive)** – able to cut;

***-fer*** (a, um); ***phor***(us, a, um) - (Engl. – ***ferous***) – carrying;

e.g**.: seminifer (**Engl**.seminiferous)–** carrying or conducting

the semen;

***-genus*** (a, um) - (Engl. ***-genic / - genous)***

***– causing some disease or process;***

***- caused by damage in the organ; formed in this organ.***

e.g.: cancerogenus, a, um – (Engl. cancerogenic = carcinogenic)

– causing cancer;

pyogenus, a, um – (Engl. pyogenous, pyogenic)

– pus-foming; relating to pus formation; causing pus formation;

osteogenus, a, um – (Engl.osteogenous, osteogenic)

– relating to the formation of a bone; causing bone formation;

hepatogenus, a, um – (Engl.hepatogenous, hepatogenic)

– caused by damage in the liver; of hepatic origin, formed in the liver.

EXERCISES:

1. *Find simple derivatives, formed with the help of suffixes,in the vocabulaty of Lesson 1, pay attention to their English equivalents, explain the meanings of the terms*
2. Give the meanings of the suffixes; explain the meanings of the terms, give their English equivalents:

Lingula, temporalis, orbitalis, venosus, squamosus, cellula, canaliculus, spinosus, sphenoidalis, thyroideus, laryngeus, oesophageus, cartilagineus, styloideus, vasculosus, cavernosus, parietalis, pelvicus, hepaticus;

cystosus, tuberculosus, paralyticus, ulcerosus, serosus, diabeticus, mucosus, chronicus, infectiosus, spasmaticus, seminifer, hepatogenus, incisivus, progressivus, thyreogenus, cancerogenus / carcinogenus.

**NOUN SUFFIXES:**

**1. Diminutives** (nouns, designating smaller structures): The suffix is added to the base of the motivying noun plus the endings of the 1st and 2nd declensions (us, a, um) depending on the gender of the motivying noun and irrespective of its declension.

e.g. : **-ul-** vena, ae f − venula, ae f ( Engl. **–ule**)

globus, i m − globulus, i m

**-cul-** tuber, eris n − tuberculum, i n (Engl, **-cule; -cle**)

auris, auris f − auricula, ae f (ear)

**-ol**- bronchus, i m − bronchiolus, i m (Engl. **–ole; -olus**)

**2. Nouns derived from the verbs with the help of suffixes:**

**-io**  − the process or result of an action − flexio (the process

of bending ) (Engl. **–tion, -sion**)

**-ura** − the result of an action − flexura (the result of bending)

(Engl. **– ure; -tion**)

**-or/-er**− the doer of the action − m. flexor (the one which bends)

(Engl. **- -or; -er**).

# **TERMINOLOGICAL SUFFIXES**

They are suffixes, which developed specific meanings in the medical terminology.

**-oma, omatis n** − (Engl. –oma)

1. tumor, any benign neoplasm (newly formed tissue);

2. localized collection of some fluid in the tissues.

e.g.: Lat. **myoma** − Engl. myoma

- a benign neoplasm of muscular tissue;

Lat. **chondroma** − Engl. **chondroma**

* a benign neoplasm derived from mesodermal cells that form cartilage;

Lat.**osteoma** − Engl. **osteoma**

* a benign slow-growing mass of mature bone;

*but*: Lat. **haematoma** – Engl. **hematoma**

* localized collection of extravasated blood in the tissues.

**NB! Malignant tumors are designated by special terms, some of them are:**

**Cancer,cri m –** Engl. **– cancer;** any malignant neoplasm;

**Carcinoma, atis n –** Engl. **– carcinoma;** (cancerous tumor) – any of the various types of malignant neoplasms derived from epithelial tissue in several sites;

**Sarcoma,atis n –** Engl. **– sarcoma** (a fleshy excrescence);a connective tissue neoplasm,usually highly malignant, formed by proliferation of mesodermal cells;

**Melanoma, atis n –** Engl. – **melanoma;** a malignant neoplasm derived from the cells that are capable of forming melanin;

**Hepatoma, atis n –** Engl. – **hepatoma;** a carcinoma derived from parenchymal cells of the liver.

**Lymphoma, atis n –** Engl. **– lymphoma;** general term for ordinarily malignant neoplasms of lymphoid and reticuloendothelial tissues.

-**itis, itidis f** (Engl. –itis)

***1. inflammatory disease***

***2. inflammation***

e.g.: Lat. **gastritis** − Engl. **gastritis**

- inflammation, esp. mucosal of the stomach;

Lat. **rhinitis**  − Engl. **rhinitis**

* inflammation of the nasal mucous membrane;

Lat. **encephalitis −** Engl. **encephalitis**

* inflammation of the brain.

**osis, osis f** (Engl. **-osis**)

Syn. **-iasis, iasis f** (Engl. –**iasis**)

1. ***any process or its result,***

e.g.: Lat**. symbiosis** – Engl. **symbiosis**

- a process of living together;

Lat. **lithiasis** (litho- calculus, stone) – Engl. **lithiasis**

* formation of calculi of any kind.

1. ***a pathological condition, caused by some agent or substance,***

e.g.: Lat.**mycosis** – Engl. **mycosis**

any disease caused *by a fungus*;

Lat. **helminthiasis** – Engl. **helminthiasis**

* disease caused *by intestinal worms*.

1. ***A chronic degenerative disease of some organ,***

e.g.: Lat**.nephrosis** (nephr- kidney) – Engl. **nephrosis**

- chronic degenerative disease of *the kidneys;*

Lat. **arthrosis** (arthr- joint) – Engl. **arthrosis**

- chronic disease *of the joints.*

*4****. Increase in number of blood cells, distribution of tumors, excessive formation of tissue cells,***

e.g.: Lat. **leucocytosis** − Engl. **leucocytosis**

-an abnormally large number of leucocytes;

Lat.**fibromatosis** – Engl. **fibromatosis**

* the condion characterized by the occurrence of multiple fibromas (tumors from fibrous tissue).

Lat. **fibrosis** − Engl**. fibrosis -** excessive formation of fibrous tissue as a reparative or reactive process,as opposed to formation of fibrous tissue as a normal constituent of an organ or tissue.

**-ismus, i m** (Engl. **-ism**)

***1. phenomenon, quality, fact.***

e.g.: Lat. **subjectivismus** - Engl. **subjectivism**

– the quality of being subjective.

***2. deviation from some standard, norm; syndrome.***

e.g.: Lat. **infantilismus** – Engl. **infantilism**

− a state marked by extremely slow development of mind and body; childishness.

***3. addiction to some substance; dependence.***

e.g.: Lat.**nicotinismus -** Engl. – **nicotinism**

- addiction to nicotine /smoking.

***4. poisoning,***

e.g.: Lat. **iodismus –** Engl. **– iodism**

− poisoning with iodine.

EXERCISES:

1. Form nouns with the suffix **–io**; translate the derivatives into English:

Resectum (to resect, to cut out)

Sectum (to cut)

Extractum (to extract)

Extensum (to stretch)

Obturatum (to obstruct, to stopper up)

Contractum (to contract)

Transfusum (to transfuse)

2. Form nouns with the general meaning of “***the doer of the action”;*** translate the derivatives into English:

Constrictum (to constrict)

Depressum (to depress)

Injectum (to inject)

Erectum (to erect)

Acceptum (to accept)

3. Form nouns with the suffix **–ura;** translate the derivatives into English:

Junctum (to join)

Strictum (to squeeze, to compress)

Curvatum (to curve)

Fissum (to split, to break down)

Commissum (to connect)

4. Construct the names of inflammatory diseases. Explain their localization:

Gastr…, ureter…, nephr…(kidney), splen…, cholecyst… (gallbladder), cyst…(urinary bladder), tonsill…, pancreat…, gingiv…, vascul…, hepat…, burs….

5. Form the terms with the meaning of “benign neoplasm”Explain their meanings:

Thymus, i m; fibra, ae f; myo- (muscle); chondro- (cartilage); osteo- (bone); nephro- (kidney); myelo- (bone marrow), lipo- (fat).

6. Explain the meanings of the suffixes and the common meanings of the terms:

Mycosis (myco- fungus), fibrosis, osteofibrosis (osteo- bone), lymphocytosis, lymphoma, morphinismus, mercurialismus, alcoholismus, coniosis (conio- dust) arthrosis (arthro- joint), arthritis, nephrosis (nephro- kidney), nephritis, hepatitis, hepatoma, spondylosis (spondylo- vertebra), spondylitis, myositis (myo- muscle), myoma, ventriculitis, thrombosis (thrombo- clot), rhinitis (rhino- nose).

**LESSON THREE**

**SIMPLE DERIVATIVES. PREFIXATION**

Alongside with suffixation, another productive way of word-building is prefixation, that is the attachment of a prefix to a motivying base without changing the meaning but giving some additional information on **localization** (above, below, in, out, of, etc. **), direction** (to, from, etc. ), **absence or negation** of something, **occurrence** at some time, etc. There are synonyms and antonyms among the prefixes which is due to the existence of Greek and Latin prefixes with the same or opposite meanings. The English medical terminology makes use of Greek and Latin prefixes, preserving the meanings attached to them in Latin.

e.g.: **ad-** ( approach); **ab**– (removal) - antonyms

musculus adductor - adductor muscle

musculus abductor - abductor muscle

**epi-** (above); **supra** – (above) - synonyms

***suprascapularis – suprascapular*** – located above the scapula;

***epitympanicus – epitympanic*** – located above or in the upper part of the tympanic membrane.

**N.B.! When you explain meanings of adjectives with prefixes, start from: “located somewhere” or “occurring at some time”,**

e.g. *subscapularis* (English – subscapular)– located below the scapula;

postnatalis (English – postnatal) – occurring after birth.

MEMORIZE THE PREFIXES:

**ab-** **- from**

**ad-**   **- to** (assimilated variants: **aff-, att-, all-,** etc.

* depending on the first letter of the root)

**ana- - upward**

**ante-, prae- - before**

**anti-, contra-, - against, contrary to**

**cata- - downward**

**circum- - around**

**con-, com-, syn-, sym- - with, together**

**de-\*, des- ,se-dis- - 1. away from; 2. separation**

**dia- - 1. between; 2. through 3. away from**

**ecto-, exo-,extra- - positioned outside;**

**ex- - outside motion;**

**in- - 1) inside motion; 2) absence of some**

**guality;(assimilated variants il-;-im;-**

**ir,etc.)**

**inter-, meso\*-, dia- - between; middle (layer);**

**intra-, endo-, ento- - inside**

**per- - 1. through; 2. facilitation of action;**

**post-, meta- - after, behind**

**re- - 1. repeated action; 2. response;**

**3. backward motion;**

**retro- - behind; backward;**

**sub-, infra-, hypo- - below**

**super-, supra - epi - - above, over;**

**trans-, per-, dia- - through**

**\*NB! Prefixes, which developed specific meanings in the medical terminology:**

1. ***meso* -+** name of an intraabdominal organ designates

***mesentery*** of this organ;

e.g.: mesoduodenum – mesentery of the duodenum.

2. ***de(s)-* +** ***quality*** means ***worsening*** of this quality.

e.g. degeneratio – worsening of the generative function.

**NB!** **1. Peri-**

1) The prefix ***peri-*** when used in adjectives designates location, that is, something located **around** some structure. Explain such terms like: something  **located around** this structure:

e.g.periarterialis – sth ***located* around** the arteries

2)when taken with the name of the organ, means

***“capsule,*** ***tunic of connective tissue enveloping this organ”,***

e.g.: “perimetrium” is the serous coat of the uterus;

“perinephrium” is the connective tissue and fat

surrounding the kidney.

**2. Para-**

1) The prefix ***para-*** when used in adjectives designates location, that is, something located **near** some structure. Explain such terms like: something  **located near** this structure:

e.g. parasternalis – sth ***located*** **near** the **sternum**

1. in combination with the name of an organ means “***tissue, especially connective, adjacent to this organ”:***

e.g.: “paracystium” are the tissues adjacent to the urinary

bladder;

“parametrium” is the connective tissue of the pelvic

floor.

3) ***para-*** ***+ function*** has an additional meaning of “***a departure from the normal, abnormal function”:***

e.g.: “paracusia” is impaired hearing.

4) ***para- + name of a disease*** designates “***a disease similar to the mentioned one”:***

e.g.: “paracholera” is a disease clinically resembling

Asiatic cholera but due to the vibrio specifically

different from Vibrio cholerae.

**NB!** ***Some prefixes are used to describe******the state of a function***.

**Eu- -** normal function**;**

a-, an- - 1) absence; without; 2) facilitation of action;

dys- - bad, painful, difficult; malfunction;

hyper- - excessive function;

hypo- - low or deficient function.

EXERCISES:

I. Answer the questions:

1. What prefixes have the meaning a) direction through; b) between?

2. What prefixes are used to denote a) disturbance, difficulty of a

function? b) excessive function c) absence of a function?

3. What prefixes correspond to the English ***against*?**

4. What stratum of the heart muscle is external?

a) endocardium b) epicardium c) myocardium

5. Which of the strata of the cells in the embyo is medium? Why?

a) entoderma b) mesoderma c) ectoderma

6. What prefix has the meaning contrary to the meaning of the prefix **–**

**ab**? Give examples in Latin and in English.

7. Explain the meanings of the words: ***apathia, sympathia, antipathia***,

if –“pathia” means “feeling, mood, emotion”.

8. What terms will have the meaning of “ rapid breathing, stop of

breathing, weakening of breathing, difficulty of breathing, normal

breathing”, if “ breathing” is designated through the Combining form

***-pnoё*** ?

9. Combining form “-tonia” denotes “the tone”. What terms will you

construct to express: a) absence of tone?

b) difficulty, trouble in a tone?

c) excessive tone?

d) lowered tone?

e) normal tone?

10. What prefix is used to denote mesentries?

11. **NB!** Explain the meanings of the terms and recollect the primary

meanings of the prefixes ***an-*** and ***per****-*, minding that in the given terms

they designate ***“facilitation of an action”:***

***aneurysma (- eurysm means dilation);***

***pertussis (- tussis means coughing).***

2. Fill in the blanks:

1. In the meaning of *“after something”* the Latin prefix … is used, and in the meaning of *“behind”* the prefix … is used.

2. The upper part of the abdomen is called ***epigastrium***, the middle part is called …, the lower part is called …

3. Terms denoting *“tunic of connective tissue enveloping a muscle, a nerve, a tendon”* are constructed with the help of the prefix …. For example: *…mysium, …neurium, …tendineum.*

4. In the terms *“parametrium”, “paranephritis*” the prefix **“*para-“*** denotes ….

3. Write prefixes with the meanings opposite to:

In-; extra-; prae-; super-; epi-; hyper-; ana.

4. Explain the meanings of the prefixes in the following terms:

1***. sub-, infra-, hypo-;***

***super-, supra-, epi-***

Subscapularis, supraspinalis, supratrochlearis, submandibularis, infracostalis, suprasternalis, subnormalis, epigastricus, infratemporalis, suprarenalis, subfemoralis, epitympanicus, subcutaneus.

2. ***in-, ex-, intra-, extra-;***

***inter-, meso-, dia-;***

***endo-, ecto-;***

Intermuscularis, intracellularis, endocervicalis, extrapyramidalis, intracranialis, interalveolaris, extrapulmonalis, interosseus, extrauterinus, mesoduodenum, mesogastrium, inhalatio, invasio (vado – movement), injectio, diastole (the dilation of the heart cavities), diaphysis (the shaft of a long bone as distinguished from the epiphysis), interatrialis, inspiratio, expiratio.

3. ***ante-, prae-, pro-;***

***post-, meta-, retro-, re-;***

Praevertebralis, retrobuccalis, postnatalis, praenatalis, reactio, pronephros, metanephros, retroarticularis, prolongatus, metaencephalon, reinfectio, praecordialis, metathalamus, retroduodenalis, prodromalis (dromos – running), revaccinatio, praecancerosus, retroperitonealis, antepositio, retropositio.

4. ***ad-, ab-;***

M. adductor, m. abductor, adhaesio, adaptatio, adsorbtio, absorbtio.

5. ***trans-, per-, dia-;***

Transmissio, diarrhoea, transfusio, perforatio, transplantatio, diameter, transformatio, dialysis.

6. ***contra-, anti-;***

***con/com-, syn/sym-;***

Symbiosis, syndesmosis, conjunctiva, compositus, syndromum, compressio, synphalangia, symmetria, synergismus, synkinesia, antibioticus, antidepressivus, contractio, contrapertura, contraceptivus, antisepticus, anthelminthicus.

7. ***dys-, eu-;***

Dysrhythmia – eurhythmia.

Dyspnoё – eupnoё.

Dystonia – eutonia.

8.***circum-, peri-, para-;***

Circumflexus, circumanalis, circumarticularis, circummandibularis, periosteum (osteo- - bone), perivascularis, pericranium, perilymphaticus, periconchalis, paradenitis (aden- - gland), paracystitis (cysto- - urinary bladder), parahepaticus.

9. ***ana-, cata-***

Anamnesis – catamnesis (-mnesis – memory)

Anabolismus – catabolismus

**NB!** anaplasia = cataplasia (loss of structural differentiation especially in malignant neoplasms; a degenerative change in cells or tissues that is the reverse of the constructive developmental change; a return to an earlier or embryonic stage).

10. ***dis-, dia-, (separation), se-, des- (removal); de- (1- away from; 2- change for the worse).***

Diffusus, dialysis, diagnosis, desinfectio, degeneratio, demobilisatio, deformatio, decompensatio, separatio, secretio, dedifferentiatio, dementia, deoxydatio, descendence, disjunctio, dislocatio.

# 5. Finish the construction of the terms:

1. An increase in number of cells in a tissue or organ:

***… plasia***

2. Reduced thyroid function:

***… thyre…***

3. Impaired gastric function:

***… pepsia***

4. Any initimate association between two species:

***… bi…***

5. Total inability to recall past experiences:

***… mnesia***

6. Inflammation of the peritoneal coat of the pancreas:

***… pancreat…***

7. Normal breathing:

***… pnoё***

8. Inflammation of the tissues adjacent to kidney:

***…nephr…***

9. The phenomenon of breaking down of complex chemical compounds into simpler ones:

***…bol…***

10. The outer layer of cells in the embryo:

***… derma***

11. Inflammation of the mesenry of the sigmoid colon:

***…sigmoid…***

12. Located behind the duodenum (2nd group):

***…duoden…***

13. Occurring after the birth (2nd group):

***…nat…***

14. Inflammation of the tissues and other structures about the urinary bladder:

***…cyst…***

15. A state marked by extremely slow development of mind and body:

***infantil…***

6. Translate the terms - word combinations into Latin and explain their meanings:

Gangrenous pneumonia, superficial inguinal hernia, hyperkalemic periodic paralysis, mucous cancer, transurethral resection, alveolar sarcoma, acute appendicitis, serous hepatitis, chronic tonsillitis, tuberculous peritonitis, physiologic jaundice, necrotic mastoiditis, intrauterine infection, otogenic abscess of the cerebrum, serous peritendinitis, intraarticular fracture, toxic gangrene of the skin.

**LESSON FOUR**

**COMPOUND TERMS. COMBINING FORMS OF THE GREEK ORIGIN DENOTING ORGANS AND TISSUES**

As you know from Anatomy, any organ or tissue is designated through a Latin term. Thus, the majority of names of organs in Human Anatomy are of Latin origin, but some of them come form Greek. Almost every Latin term of the Human Anatomy has its Greek duplicate in the Pathological Anatomy. Greek designations of organs and tissues occur as ***Combining forms\**** and are usually not used as independent words, but we single them out in the structure of compound terms.

***\*see p.91***

As it has already been mentioned in Lesson One, the name of an organ is included into the term *as its first part* as a rule; the science, method, diagnostics and disease being included into its second part.

e.g.: ***spondylitis*** – inflammation of the vertebrae;

***arthropathia*** – any disease affecting a joint;

***cardiograph*** – an instrument for recording graphically the movements of the heart.

But there are cases when the names of organs occur as final combining forms, denoting 1) congenital pathologies or 2) some part or subdivision of a structure, usually in the terms constructed with the help of prefixes:

e.g.: 1) ***apodia*** – congenital absence of feet;

**macropodia –** abnormally large feet; but:

***podalgia*** – pain in the foot.

2) ***pericardium –*** fibroserous membrane covering the heart

***endocardium –*** the innermost tunic of the heart, but:

***cardiopathia*** – any disease of the heart

**NB!** Greek Combining Forms are not translated, but transcribed into English!

MEMORIZE GREEK AND LATIN DUPLICATES

OF NAMES OF ORGANS:

Greek Latin English

**1. kephalo-, cephalo-,** **cephalo-,-cephalia**

**- cephalia**  caput, itis n head

**2. somato-, -soma**  corpus, oris n **somato-, -soma** body

**3. osteo-** os, ossis n **osteo-** bone

**4. stetho-**  pectus, oris n **stetho-** chest,

thorax, acis m thorax

**5. spondylo-; -spondylia** vertebra, ae f **spondylo-, pondylia** vertebra

**6. cardio-; -cardium**; cor, cordis n **cardio-, -cardium**  heart

**7. arthro-**  articulatio, onis f **arthro-** joint

**8. stomato-** os, oris n **stomato-** mouth

**9. rhino**- nasus, i m **rhino-** nose

**10. odonto-;-odontia** dens, ntis m **odonto-** tooth

**11. cheiro-, chiro-, -cheiria** manus, us f **cheiro-**  hand

**12. podo-, -podia** pes, pedis m **podo-** foot

**13. oto-, -otia**  auris, is f **oto-, -otia** ear

**14. ophthalmo-;** oculus, i m **ophthalmo-** eye

**-ophthalmia**

**15. –op-; -opt-; optico-;** visus, us m **optico-** vision,

**-opia; -opsia** **-opia,opsia**

eyesight

**16. glosso-; -glott-;**  lingua, ae f **glosso- . glott-,-glossia**

**-glossia** language, tongue;

**17. cheilo-;-cheilia** labium, i n **cheilo-,-cheilia**  lip

**18. ulo-** gingiva, ae f **ulo-** gum

**19. gnatho-; -gnathia** maxilla, ae f **gnatho**- jaw; upper jaw

**20. geno-; -genia** mandibula, ae f **geno-** lower jaw

**21. urano-** palatum durum **urano-**  hard palate

COMBINING FORMS DENOTING SCIENCE, METHODS

OF DIAGNOSTICS, TREATMENT, DISEASE

**1. -logia** CF expressing in a general way the study of the

subject noted in the body of the word; the English

equivalent is **–logy**

**2. -logo**- - CF denoting relation *to speech;* Engl*.* **logo-**

**3. -scopia** -CF denoting an action or activity involving the

use of an instrument for viewing, Engl. **–scopy**

**4. -metria, -metr-** (to measure) - measurement (quantitative)

**5. -graphia** (a writing or description);

1. recording of the work of an organ;

2. X-ray examination; roentgenography.

Engl**. -graphy**

**6. -gramma** 1. A record of the work of an organ (a line or tracing

denoting varying values or commodities,

temperatures, etc.);

2. result of X-ray examination.

Engl. -**gram**

**7. –therapia** 1. treatment of a disease by various methods

- Engl.  **–therapy** ( a Combining Form)

2. non- surgical treatment; Engl.  **therapy** (simple

root word)

**8. noso-** (disease) - CF denoting relation t*o disease. Engl.*

**noso-**

**9. patho-, -pathia -** feeling, suffering*, disease* . Engl. **patho-,**

**-pathy**

**10. -alg-, -algia, -algesia** - CF meaning *pain or painful condition.*

*Engl.* ***alg-****,* **-algia, -algesia**

**11. -odynia** - CF meaning *pain. Engl***. -odynia**

**12. aesthesio-;** 1) perception; 2) sensitivity. Engl. -**esthesia**

**-aesthesia**

EXERCISES:

I. Analyze the terms: split them into Combining forms, give the meaning of each, explain the common meanings of the terms:

Osteologia, somatologia, stomatologia, somatoscopia, arthropathia, nosologia, pathologia, rhinologia, hormonotherapia, logotherapia, spondylographia, cardiographia, osteogenus, hepatogenus,

odontalgia, pancreatodynia, logopathia, osteoarthropathia, thyreopathicus, thyreogenus, otalgia, podalgia, spondylodynia, ophthalmoscopia, cardiogramma, encephalogramma, acheiria, apodia, chirospasmus, cephalgia, stethometria;

anaesthesia, dysaesthesia, hypaesthesia, periosteum, glossalgia, cheilodynia, ulodynia, gnathodynia, retrogenia, prognathia, gnathopathia, gnathospasmus, cheilosis, cheilitis.

2. Construct the terms according to their definitions:

1. Any disease of the vertebrae
2. Any lesion of the vertebrae of a degenerative nature
3. Inflammation of one or more vertebrae
4. Pain in the spine (vertebra)
5. The scientific measurement (of the bones ) of the skull (and face)
6. Headache
7. Cephalo(metric) roentgenogram
8. Any disease of the body
9. Examination of the body

10. Therapy by using heat (thermo-)

11. The science concerned with the study of the body

12. A disorder affecting bones and joints

13. Benign tumour of osteoblasts

14. Degenerative joint disease

15. Carcinoma (malignant tumour) in a bone

16. Pain in the chest

17. The study of the structures, functions, and diseases of the mouth

18. Inflammation of the mucous membrane of the mouth

19. Disease of the nose

20. Fungus infection of the nasal mucous membrane

21. Inflammation of the ear

22. Toothache

23. Inflammation of the lip

24. Earache

25. The examination of the eyes to determine the presence of vision

problems and eye disorders

26. Pain in the foot

27. An inflammatory disorder of the foot

28. Pain in the hands and in the feet (= extremeties – *acro*-)

29. Any disease of the eye caused by a fungus

30. Pain in the lip

**SELF-CONTROL EXERCISES**

**Variant I**

**I. Write Combining forms to the following names of organs:**

1. caput, itis n 7. oculus, i m

2. corpus, oris n 8. visus, us m

3. os, oris n 9. cor, cordis n

4. pectus, oris n 10. manus, us f

5. nasus, i m 11. articulatio, onis f

6. dens, dentis m 12. auris, is f

**II. Match the following medical terms with their definitions:**

1. ***any disease of vertebrae***

spondylitis

spondylosis

spondylopathia

2. ***the science concerned with the study of the body***

somatogenus

somatologia

somatomycosis

somatoscopia

3. ***the medical science concerned with all aspects of disease***

nosologia

pathologia

pathogenesis

4. ***caused by damage of the thyroid gland***

thyreogenus

thyreopathicus

cardiogenus

5. ***any speech disorder due to the pathology of the CNS***

logotherapia

logopathia

logospasmus

6. ***the medical science of classification of diseases***

nosologia

rhinologia

pathologia

**Variant II.**

**I. Write Combining forms to the following names of organs:**

1. articulatio, onis f 7. vertebra, ae f

2. os, ossis n 8. nasus, i m

3. gingiva, ae f 9. labium, i n

4.thorax, acis m 10. cor, cordis n

5. oculus, i m 11. auris, is f

6. corpus, oris n 12. dens,ntis m

**II. Match the following medical terms with their definitions:**

1***. any disease of the joints***

arthrosis

arthritis

arthropathia

2***. the study of the structures, functions and diseases of the mouth***

somatologia

stomatologia

stomatomycosis

3. ***the medical science of classification of diseases***

nosologia

rhinologia

pathologia

4. **measurement of the dimensions of the heart**

cardiogramma

cardiographia

cardiometria

5. ***a treatise on or description of the bones***

osteometria

osteographia

osteoma

osteologia

6. ***low sensitivity***

hyperaesthesia

analgesia

hypaesthesia

**Check up yourself:**

**The answers for the tasks**

**Variant I**

**I.** 1. kephalo-; cephalo-; cephalia 7. ophthalmo-;

2. somato-; -soma -ophthalmia

3. stomato- 8. –op-; opt-;-opia

4. stetho- optico-; -opsia;

5. rhino- 9. cardio-; -cardium

6. odonto-; -odontia 10. cheiro-; chiro-

11. arthro-

12. oto-; otia

**II.** 1.spondylopathia

2. somatologia

3. pathologia

4. thyreogenus

5. logopathia

6. nosologia

**Variant II**

**I.** 1. arthro- 7. spondylo-; spondylia

2. osteo- 8. rhino-

3. ulo- 9. cheilo-; -cheilia

4. stetho- 10. cardio-; -cardium

5. ophthalmo-; -ophthalmia. 11. oto-; otia

6. somato-; -soma 12. odonto-, -odontia

**II.** 1.arthropathia

2. stomatologia

3. nosologia

4. cardiometria

5. osteographia

6. hypaesthesia

**LESSON FIVE**

**GREEK AND LATIN DUPLICATES OF NAMES**

**OF ORGANS AND TISSUES**

Greek Latin English

**1. gastro-, -gastr** ventriculus, i m stomach; **gastro-**

**2. entero-;-enteri** **um** interstinum, i n intestine,

intestinum tenue small intestine;

**entero-, -entery**

**3. procto-**  anus, i m anus

rectum, i n rectum; **procto-**

**4. pneumo-, pneumono**- pulmo, onis m lung; **pneumo-**

**pneumono-**

**5. nephro** ren, renis m kidney; **nephro-**

**6. spleno**- lien, enis m spleen; **spleno-**

**7. pyelo-** pelvis renalis the pelvis of

the kidney; **pyelo-**

**8. cysto-** vesica, ae f bladder

vesica urinaria urinary bladder

**cysto-**

**9. cholecysto**- vesica fellea, seu gallbladder;

vesica biliaris **cholecysto-**

**10. choledocho-** ductus choledochus the common bile

duct; **choledocho-**

**11. metro-, -metr** uterus, i m uterus (womb);

**-metrium; hystero- metro-, hystero-**

**12. cholangio-**  ductus beliferi bile ducts;

**cholangio-**

**13. haemo-, haemato-,** sanguis, inis m blood; **hemo-**

in the blood; **-emia**

**14. histo-, histio**- textus, us m tissue; **histo-**

**15. myo-, -mysium** musculus, i m muscle; **myo-,**

**-mysium**

**16. cyto-,-cytus** cellula, ae f cell; **cyto-; -cyte**

**17. -cele**  hernia, ae f hernia; **-cele**

**18. chondro-**  cartilago inis f cartilage; **chondro-**

**19. neuro-, neuri-** nervus, i m nerve;**neuro-, neuri-**

**20. adeno-**  glandula, ae f gland; adenoid

nodus lymphaticus; lymph node; **adeno-**

**21. angio-** vas, vasis n vessel; **angio-**

**22. phlebo-** vena, ae f vein; **phlebo-**

**23. myelo-, -myelia** medulla spinalis 1) the spinal cord;

medulla ossium 2) the bone marrow;

3) the myelin sheath

of nerve fibres; **myelo-; myelia**

**24. masto-** mamma, ae f the breast; **masto-**

**25. teno-**  tendo, inis m tendon; **teno-**

**26. uro-,** **-uria** urina, ae f urine; in the urine;

**-uresis,** urintation**; uro-, -uria -uresis,**

**27. splanchno**- viscus,eris n internal organs; **splanchno-**

COMBINING FORMS DENOTING PATHOLOGICAL CONDITIONS

IN TISSUES AND ORGANS AND THERAPEUTICAL

AND SURGICAL METHODS

**1. –iatria**  - treatment; **-iatry, -iatrics**

**-iater**  **-** physician; **-iater**

**2. –paedia**  - (methods of) corrective treatment;

- **pedics**

**3. paedio-, paedo**- - child; **pedi-, pedo-**

**4 -gyno-, gynaeco-** - woman/ female

**5. andro-, -andria** - man/ male

**6. geri-, gero-, geronto**- - old age

**7. -ectasia, -ectasis** - dilation or expansion; **- ectasis**;

**8. –ptosis**  - a falling or downward displacement

of an organ; **- ptosis**;

**9. steno-, -stenosis** - narrowness, constriction; **- stenosis**;

**10. –sthenia;**  - a condition of activity and

apparent force; strength; **- sthenia**;

**11. sclero-, -sclerosis** - hardness (induration); relationship

to the sclera; - **sclerosis**;

**12. –malacia** - softening or loss of consistency

and contiguity in any of the organs or

tissues; **- malacia**;

**13. –lysis, -lyt-**  - 1) destruction;

2) an operation for breaking up the

adhesions in an organ; **- lysis**;

**14. –tomia**  - incision, a cutting operation; **- tomy**;

**15. –ectomia** - removal of any anatomical

structure; **-ectomy;**

**16. –stomia**  - 1) artificial or surgical opening;

2) creation of an anastomosis; **- stomy**;

**17. –pexia** - fixation, usually surgical; **- pexy;**

**18. –rrhaphia**  **-** surgical suturing; **-rhaphy**;

**19. –eurysis** - surgical procedure of dilating an

organ; **-eurysis**;

**20. –stasis**  - stagnation of the blood or other

fluids; slow flow; persistency **-stasis**.

**21. – plastica**  – plastic surgery; restoration of the

shape and function of organs and tissues;

**- plasty**.

EXERCISES:

1. Explain the meanings of the Combining forms, give their Greek and Latin duplicates. Explain the common meanings of the terms:

Haemolysis, anaemia, haemotherapia, haemostasis, haemangioma, haemangiomatosis, haematologia, haemopathologia, haemothorax, haemarthrosis, haematonephrosis, haematoma, haematuria, uraemia, azotaemia, cholaemia, haematomyelia, haematometria, haemopathia,.

**NB! *haemo-; haemato*- + name of organ = *blood in this organ*;**

Pneumonitis, pneumomalacia, pneumonopexia, pneumonorrhaphia, pneumoresectio, pneumotomia, pneumosilicosis, pneumopyelographia, pneumogastrographia, pneumomyelographia, pneumothorax, pneumocranium, pneumopyothorax.

**NB!** ***Pneumo-; pneumono- + pathological condition/ surgery/* *examination* = pathological condition/ surgery/ examination of the lungs;**

***Pneumo-; pneumato- + organ* = gas or air in this organ;**

***Pneumo-; pneumato- + organ + -graphia* = X-ray, (radiography) after introduction of gas/air into this organ.**

Cystoma, cystofibroma,cystadenoma, cystadenocarcinoma, cystalgia, cystectasia, cystectomia, cystitis, cholecystocolostomia, cystoenterostomia, cystographia, cystopyelitis, cystolithus, cystolithiasis, cystometria, cystopexia, cystoptosis, cystopyelonephritis, cystourethrographia.

**NB! *Cysto- + pathology /surgery/examination =* pathology /surgery/examinatio*n* of the urinary bladder;**

**Cysto- + -oma – benign neoplasm containing cysts**

***Cysto- + tissue* + -oma= benign neoplasm (tumor),developing from this tissue and containing cysts;**

Neurosis, neuritis, neuroma, neurolysis, angioneurosis, neurospasmus, neurotologia, neurasthenia, neurosthenia, neuralgia, neurectomia, neuriatria, neuroarthropathia, neuroblastoma, neurogenus, neurologia.

**NB! N*eurolysis* – 1) “ destruction of nerve tissue”; 2) “ freeing of a nerve from inflammatory adhesions”.**

Hysterocystopexia, hystereurysis, hysterodynia (hysteralgia), hysterogenus, hysterogramma, hysterolysis, hysteromyoma, hysteromyotomia, hysteropexia, hysterorrhaphia, hysteroscopia;

metritis, metrodynia, metromalacia, metrofibroma, metrographia, metropathia, metrorrhagia, metrostenosis, perimetritis, parametritis, myometrium, endometrium, pyometra.

**NB! *Hystero- = metro*- - synonymous Combining forms;**

***-metrium* – describing the structure (layers) of the uterus;**

***-metra* – sth contained in the uterus.**

Myositis, myoma, myoblastoma, myocardium, myocardiosclerosis, myelitis, myeloblastoma, myelographia, myelogenus, myelocytus, myelomalacia, myelolysis, myographia, myopathia, myorrhaphia, myotonia, myocardium, myometrium, hydrometra.

**NB! Mind the difference in spelling and meaning between Combining forms *myo*- (muscle) and *myelo-* (spinal cord or bone marrow).**

2. Construct Latin compound terms with the following meanings:

1. Hemorrhage into the substance of the spinal cord.
2. The division of pathology concerned with the diseases of blood.
3. Any condition in which urine contains blood.
4. An excess of urea and other nitrogenous wastes in the blood.
5. Establishment of a new opening between the stomach and the

intestine.

1. Softening of the walls of the stomach.
2. Suture of the perforation of the stomach.
3. Visual examination of the rectum and anus.
4. Inflammation of the spleen.
5. Removal of the spleen.
6. Originating in the spleen and bone marrow.
7. X-ray examination of the bile ducts.
8. A neoplasm of bile duct origin.
9. Establishment of the communication between the common bile

duct and any part of the intestine.

1. The science dealing with the histologic structure of abnormal and

diseased tissue.

1. Hernia of a portion of the stomach.
2. Protrusion of muscle substance through a rent in its sheath.
3. Pain in cartilage.
4. Softening of any cartilage.
5. Narrowing of the lumen of the vein from any cause.
6. Abnormally slow motion of blood in veins.
7. Any disease of the breast.
8. Pain in the breast.
9. Suture of the divided ends of a tendon.
10. Surgical division of a tendon.

SELF-CONTROL EXERCISES

**Variant I.**

# **1. Write Combining Forms (CF), corresponding to the names of organs:**

1. stomach 6. nerve

2. intestine 7. vessel

3. urinary bladder 8. vein

4. gallbladder 9. cartilage

5. uterus 10. kidney

**2. State the meanings of the following Combining Forms:**

1. -paedia 6. –ptosis

2. paedo- 7. –malacia

3. geronto- 8. –lysis

4. andro- 9. –sclerosis

5. gynaeco- 10. –ectasia

**3. Write the correct word or word part on the line:**

1. a) the Cf \_\_\_\_\_\_ means blood

b) the suffix \_\_\_\_\_\_ tumor or localized collection

c) the term \_\_\_\_\_\_ is localized collection of blood in the

tissues

2. a) the Cf \_\_\_\_\_\_\_\_ means urinary bladder

b) the Cf \_\_\_\_\_\_\_\_ means dilation

c) the term \_\_\_\_\_\_\_\_ is dilation of the urinary bladder

3. a) the Cf \_\_\_\_\_\_\_\_\_\_ means vessel

b) the Cf \_\_\_\_\_\_\_\_\_\_ means nerve

c) the suffix\_\_\_\_\_\_\_\_\_means chronic disease

d) the term \_\_\_\_\_\_\_\_\_\_ is chronic disease of vessel nerves

4. a) the Cf \_\_\_\_\_\_\_\_\_ means spinal cord

b) the Cf \_\_\_\_\_\_\_\_\_ means softening

c) the term \_\_\_\_\_\_\_\_\_\_ is softening of the matter of the spinal

cord

5. a) the prefix \_\_\_\_\_\_\_\_\_ means serous coat

b) the C.f. \_\_\_\_\_\_\_\_\_ means uterus

c) the suffix \_\_\_\_\_\_\_\_\_ means inflammation

d) the term \_\_\_\_\_\_\_\_\_ means inflammation of the serous coat

of the uterus

Variant II.

# **1. Write Combining Forms (CF), corresponding to the names of organs:**

1. intestine 6. vessel

2. gallbladder 7. the pelvis of the kidney

3. nerve 8. the breast

4. hernia 9. vein

5. stomach 10. lung

**2. State the meanings of the following Combining Forms:**

1. –aemia 6. andro-

2. –ectasia 7. gynaeco-

3. -ectomia 8. geri-; geronto-

4. –paedia 9. sclero; –sclerosis

5. -iatria

**3. Write the correct word or word part on the line:**

1. a) the Cf \_\_\_\_\_\_\_\_ means uterus

b) the Cf \_\_\_\_\_\_\_\_ means surgical fixation

c) the term \_\_\_\_\_\_\_ surgical fixation of the uterus

2. a) the Cf \_\_\_\_\_\_\_\_ means blood

b) the Cf \_\_\_\_\_\_\_\_ means joint

c) the Cf \_\_\_\_\_\_\_\_ means pathological condition in some

organ or tissue

d) the term\_\_\_\_\_\_\_\_ presence of blood in the joint

3. a) the Cf \_\_\_\_\_\_\_\_ means lung

b) the Cf \_\_\_\_\_\_\_\_ means protrusion of the organ through the

tissue normally containing it

c) the term\_\_\_\_\_\_\_\_ protrusion of a portion of the lung though

a defect in the chest wall

4. a) the Cf \_\_\_\_\_\_\_\_\_ means bile ducts

b) the suffix \_\_\_\_\_\_\_\_\_ means inflammation

c) the term \_\_\_\_\_\_\_\_\_ inflammation of the bile ducts

5. a) the prefix \_\_\_\_\_\_\_\_ means internal organs

b) the Cf \_\_\_\_\_\_\_\_ means a falling or downward

displacement of an organ

c) the term \_\_\_\_\_\_\_\_ downward displacement of the internal

organs

**Check up yourself:**

**The answers for the tasks**

**Variant I.**

**I.** 1. gastro-; -gastria 6. neuro-

2. entero-; -enterium 7. angio-

3. cysto- 8. phlebo-

4. cholecysto- 9. chrondro-

5. metro-; -metra; -metrium; hystero- 10. nephro-

**II.** 1. methods of corrective treatment

2. child

3. old age

4. man

5. woman

6. a falling or downward displacement of an organ

7. softening or loss of consistency and contiguity in any of the organ or tissues

8. 1. destruction

2. an operation for breaking up the adhesions in an organ

9. hardness (in duration) relationship to the sclera

10. dilation or expansion

**III.** 1. a) haemato-

b) –oma

c) haematoma

2. a) cysto-

b) –ectasia

c) cystectasia

3. a) angio-

b) neuro-

c) –osis

d) angioneurosis

4. a) myelo-

b) –malacia

c) myelomalacia

5. a) peri-

b) –metro-

c) –itis

d) perimetritis

**Variant 2**

**I.** 1. entero-; -enterium 6. angio-

2. cholecysto- 7. pyelo-

3. neuro-; -neuri- 8. masto-

4. -cele 9. phlebo-

5. gastro-; -gastria 10. pneumo-; pneumono-

**II.** 1. in the blood

2. dilation or expansion of an organ

3. removal of any anatomical structure

4. methods of corrective treatment

5. treatment of the diseases

6. man

7. woman

8. old age

9. hardness (in duration) relationship to the sclera

10. condition of activity and apparent force

**III.** 1. a) hystero-

b) –pexia

c) hysteropexia

2. a) haemo-

b) –arthr-

c)-osis

d) haemarthrosis

3. a) pneumono-

b) cele-

c) pneumonocele

4. a) cholangio-

b) – itis

c) cholangiitis

5. a) splanchno-

b) –ptosis

c) splanchnoptosis

# **LESSON SIX**

**GREEK AND LATIN DUPLICATES OF NAMES**

**OF ORGANS AND TISSUES:**

Greek Latin English

**1. dermo-, dermato-;**

**- dermia**  cutis is f skin; **dermo-;**

**dermato-**

**2. -chole, -cholia** fel, fellis n, bilis, is f bile**;-cholia**

**3. chylo-, -chylia** lympha, ae f juice, chyle; **-chylia**

**4. pyo-** pus, puris n pus; **pyo**-

**5. hidro-** sudor, oris m sweat; **hidro-**

**6. hydro-**  aqua ae f; water, hydrogen;

Hydrogenium, i n **hydro-**

**7. litho-, -lithus** calculus, i m stone; **litho-**

**-lithiasis** stone formation**;-lithiasis**

**8. onco-** tumor, oris m tumor;volume **onco-**

**9. topo-; -topia** locus, i m place; **-topia**

**10. lipo-** adeps, ipis m fat; **lipo-**

**11. bio**- vita, ae f life; **bio-**

**12. sialo-;-sialia**  saliva, ae f saliva; **sialo-**

**13. psycho-; psychia** mens,mentis f soal; psychics;

mental abilities;

**psycho-**

**14. acro**- 1) extremitas,atis f; 1) extremity;

2) apex,icis m; 2) tip, topmost;

3) acutus,a,um; 3) sharp; **acro-**

**15. pharmaco**- remedium i n remedy, drug;

**pharmaco-**

1. **gluco-; glyco-** 1) saccharum, i n 1) sugar;

2) glucosum, i n 2) glucose

COMBINING FORMS DENOTING FUNCTIONS,

PATHOLOGICAL CONDITIONS AND PROCESSES

**1. -pnoë** - C.f. denoting breathing; **-pnea**

**3. crino-, -crinia** - production of secretions by specific

Glands; **-crinia**

**4. geno-, -genesis,** - producing or forming; **- genesis**

**-genesia**  produced or formed by;

development (in the embryo);

**5. –penia** - deficiency ( of blood cells); **-penia**

**6. –rrhoea** - discharge of any fluid from the organ;

**-rrhea**

7**. –rrhagia** - blood discharge, bleeding; **- rrhagia;**

**-rhage**

**8. –tono, -tonia** **-** tension; firmness of the tissues; **-tonia**

**9. –tensio** - strain; the condition of being

strectched or tense; blood pressure (B. P.);

- **tension**

**10. –plasia**  - formation ( of new cells and tissues);

**-plasia**

**11. tropho-, -trophia** **-** food or nutrition; - **trophy**

**12. tropo-, -tropia** - a turning toward; **-tropia**

**13. phago, -phagia** - eating or devouring, swallowing; **-phagy**

**14. philo-, -philia**  - affinity for or craving for; liking;

tendency; **-philic;-philia**

**15. phobo-, -phobia** - any objectively unfounded morbid dread

or fear; **-phobia**

**16. –plegia**  - paralysis; stroke; **-plegia**

**17. aetio- (etio-)**  - cause **etio-**

**18. morpho-**  - form, shape or structure; **morpho-**

**19. ergo-, -ergia, -** relating to work or reactivity;**- ergy**

**-urgia**

**20. dynamo-, -dynamia**  - force or energy; **-dynamics**

**21. –kinesia, kinemato-,** - motion; **kineto-,** **-kinesia**

**kinemo-, kineto-**

**22. –gnosis, -gnosia** - (knowledge) The perceptive faculty

enabling one to recognize the form

and the nature of persons and things;

**-gnosis; -gnosia**

**23. –poësis, -poët-** - production; creation; **-poiesis**

**24. –mnesia**  - memory; mneme (ability to

remember) **-mnesia**

**25. auto-** - self, same, **auto-**

**26. allo-**  - other or differing from the normal

or usual; **allo-**

**27. hetero-**  - other or different; **hetero-**

**28. homo-, homeo-** - the same or alike;**homo-**

**29. hemi-, semi-**  - one-half; **hemi-, semi-**

**30. tele-, telo-, teleo-**  - distance, end or other end;**tele-**

**31. pseudo-**  - prefix denoting a resemblance,

often deceptive; **pseudo-**

**32. ortho-** - 1. straight, **ortho-**

- 2. correct, normal or in proper order;

**33. cryo-**  - relating to cold; **cryo-**

**34. megalo-;** **- megalia** **-** enlargement of an organ; **-megaly**

**35. xero-** - dry; **xero-**

**36. oligo-**  - a few or a little; **oligo-**

**37. necro-** - relating to death or necrosis; **necro-**

**38. polio-**  - denoting gray or the gray matter;

**polio-**

**39. poly-**  - prefix denoting multiplicity; **poly-**

**40. pan-, panto**- - all, entire**; pan-; panto-**

**41. brachy-** - short; **brachy-**

**42. brady-**  - slow; **brady-**

**43. tachy-, tacho**- - rapid; **tachy-**

**44. chromo-, chromato,** - colour; **chromo-;chromato-**

**-chromia**

**45. cyano-** - blue; relating to cyanic group;

**cyano-**

**46. melano-**  - black; or extreme darkness of hue;

**melano-**

**47. chloro**- - green; association with chlorine; **chloro-**

**48. xantho**- - yellow; **xantho-**

**49. erythro**- - red; relating to erythrocytes; **erythro-**

**50. leuco-**  - white; relating to leucocytes; **leuco-**

EXERCISES:

1. Explain the meanings of the following terms:

- Haemorrhagia, odontorrhagia, myelorrhagia, cholaemia, anhidrosis, acrohidrosis, hydraemia, cytopenia, lymphocytopenia, herniorrhaphia, hidradenitis;

- dermatostomatitis, pyodermia, leucodermia, acrodermatitis, acrodermatosis, acrodynia, acromegalia;

- lithiasis, lithotomia, cholelithiasis, urolithiasis, broncholithus,

broncholithiasis, nephrolithiasis, odontolithus;

- chylothorax, chyluria, pyaemia, hypoglykaemia; pyorrhoea, pyothorax, pyuria, glucosuria, pyometra, dyscrinia, endocrinologia;

- chondrogenesis, oncogramma, oncogenesis, aetiopathogenesis, chondrodysplasia, aplasia, dysplasia, metaplasia, myelodysplasia,

- hydrophilia, hydrophobia, apnoё, hypopnoё, pneumocephalia,

aёrohaemotherapia, atrophia, dystrophia, hypertrophia, hypotrophia,

lipodystrophia, aërophagia, aërotherapia, cholekinesis;

- anergia, allergia, synergia, asynergia, chirurgia, hyperdynamia,

amnesia, lipoma, dysmorphosis, morphologia, heteromorphosis;

- aetiotropus, aetiologia, haemopoësis, xerodermia, xerophilus,

telepathia, orthopaedia, pseudostenosis, orthopnoё;

- thermoplegia, cardioplegia, ophthalmoplegia, hemiparesis,

poliomyelitis, homogenus, heterogenus;

- brachycephalia, brachyspondylia, bradycardia, bradypnoё,

tachycardia, tachypnoё, polyangiitis, polyarteriitis, polyarthritis,

polyneuritis, poliomyelitis, polioencephalitis;

- homeostasis, acidophilus, tonometria, panophthalmitis, pancarditis, pharmacotherapia, teleroentgenotherapia, psychotherapia;

- chlorodontia, melanosis, cyanodermia, acrocyanosis, leucopenia, melanodermia, xanthochromia, erythrocytosis.

2. Construct Latin terms with the following meanings:

1. Inflammation of the skin;
2. (The clinical syndrome caused by) toxic substances in the blood;
3. The flow or discharge of chyle;
4. Septicemia due to pyogenic organisms (pus in the blood);
5. Hemorrhage from the stomach;
6. An increase in number of cells in a tissue or organ, whereby the

bulk of the part or organ may be increased;

1. Presence of air in a joint;
2. (An inherited disorder in blood coagulation characterized by) a

permanent tendency to hemorrhages;

1. The presence of an increased amount of blood in a part or organ;

10. A marked change in a subject’s reactivity (other work);

11. Extreme power of memory;

12. Paralysis of one side of the body;

13. The branch of medicine concerned with the medical problems

and care of the old people;

14. Excision of the breast;

15. Excessive swallowing of air;

16. Shortness of breath, a subjective difficulty or distress in

breathing;

17. An abnormally small concentration of glucose in the circulating

blood;

18. Any deficiency in the amount of fluid (water) in the blood;

19. Deficiency in the number of red blood cells;

20. High blood pressure;

21. Scanty urination;

22. Abnormal smallness of the spleen;

23. Excessive excretion of urine resulting in a profuse micturition;

24. Enlargement of the liver;

25. Decrease below normal levels of oxygen in inspired gases;

26. Subnormal oxygenation of arterial blood.

27. Anesthesia (of one or more ) of the extremities.

1. Inflammation of the joints of hands and feet (extremities).
2. Movements of drugs (within biological systems).
3. Morbid fondness for taking drugs.

**SELF-CONTROL EXERCISES**

# **1. Write Combining Forms, corresponding to the names of organs and tissues:**

1. life 6. sweat
2. place 7. juice, chyle
3. tumor 8. stone
4. skin 9. water
5. pus 10. fat

**II. Give English equivalents of the following Combining Forms:**

1. –crinia 6. megalo-
2. –tonia 7. oligo-
3. –tensio 8. aetio-

4. –mnesia 9. polio-

5. pan- 10. poly-

**III. Use the Cf *production or formation* to build medical terms meaning**

1. production of blood

2. production of urine

3. production of red cells

4. production of white cells

5. production of lymphocytes

**IV. Use the Cf  *formation* *or development* to build medical terms**

**meaning**

1. forming bone tissue

2. formation of tissue of the embryo

3. production of tumors

4. the development of the disease

5. formation of the heart in the embryo

**V. Use the Cf *deficiency* to build medical terms meaning**

1. decrease in RBCs (red blood cells)

2. derease in WBCs (white blood cells)

3. decrease in lymphocytes

4. decrease in granulocytes

**VI. Use the Cf *discharge of blood* to build medical terms**

**meaning**

1.bleeding from the stomach

2.hemorrhage from the tooth

3.bleeding from the uterus

4.bleeding from the kidney

**VII. Use the Cf *discharge of any fluid* to build medical terms meaning**

1. flow of milk

2. discharge from the ear

3. flow of lymph from cut lymph vessel

4. any discharge of mucus (blenno-)

**VIII. Use the Cf *nourishment* to build medical terms meaning**

1. excessive nourishment

2. absence of nourishment

3. deficient nourishment

4. bad nourishment

**IX. Use the Cf *breathing* to build medical terms meaning**

1. difficult or painful breathing
2. breathing in a straight (upright) position
3. good, normal breathing
4. slow breathing

**X. Use the C f *paralysis* to buildmedical terms meaning**

1. paralysis of one half of the body
2. paralysis of four limbs (tetra-)
3. paralysis of the whole body

**Check up yourself:**

**Answers to the tasks**

**I.** 1. bio- 6. hidro-

2. topo-; -topia 7. chylo-; -chylia

3. onco- 8. litho-

4. dermo-; dermato-, -dermia 9. hydro-

5. pyo- 10. lipo-

**II.** 1. production of secretions by specific glands

2. tension, firmness of the tissues

3. strain; the condition of being stretched or tense; blood pressure (BP)

4. memory

5. all; entire

6. enlargement of an organ

7. a few or a little

8. cause

9. denoting gray or the gray matter

10. multiplicity

**III.** 1. haemopoёsis 4. leucytopoёsis

2. uropoёsis 5. lymphocytopoёsis

3. erythrocytopoёsis

**IV.** 1. osteogenesis 4. pathogenesis

2. embryogenesis 5. cardiogenesis

3. oncogenesis

**V.** 1. erythrocytopenia 3. lymphocytopenia

2. leucocytopenia 4. granulocytopenia

**VI.** 1. gastrorrhagia 3. hysterorrhagia

2. ondotorrhagia (metrorrhagia)

4. nephrorrhagia

**VII.** 1. galactorrhoea 3. lymphorrhoea

2. otorrhoea 4. blennorrhoea

**VIII.** 1. hypertrophia 3. hypotrophia

2. atrophia 4. dystrophia

**IX.** 1. dypnoё 3. eupnoё

2. orthopnoё 4. bradypnoё

**X.** 1. hemiplegia

2. tetraplegia

3. panplegia

# **LESSON SEVEN**

**REVISION OF LESSONS I – 6**

The aim of this Revision Lesson is to systematize the studied material and to prepare for the final control in the Clinical Terminology.

Keys to exercises 3 – 6 will help you to check up your knowledge, skills and habits of working with clinical terms.

The examples of pathologo-anatomic diagnoses will demonstrate whether you are proficient enough in the Latin medical terminology.

EXERCISES

## I Construct medical terms and explain their meanings:

Arthr- -genesis

Cephal- -plasia

Ot- -pnoё

My- -topia

Nephr- -ostosis

Cyst- +-algia -uria

Neur- dys- + -hidrosis

Cardi- - kinesia

Gastr- - crinia

Rhin- - tonia

Odont- - trophia

- topia

- phagia

-chromia

osteo-

colo- - stasis

cysto- -pexia

adeno- + tomia -plastica

phlebo- colo- + -pathia

cholecysto- -ptosis

spondylo- -stomia

chole- -cephalia

homeo- macro- + -podia

hypo- -otia

lympho-

haemo- + -stasis -aemia

chylo- oligo- + -pnoё

uro- -uria

phlebo- -kinesia

2. Explain the meanings of the terms:

Haematomyelia, splanchnomegalia, cholangioenterostomia, polyotia, chylothorax, anhidrosis, hypaesthesia, erythrocytosis, erythrophobia, bradypnoë, bradysystolia, hemiparesis, hemiplegia, osteoarthritis, osteogenesis;

lymphadenitis, lymphangiitis, lymphagioma, lymphadenographia, lymphadenosis, lymphangiomyoma, lymphoma, lymphomatosis, lymphocytopenia, lymphorrhoea, panophthalmitis, oligokinesia, hyperkinesia, pharmacokinesis;

teleendoscopia, choledochoduodenostomia, coloproctectomia, psychosis, myelocele, panmyelosis, pantophobia, microsplenia, splenomegalia, heterogenus, homogenus, polyuria, heterochromia, allomyelotransplantatio, degeneratio;

neotropus, aetiotropus, morphogenesis, polymastia, xerophthalmia, pathogenesis, gerontologia, geriatria, orthopaedia, gynaecologia, dyschromatopsia, thermoplegia, orthopnoё, telepathia, allergia, energia;

allopathia, homeopathia, leucocytosis, leucosis, leucopenia, haemostasis, homeostasis, hydrometra, chondromalacia, gastropathia, hysteroscopia, hysterographia, endophlebitis, phlebothrombosis, nephropexia.

3. Construct compound terms with the following meanings:

1. Breaking up of adhesions between the uterus and the

neighbouring parts.

1. The formation of sweat.
2. An epithelial neoplasm.
3. Inspection of the interior of the duodenum through an endoscope.
4. Suture of the tear or incision in the duodenum.
5. Pain in the urinary bladder.
6. Dilation of the bladder.
7. Hernial protrusion of portions of the bladder and of the intestine.
8. Treatment of a disease by coloured light (colour).
9. A morbid dislike of colours.
10. Pain in a cartilage.
11. An arrest in the flow of bile.
12. Extreme slowness of movement.
13. Extreme slowness in eating.
14. Narrowing of one or more blood vessels.
15. Sectioning of a blood vessel.
16. Examination of the chest by means of auscultation and

percussion.

1. An apparatus for recording the respiratory movements of the

chest.

1. The measurement of (muscular) strength.
2. Muscular weakness.

4. Match the medical terms in a) with their meanings in b):

1. 1. topophobia,
   1. trophocytus,
   2. trophodynamia,
   3. topognosis,
   4. tropometer
2. 1. a cell that supplies nourishment,
   1. any instrument for measuring the degree of rotation or torsion,
   2. recognition of the localization of a sensation, in the case of touch,
   3. the dynamics of nutrition,
   4. a neurotic dread of or related to a particular place or locality.

5. Choose a correct answer:

1. *Faulty or abnormal position of a part or organ:*

a) dystonia b) dystropia c) dystopia d) dystrophia

1. *Lowered reactivity:*

a) dysergia b) hyperergia c) hypergia d) hypotonia

1. *False recollection, as of events that have never occurred:*

a) dysmnesia b) paramnesia c) amnesia d) hypomnesia

4. *Discharge of some watery fluid:*

a) hidrosis b)hydrorrhoea c) hidropoёsis d) hydrodynamia

5. Nasal bleeding:

a) rhinorrhoea b) rhinitis c) rhinopathia d) rhinorrhagia

6. Translate the terms into Latin. Explain their meanings:

1. gangraenous adenitis
2. hepatocellular adenoma
3. serous adenofibroma
4. hematogenous cholangitis
5. juvenile progressive paralysis
6. tuberculous empyema
7. hemolytic coma
8. chronic atrophy of muscles
9. intraarticular fracture

10. white atrophy of the skin

11. subacute septic endocarditis

12. chronic enterocolitis

13. allotransplantation of the lung

14. acute posthemorrhagic anemia

15. benign osseous cyst

***KEYS TO EXERCISES 3 - 6***

**Ex. 3.**

1. hysterolysis 2. hidropoёsis 3. epithelioma 4. duodenoscopia

5. duodenorrhaphia 6. cystalgia 7. cystectasia 8. cystoenterocele

9. chromotherapia 10. chromophobia 11. chondrodynia   
 12. cholestasis 13. bradykinesia 14. bradyphagia 15. angiostenosis   
 16. angiotomia 17. stethoscopia 18. stethograph 19. sthenometria   
 20. myasthenia

# **Ex. 4**

1-5, 2-1, 3-4, 4-3, 5-2

# **Ex. 5**

1-c, 2-c, 3-b, 4-b, 5-d

**Ex. 6**

1. adenitis gangraenosa; 2. adenoma hepatocellulare;   
3. adenofibroma serosum; 4. cholangitis haematogena; 5. paralysis progressiva juvenilis; 6. empyema tuberculosum; 7. coma haemolyticum; 8. atrophia musculorum chronica; 9. fractura intraarticularis; 10. atrophia cutis alba; 11. endocarditis septica subacuta; 12. enterocolitis chronica;   
13. allotransplantatio pulmonis; 14. anaemia posthaemorrhagica acuta;   
15. cysta ossea benigna.

## EXAMPLES OF PATHOLOGO-ANATOMIC DIAGNOSES

Read the Latin diagnoses and render them into English:

**I**

Tuberculosis disseminata pulmonum: nodi caseosi multiplices lobi superioris et S6 pulmonis sinistri et lobi superioris sinistri.

Tuberculomiliaria et noduli caseosi lymphonodorum peribronchialium lateris sinistri et bifurcationis tracheae.

Pneumothorax lateris sinistri. Status post drainagem pleurae sinistrae. (1981, X, 5) Empyema pleurae sinistrae. Pericarditis fibrinosopurulenta. Dystrophia organorum parenchymatosorum.

Alcoholismus chronicus: inflitratio adiposa hepatis, fibrosis focalis pericanalicularis pancreatis.

### II

Atherosclerosis: aortae IV-Vo, arteriarum coronariarum IV st. 75%, arteriarum membrorum inferiorum utriusque. Microcirrhosis atherosclerotica.

Cicatrix post infractum myocardii subendo cardialem anteroseptalem. Thrombus organisatus recanalisatus S2, 3 arteriae coronariae dextrae, cicatrix post infractum myocardii posteroseptalem inde aneurysma chronicum.

Thrombus obturatorius recens in organisatione S1 arteriae coronariae dextrae, infractus myocardii transmuralis posterolateralis inde aneurysma acutum. Insufficientia ventriculi sinistri cordis. Hyperaemia venosa organorum. Hypotensio. Haemorrhagia segmentaria intestini ilei.

Insufficientia renalis, uraemia, colitis uraemica. Pneumonia lobularis confluens pulmonis dextri.

Hypertrophia adenomatosa prostatae. Pyelonephritis ascendens.

**PHARMACEUTICAL TERMINOLOGY.**

**LESSON ONE**

**THE BASIC NOTIONS OF PHARMACY.**

**THE NOMENCLATURE OF DRUGS.**

Pharmaceutical terminology is a complex, including terminologies of a number of sciences, united under one name – “pharmacy”

(pharmacon –Greek – remedy; drug).

Pharmacy is a field of medicine studying exploration, obtaining, production and application of drugs of plant, mineral, animal and synthetic origin. The central place belongs here to the Nomenclature of Drugs, which is a vast total combination of names of medical substances and preparations, officially allowed for use. One may distinguish some typical groups within the Nomenclature of Drugs, each of them having some definite peculiarities in the meaning and construction of the terms included into it. They are:

**I. Names of raw materials of plant and animal origin.**

***Parts of plants:***

* 1. folium, i n – leaf
  2. herba, ae f – herb, dried grass
  3. radix, icis f – root
  4. rhizoma, atis n – rhizome
  5. flos, oris m – flower
  6. semen, inis n – seed
  7. cortex, icis m – cortex, bark
  8. gemma, ae f – bud
  9. fructus, us m – fruit

***Products of primary processing:***

1. oleum, i n – oil

In Latin names of raw materials and oils are represented by word combinations which contain a non-agreed attribute, i. e. the first position in a term belongs to the Nominative Case of a noun denoting a part of a plant or a type of product (herb, oil, etc. ). The second position − to the name of a plant in the Genitive singular as a rule, for example:

**Noun Nom. sing/pl. + Noun Gen. sing.**

(part of plant) (plant name)

(oil)

**herba** (Nom. sing. ) Menthae (Gen. sing. ) - Engl. - mint herb

**flores** (Nom. plural) Chamomillae (Gen. Sing. )

− Engl. − chamomile flowers

**oleum** (Nom. sing. ) Ricini (Gen. Sing. ) − Engl. castor oil

**­NB!** 1. In Latin the names of plants are always written with the capital letter:

**B**elladonna, ae f − belladonna

**C**onvallaria, ae f − lily of the valley

**Ri**cinus, i m − castor-oil plant

2. The names of plants are in the Genitive singular irrespective of the Number and Case of the noun designating a part of a plant :

e.g.: Nom. sing. folium Menthae

Gen. sing. folii Menthae

Nom. plur. folia Menthae

Gen. plur. foliorum Menthae

***3. MIND THE EXCEPTIONS:***

1. ***expressed almond oil −oleum Amygdalarum (Gen. plural)***
2. ***olive oil −oleum Olivarum***
3. ***peach oil − oleum Persicorum***

Being stone fruit, they preserve the sense of multiplicity which is reflected in the nomenclatural names using the Genitive plural of the names of these plants.

1. ***As Nomenclatural names,* all names of parts of plants excluding “herba” and “cortex” are used in the plural:**

*Nom. pl.* - folia (leaves)

- flores (flowers)

- radices (roots)

- rhizomata (rhizomes)

- semina (seeds)

- gemmae (buds)

- fructus (fruit – pl.)

**II. Names of pharmaceutical preparations - extractions from raw materials. Their drug forms are:**

1. tinctura, ae f − tincture
2. extractum, i n − extract
3. sirupus, i m − syrup
4. infusum, i n ­− infusion
5. decoctum, i n − decoction

They are word combinations with the designation of type of extraction (drug form) and a name of the plant. Two subgroups are differentiated:

* 1. *Names of pharmaceutical preparations produced from plants according to some standard formula.* They are first of all *tinctures* and *extracts,* then *syrups,* obtained by mixing extracts and tinctures with sugar syrup (sirupus Sacchari). The type of raw material is not mentioned in their names:

**Noun Nom. sing. + noun Gen.sing.**

(drug form) (plant name)

e.g.: *Lat*. tinctura Convallariae – *Engl*. lily-of-the-valley tincture

extractum Belladonnae belladonna extract

sirupus Rosae dog-rose syrup

2) *Names of infusions and decoctions* should contain the designation of a raw material, their names consist of three words:

**Noun Nom. sing. + noun Gen. sing./pl. + noun Gen. sing.**

(drug form) (part of plant) (plant name)

e.g.: Lat. infusum foliorum Menthae - Engl. infusion of mint leaves

decoctum corticis Quercus - Engl. decoction of oak-tree bark

The prescriptions for infusions and decoctions contain information on the correlation between the mass of a raw material and the volume of an infusion or decoction to be obtained, for example:

Recipe: Infusi foliorum Salviae 20,0-200 ml

(from 20 gram of sage leaves they are to obtain 200 ml of infusion)

1. **Generic names of chemical substances**:
2. *Names of organic substances obtained from plants (glycosides,*

*alkaloids, etc. ):*

They are usually constructed by combining some part of the plant name with the suffix **–in,** which means “substance” and adding the Latin ending of the noun of the neuter gender of 2nd declination **-um.**

e.g.: Lat. **Papaverinum** − obtained from opium poppy

(Bot.**Papaver** somniferum).

1. *Names of synthetic substances and their compounds (salts,*

*ethers):*

e.g.: “Procainum” is a generic name of a synthetic substance, and

“Novocainum” is a generic name for the same substance,used in the Pharmacopoeia of the Russian Federation.

**IV. Names of pharmaceutical specialities with the designation of a drug form:** (Names of ointments, tablets, solutions, etc.)

They begin with the designation of a drug form – a noun in the Nominative Case singular or plural – plus the generic name of the chemical substance – in the Genitive Case singular, as a rule,

e.g.: Lat. Unguentum Tetracyclini − Engl. Tetracycline ointment

Solutio Dimedroli − Dimedrol solution

**V. Pharmacopoeal chemical nomenclature: Names of chemical elements, oxides, acids, salts:**

e.g.: **Lat.** Ferrum, i n **Engl.** - iron

Zinci oxydum − Zinc oxide

acidum ascorbinicum − ascorbic acid

Ferri lactas − iron lactate

**Mind the basic terms of Pharmacy!**

**A DRUG** (Lat. medicamentum, remedium; Gr. pharmacon)− is a substance or a mixture of substances, applied for prevention, diagnostics or treatment of a disease, prevention of pregnancy; obtained from blood,blood plasm and also from organs and tissues of man and animal, plants,minerals by methods of synthesis or biotechnologies. Substances of plant, animal and synthetic origin possessing pharmacological activity and and intended for manufacturing and preparation of drugs are also attributed to drugs.

**A PHARMACEUTICAL SUBSTANCE** − is a drug with an individual chemical structure or a biological substance.

**PHARMACEUTICAL RAW MATERIAL OF PLANT ORIGIN** − includes parts of plants allowed for medical use.

**DRUG FORM** − is a state given to a pharmaceutical substance or raw material of plant origin, convenient for application, aimed at achieving the required effect.

**A PHARMACEUTICAL SPECIALITY** – A dosaged drug in a certain drug form, manufactured at a pharmaceutical factory and ready for use.

**A PHARMACEUTICAL PREPARATION** − same as a pharmaceutical speciality, but prepared at a pharmacy.

MEMORIZE SOME NAMES OF PLANTS:

1. Absinthium, i n − wormwood
2. Adonis, idis f − adonis
3. Aloë, es f − aloe
4. Amygdala, ae f − almond (fruit)
5. Anisum, i n − anise
6. Belladonna, ae f − belladonna
7. Calendula, ae f *−* marigold
8. Chamomilla, ae f − chamomile
9. Convallaria, ae f − lily of the valley
10. Digitalis, is f − digitalis, foxglove
11. Farfara, ae f − coltsfoot
12. Foeniculum, i n − fennel
13. Gossypium, i n - cotton
14. Helianthus, i m − sunflower
15. Hypericum, i n − perforate
16. Linum, i n - flax
17. Mentha, ae f − mint
18. Oliva, ae f − olive
19. Papaver, eris n − opium poppy
20. Persicum, i n − peach
21. Plantago, inis f − plantain
22. Quercus, us f − oak-tree
23. Rheum, i n − rababaer
24. Ricinus, i m − castor(-oil) plant
25. Rosa, ae f − rose (dog rose)
26. Rubus (i) idaeus (i) m − raspberry
27. Salvia, ae f − sage
28. Terebinthina, ae f − turpentine
29. Urtica, ae f − stinging nettle
30. Valeriana, ae f − valerian

EXERCISES:

1. Decline the names of raw materials according to the model:

**Model:** singular plural

Nom. folium Salviae **folia Salviae**

Gen. folii Salviae  **foliorum Salviae**

Fructus Rosae; radix Valerianae; flos Chamomillae; semen Foeniculi; rhizoma Valerianae; folium Salviae.

2. Translate the terms into English:

***Raw materials and products of primary processing:***

oleum Ricini herba Hyperici

Persicorum Convallariae

Olivarum Absinthii

Amygdalarum Belladonnae

Terebinthinae Salviae

Helianthi Calendulae

Foeniculi Menthae

Rosae Urticae

Lini Foeniculi

Gossypii

folia Helianthi flores Chamomillae

Belladonnae Adonidis

Farfarae Helianthi

Salviae

Urticae fructus Rosae

Rubi idaei Foeniculi

Digitalis Rubi idaei

Plantaginis cortex Quercus

***Extractions from raw materials of plant origin:***

Sirupus Rosae Tinctura Absinthii

Rubi idaei Aloës

Sacchari Convallariae Anisi Extractum Valerianae Valerianae

Calendulae Calendulae

Urticae Hyperici

Adonidis Menthae

Aloës

Belladonnae

Absinthii

3. Translate into Latin:

1. Aloë; aloë leaves; aloe tincture; infusion of aloë leaves.

2. fennel; fennel fruit; fennel oil;

3. raspberry; raspberry fruit; raspberry leaves; decoction of raspberry fruit; raspberry syrup.

4. sage; sage leaves; sage tincture; infusion of sage leaves.

5. lily of the valley; lily-of-the-valley herb; lily-of-the-valley tincture.

6. belladonna; belladonna leaves; belladonna herb; belladonna tincture; belladonna extract; infusion of belladonna leaves.

7. marigold; marigold herb; marigold flowers; marigold tincture; infusion of marigold flowers.

8. mint; mint oil; mint herb; mint leaves; mint tincture; infusion of mint leaves.

9. oak tree; oak-tree bark; decoction of oak-tree bark

10. dog rose (oil, fruit, infusion of fruit, extract, syrup).

11. perforate (herb, tincture, infusion of herb).

12. Valerian (roots, rhizomes, tincture, extract, decoction of roots and rhizomes).

13. castor-plant (oil, seeds).

14. chamomile ( flowers; infusion of flowers).

15. coltsfoot (leaves, flowers, infusion of leaves).

16. olive (fruit, oil).

17. peach (fruit, oil).

18. almond (oil, seeds).

19. stinging nettle (leaves, herb, rhizomes, extract, infusion of leaves).

20. digitalis (leaves, infusion of leaves).

**LESSON TWO**

**TYPES OF DRUG NAMES.**

**A GENERIC OR OFFICIAL NAME**

A pharmaceutical substance can have several names:

**Substance names**

**Chemical**  **Generic**

(scientific,

systematic)

**INN** **Trade** (Brand)

(International

Non-Proprietary **NNN**

Name) (National

Non-Proprietary

Name)

**The chemical name** is the chemical formula for the drug. It is also called a scientific or systematic name.

Any chemical name reflects the composition of a medical substance***.***

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

**NB!** Many chemical compounds, used as pharmaceutical substances, retain **their half-systematic chemical names**, which describe but partially the structure of this substance, but show its relation to some class of chemical substances.

*e. g. Zinci oxydum (*oxide)*, acidum acetylsalicylicum (*acid)*, Natrii chloridum* (salt).

The names of such type are too complicated for use in practice. That is why many of the pharmaceutical substances take their ***generic or official names***. They do not express any common principles of scientific classification used by chemists, fully reflect neither composition, nor structure – this is the function of the scientific names. But generic names are brief, convenient and easy to use not only in the professional, but in the common communication as well. The above given systematic name has its generic analogue ***“nifedipin***”.

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

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

e. g. “Уретан” - in the Russian Pharmacopoeia

“Urethan” - in Pharmacopoeia of the USA

“Urethane” - in British and French Pharmacopoeias

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

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

***In generic names common parts of words are often used to indicate this or that kind of information. They are called*** ***Common Stems (CS) and have fixed meaning, but their spelling can vary,***

Nowadays, the spelling of the Common Stems (CS) is often simplified, for example, the CS with the meaning “ethyl” may be presented as “aeth → eth → et”.

***Memorize the Common Stems reflecting the chemical structure of medical substances***:

**1. aeth, eth, et- - ethyl**

**2. meth, met- - methyl**

**3. phen, fen- - phenyl**

**4. thi-, ti- - sulfur in compounds like thiosalts and**

**thioacids**

**5. sulf- - sulfur**

**6. benz- - benzyl**

**7. chlor-, clo- - chlorine**

**8. cycl- - cycle, circle, period; cyclic structure;**

**9. hydr-, hidr- - hydrogen;**

**10. oxy-, oxi- - oxygen**

**11. az-, (a)zid-, (a)zin-,**

**(a)zon-, (a)zol- - nitrogen**

EXERCISES

1. Analyze the names of drugs. Pay attention to the spelling of the

Common Stems:

1. Methotrexat, 2. Indomethacin, 3. Phenylbutazon, 4. Midazolam,

5. Aethylmorphinum, 6. Norsulfazolum, 7. Benzbroaron,

8. Chlordiazepoxid, 9. Clozapin, 10. Oxycort.

2. Copy the names of pharmaceutical substances, underline known

to you Common Stems:

1. Cyclobarbitalum, 2. Clonazepam, 3. Hydrochlorthiazid,   
 4. Sulfasalazin, 5. Methyloxytocinum, 6. Ethambutolum,

7. Prothionamid, 8. Metildigoxin, 9. Metoclopramid, 10. Fenoterol.

3. Соpy the drug names adding Latin endings to them and explain the

meanings of the Common Stems:

1. Methylergobrevin, 2. Oxytetracyclin, 3. Hydrocortison,   
 4. Ethionamid, 5. Fenoterol, 6. Benzbroaron, 7. Sulfanizolon,   
 8. Hypothiazidum 9. Chlorhexidine, 10. Clorazepin.

4. Analyze the names of pharmaceutical substances (alkaloids and glycosides) and plants, from which they are obtained. Underline the corresponding Common Stems:

*For example: Mentholum is obtained from the plant mint (Mentha)*

1. Convallotoxinum - Convallaria (lily of the valley)

2. Absinthinum - Absinthium (wormwood)

3. Digoxinum - Digitals (foxglove)

4. Coffeinum - Coffea (coffee)

5. Bellaspon - Bellandonna (belladonna)

6. Adonisidum - Adonis (Adonis)

7. Papaverinum - Papaver (opium poppy)

8. Theophyllinum - Thea (tea)

9. Galanthaminum - Galanthus (snow drop)

**LESSON THREE**

**INTERNATIONAL NON-PROPRIETARY NAMES (INN)**

A great number of synonyms appeared in world drug sale due to the existence of a great number of Trade names for one and the same pharmaceutical substance.

In the second half of the 20th century this fact drew the attention of the World Health Organisation authorities. It was proclaimed that common international names for pharmaceutical substances are necessary to cancel the negative influence of the synonym abundunce.

To determine what substances are contained in this or that drug and to identify these substances, a special Commission of the World Health Organization is introducing **International Non-Proprietary Names (INN) to pharmaceutical substances.**

***The INN is a public property and any drug manufacturer from any country may use it as the name for his product. The INNs are used by national Pharmacopoeias, by all kinds of reference listings of drugs, on the drug labels with the aim of identifying pharmaceutical substances.***

If a company produces a drug, consisting of one pharmaceutical substance, under its own trade name, the INN is given on a label below the trade name, for example:

CORINFAR®

(nifedipin)

*The World Health Organisation recommends that an INN should reflect the chemical structure of the pharmaceutical substance and / or its relation to a certain Pharmacological group.*

Drugs having similar effects are arranged into Pharmacological groups. Information on the relation of a drug to a certain pharmacological group enables the specialists to systematize the drugs, and it is usually included into the INN.

**Pharmacological Groups**

**Cardiovascular drugs** - (used for treatment of heart and vessels)

***-cor-, -card-***  *(heart)*

***-vas-, -ang(i)- (****vessel)*

***-pres(s)-, - ten(s)-*** *B.P (blood pressure) – antihypertensive*

*drugs*

***-haem-, -haemat-*** *(blood)*

***-dil-***  *(dilation)*

**Analgesics** (pain releasing drugs):

***-alg-, - dol- (****pain)*

**Drugs for treatment of respiratory organs:**

***-as(th)m-*** *asthma,( difficulty of breathing); antiasthmatic drugs;*

***-solv-*** *(to dissolve)– dissolving the mucus;- mucolytic drugs;*

***-tuss-*** *(cough) – relieving coughing; antitussive drugs;*

***-vent-*** *ventilation*

***-phyll -*** *1. leaf, 2. tea alkaloid*

EXERCISES:

I. Give the meanings of the underlined CSs:

1. Atrovent 2. Panadol 3. Haemofer 4. Trenpress 5. Thepaphylline   
6. Panangin 7. Anopyrin 8. Cordanum 9. Slow-Trasitensin 10. Tussimol 11. Asmatol 12. Bemekor.

2. Underline known to you CSs and explain their meanings:

1. Analgin 2. Mucosolvon 3. Tussiglaucin 4. Spasmoveralgin   
5. Algezal 6. Oralgan 7. Dipidolor 8. Panadol. 9. Doliprane 10. Asmin

3. Choose names of drugs, used for the treatment of:

1. heart and vessels
2. respiratory organs

1. Cordaflex 2. Diloran 3. Lasolvan 4. Ventodisk 5. Mucarthron   
6. Vasaphrestan 7. Pressolar 8. Asmasedil 9. Nifangin 10. Bisolvon   
11. Apisarthron 12. Asthmopent 13. Intussin 14. Intencordin 15. Lopresor 16. Dolobid 17. Glauvent 18. Theophyllamin 19. Isocard 20. Tenoric.

4. State, what effect on organism the medicine sold under the following names has:

A. 1. Angiopril 2. Aceten 3. Capoten 4. Tensiomin

B. 1. Aldizem 2. Angizem 3. Apo-Diltiaz 4. Herbesser   
 5. Diacordin 6. Dilzem 7. Dilrene 8. Cardil 9. Cortiazem-retard.

5. Write out the names of drugs, containing “nifedipin”, which reflect the drug effect in the body:

1. Adalat 2. Calcigard 3. Cordafen 4. Cordaflex 5. Cordipin   
6. Corinfar 7. Depin-E 8. Nifangin 9. Nifexal 10. Pidilat.

# **LESSON FOUR**

**TRADE or BRAND NAMES**

As you already know, ***a pharmaceutical substance, prepared at a pharmaceutical factory in a certain dosage and in a certain Drug form is called a pharmaceutical speciality***.

It may be available in pharmacies under its INN. The INN of the pharmaceutical substance is usually included into the name of the pharmaceutical speciality. But in world drug sale pharmaceutical specialities containing one and the same substance are issued into sale under various *Trade names or Brand names.*

Trade names are used to differentiate the products of one drug producing company from those of all others. The Trade name name is a private property of an individual drug manufacturer and no competitor may use it. Trade names often have the superscript after or before the name, for example: Rocephin

Most drugs have several Trade names because each manufacturer producing the drug has a right to introduce the name of his choice for the product.

A pharmacist must dispense a drug, prescribed under a certain Trade name and must not substitute it by a drug under some other Trade name.

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

The following list gives examples of the chemical, INN and Trade names of the well known antibiotic drug, ampicillin. Note that ***a drug can have several Trade names but only one INN.***

Chemical name INN Trade name

Alpha-aminobenzyl P ampicillin Amcill capsules

Omnipen

Penbritin

Polycillin Principen/N

The pharmaceutical substance under the INN Nifedipin has

the following Trade names:

Adalat - the firm BAYER, Germany

Calcigard -TORRENT, India

Cordafen -POLFA, Poland

Cordaflex -EGIS, republic of Hungary

Cordipin - KRKA, Slovenia

Corinfar -AWD, Germany

Dopin-E -CADILA, India

Nifangin -FARMOS, Finland

Nifexal -HEXAL PHARMA, Germany

Pidilat -SOLVAY FARMA, CUILYNI PHARMA, Niederlands

Some drugs have over 200-300 Trade names, as a result of which there appears a great number of synonyms in world drug names.

At the same time pharmaceutical specialitites may be sold under INNs alongside with their Trade names, for example, the Bulgarian company Pharma-chim and the Polish firm Polfa issue the drug under its INN: “NIFEDIPIN”.

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

Trade names may have the Latin ending “-um”, for example:

Cordiamium, Librium, Relanium, but more often than not they have no ending. Some of them are pronounced according to the rules of modern languages:

e.g.: Majeptil [ madgeptil]

Sucrace [sukreis]

One – alfa [wan elfa]

Memorize the following Common Stems useful to define the relation of drugs to certain pharmacological groups:

**Pharmacological Groups (continued)**

**Anesthetics**

***- aesthes*** – (feeling, nervous sensation) – drug producing loss of

**-esthes-; estes-** sensation and blocking the awareness of painful

stimuli;

***-cain-***  - local anesthetics.

**Antibiotics –** soluble, biologically active substances, derived from molds or bacteria that inhibit the growth of other microorganisms.

*They recognize four main groups of antimicrobic antibiotics:*

***-cillin-*** - antibiotics-penicillins;

***-cyclin-*** - antibiotics- tetracyclins;

***-mycin-* –** (myco- mold) - antibiotics produced by a red mold;

***-micin-***

***-ceph-, cef-, cep****-* (head) - antibiotics-cephalosporins.

**Hormones** - chemical substances, formed in one organ or part of the body and carried in the blood to another organ or part; depending on the specificity of their effects. A number of hormones are formed by ductless glands, but secretin and pancreozymin, formed in the gastrointestinal tract, by definition are also hormones.

***-cort-***(pertaining to adrenal cortex) - adrenocortical hormones;

**-*andr-, -test-, -ster****-* (male) - steroid hormones – androgens;

**-*oestr-, -estr****-* (female) - steroid hormones – estrogens;

**-*thyr-, -tyr-,- tir*-** (thyroid gland) - thyroid gland hormones and

their synthetic analogues.

**Antipyretics**

***-pyr-*** (fever) - reducing fever.

***-pir-***

**Antifungal agents**

***-myco***– (mold) - against fungi.

***-miko-; mico-***

***-fung-* (**fungus)

**Drugs influencing blood coagulation**

***-c(o)um-,- c(o)amar-, -arol****-* ***- anticoagulants*** (preventing the blood

coagulation);

***-thromb-, -tromb****-* (clot) ***- thrombolytics*** (destoying the clots).

EXERCISES:

1. Copy the drug names, pay attention to the spelling of the

CSs and give their meanings:

1. Anapyrin 2. Oxytetracyclin 3. Mutamycin 4. Hydrocortisonum   
 5. Levothyroxinum 6. Ethyloestradiolum 7. Dicoumarolum 8.

Trombonil 9. Iodognost 10. Mycoseptin 11. Tomapyrin 12.

Extencillin.

2. Underline known to you CSs:

1. Acylpyrin 2. Estradurin 3. Locacorten 4. Hepatrombin   
 5. Sincumar 6. Testosteronum 7. Benemycin 8. Ultracain 9.

Beclocort 10. Andriol 11. Triiodthyrosin 12. Pyranal 13.

Tetracyclinum 14. Anaesthesinum.

3. Match the drug name in a) with the drug group in b):

a) 1. Doxycycline 2. Azlocillin 3. Protandren 4. Ethinylestradiol   
 5. Synandrone 6. Micosper 7. Thyroxin 8. Metasteron

b). 1. thyrotropic hormones 2. androgens 3. estrogens 4. antibiotics-

tetracyclins 5. antibiotics-penicillins 6. antifungal agents

4. Write out the names of antibiotics:

1. Cycloplantin 2. Mycosolon 3. Isocillin 4. Mufungar   
 5. Doxycycline 6. Aminocaine 7. Gentamycinum 8. Ftorocort   
 9. Metasteron 10. Klimicin 11. Dicumaryl 12. Acyclovir.

5. Write out the names of a) adrenocortical hormones, b) androgens:

1. Dilcoran 2. Kornilat 3. Pulmicort 4. Tensiomin 5. Mexicord   
6. Sicorten 7. Diacordin 8. Testoenatum.

**LESSON FIVE**

**NAMES OF VITAMINS**

*VITAMINS are substances found in foods and in minute quantities*

*essential for good health, growth and life itself.*

Vitamins are prescribed either under their alphabetical symbols (A, B, C, D, E, H, K, P) or under their international generic names adopted by biochemists (Axerophtholum, Thiamunum, etc. )

Some vitamins designated by a letter are not homogenous in their structure though they are chemically related. In this case their ordinal numbers are added to the names expressed through alphabetical symbols, for example : B1, B2, B12, K1, P6, D3 ,etc.

Due to the appearance of a great number of heterogenous vitamins designated by one and the same letter, it became acute to change alphabetical symbols into verbal designations.

*They assumed the naming of vitamin substances according to the biochemical terminology, which uses either generic names or half systematic names of substances.*

Most of vitamin names reflect the chemical structure of a vitamin:

e.g.: Vitaminum B1 - Thiaminum

Vitaminum B12 - Cyanocobalaminum

Vitaminum B2 - Riboflavinum

Sometimes the therapeutic effect of a substance is reflected in its name:

e.g.: Vitaminum A - Axerophtholum – Retinolum

Vitaminum B6 - Pyridoxinum

Vitaminum C - Acidum ascorbinicum

Drugs containing two or more vitamins (multivitamins) get generic and trade names including the Common Stem –***vit-*,** for example:

Vitaplex A, Pyrivitol, Cobavite, Aldevit, Macrovit, etc.

**NAMES OF ENZYMES**

***ENZYME – organic catalyst; a protein, secreted by cells, that acts as a catalyst to induce chemical changes in other substances, itself remaining apparently unchanged by the process.*** In Latin the names of enzymes are generally constructed by adding the suffix ***–as(um)*** to the name of the substance on which it acts, the substances activated and / or the type of reaction, e. g. :

Latin -Lip**asum -** English – Lip**ase**.

Other Common Stems for designating enzymes are: *-****enz,-zym-,-zim****-.*

#### Pharmacological Groups (continued)

**Drugs, influencing the Central Nervous System**

***-barb*-** - derivatives of the barbituric acid with soporific

and hypnotic effect;

***-mal-, -nal-***- soporific (inducing sleep);

***-som(n)-, -son-,*** - (dream) hypnotic;

***-hypn-,-ipn****-*

***-dorm-*** - (to sleep) soporific (somniferous)

***-nox-,-noct****- -* (night) somniferous

***-раx-,-рас****-* - (peace) somniferous

**Psychotropic, antidepressant drugs:**

***- sedatives*** (relaxing without sleep):

***-sed-***

***-relax-***- relaxing

***- tranqulizers*** (calming and quieting)

***-stress-, -tran(qu)-***

***-azin-***- derivatives of Phenothiazin

***-azepam****-* - derivatives of Diazepam

**Antiseptic, antimicrobic, antiviral drugs:**

***-sulfa-*** - antimicrobic sulfonamides;

***-sept-, -micr-*** - antiseptic (inhibiting the growth of

infectious agents);

***-vir-***  - antiviral (opposing a virus, weakening or

abolishing its action);

**-*cid-, -bact-***  - antibacterial (bactericidal - destructive to or

preventing the growth of bacteria)

***-io-*** - iodine-containing agents used as

1) inhibiting the growth of infectious agents

and 2) for X-ray as a diagnostic drug.

**Cholagogics**

**-*chol-, -bil-,-col-***  - promoting the flow of bile;

**Laxatives**

***-lax-,-pur(g)-***  - promoting defecation; purgatives;

**Anthelminthics:**

***-verm-, -helm(int)-, -elm****-* - destroying or expelling intestinal

worms;

#### Diuretics

***-ur-, -diur-*** - promoting the excretion of urine

**Diagnostic Drugs**

***-gnost-*** (knowledge)

***-trast-*** (contrast) medical substances used for

***-graph-, -graf-*** roentgenography (X-ray and

***-vid-,-vis***- (vision) radiography)

***-io –*** (iodine)

**NB!** *In case the Common Stems designating cholagogic, diuretic*

*or some other drugs are found in the same names with the CSs designating diagnostic procedures, they change their primary meanings for: “drugs used for diagnostics of the diseases of the bile-producing, urinary systems or some organs”, for example:*

*Auxobil* – a cholagogic drug, but *Bilignost* is a diagnostic drug for the bile producing system.

EXERCISES:

1. Analyze the drug names, underline familiar to you CSs:

1. Prodormol 2. Barbamylum 3. Seduxen 4. Septolete   
5. Somnopentyl 6. Tranxene 7. Insomin 8. Phenothiazin.9. Eunocin   
10. Hypnomidate 11. Hexenalum 12. Degmicid 13. Phenazepam   
14. Pacidrim.

2. Copy the drug names, underline familiar to you CSs:

1. Stalicid 2. Sulfatrim.3. Apodorm 4. Rothypnol 5. Sedocard 6. Sedatival 7. Dormigal 8. Retrovir 9. Deseptyl 10. Sulfamonomethoxinum 11. Groseptol 12. Berlidorm 13. Normanox 14. Guasept 15. Tranxene.

3. Write out the names of relaxing and somniferous drugs:

1. Somneton. 2. Cyclosedal 3. Temazepax 4. Cyclobarbitalum   
5. Bromodorm 6. Poteseptil 7. Hypothiazidum 8. Hypnoter 9. Dermovate 10. Dormicum 11. Degmicidum 12. Sediston 13. Superseptyl 14. Zovirax.

4. Define the meanings of the CSs:

1. Mycoseptin 2. Septocid 3. Dormised 4. Noctosom 5. Anaesthalgin 6. Hypnodorm 7. Ipnosed 8. Dormonal 9. Sonapax 10. Cycloviran   
11. Acyclovir 12. Viraride 13. Sulfasalazinum 14. Fulsed.

5. Write out the names of antiseptic and antiviral drugs: 1. Microcid 2. Bensedin 3. Aseptosyl 4. Sonepam 5. Lidocain   
6. Mesacol 7. Ophthalmo-septonax 8. Pantocidum 9. Ketoviran. 10. Panavir.

6. Analyze the drug names, give the meanings of the CSs:

Enzystal 2. Betavitam 3. Pantelmin 4. Vermox 5. Robavite   
6. Aethyotrastum 7. Depuran 8. Urovison 9. Ribonucleasum 10. Cholestid 11. Demolaxin 12. Iopagnost

7. Analyze the drug names, underline the CSs:

1. Vitohepat 2. Helmirasin 3. Acignost 4. Cocarboxilase 5. Eulaxan 6. Uroflux 7. Avermol 8. Sennapur 9. Endografin 10. Dodecavit   
11. Streptodecasum 12. Diuramid 13. Menzyme 14. Hyasum 15. Crinuril.

# 8. Write out the names of 1) diagnostic drugs;

2) cholagogic drugs

1. Auxobil 2. Iopagnost 3. Salmidochol 4. Chole-contrast   
   5. Gastrographin 6. Urotrast 7. Cholevid 8. Bilignost 9. Neocol   
   10. Colegraf 11. Bilizorin 12. Teletrast 13. Merkenzym 14. Moduretic.

**LESSON SIX**

**NAMES OF PHARMACEUTICAL SPECIALITIES**

As you remember, **A PHARMACEUTICAL SPECIALITY** is a dosaged drug in a certain *drug form*, manufactured at a pharmaceutical factory and ready for use. Some of traditional drug forms are:

**DRUG FORMS:**

**AЁROSOLUM, i n** - aerosol – spray - a liquid or solution, dispersed in air in the form of a fine mist, packed under pressure and containing therapeutically or chemically active ingredients.

**GRANULUM, i n** - grain, granule - a very small pill, usually gelatin coated or sugar coated, containing a drug to be given in a small dose.

**GUTTA, ae f** - drop - a volume of liquid regarded as a unit of dosage, equivalent in the case of water to about 1 minim.

**UNGUENTUM, i n** - ointment, salve, uncture, unguent - a semi-solid preparation usually containing medicinal substances and intended for external application. There are 4 types of ointment bases:

1 – oleaginous bases - Hydrocarbon bases

2 – absorption bases

3 – water-removable bases (creams)

4 - water-soluble bases (greaseless)

**LINIMENTUM, i n** - liniment - fluid ointment.

**PASTA, ae f** - paste – ointment, containing powdered substances more than 20 – 25%

**EMPLASTRUM, i n** - plaster – a solid preparation which can be spread when heated and which becomes adhesive at the temperature of the body.

Emplastrum simplex - simple plaster (with one active agent)

Emplastrum compositum - composite plaster (with several ingredients).

**SUPPOSITORIUM, i n -** suppository – a small solid body shaped for ready introduction into one of the body orifices other than the oral cavity, made of a substance usually medicated, which is solid at ordinary temperatures and which melts at body temperature.

Suppositorium rectale - rectal suppository

Suppositorium vaginale - vaginal suppository

**PULVIS, eris m** – powder – a homogenous dispersion of finely divided, relatively dry, particulate matter consisting of one or more

substances; a single dose of a powdered drug, enclosed in an

envelope or folded paper.

**TABULETTA, ae f -** tablet, tabule - a solid dosage form containing

medicinal substances with or withoutt suitable diluents; it may vary

in shape, size and weight, and may be classed according to the

method of manufacturing as a molded tablet and a compressed tablet.

Tabuletta obducta – a coated tablet – with a coating, which delays

release of medication, improves taste, etc.

**DRAGEE(S**)(unchangeable) - dragee - a sugar–coated pill or

capsule.

**CAPSULA, ae f** - capsule - a solid dosage form in which the drug is

enclosed in either a hard or soft soluble container or “shell” of a

suitable form of gelatin or starch.

Capsula gelatinosa - a gelatinous capsule - that made from gelatin.

Capsula amylacea - an amylaceous capsule – that made from starch.

**PILULA, ae f** - pill - a small globular mass of some coherent but

soluble substance, containing a medicinal substance to be swallowed.

**SOLUTIO, onis f** - solution - drug form, obtained by dissolving of

one or several medicinal substances in a solvent like water, alcohol,

oil, gelatin. Intended for injections, or internal and external use.

Solutio aquosa - aqueous solution (in water)

Solutio spirituosa - alcoholic solution (in alcohol)

Solutio oleosa - oily solution (in oil)

Solutio gelatinosa - gelatinous solution ( in gelatin)

**SUSPENSIO, onis f** - suspension - a class of pharmacopoeial

preparations of finely divided, undissolved drugs dispersed in liquid

vehicles for oral and parenteral use.

**EMULSUM, i n** - emulsion - a system, containing two immiscible

liquids in which one is dispersed in the form of very small globules

(internal phase) throughout the other (external phase).

**TINCTURA, ae f** - tincture - an alcoholic or hydroalcoholic solution

prepared from plant materials or from chemical substances by

percolation or by maceration.

**INFUSUM, i n** - infusion - a medicinal preparation obtained by

steeping a crude drug in water.

**DECOCTUM, i n** - decoction - the pharmacopoeial name for

preparations made by boiling crude vegetable drugs, and then

straining, in the proportion of 50g of the drug to 1000 ml of water.

**SIRUPUS, i m** - syrup - a liquid preparation of medicinal or

flavouring substances in a concentrated aqueous solution of a sugar,

usually sucrose.

**SPECIES, ei f** (as a drug form used in the plural – Gen. plural –

specierum) - tea - a class of pharmaceutical preparations consisting

of a mixture of dried plants, not pulverized, but in sufficiently fine

division to be conveniently used in making of decoctions and

infusions, as a tea.

Species stomachicae - stomachic tea;

Species sedativae - sedative tea;

Species pectorales - pectoral tea

Species cholagogae - cholagogic tea

Species amarae - bitter tea, etc.

**EXTRACTUM, i n** - extract - a concentrated preparation of a drug

obtained by removing the solvent and adjusting the residual mass or

powder to the prescribed standard.

According to their consistence extracts may be fluid, dense and dry: e.g.: Extractum Crataegi fluidum - fluid hawthorn extract;

Extractum Taraxaci spissum - dense dandelion extract

Extractum Valerianae siccum - dry Valerian extract

**NAMES OF PHARMACEUTICAL SPECIALITIES**

The nomenclatural names of the drugs with the designation of the drug form consist of two nouns:

**Noun Nom.sing./pl. + noun Gen.sing.**

*drug form name + substance name*

e.g. capsulae Indomethacini - Engl. indomethacin capsules.

Sometimes it is necessary to designate some additional information about a pharmaceutical speciality, which is done by including some *agreed attributes,* characterizing the drug forms, into their nomenclatural names:

**Noun Nom.sing./pl. + noun Gen.sing. + attribute Nom sing./pl**

*drug form name + substance name +*

e.g. tabulett**ae** Tetracyclini obduct**ae** (agreement with *tabulettae*)

(coated tetracyclin tablets)

solutio Retinoli oleos**a** (agreemet with *solutio,onis f*)

(oily retinol solution)

extractum Valerianae sicc**um** (agreement with *extractum, i n*)

***COMPOUND DRUGS are those containing two or more pharmaceutical substances.*** Each compound drug gets its Trade name (Trade mark) .

Usually, the Trade mark (which is unchangeable) follows the name of the drug form as an application and is taken into quotation marks:

**noun Nom.sing./plural + “noun Nom sing”:**

*drug form name + “Trade mark”*

e.g.: suppositoria “Bethiolum” (“Bethiol” suppositories);

tabulettae “Ibuclin” (“Ibuclin” tablets)

The Trade marks of compound drugs may reflect the following information:

1. *on composition:*

SOLPADEIN – contains Sorbitol, Paracetamol, Codeine phosphate,

Coffein;

1. *disease:*

SPASMALGIN – from –spasm- (involuntary contraction of muscles)

and - alg- ( pain)

1. *effect in the body:*

Ultracain -ultra - excess, exaggeration, beyond;

-cain - local anesthetic;

There are names of compound drugs reflecting some additional information, for example:

Balsamum “ Stella auraria” - “Golden Star” balm

Guttae “Denta” - “Denta” drops (dens, dentis m – tooth)

NB! A quotation mark may be absent, but they preserve the Nominative form of the drug name, e.g. dragee Complivitum.

EXERCISE:

Translate the terms into Latin, find known to you CSs, explain their meanings. Give definitions to the Drug forms:

1. Coated Sedalgin tablets; 2. Sulfamethoxazol suspension;   
 3. Tetracyclin eye(ophthalmic) ointment; 4. Ampicillin drops 5. Lidocaine solution; 6. "Anaesthesolum” suppositories; 7. Insulin suspension; 8. Calciferol(Vitamin A) solution; 9. lndomethacin capsules; 10. "Complivit” dragees; 11. Hydrochlorthiazide tablets; 12. Oily Retinol (Vitamin A) solution; 13. Hydrocortisone ointment; 14. Liniment "Sanitas”;

15. Mint oil tablets 16. Dense wormwood extract 17. Alcoholic Iodine (Iodum,i n) solution 18. Fluid belladonna extract 19. Coated “Ibuclin” tablets 20. Dry Valerian extract.

**REVISION EXERCISE**:

Find useful information in the names of the drugs:

DRUGS, produced by France and Germany:

Adversuten, Angiografin, Ampicillin, Analgin, Anandron, Depuraflux, Depuran, Dulcolax, Desuric, Gastrographin, Gentamicin, Guttalax, L – Thyroxin, Oralgan, Sedocard, Baralgin, Baypress, Berlocid, Betapressin. Biltricid, Berlidorm, Biovital N, Estriol, Euphyllin, Chinofungin, Mezim, Pilosuryl, Thyreocomb, Thyreotorm, Tomapyrin, Tranxene, Travocort, Cholaflux, Cholagogum, Cordiamin, Cordarone, Corinfar, Cortison, Corvaton, Finalgon, Isocard, Isocillin, Norgestrol, Radenarcon, Uralyt-U, Urokinase, Ultracain.

Drugs, produced by India:

Aceten, Aminophyllin, Analgin, Angiopril, Angizem, Atcardil, Atenolol, Enzystal, Menzym, Mifungar, Minalgar, Betacard, Gentamycin, Naturolax, Nemocid, Nificard, Campicillin, Cyclovir, Cardicarp, Cordaron, Lincomycin, Lasolvan, Roscillin, Septopal, Solvin, Spasmalgin, Tenolol, Thrombonil, Thrombophob, Toralgin, Trazograph, Tricort, Urographin.

Drugs, produced by USA, Great Britain, Canada:

Acetaminophen, Apo-Atenol, Dolobid, Garamycin, Metronidazole, Minipress, Moduretic, Retrovir, Rondomycin, Rovamycine, Ventodisk, Ventolin, Vibramycin, Belcomycine, Extencilline, Hepatrombin, Netromycin, Septrin, Serevent, Solu-Cortef, Zovirax, Capoten, Corgard, Fungizon, Soniten, Panadol, Piroxicam, Prolipase, Tenoretic.

**LESSON SEVEN**

**LATIN PREPOSITIONS**

A number of medical and pharmaceutical terms are constructed with

the help of prepositions:

e.g.: per os – by mouth

pro injectionibus – for injections

Certain prepositions govern nouns in certain cases, that is why, to correctly use a Latin preposition, it is necessary to observe government of a noun by a preposition. In Latin prepositions are used only with nouns in two cases: Accusativus and Ablativus.

ACCUSATIVUS – is the Case of a direct object. Nouns of both masculine and feminine genders, as well as the corresponding adjectives, have the common final **–m** in the Accusative Case singular and in the Accusative Case plural they have **–s** with the preceding vowels, depending on the declination.

Nouns and adjectives in the form of the neuter gender obey the

following rules:

1. The ending in the ACC. sing. is the same as that in the Nom. sing.
2. The ending of the Acc. pl. is the same as that of the Nom. pl. and
3. irrespective of the declination it is always **–a (-ia)**

ACCUSATIVE CASE ENDINGS

Singularis Pluralis

I - f -**am** I - f **-as**

II - m **-um** II - m **-os**

- n -**um** (Nom. =Acc.) - n **-a** (Nom. =Acc.)

III - m **-em** III - m -**es**

f **-em (-im)\*** f **-es**

n - (**Nom. =Acc.)**  n -**a (-ia) (Nom. =Acc.)**

IV - m -**um** IV - m **-us**

n -**u** (Nom. =Acc.) n -**ua – (Nom. =Acc.)**

V – f -**em** V – f **-es**

**\***Nouns of Greek origin ending in *–sis* take the ending *–im* in the

Acc. sing. The same is also true for some Latin nouns, as:

tussis, is f – cough; febris, is f – fever;

pertussis, is f – whooping cough; pelvis, is f – pelvis.

ABLATIVUS – is the case corresponding to the questions: by what?

Or with what?

Singularis Pluralis

I - f -**a** I -**is**

II - m, n -**o**  II -**is**

III - m, f, n -**e (-i)\***  III -**ibus**

IV - m, n -**u**  IV -**ibus**

V - f -**e**  V -**ebus**

\*The ending –**i** in Ablativus singularis is added to

* 1. nouns ending in –**e,-al,-ar** in the Nominative. singular;
  2. adjectives of the 2nd group ;
  3. nouns of Greek origin ending in **–sis** and such Latin nouns

as : tussis, is f, pertussis, is f; febris, is f; pelvis, is f.

Almost all Latin prepositions are used as prefixes as well.

ACCUSATIVE CASE PREPOSITIONS:

**ad** – motion toward, at, for, up to (in a prescription)

e.g.: ad aegrotam (for the sick)

ad hypertoniam (at hypertonia)

ad 100 ml (up to 100 ml)

ad usum internum /externum ( for internal/ external use)

**per –** through; by; during;

e.g.: per os (by mouth)

per horam (during an hour)

**contra –** against

e.g.: contra anginam (against angina)

contra tussim ( against coughing)

**post –** after

e. g. : post mortem (after death)

post cibum ( after meal)

**ante -** before

e.g.: ante cibum (before meal)

ABLATIVE CASE PREPOSITIONS:

**cum –** with e.g.: cum extracto; cum Nystatin**o;**

**sine -**  without e.g.: sine causa (without cause);

**ex –** from e.g.: ex aqua (from water); ex tempore (when

needed);

**pro** – for e.g.: pro injectionibus (for injections);

pro usu interno / externo ( for internal / external use ).

ACCUSATIVE AND ABLATIVE CASE PREPOSITIONS

The prepositions **in** (in) and **sub** (under) govern two Cases

depending on the question which may be put:

where in? - Ablativus - **in** – in vitro (in glass);

**sub** – sub lingua (under the tongue);

where to? - Accusativus - **in** – in vitrum (into the glass); **sub –** sub linguam (to under the tongue).

***PROFESSIONAL EXPRESSIONS WITH PREPOSITIONS:***

***Ad usum internum / externum - for internal / external use***

***ex tempore – when needed***

***in ampullis – in ampules***

***in capsulis – in capsules***

***in tabulettis – in tablets***

***in tabulettis obductis – in coated tablets***

***in vitro – in an artificial environment;***

***in glass;***

***in vivo – in the living body***

***per inhalationem - through inhalation***

***per os – by mouth***

***per rectum – through rectum***

***pro infantibus – for children***

***pro injectionibus – for injections***

***pro roentgeno – for X –ray***

***pro diagnosi – for diagnosis***

EXERCISE:

Translate the names of pharmaceutical substances and professional expressions into Latin:

1. dense Belladonna extract in capsules
2. Synthomycin liniment with Novocain
3. tablets against coughing
4. castor oil in gelatinous capsules
5. oily Progesteron solution in ampules

6. Tetracyclin in coated tablets

7. Nifedipin in capsules

8. suppositories with Dimedrol for children

9. Furacilin solution for external use

10. Dibazol solution for injections

11. purified water\* for injections

12. “Adonis-brom” in coated tablets

13. ethyl alcohol\*\* in ampules

\*aqua purificata - purified water

(aqua, ae f; purificatus, a, um)

\*\*spiritus aethylicus (spiritus, us m)– ethyl alcohol

**LESSON EIGHT**

**VERB. INFINITIVE.**

**IMPERATIVE AND SUBJUNCTIVE MOODS**

You are to learn some forms of the Latin verbs in order to use them in drug prescriptions. In Latin prescriptions verbs are used only in the Present tense of the Active and Passive voices. Out of three Moods of the verb – Indicative, Imperartive and Subjunctive – they use only the last two in the prescriptions.

Latin verbs are conjugated according to four conjugations, i. e. they change their Person, Number, Tense and Mood. The conjugation of the verb depends on the character of the base of the verb.

To single out the base of a verb it is necessary to know its Infinitive form.

**The Infinitive** of a verb is its unchangeable form, which is recognized from the ending **–re**. Verbs of the 1st, 2nd, 4th conjugations join this **–re** to their base, and verbs of the 3rd conjugation use the combining vowel **–e-** plus the ending **–re.** (see the table):

|  |  |  |
| --- | --- | --- |
| Conjugation | The final letter of the base | Examples of the Infinitive forms |
| 1 | -**a** | Sterilis**a**-re (to sterilize) |
| 2 | -**e** | Misc**e**-re (to mix) |
| 3 | Consonant  or -**u** | Sol**v**-e-re (to dissolve)  Dil**u**-e-re (to dilute) |
| 4 | **-i** | Aud**i**-re (to listen) |

Thus, the base of the verbs of the 1st, 2nd, 4th conjugations corresponds to their Infinitive forms without the ending –re, while in the 3rd conjugation there is a combining vowel –e between the base and the ending.

**The Dictionary form** of the verbs in Latin textbooks for medical students includes the full form of the 1st person singular in the Present tense of the Indicative Mood Active Voice (the ending **–o**), then the ending of the Infinitive –re with the preceding vowel, then the number of the conjugation, for example:

steriliso, are I - to sterilize

misceo,ere II - to mix

solvo, ere III - to dissolve

diluo, ere III - to dilute

audio, ire IV - to listen

**The Imperative Mood (Imperativus)**

By its meaning the Imperative Mood corresponds to an address to the 2nd person singular or plural, but in prescriptions they use only the form of the 2nd person singular. This form fully coincides with the bases of the verbs of the 1st, 2nd and 4th conjugations, and in the 3rd conjugation they add the combining vowel **–e.** Practically, it is enough to cancel the Infinitive ending **–re** in the verbs of all four conjugations to obtain the form of the Imperative Mood in the singular, for example:

Infinitive: Imperative Mood, singular:

sterilisare (I) sterilisa (sterilize!)

miscere (II) misce (mix!)

solvere (III) solve (dissolve!)

audire (IV) audi (listen!)

EXERCISE:

Make up the Imperative singular forms of the verbs:

Addere (III) – to add; infundere (III) – to pour; diluere (III) - to dilute; adhibere (II) - to use; signare (I) - to designate; recipere (III) - to take; repetere (III) - to repeat; dare (I) - to give (dispense).

**The Subjunctive Mood (Conjunctivus).**

In Latin prescriptions they use only one of the meanings of the Subjunctive Mood – that of “an order, stimulation for some action”. In this meaning the forms of the Subjunctive Mood may be rendered into English with the help of the phrase: “Let it be done. ”

The Subjunctive Mood is formed by changing the bases of the verbs, for example:

Formation of the base of the Subjunctive Mood:

|  |  |  |  |
| --- | --- | --- | --- |
| Meaning | Dictionary form | Base | Subjunctive base |
| to designate | signo,are I | **signa-** | sign**e-** |
| to mix | misceo,ere II | **misce-** | misc**ea**- |
| to repeat | repeto,ere III | **repet-** | repet**a-** |
| to finish | finio,ire IV | **fini-** | fin**ia**- |

Latin verbs have three personal forms, while the medical terminology makes use only of the 3rd person singular and plural in the Passive Voice. Endings of the 3rd person in the Passive Voice are the following: singular**: -tur**; plural: **- ntur.**

**Examples of verb conjugation in the Passive Voice:**

|  |  |  |  |
| --- | --- | --- | --- |
| Conju  gation | Subjunctive base | singular | plural |
| I | Signe- | Sign**etur**  (let it be designated) | Sign**entur**  (let them be designated) |
| II | Miscea- | Misce**atur**  **(**let it be mixed) | Misce**antur**  (let them be mixed) |
| III | Repeta- | Repet**atur**  (let it be repeated) | Repet**antur**  (let them be repeated) |
| IV | Finia- | Fini**atur**  (let it be finished) | Fini**antur**  (let them be finished) |

In Latin prescriptions the directions of a physician to a pharmacist are expressed through verbs either in the Imperative or in the Subjunctive Mood as they are considered interchangeable. They are used in standard formulations.

**Memorize the Standard Formulations used in Prescriptions:**

**Imperative Subjunctive**

***Da. Signa: Detur. Signetur:***

***(Give. Designate:) (Let it be given. Let it be designated:)***

***Misce. Da . Signa: Misceatur. Detur. Signetur:***

***(Mix. Give. Designate:) (Let it be mixed, given,***

***designated:)***

***Sterilisa! Sterilisetur!***

***(Sterilize!) (Let it be sterilized!)***

***Repete. Repetatur.***

***(Repeat) (Let it be repeated)***

***Da tales doses (numero…) Dentur tales doses (numero…)***

***(Give such doses number…) (Let such doses be given number…)***

The prescription formulations with the verb **fio, fieri** (to form) are used after enumerating the ingredients which should be given in a certain drug form. It usually concerns the prescribing of powders, ointments, pastes, liniments, emulsions and suppositories. In this case *the name of the drug form is in the Nominative Case singular.* The singular form of the verb “fio,fieri” used in prescription formulations is **fiat,** while its plural is **fiant.**

Misce, fiat pulvis – Mix, in order to obtain powder

Misce, fiat unguentum – Mix, in order to obtain ointment

Misce, fiat linimentum – Mix, in order to obtain liniment

Misce, fiat pasta – Mix, in order to obtain paste

Misce, fiat emulsum – Mix, in order to obtain emulsion

Misce, fiat suppositorium – Mix,in order to obtain a suppository

Misce, fiat suppositorium – Mix, in order to obtain a vaginal

vaginale; suppository ;

Misce, fiant species – Mix, in order to obtain (tea) species

(Mind: the term “species” is used in the plural!)

**NB!** These formulations contain the verb Misce, which is in the form of the Imperative Mood and is never changed into the Subjunctive.

EXERCISES:

1. Form Imperative and Subjunctive forms of the following verbs:

to designate; to sterilize; to give; to mix; to take; to use; to repeat; to finish; to listen; to add; to use; to prescribe.

2. Translate into Latin:

*Mind, that drug names are nouns of the 2nd declension neuter gender, which have the same endings in Nominative and Accusative Cases singular and plural!*

1) Prescribe Mycoseptin; 2) Take 20 grams of Xeroform ointment; 3) Add 3 millilitres of mint oil; 4) Mix 10 millilitres of Valerian tincture and 15 millilitres of lily-of-the-valley tincture; 5) Add 5 millilitres of castor oil; 6) Dispense 25 grams of Synthomycin liniment; 7) Dispense 10 millilitres of Adrenalin solution; 8) Sterilize 20 millilitres of castor oil; 9) Take 10 grams of Synthomycin emulsion; 10) Dispense 25 millilitres of infusion of sage leaves.

3. Translate into Latin:

*Mind, that the name of a drug is a subject in a sentence with the verb in the Subjunctive Mood Passive Voice (predicate)!*

1) Let Dibazol and Papaverin be dispensed; 2) Let “Apilacum” suppositories be dispensed; 3) Let eucalyptus oil be dispensed; 4) Let infusion of valerian roots be dispensed; 5) Let Novocain solution be sterilized.

4. Translate into Latin:

1) Take 10 ml of lily-of-the-valley tincture and 20 ml of valerian tincture. Mix. Give (Dispense). Designate.

2) Take 30,0 of Ichthyol ointment. Let it be given. Let it be designated.

3) Take 10,0 of sage leaves and 20,0 of mint leaves. Mix in order to obtain tea. Give. Designate:

4) Take 5 ml of Dibazol solution. Sterilize! Give. Designate.

5) Take 1,2 of Xeroform and 20 ml of castor oil. Mix in order to obtain liniment. Let it be given and designated

MEMORIZE THE VERBS:

1. addo,ere III - to add

2. audio, ire IV - to listen

3. curo,are I - to cure

4. do, dare I - to give; to dispense

5. finio, ire IV - to finish

6. misceo, ere II - to mix

7. recipio, ere III - to take

8. repeto, ere III - to repeat

9. signo, are I - to designate

10. steriliso, are I - to sterilize

11. verto, ere III - to turn

MEMORIZE SOME LATIN SAYINGS WITH VERBS:

1. **Noli nocere** (noceo, ere II – to do harm)

- Never do harm (to your patients).

2**. Vade mecum** (vado, ere III – to go)

- in the literal sense - “go with me” – some reference book or

guide.

3. **Festina lente** (festino, are I – to be in a hurry)

- in the literal sense “hurry up slowly” - Do not do anything in a

hurry.

4. **Edimus, ut vivamus, non vivimus, ut edamus** (edo, ere III – to

eat; vivo, ere III – to live)

- We eat in order to live; but we do not live in order to eat.

5**. Audiatur et altera pars** (audio, ire IV – to listen)

- Let the other side be also listened to.

**LESSON NINE**

**LATIN PRESCRIPTION**

A prescription is a doctor’s written order or direction for the making up and administration of a medicine.

A special form for a prescription is divided into 9 parts:

1. The name of a medical establishment (stamp) and code – Inscriptio – ( Inscription)
2. The date of prescribing medicine (DATUM)
3. Name of a patient (NOMEN AEGROTI)
4. Age (AETAS AEGROTI)
5. Doctor’s name (NOMEN MEDICI)
6. Designation of medicines and their quantity (DESIGNATIO MATERIARUM)
7. Directions to a pharmacist (SUBSCRIPTIO)
8. Way of drug administration (SIGNATURA)
9. Doctor’s signature and individual seal (SIGILLUM MEDICI)

You will get a detailed description of all the parts of a prescription during your further studies at the University. In the course of the Latin medical terminology parts number VI and VII are of utmost interest as they are compiled in Latin.

Part VI – Designation of medicines and their quantity – starts with the abbreviation Rp. : = Recipe: = Take:

Then comes the enumeration of drugs’ names followed by data on their quantities. There are some rules which should be observed here:

1. Each drug name is written on a new line and with a capital letter.

**The names of pharmaceutical substances and plants are always capitalized (**See the example):

e.g.: Recipe: Tincturae **V**alerianae 10 ml

Tincturae **C**onvallariae 15 ml

***The Grammar model of a prescription line*** is the folowing:

Take

Recipe: (name of the drug in the Genitive) **What?**

**Of what?** (*amount* of the drug

in the Accusative

Case)

Thus, each drug name is written in the Genitive as it depends grammatically on the dose designation which is the Accusative Case (corresponding to the English Objective case) as it is a direct object to the verb “Recipe:” – Take:

Such pharmaceutical specialities as tablets and suppositories bearing trade names without the dosage designation (as the dose is standard) are prescribed in the Accusative Case singular or plural.

Take:

What? Acc.sing./pl

*Drug form*

e. g. : Recipe: **Tabulettam** “Ancophenum” (*Acc.sing.)*

(Take: One tablet of “Ancophen”)

or

Recipe: **Tabulettas** “Ancophenum” numero 20 (*Acc.plural)*

(Take: “Ancophenum” tablets number 20)

Recipe: **Suppositorium** “Bethiolum” (*Acc.sing.)*

(Take: a “Bethiol” suppository)

or

Recipe: **Suppositoria** “Bethiolum” numero 10 *(Acc.plural)*

(Take: “ Bethiol” suppositories 10 by number

**NB**! Tablets having one ingredient and dose designation are

prescribed in the similar way:

e.g.: Recipe: Tabulettas Barbamyli 0.1 numero 10

(Take: Barbamyl tablets 0.1 number 10)

2) Drug dose is designated in grams or parts of grams. Parts of grams

are separated from the whole number by a dot. If parts of grams are

absent, a zero is put instead.

e.g.: 130. 0 = 130 grams;

0.3 = 0 point 3 grams or three decigrams;

0.03 = 3 centigrams;

0.003 = 3 milligrams.

In modern practice they designate the amount of drugs also in milligrams, using for that the “mg” abbreviation, e.g. : 300 mg.

Liquid medicines are dosed in milliliters (1 ml; 100 ml), grams or drops.

If the amount of a medicine is less than 1 ml, it is dosed in drops. One drop of an aqueous solution equals to 0. 05 ml. The number of drops is designated through Roman figures after the word “guttam “ ( a drop) or “guttas” (drops) in the Accusative Case, for example:

***Guttam I, guttas II*** (III, etc. )

Recipe: Olei Menthae (mint oil) ***guttas XV*** (15 drops)

If two or more medicines are prescribed in equal doses, the quantity is designated once after the last drug name with the Greek word “***ana***” (in equal amounts) before it.

e.g.: Recipe: Tincturae Valerianae

Tincturae Convallariae ***ana*** 10 ml

Part VII – gives directions to the pharmacist as to what operations to make (to mix, sterilize, etc. ), what drug form to obtain (pills, powder, ointment etc. ), how many doses to prepare (number of tablets, ampules) and how to pack the medicine (in paper, in vitro, etc. )

Part VIII – designation of the way of the drug administration. It starts with the abbreviation **S.: (Signa) – Designate**:

This part includes directions of a physician to a patient of how to use the medicine. It is written in the native language of a patient.

EXERCISES:

1. Render Latin prescriptions into English:

Recipe: Paracetamoli

Analgini ana 0.25

Da tales doses numero 12 in tabulettis

Signa: *1 tablet at headache*

Recipe: Tabulettas “Adonis-brom” obductas numero 20

Detur. Signetur:

Recipe: Suppositoria cum Synthomycino 0.25 numero 10

Da. Signa:

Recipe: Tabulettam Furacilini ad usum externum

Dentur tales doses numero 10

Signetur:

Recipe: Solutionis Aminazini 2.5%, 2 ml

Solutionis Glucosi 5% 20 ml

Misceatur. Sterilisetur!

Detur. Signetur:

Recipe: Olei Vaselini 100 ml

Olei Menthae guttas II

Misce. Da.

Signa:

Recipe: Sirupi Rhei 30.0

Da.

Signa:

Recipe: Emulsi olei Ricini 180.0

Sirupi Sacchari ad 200.0

Misceatur. Detur.

Signetur:

2. Make up Latin prescriptions to the following compositions of drugs:

I.

0.3 grams of hawthorn (Crataegus, i f) tincture

0.15 grams of rabarbaer tincture

0.2 grams of Barbital-Sodium (Barbitalum-natrium)

20 ml of ethyl alcohol

purified water up to 200 ml

II.

Equal amounts of 10 ml of lily-of-the-valley tincture

and valerian tincture,

Nitroglycerin solution 1% - 1 ml,

2 ml of Validol

III.

Equal amounts of 0.25 of Paracetamol and Phenacetin

should be given in tablets number 12

IV.

0.5 Sulfadimezinum tablets number 12

V.

50.0 of 1% Synthomycine liniment with Novocain 0.5

VI.

Suppositories with Diprophyllin 0.5 number 10

**LESSON TEN**

**ABBREVIATIONS IN PRESCRIPTIONS**

Abbreviations in prescriptions are not allowed to be performed at random. They are regulated by special documents which are sent by the Ministry of Health to all hospitals and pharmacies to enable some common approach.

*In prescriptions they usually make abbreviations for:*

*1. names of drug forms;*

*2. names of parts of plants;*

*3. standard prescription formulations*: directions to a pharmacist.

They forbid to make abbreviations of plant names and of names of

drugs to prevent confusion and wrong interpretation of drug names.

*There are some rules for making abbreviations, they are*:

1 - universally accepted abbreviations may be represented by *the first*

*syllable or the initial part of the word with the dot at the end:*

e.g.: ac., acid., - acidum (acid)

2 - they may include *the initial letter of the word (the initial*

*abbreviation):*

e.g.: M. - Misce (Mix)

3 - if the abbreviation includes a syllable containing several

consonants, all of them are taken into it:

e.g.: extr. - extractum (extract)

4 - sometimes they take *the framework of a word* to make an

abbreviation:

e.g.: tct. – tinctura; dct. – decoctum; aa - ana

REMEMBER THE MOST IMPORTANT UNIVERSALLY ACCEPTED ABBREVIATIONS

Rp.: Recipe: Take:

aa ana in equal parts

ac., acid. acidum; acidi acid; of acid

aq. purif. aqua purificata; purified water

aquae purificatae of purified water

ad up to

amp., in amp. in ampullis in ampules

D. Da. Detur. Dentur Give. Let it be given.

D. t. d. Da tales doses… Give such doses…

Dentur tales doses.. Let such doses be dispensed

dec., dct. decoctum; decocti decoction; of decoction

emuls. emulsum; emulsi emulsion; of emulsion

extr. extractum; extracti extract; of extract

fl. flores; florum flowers;of flowers

fol. folia; foliorum leaves; of leaves

fr. fructus; fructuum fruit; of fruit

hb., h. herba ; herbae herb; of herb

in caps. in capsulis in capsules

inf. Infusum; infusi infusion; of infusion

tab. tabulettam(Acc.); a tablet

tabulettas (Acc.) tablets

in tab. in tabulettis in tablets

lin. linimentum; linimenti liniment; of liniment

M. Misce. Misceatur. Mix! Let it be mixed

N. numero number

ol. oleum; olei oil; of oil

pulv. pulvis; pulveris powder; of powder

q. s. quantum satis as much as required

r., rad. radices; radicum roots; of roots

S. Signa:Signetur: Designate; Let it be

designated

sem. semina; seminum seeds; of seeds

sir. sirupus; sirupi syrup; of syrup

sol. solutio; solutionis solution; of solution

sp. species; specierum tea; of the tea

spir. spiritus; spiritus alcohol; of alcohol

steril! Sterilisa! Sterilisetur! Sterilize! Let it be

sterilized

supp. suppositorium (Nom.= Acc.); suppository;

suppositoria (Nom.= Acc.); suppositories

susp. suspensio; suspension;

suspensionis of suspension

t-ra, tct., tinct. tinctura; tincturae tincture; of tincture

ung. unguentum; unguenti ointment; of ointment

M., f… Misce, fiat (fiant)… Mix, to obtain …

***LATIN ABBREVIATIONS USED IN THE PROFESSIONAL MEDICAL LANGUAGE***

They are used in the professional communication between a physician and a medical nurse, for example. Ususally they are designations how to administer a drug to a patient. In many cases most frequently diagnosed diseases and symptoms, and also names of physio-therapeutical and surgical procedures are also abbreviated in the hospital practice. Here you are offered some examples of such professional abbreviations:

Latin English

a. c. ante cibum Before meals

ad. lib. ad libitum As desired

b. i. d. bis in die Twice a day

i. One or one time

gtts guttae Drops

h. s. hora somni At bedtime

NPO nulli per os Nothing by mouth

O D oculus dexter Right eye

O S oculus sinister Left eye

p. c. post cibum After meals

P O per os Orally - by mouth

p. r. n. pro re nata As required

q. d. quaque die Every day

q. h. quaque hora Every hour

q. i. d. quarter in die Four times daily

q. n. s. quantitas non sufficiens Quantity not sufficient

Stat. Statim! Immediately

t. i. d. ter in die Three times daily

EXERCISES:

I. Translate Latin prescriptions into English:

Rp.: Phenacetini 0.25 Rp.: Mentholi 0.01

D. t. d. N.10 in tab. Paracetamoli 0.3

S. : M., f. pulv.

D. t. d. N.10

S.:

Rp.: Acrichini 0.1 Rp.: Extr. Belladonnae 0.1

Glucosi 0.3 Dimedroli 0.02

M., f. pulv. Euphyllini 0.2

D. t. d. N. 12 in caps. M., f. pulv.

S.: D. t. d. N.10

S.:

Rp.: Fr. Rosae 30.0 Rp.: Tab. Thyreoidini 0.1 obductas

Fr. Rubi idaei 10.0 N. 50

Fol. Urticae 20.0 D. S.:

M., f. sp.

D. S.:

Rp.: Theophyllini 0.25 Rp.: Tab. Phenolphthaleini 0.1

Dimedroli 0.025 D. t. d. N. 24

D. t. d. N. 10 in tab. S.:

S.:

Rp.: Extr Belladonnae spissi 0.5

D. t. d. N. 12 in caps.

S.:

Rp.: Ol. Ricini 1.0

D. t. d. N. 15 in caps.

S.:

Rp. : Furacilini 0.2

Aq. purif. 1000 ml

M. D. S.:

2. Make abbreviations in Latin prescriptions and render them into English:

Recipe: Solutionis Glucosi 10% 10 ml

Sterilisa!

Da tales doses numero 10

Signa:

Recipe: Solutionis Progesteroni oleosae 1% 1 ml

Da tales doses numero 10 in ampullis

Signa:

Recipe: Anaesthesini 0.05

Thymoli 0.1

Olei Menthae guttas X

Olei Persicorum 20.0

Misce. Da.

Signa:

Recipe: Tabulettas olei Menthae numero 20

Da. Signa:

Recipe: Tabulettam Butadioni 0.15

Da tales doses numero 12

Signa:

Recipe: Tannalbini 4.0

Sirupi Sacchari 15 ml

Aquae purificatae ad 180 ml

Misce. Da.

Signa:

Recipe: Mentholi 1.0

Olei Amygdalarum 20.0

Aquae purificatae ad 120.0

Misce, fiat emulsum

Da. Signa:

3. Make up Latin prescriptions in their full and abbreviated forms:

Take: 200 ml of infusion of chamomile flowers

Give. Designate:

Take: 200 ml of infusion of mint leaves

Give. Designate:

Take: Coated Tetracycline 0.25 tablets number 20

Give. Designate:

Take: A Phenoxymethylpenicillin 0.25 tablet

Give such doses number 10

Designate:

Take: 1.5 of Paracetamol

3 ml of lily-of-the-valley tincture

100 ml of purified water

Mix. Give. Designate:

Take: 1 ml of fluid aloe extract

Give such doses number 10 in ampules

Designate:

Take: 0.5 of oily solution of Vitamin A

Equal amounts of Lanolin

Sunflower oil and

Purified water 20.0

Mix to obtain ointment

Give. Designate:

Take: Suppositories with Nystatin 250 mg 10 by number

Give. Designate:

Take: 0.015 of belladonna extract

0,01of Naphthalan

Cocoa oil as much as required (Lat. Cacao – not changed)

Mix to obtain a suppository

Give such doses number 4

Designate:

**LESSON ELEVEN**

# **PHARMACOPOIEAL CHEMICAL NOMENCLATURE**

When prescribing a drug, which is either a chemical element (sulfur, iron) or a compound (acid, oxide, salt), a physician writes neither a chemical symbol of the element, nor the formula of the compound. He uses their nomenclatural names in accordance with the rules existing for the International chemical nomenclature in Latin, i. e. he uses systematic names. Thus, both for a physician and a pharmacist it is important to know precisely the Latin names of chemical compounds as well as the basic rules for constructing them.

**NAMES OF MOST IMPORTANT CHEMICAL ELEMENTS**

All Latin names of chemical elements are nouns of the neuter gender of the 2nd declension ending in –um.

Exceptions: **Phosphorus, i m – phosphorus**

**Sulfur, uris n (3rd declination) – sulphur**

**NAMES OF CHEMICAL ELEMENTS**

Latin name Symbol English name

Aluminium Al aluminium

Argentum Ag silver

Arsenicum As arsenic

Aurum Au 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

Fluorum (Phthorum) F fluorine

Iodum I iodine

Hydrogenium H hydrogen

Nitrogenium N nitrogen

Oxygenium O oxygen

Hydrargyrum (Mercurium) Hg mercury

Kalium (Potassium) K potassium

Lithium Li lithium

Magnesium (Magnium) Mg magnesium

Manganum Mn manganese

Natrium (Sodium) Na sodium

Phosphorus P phosphorus

Plumbum Pb lead

Silicium Si silicon

Stibium (Antimonium) Sb antimony

Sulfur S sulphur

Thallium Tl thallium

Zincum Zn zinc

**NAMES OF ACIDS**

***I. 1. Names of oxygenous acids*** are constructed by adding certain suffixes, characterizing the oxidation level, to the base of an acid-forming element. They are adjectives, which are in agreement with the noun “acidum” (acidum, i n – acid).

The suffix **–icum** (English –ic) corresponds to the maximum oxidation level of the acid-forming element, for example:

H2SO3 – acidum sulfuricum – sulfuric acid

HNO3 – acidum nitricum – nitric acid

2. If an element forms two acids, the name of the one with a low oxidation level is constructed with the help of the suffix **–osum** (English - ous) added to the Latin base of the name of the chemical element, for example:

H2SO3 – acidum sulfurosum – sulfurous acid

HNO2 – acidum nitrosum\* – nitrous acid

**NB!**\* Compound names of the chemical elements, i. e. **Nitrogenium; Oxygenium; Hydrogenium l**oose their second root when used to construct the names of the chemical compounds, so they use: **nitro-; oxy-; hydro-** correspondingly.

***II. Names of oxygen-free acids*** are constructed with the help of the prefix **hydro-** added to the base of the name of an element and the suffix

**–icum** (English -hydro…ic), for example:

HCl – acidum hydrochloricum (hydrochloric acid)

Hl − acidum hydroiodicum (hydroiodic acid)

HCN – acidum hydrocyanicum (hydrocyanic acid)

H2S − acidum hydrosulfuricum (hydrosulfuric acid)

H2F2 – acidum hydrofluoricum (hydrofluoric acid)

***III. Names of organic acids.*** They are oxygenous acids and their names are word combinations including the noun “acidum” plus an adjective with the suffix **–icum**, which is attached to the Latin base of the generic name or to the Latin name of an organic substance, for example:

acidum tartaricum – tartaric acid

acidum citricum – citric acid

acidum acetylsalicylicum – acetylsalicylic acid (Aspirin)

acidum nicotinicom – nicotinic acid (Niacin)

acidum formicicum – formic(ic) acid

acidum lacticum – lactic acid

acidum ascorb(in)icum\* – ascorbic acid (Vitamin C)

acidum glutam(in)icum\* – glutamic acid

acidum carbolicum – carbolic acid (Phenol)

acidum folicum – folic acid (Lifsulfas)

\*The updated Latin variant of these acid names excludes the suffix

**-in!**

EXERCISES:

I. Fill in the blanks:

1. As you remember, mercury in Latin is …, and Hydrogenium is for English …

2. The Englsih name for Kalium is …, and Sodium is English for Latin …, Antimony being translated into Latin like …

3. To be able to construct any acid name, it is necessary to recollect the name of the acid forming … and to add …, characterizing the oxidation level to its base.

4. If there are two oxidation levels, the suffix … characterizes high oxidation level, and the suffix -osum - … oxidation level.

2. Construct the names of acids in Latin and in English:

Latin English

Example: Acidum propionicum Propionic acid

Acidum glutamin… … -ic acid

… salicyl… … -ic acid

… …-icum carbon… acid

… …-icum nitr… acid

… tellur… … -ous acid

… arsenic… … -ous acid

… … -osum − sulfur… acid

… … -osum − nitr… acid

**NAMES OF OXIDES**

Pharmacopoeias of different countries use two types of Latin names of oxides and salts (esters). The one used by the International Pharmacopoeia is considered to be commonly used.

According to it, names of oxides, peroxides and hydroxides consist of two nouns, the first of them being the name of the chemical element in the Genitive Case singular, the second one – the group name of the oxide – the noun oxydum, i n (oxide) with the corresponding prefixes in the Nominative case singular.

e.g.: Lat. Magnii oxydum Engl. Magnesium oxide

Magnesii peroxydum Magnesium peroxide

Hydrogenii hydroxydum Hydrogen hydroxide

Thus, English names of oxides consist of the name of the chemical element, expressed by a noun in the Common Case and used as an attribute, plus the noun “oxide; peroxide; hydroxide”.

**NB**! Mind the difference in spelling between the Latin “oxydum” and the English “oxide”.

# EXERCISES:

I. Render the terms into English:

1. Unguentum Zinci; 2. Aurum radioactivum; 3. Ferrum cum acido ascorbico; 4. Sulfur depuratum; 5. Ferrum reductum; 6. Tabulettae Ferri reducti; 7. Aqua Plumbi; 8. Sirupus Aloës cum Ferro; 9. Unguentum Hydrargyri cinereum; 10. Unguentum Hydrargyri praecipitati albi;   
11. Emplastrum Thallii; 12.Magnesii oxydum seu Magnesia usta; 13. Calcii oxydum seu Calcaria usta; 14. Hydrogenii peroxydum; 15. Aluminii hydroxydum; 16. Acidum arsenicosum anhydricum seu Arsenicum album 17. Acidum carbonicum anhydricum 18. Acidum sulfuricum concentratum; 19. Acidum carbolicum 20. Acidum ascorbinicum 21. Acidum acetylsalicylicum; 22. Acidum hydrochloricum purum dilutum; 23. Acidum aceticum concentratum; 24. Acidum hydrochloricum dilutum;   
25. Tabulettae acidi arsenicosi obductae; 26. Tabulettae acidi nicotinici; 27. Unguentum acidi borici; 28. Dragee acidi ascorbinici.

2. Translate the terms into Latin:

1. Diluted hydrochloric acid; 2. yellow mercuric oxide or yellow precipitated mercury; 3. nitric / nitrous acid; 4. lactic acid; 5. tablets of nicotinic acid; 6. ointment of boric acid; 7. coated tablets of glutamic acid; 8. reduced iron; 9. lead plaster; 10. radioactive phosphorus; 11. diluted sulfuric acid; 12. pure hydrocyanic acid; 13. powdered tartaric acid;   
14. ointment of yellow mercuric oxide; 15. zinc ointment; 16. coated tablets of arsenous acid; 17. anhydric arsenous acid; 18. anhydric carbonic acid; 19. boric acid; 20. strong hydrogen peroxide solution (Compare: Latin: Solutio Hydrogenii peroxydi concentrata)

3. Translate the prescriptions in English:

Recipe: Xeroformii 1.0

Zinci oxydi 5.0

Lanolini

Vaselini ana 10.0

Misce, fiat unguentum

Da. Signa:

Recipe: Emulsi olei Persicorum 120.0

Acidi benzoici 0.2

Olei Foeniculi guttas XX

Misce. Da.

Signa:

Rp: Tab**.** Ac. ascorbinici 0.05 N 50

D. S.:

Rp.: Ferri reducti 1.0

Ac. ascorbinici 0.1

M., f. pulv.

D. t. d. N 20 in caps.

S.:

Rp.: Sol. Hydrogenii peroxydi dilutae 50 ml

D. S.:

4. Make up Latin prescriptions in their full and abbreviated forms:

Take: 0.5 of salicylic acid

0.6 of Zinc oxide

9.5 of Vaselin

Mix to obtain ointment

Give. Designate:

Take: 1.0 of precipitated sulphur

2.0 of Glycerin

60 ml of purified water

Mix. Give.

Designate:

Take: 100 ml of aloe syrup with iron

Give. Designate:

Take: Purified sulphur

Magnesium oxide

Milk sugar in equal amounts of 10.0 (Saccharum lactis; lac,

Mix. to obtain powder lactis n - milk)

Give. Designate:

MEMORIZE THE TERMS:

1. depuratus, a, um – purified ( for sulfur)
2. purificatus, a, um – purified ( for water)
3. rectificatus, a,um – purified ( alcohol and turpentine oil)
4. dilutus, a, um – diluted
5. ustus, a, um – burnt
6. concentratus, a, um – concentrated, strong
7. praecipitatus, a, um – precipitated
8. reductus, a, um – reduced
9. obductus, a, um – coated

10. purus, a, um – pure

11. cinereus, a, um – grey

12. pulveratus, a, um – powdered

# **LESSON TWELVE**

**PHARMACOPOIEAL Chemical Nomenclature (continued)**

**NAMES OF SALTS and ESTERS**

According to the International Pharmacopoeia, Latin names of salts (esters) consist of two nouns, the first of which is the name of the cation in the Genitive case, the second being the name of the anion in the Nominative case. For example:

Lat. ***Barii sulfas*** - Engl. ***Barium sulfate***

Lat. ***Natrii nitris*** *-* Engl. ***Sodium nitrite***

It is possible to define the type of a chemical compound from the suffix of the anion. (See the table)

In English the name of the cation in the Nominative case takes also the first place followed by the name of the anion, the suffix of which corresponds to the suffix in the Latin anion (See the table):

**ANION SUFFIXES**

**IN DIFFERENT TYPES OF CHEMICAL COMPOUNDS**

|  |  |  |
| --- | --- | --- |
| Type of Compound | Latin anion | English anion |
| Combinations of oxygenous acids with high oxygen content | **-as (Gen. –atis) m**  Kalii orot**as** | **-ate**  Potassium orot**ate** |
| -«- oxygenous acids with low oxygen content | **-is (Gen. –itis) m**  Natrii nitr**is** | **-ite**  Sodium nitr**ite** |
| Combinations of oxygen-free acids | **-idum (Gen. –idi) n**  Kalii brom**idum** | **-ide**  Potassium brom**ide** |
| -«- oxygen-free acids with organic bases | **hydro-…-idum**  Morphini **hydro**chlor**idum** | **hydro-…-ide**  Morphine **hydro**chlor**ide** |
| Acid salts | **hydro-(bi-)…-as**  Natrii **hydro**carbon**as** | **hydro-(bi-)…-ate**  Sodium **bi**carbon**ate** |
| Basic salts | **sub-…-as**  Bismuthi **sub**nitr**as** | **sub-…-ate**  Bismuth **sub**nitr**ate** |

**NB!**

1. **Lat. –** ***Coffeinum-natrii benzoas* – Engl. *Caffeine and Sodium benzoate***
2. ***The Bases of the names of some chemical elements may be different when used for the construction of acids and the corresponding salts:***

|  |  |  |
| --- | --- | --- |
| **Name of the chemical element** | **Acid name base** | **Anion name base** |
| Phosphorus, i m | phosphor- | phosph- |
| Sulfur, uris n | sulfur- | sulf- |
| Arsenicum, i n | arsenic- (Latin)  arsen- (English) | arsen- |
|  |
|  | tartar- | tartr- |

**For example:** acidum **phosphor**icum, *but* – Codeini **phosph**as

# **NAMES OF SODIUM AND POTASSIUM SALTS**

Latin names of sodium and potassium salts consist of the generic name of a substance with “natrium” and “kalium” added to them after a hyphen, for example:

Lat. Thiopentalum-natrium – Engl. Thiopental Sodium

The International Pharmacopoeia makes use of the following name in this case: Thiopentalum Natricum, using an adjective constructed from the name of the chemical element (either “natrium” or “kalium”) with the help of the suffix **-ic.**

**NAMES OF ESTERS**

Latin names of hydrocarbon and acid radicals are constructed by adding the suffix **-ylium** to the bases of the names of the corresponding hydrocarbons and acids, for example:

hydrocarbon: hydrocarbon radical:

“methanum” (CH4) “methylium” (CH3) – methyl;

“aethanum” (C2H6) “aethylium” (C2H5) – ethyl, etc.

**The names of esters include names of hydrocarbon radicals as cations, for example:**

Lat. Phenylii salicylas – Engl. Phenyl salicylate

***Analyze the names of salts (esters) in the following table and pay attention to the difference in the construction of names of sodium / potassium salts and names of esters in the Latin and International Pharmacopoeias:***

|  |  |  |
| --- | --- | --- |
| Latin | English | International |
| Pilocarpini hydrochloridum | Pilocarpine hydrochloride | Pilocarpini hydrochloridum |
| Physostigmini salicylas | Physostigmine salicylate | Physostigmini salicylas |
| Atropini sulfas | Atropine sulfate | Atropini sulfas |
| Homatropini hydrobromidum | Homatropine hydrobromide | Homatropini hydrobromidum |
| Platyphyllini hydrotartras | Platyphylline hydro(bi)tartrate | Platyphyllini hydrotartras |
| Scopolamini hydrobromidum | Scopolamine hydrobromide | Scopolamini hydrobromidum |
| Ephedrini hydrochloridum | Ephetonin hydrochloride | Ephedrini hydrochloridum |
| Magnesii sulfas | Magnesium sulfate | Magnesii sulfas |
| Barbitalum-natrium | Barbital Sodium | Barbitalum Natricum |
| Ammonii bromidum | Ammonium bromide | Ammonii bromidum |
| Kalii bromidum | Potassium bromide | Kalii bromidum |
| Codeini phosphas | Codeine phosphate | Codeini phosphas |
| Natrii salicylas | Sodium salicylate | Natrii salicylas |
| Coffeinum-natrii benzoas | Caffeine and Sodium benzoate | Coffeinum et Natrii Benzoas |
| Bismuthi subgallas | Bismuth subgallate | Bismuthi subgallas |
| Bismuthi subnitras | Bismuth subnitrate | Bismuthi subnitras |
| Natrii sulfas | Sodium sulphate | Natrii sulfas |
| Apomorphini  hydrochloridum | Apomorphine  hydrochloride | Apomorphini  Hydrochloridum |
| Amylii nitris | Amyl nitrite | Amylis nitris |
| Methylii salicylas | Methyl salicylate | Methylis salicylas |
| Aethylii chloridum | Ethyl chloride | Aethylis chloridum |
| Chlorali hydras | Chloral hydrate | Chloralis hydras |
| Natrii nitris | Sodium nitrite | Natrii nitris |
| Benzylpenicillinum-  -natrium | Penicillin G | Benzylpenicillinum  Natricum |
| Neomycini sulfas | Neomycin sulfate | Neomycini sulfas |
| Methicillinum-natrium | Methicillin Sodium | Methicillinum Natricum |
| Oxacillinum-natrium | Oxacillin Sodium | Oxacillinum Natricum |
| Natrii iodidum | Sodium iodide | Natrii iodidum |
| Barii sulfas | Barium sulphate | Barii sulfas |
| Argenti nitras | Silver nitrate | Argenti nitras |
| Cupri sulfas | Copper sulphate | Cupri sulfas |
| Natrii hydrocarbonas | Sodium bicarbonate | Natrii hydro-(bi)  carbonas |
| Magnesii subcarbonas | (Light) Magnesium  carbonate | Magnesii subcarbonas |
| Calcii lactas | Calcium lactate | Calcii lactas |

EXERCISES:

I. Translate the terms into Latin:

1. Copper citrate - ointment of copper citrate 2. Codein phosphate - tablets of Codein phosphate 3. Potassium iodide - ointment of Potassium iodide 4. Morphin hydrochloride - tablets of Morphin hydrochloride   
5. Silver nitrite - ointment of Silver nitrite 6. burnt Calcium sulphate   
7. Sodium chloride - composite solution of Sodium chloride 8. Isotonic solution of Sodium chloride 9. Precipitated Calcium carbonate 10. Caffeine and Sodium benzoate - coated tablets of Caffeine and Sodium benzoate

2. Write Latin prescriptions in their full form and translate them into English:

Rp: Extr. Belladonnae 0.1

Phenylii salicylatis

Natrii hydrocarbonatis aa 0.2

M., f. pulv.

D. t. d. N. 20

S.:

Rp: Platyphyllini hydrotartratis 0.005

Papaverini hydrochloridi 0.04

Euphyllini 0.2

M., f. pulv.

D. t. d. N. 12

S.:

Rp.: Oxacillini-natrii 0.25

D. t. d. N. 50 in caps. gelatinosis

S.:

Rp.: Natrii chloridi 4.75

Kalii chloridi 1.5

Natrii hydrocarbonatis 1.0

Natrii acetatis 2.6

Aq. pro inject. ad 1000 ml

M. Steril. !

D. S.:

Rp.: Sol. Kalii bromidi 2% - 200 ml

Tinct. Convallariae 6 ml

M. D. S.:

Rp.: Coffeini-natrii benzoatis 0.5

Sol. Natrii bromidi 1% 150 ml

Camphorae 2.0 (Engl. - Camphor)

M. D. S.:

3. Make up Latin prescriptions in their full and abbreviated forms:

Take: 200 ml of castor-oil emulsion

3.0 of Phenyl salicylate

2.0 of Benzonaphthol

Mix. Give. Designate:

Take: Ethaminal-Sodium 0.1 tablets number 10

Let it be given and designated:

Take: Tannalbin

Bismuth subnitrate in equal amounts of 0.3

Give such doses number 10 in tablets

Designate:

Take: Equal amounts of 10.0 of Sodium bromide and

Potassium bromide

10 ml of Valerian tincture

Mint water up to 200 ml

Let it be mixed, given, designated:

Take: 0.015 of Morphin hydrochloride

0.05 of diluted hydrochloric acid

200 ml of purified water

20 ml of raspberry syrup

Mix. Give. Designate:

Take: 1.0 of Camphor

2.0 of Menthol

10.0 of Methyl salicylate

15.0 of Turpentine oil

Let it be mixed, given, designated:

Take: 55 ml of purified water

30 ml 1:20 Sodium hydrocarbonate solution

15 ml 1:10 Sodium hydrocarbonate solution

0.5 of Menthol

5 drops of 90% Aethanol

Mix. Give. Designate:

**LATIN SAYINGS AND PROFESSIONAL EXPRESSIONS**

1. ***Non est medicina sine lingua Latina*** – There is no medicine without the

Latin language

1. ***Feci quod potui, faciant meliora potentes*** – I’ve done what I could let the

one who can do it better.

1. ***Cogito,ergo sum*** – I’m thinking – it means I’m existing
2. ***Per aspera ad astra*** –Through thorns – to stars (through difficulties – to

success)

1. ***Lapsus linguae –*** The slip of the tongue
2. ***Nosce te ipsum*** (Socrates) – Cognize yourself! (Inscription on the

frontons of ancient anatomical theatres)

1. ***Exitus letalis*** – Lethal exit, death
2. ***Omnia mea mecum porto*** (Biant) – my everything I have with me –

(The real treasure of a man is his inner dignity)

1. ***Omne principium difficile*** – Every beginning is difficult
2. ***Non progredi est regredi*** – Not to move forward is to move backward
3. ***Amore, more, ore, re probantur amicitiae*** – friendship is tested by love,

behavior, word, and deed

1. ***Status quo*** – The existing (present) state
2. ***Tabula rasa*** – A clean board (may be addressed to a person, who knows

nothing in a certain field of activities)

1. ***Terra incognita*** – An unknown land (an unknown field of knowledge is

implied)

1. ***Usus est optimus magister*** – Experience (usage) is the best teacher
2. ***Ars longa, vita brevis est*** – art is eternal, and life is passing (short)
3. ***Dum spiro spero*** – I hope until I breath
4. ***Debes ergo potes*** – You must, it means you can
5. ***Errare humanum est*** – To be mistaken is typical for humans
6. ***Experientia docet*** – Experience teaches
7. ***Alma mater*** – “Nursing mother” – an educational establishment

providing one with a profession

1. ***Repetitio est mater studiorum*** – Repetition (rehearsal) is mother of

studies

1. ***Medica mente, non medicamentis*** – Cure with your mind, but not with

medicaments

1. ***Diagnosis bona – curatio bona*** – Good diagnosis provides good

treatment

1. ***Anamnesis vitae*** – The medical history of a patient, describing his

physical, psychic & social development

1. ***Anamnesis morbi*** – The medical history of a patient, describing the

etiology, pathogenesis & ways of treatment of the dsease

1. ***Hygiena amica valetudinis*** –Hygiene is a friend of health
2. ***Medicina soror philosophiae*** (Democrites) – medicine is a sister of

philosophy

1. ***Medice, cura aegrotum, sed non morbum*** – Doctor, cure your patient, but

not a disease

1. ***Salus aegroti – suprema lex medicorum*** - Health of a patient is the highest

law for a physician

1. ***Noli nocere!*** (The first rule for a physician) – Never do harm!
2. ***O tempora, o mores*** (Cicero) – Such times, such habits!
3. ***Tempus vulnera sanat*** – Time cures wounds
4. ***Mens sana in corpore sano bonum magnum est*** (Juvenalius) – Healthy

spirit in a healthy body is the greatest benefit

1. ***Summum bonum medicinae sanitas*** – the greatest benefit of medicine is

health

1. ***Per scientiam ad salutem aegroti*** – Through knowledge (science) – to the

health of a patient

1. ***ex tempore*** – when needed
2. ***ad usum internum/externum*** – for internal/external use
3. ***in vivo*** – in the living body
4. ***in vitro*** – in an artificial environment; in gass
5. **pro diagnosi** – for diagnosis
6. ***pro roentgeno*** – for X-ray
7. ***pro narcosi*** – for narcosis
8. ***pro injectionibus*** – for injections
9. ***pro infantibu***s – for children
10. ***per os –*** by mouth
11. ***per rectum*** – through rectum
12. **per inhalationem** – through inhalation
13. ***Rubor, tumor, calor, dolor et functio laesa – symptomata inflammationis sunt.*** – The symptoms of inflammation are: reddening, swelling, fever (heat), pain & worsened function
14. ***Veni,vidi,vici*** (Caesar) – I’ve come, I’ve seen, I’ve won

**LATIN-ENGLISH VOCABULARY**

1. **ANATOMICAL AND PHARMACEUTICAL TERMINOLOGY**

|  |  |
| --- | --- |
| **LATIN ENGLISH** | |
| **A** | |
| Absinthium, i n | * wormwood; |
| abdomen, inis n | * abdomen, belly; |
| abdominalis, e | * abdominal, relating to the abdomen; |
| accessorius, a, um | * accessory, additional; |
| acidum, i n | * + acid; |
| acidum acetylsalicylicum | * + - acetylsalicylic acid; |
| acidum arsenicosum | * arsenous acid; |
| acidum ascorb(in)icum | * ascorbic acid; |
| acidum carbolicum | * carbolic acid; |
| acidum carbonicum | * carbonic acid; |
| acidum citricum | * citric acid; |
| acidum folicum | * folic acid; |
| acidum formicicum | * formic(ic) acid; |
| acidum glutam(in)icum | * glutamic acid; |
| acidum hydrochloricum | * hydrochloric acid; |
| acidum hydrocyanicum | * hydrocyanic acid; |
| acidum hydrofluoricum | * hydrofluoric acid; |
| acidum hydroiodicum | * hydroiodic acid; |
| acidum hydrosulfuricum | * hydrosulphuric acid; |
| acidum lacticum | * lactic acid; |
| acidum nicotinicum | * nicotinic acid; |
| acidum nitricum | * nitric acid; |
| acidum nitrosum | * nitrous acid |
| acidum propionicum | * propionic acid; |
| acidum sulfuricum | * sulphuric acid; |
| acidum sulfurosum | * sulphurous acid; |
| acidum tartaricum | * tartaric acid; |
| acidum tellurosum | * tellurous acid; |
| acromion, i n | * acromion; |
| addo, ere III | * + - * to add; |
| adiposus, a, um | * adipous, fat; |
| Adonis, idis f | * adonis; |
| aёrosolum, i n | * aerosol; |
| aether, eris m | * ether; |
| aethylicus, a, um | * ethyl (attr.); |
| ala, ae f | * wing; |
| alaris, e | * + - * + alar; relating to a wing, winged; |
| albus, a, um | * + - * + white; |
| Aloё, ёs f | * + - * + aloe; |
| alveolaris, e | * + - * + alveolar; |
| Aluminium, i n | * + - * + aluminium; |
| ampulla, ae f | * + - * + ampule; |
| Amygdala, ae f | * + - * + almond (fruit); |
| Anisum, i n | * + - * + anise; |
| angulus, i m | * + - * + angle; |
| anterior, ius | * + - * + anterior; |
| anus, i m | * + - * + anus; |
| aorta, ae f | * + - * + aorta; |
| aorticus, a, um | * + - * + aortic; aortal; relating to the aorta or the a. orifice of the left ventricle of the heart; |
| apertura, ae f | * aperture; opening; an open gap or hole; |
| apex, iсis m | * apex - summit, tip (the extremity of a conical structure); |
| apicalis, e | * apical, relating to apex; |
| appendix, icis f | * appendix; appendage; |
| aqua, ae f | * water; |
| aquosus, a, um | * aqueous; watery; in water; |
| arachnoidea, ae f | * arachnoid membrane; |
| arcus, us m | * arch - part of the circumference of a circle or structure resembling it; |
| Argentum, i n | - silver; |
| Arsenicum, i n | - arsenic; |
| arteria, ae f | * artery; |
| a. carotis (carotis,idis f) | * carotid artery; |
| articularis, e | * articular; relating to a joint; |
| articulation, onis f | * articulation; joint; |
| atlas, atlantis f | * atlas; the first cervical vertebra; |
| atrium, i n | * atrium; |
| audio, ire IV | * to listen; |
| auris, is f | * ear; |
| Aurum, i n | * gold; |
| axis, is m | * axis; the second cervical vertebra; |
| **B** | |
| basis, is f | * base; |
| Barium, i n | * barium; |
| Belladonna, ae f | * belladonna; |
| biceps, bicipitis (adj.) | * biceps; bi-cephalous; |
| bilis, is f | * bile; |
| Bismuthum, i n | - bismuth; |
| Borum, i n | - boron; |
| brachium, i n | * shoulder; |
| brachialis, e | * brachial, relating to shoulder; |
| Bromum, i n | * bromine; |
| bursa, ae f | * bag; |
| **C** | |
| caecum, i n | * cecum, the blind gut; |
| calcaneus, i m | * calcaneus; heel bone; |
| calcaneus, a, um | * calcaneal; relating to the calcaneus or the heel bone; |
| Calcium, i n | - calcium; |
| Calendula, ae f | - marigold; |
| canalis, is m | * canal; |
| capillaris, e | * capillary, resembling a hair; fine; minute |
| capsula, ae f | * capsule; |
| caput, itis n | * head; |
| Carboneum, i n | - carbon; |
| cardiacus, a, um | - cardiac, 1. relating to or affecting the heart,  2. relating to the upper part of the stomach, where it is connected to the esophagus; |
| caroticus, a, um | - carotid (for glome, canal, etc.); |
| carotis, tidis f | - carotid (for artery); |
| carpus, i m | - carpus; wrist; |
| carpeus, a, um | - carpal; relating to the carpus or wrist; |
| cartilagineus, a, um | * cartilaginous, resembling, made of, or relating to cartilage; |
| cavernosus, a, um | * cavernous, like or suggestive of a cavern; |
| cavitas, atis f | - cavity; |
| cavum, i n | - cavity; |
| cavus, a, um | - hollow; |
| centralis, e | * central; |
| cerebellaris, e | * cerebellar, relating to cerebellum; |
| cerebellum, i n | * cerebellum; |
| cerebralis, e | * cerebral; relating to the larger brain; |
| cerebrospinalis, e | * cerebrospinal, relating to or involving the brain and spinal cord; |
| cerebrum, i n | * cerebrum, larger portion of the brain; |
| cervicalis, e | * cervical; relating to the cervix or the neck; |
| cervix, icis f | * 1. cervix (of the uterus, urinary bladder, tooth, etc.); 2. neck; |
| Chamomilla, ae f | * chamomile; |
| chiasma, atis, n | - chiasm; crossing; |
| Chlorum, i n | - chlorine; |
| ciliaris, e | * ciliary, relating to any cilia or hair like processes; |
| cilium, i n | * cilium; eyelash; |
| cinereus, a, um | * grey; |
| clavicula, ae f | * clavicle; |
| clavicularis, e | * clavicular, relating to clavicle; |
| cochlearis, e | * cochlear, relating to coc(h)lea - a spiral structure in the inner ear that looks like a snail shell; |
| collateralis, e | * collateral; |
| colon, i n | * colon; the division of the large intestine extending from the cecum to the rectum; |
| collum, i n | * neck, neck like structure; |
| columna, ae f | * column; |
| commissura, ae f | * commisure, connection; |
| communis, e | * common; |
| compactus, a, um | * compact; |
| compositus, a, um | * composite; |
| concha, ae f | * shell; |
| concentratus, a, um | * concentrated; strong; |
| conjunctiva, ae f | * conjunctive tunic (membrane); |
| conjunctivus, a, um | * conjunctive; |
| Convallaria, ae f | * lilly-of-the-valley; |
| cornea, ae f | - cornea; tough transparent part of the eyeball; |
| cornu, us n | * horn; |
| corpus, oris, n | * body; |
| corticalis, e | * cortical, relating to cortex; |
| cortex, icis m | - cortex, bark; |
| costa, ae f | - rib; |
| costalis, e | - costal, relaiting to rib; |
| cranialis, e | - cranial, relaiting to the skull; |
| cranium, i n | - skull; |
| Crataegus, i m | * hawthorn; |
| crista, ae f | * crest, ridge; |
| crus, cruris n | * 1. leg, 2. any structure resembling a leg; |
| Cuprum, i n | * copper; |
| curo, are I | * to cure; |
| cutaneus, a um | * cutaneus, relating to the skin; |
| cutis, is f | * skin; |
| **D** | |
| decoctum, i n | * decoction; |
| deltoideus, a, um | - deltoid, in the shape of Greek letter  “Δ”- delta; |
| dens, dentis m | * tooth; |
| dentalis, e | * dental, relating or belonging to the teeth; |
| depuratus, a, um | * purified (for sulphur); |
| dexter, tra, trum | * right; |
| diaphragma, atis n | - diaphragm; |
| diaphragmaticus, a, um | - diaphragmatic, relaiting to diaphragm; |
| Digitalis, is f | - digitalis, foxglove; |
| digitus, i m | - finger; |
| digitus (i) minimus (i) | - little finger; |
| dilutus, a, um | - diluted; |
| do, dare I | * to give, to dispense; |
| dorsalis, e | * dorsal, pertaining to the back of the body; |
| dorsum, i n | * the back of the body; |
| ductus, us m | * duct; canal, a tubular structure; |
| duodenum, i n | - duodenum; the first division of the small intestine, about 25 cm or 12 finger breadths in length; |
| duodenalis, e | - duodenal, relating to duodenum; |
| durus, a, um | - hard; solid; |
| **E** | |
| emplastrum, i n | - plaster; |
| emulsum, i n | - emulsion; |
| encephalon, i n | - brain; |
| endocrinus, a, um | - endocrine, relating to the endocrine glands or their secretions; |
| ethmoidalis, e | - ethmoid, resembling a sieve; |
| externus, a, um | - external; |
| extractum , i n | - extract; |

|  |  |
| --- | --- |
| **F** | |
| facialis,e | * facial, pertaining to the face; |
| facies, ei f | * surface, face; |
| Farfara, ae f | * coltsfoot; |
| fascia, ae f | * fascia, a band or fillet; |
| femoralis, e | * femoral, relating to, in, or involving the thigh or femur; |
| femur, oris n | * femur, hip; |
| Ferrum, i n | * iron; |
| fibrosus, a, um | * fibrous, consisting of or resembling fibers; |
| fibula, ae f | - fibula; |
| fibularis, e | * fibular, relating to fibula; |
| finio, ire IV | * to finish; |
| fissura, ae f | * fissure, a natural or pathological division in a body part; |
| flavus, a, um | - yellow; |
| flexura, ae f | * flexion; |
| Fluorum (Phthorum), i n | * fluorine; |
| flos, oris, m | * flower; |
| fluidus, a, um | * fluid; |
| Foeniculum, i n | * fennel; |
| folium, i n | * leaf; |
| foramen, inis n | * foramen; an aperture or perforation; opening; |
| fornix, icis m | * vault; |
| fossa, ae f | * fossa, depression longitudinal in shape; |
| fovea, ae f | * fovea - a cup-shaped depression or pit; |
| fractura, ae f | * fracture - a break, esp. the breaking of a bone or cartilage; |
| frons, ntis f | * forehead; |
| frontalis, e | * frontal - referring to a the frontal bone; |
| fructus, us m | * fruit; |
| fundus, i m | * bottom; |
| **G** | |
| ganglion, i n | * ganglion - knot, node (neural); |
| gaster, tris f | * stomach; |
| gastricus, a, um | * gastric, relating to, involving, or near the stomach; |
| gelatinosus, a, um | * gelatinous; |
| gemma, ae f | * bud; |
| genu, us n | * knee; |
| glandula, ae f | * gland; |
| gl. parotidea | * parotid gland; |
| gl. suprarenalis | * suprarenal gland; |
| gl. thyroidea | * thyroid gland; |
| glomus, eris n | * glome; a small globular body; |
| gluteus, a, um | * gluteal, relating to the buttocks; |
| Gossypium, i n | * cotton; |
| gummi (not changeable ) | * gummi; |
| gutta, ae f | * drop; |
| gyrus, i m | * gyrus, convolution; |
| **H** | |
|  |  |
| hallux, ucis m | * the great toe; |
| Helianthus, i m | * sunflower; |
| hepar, atis, n | - liver; |
| hepaticus, a, um | * hepatic, relating to or affecting the liver; |
| herba, ae f | * herb, dried grass; |
| homo, inis m | * man; a human being; |
| horizontalis, e | * horizontal; |
| humerus, i m | - humerus; the bone of the arm; |
| humor, oris m | - humor, any clear fluid or semifluid; one of the body elemental fluids; |
| Hydrargyrum (Mercurium), i n | - mercury; |
| Hydrogenium, i n | - hydrogen; |
| hyoideus, a, um | - hyoid (denoting *os hyoideum*); located under the tongue; |
| hypoglossus, a, um | - hypoglossal ( denoting *nervus hypoglossus*); located under the tongue; |
| Hypericum, i n | * perforate; |
| **I** | |
| ileum, i n | - iliac intestine; |
| iliacus, a, um | - iliac; |
| impressio, onis f | * impression, deepening; |
| incisivus, a, um | * incisive; |
| incisura, ae f | * notch; |
| index, icis m | * index finger or the forefinger; |
| inferior, ius | - inferior; |
| infusum, i n | - infusion; |
| injectio, onis f | - injection; |
| intercostalis, e | * intercostal, situated or occurring between the ribs; |
| internus, a, um | - internal; |
| interosseus, a, um | * interosseous, situated or occurring between the bones; |
| intestinalis, e | - intestinal; |
| intestinum, i n | * intestine; |
| ileum, i n | - iliac intestine; |
| intestinum crassum | * large intestine |
| intestinum tenue | * small intestine |
| jejunum, i n | * jejunum, empty gut; |
| rectum, i n | * rectum, straight gut |
| Iodum, i n | * iodine; |
| iris, idis f | * the iris of the eye - rainbow; |
| ischiadicus, a, um | * ischial or sciatic; |
| ischium, i n | * ischium; os ischii – the lower and posterior part of the hip bone; |
| **J** | |
| jeunum, i n | * jejunum; the empty gut; |
| jugularis, e | * jugular - relating to the throat or neck; |
| **K** | |
| Kalium (Potassium), i n | * potassium; |
| **L** | |
| labium, i n | * lip; |
| lacrimalis, e | * lacrimal, relating to the glands that produce tears, or the ducts through which they drain; |
| lamina, ae f | * plate; |
| laryngeus, a, um | * laryngeal, relating to larynx; |
| larynx, ngis f | * larynx; |
| latus, a, um | * broad; wide; |
| latissimus, a, um | * the broadest; |
| lens, lentis f | * lens - transparent part of the eye, behind the pupil, through which light is refracted; |
| liber, era, erum | * free; |
| lien, lienis m | * spleen; |
| ligamentum, i n | * ligament; |
| linimentum, i n | * liniment; |
| lingua, ae f | * tongue, language; |
| lingualis, e | * lingual; relating to the tongue; |
| lingula, ae f | * small tongue; |
| Linum, i n | * flax; |
| liquor, oris m | * liquid; |
| Lithium, i n | * lithium; |
| lobaris, e | * lobar; relating to any lobe; |
| lobatus, a, um | * lobate, lobous; divided into lobes; |
| lobosus, a, um | * lobous, lobate; divided into lobes; |
| lobus, i m | * lobe; |
| longissimus, a, um | * the longest; |
| longitudinalis, e | * longitudinal; |
| longus, a, um | * long; |
| lymphaticus, a, um | * lymph (attr.) – like in *lymph node*, * lymphatic; |
| **M** | |
| Magnesium (Magnium), i n | * magnesium; |
| Magnium (Magnesium), i n | * magnesium; |
| magnus, a, um | * large, great; |
| major, ius | * greater; major; |
| mandibula, ae f | * mandible, lower jaw; |
| mandibularis, e | * mandibular, relating to the lower jaw; |
| Manganum, i n | * manganese; |
| marginalis, e | * marginal, relating to the border; |
| margo, inis m | * margin, border; |
| mastoideus, a, um | * mastoid, breast shaped; |
| mater, tris f | * 1. mother, 2. medullary tunic; |
| dura mater | * dura mater; hard medullary tunic; |
| pia mater | * pia mater; soft medullary tunic; |
| maxilla, ae f | * maxilla, upper jaw; |
| maxillaris, e | * maxillary; relating to the upper jaw; |
| maximus, a, um | * maximum, greatest; the highest (in amount); |
| meatus, us m | * a passage (as for air) or channel; |
| medialis, e | - medial; |
| medianus, a, um | - median; |
| medius, a, um | * middle; |
| medulla, ae f | * marrow, any soft marrow-like structure; |
| medulla ossium | * bone marrow; |
| medulla spinalis | * spinal marrow; spinal cord; |
| medullaris, e | * medullary; relating to the medulla or marrow; |
| membrana, ae f | * membrane; a thin sheet or layer of pliable tissue serving as a covering or envelope of a part, the lining of a cavity; |
| membrum, i n | * extremity; limb; |
| meninx, ngis f | * medullary tunic (often in the plural – meninges); |
| Mentha, ae f | * mint; |
| Mercurium (Hydrargyrum), i n | * mercury; |
| minimus, a, um | * minimum, the least, the smallest; |
| minor, us | * lesser, minor; |
| misceo, ere II | * to mix; |
| mobilis, e | * mobile; able to move; |
| mucosa, ae f | * mucous tunic or membrane; |
| mucosus, a, um | - mucous; |
| muscularis, e | - muscular; |
| musculus, i m | * muscle; |
| m. abductor | - abductor muscle (taking away); |
| m. adductor | * adductor muscle (bringing together); |
| m. buccinator | * buccinator (cheek) muscle; |
| m. constrictor | * constrictor muscle (shortening); |
| m. corrugator | * corrugator (wrinkler) muscle; |
| m. depressor | * depressor muscle (bringing down); |
| m. dilatator | * dilator muscle (widening); |
| m. extensor | * extensor muscle (stretching); |
| m. flexor | * flexor muscle (bending); |
| m. levator | * elevator muscle (raising); |
| m. masseter | * masseter (chewing) muscle; |
| m. pronator | * pronator (turning inward) muscle; |
| m. rotator | * rotator (turning round) muscle; |
| m. sphincter | * sphincter muscle (narrowing); |
| m. supinator | * supinator (turning outward) muscle; |
| m. tensor | * tensor (straining) muscle; |
| **N** | |
| nasalis, e | - nasal; relating to the nose; |
| nasus, i m | - nose; |
| Natrium (Sodium), i n | * sodium; |
| nervosus, a, um | - nervous; |
| nervus, i m | - nerve; |
| niger, gra, grum | - black; |
| Nitrogenium, i n | - nitrogen; |
| nodulus, i m | - nodule, a small node; |
| nodus, i m | - node; |
| nucha, ae f | * nape, back of the neck; |
| nuchalis, e | * nuchal, relating to the nape; |
| nucleus, i m | * nucleus; |

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| **O** | |
| obductus, a, um | * coated; |
| obliquus, a, um | * oblique; slanted; |
| occipitalis, e | * occipital; relating to the occiput ; |
| occiput, itis n | * occiput, the back of the head; |
| oculus, i m | * eye; |
| oesophagus, i m | - esophagus; |
| oleosus, a, um | - oily; in oil; |
| oleum, i n | - oil; |
| oleum Terebinthinae | - turpentine (oil); |
| oleum Ricini | - castor oil; |
| oleum Amygdalarum | * almond oil; |
| oleum Olivarum | * olive oil; |
| oleum Persicorum | * peach oil; |
| Oliva, ae f | * olive; |
| opticus, a, um | * optic; relating to the eye, vision or optics; |
| oralis, e | * oral, relating to mouth; |
| orbita, ae f | * orbit, orbital cavity; eye socket; |
| orbitalis, e | * orbital, relating to or belonging to an orbit; |
| os, oris n | * mouth; |
| os, ossis n | * bone; |
| osseus, a, um | * osseous, bony; |
| ostium, i n | * ostium, orifice, entrance; |
| ovalis, e | * oval; |
| oxydum, i n | * oxide; |
| Oxygenium, i n | * oxygen; |
| **P** | |
| palatinus, a, um | * palatal, palatine; relating to the palate or the palate bone; |
| palatum, i n | * palate – the roof of the mouth; |
| palpebra, ae f | * eyelid; blepharon; |
| palpebralis, e | * palpebral; relating to an eyelid; |
| pancreas, atis n | * pancreas, salivary gland of the abdomen; |
| pancreaticus, a, um | * pancreatic, relating to the pancreas; |
| Papaver, eris n | * opium poppy; |
| paries, etis m | * wall; |
| parietalis, e | * parietal, relating to the wall; |
| pars, partis f | * part; |
| parvus, a, um | * small; |
| pasta, ae f | * paste; |
| patella, ae f | * patella, knee cup; |
| pectoralis, e | * pectoral, relating to the breast; |
| pectus, oris n | * breast; the anterior wall of the chest or thorax; |
| pediculus, m | * pedicle; |
| pelvinus, a, um | * pelvic; relating to pelvis; |
| pelvis, is f | * pelvis, basin; |
| pelvis renalis | * renal pelvis; the pelvis of the kidney; |
| perineum,i n | - perineum; the area between the thighs extending from the coccyx to the pubis and lying below the pelvic diaphragm; |
| peritoneum, i n | * peritoneum (membrana abdominis); |
| peroneus, a, um | * syn. fibularis, e - peroneal; relating to the fibula; |
| peroxydum, i n | * peroxide; |
| Persicum, i n | * peach; |
| pes, pedis m | * foot; |
| petrosus, a, um | * petrous, petrosal ; |
| phalanx, ngis f | * phalanx - bone in a finger or toe; |
| pharyngeus, a, um | * pharyngeal, relating to pharynx; |
| pharynx, ngis m | * pharynx; |
| Phosphorus, i m | * phosphorus; |
| Phthorum (Fluorum), i n | * fluorine; |
| pilula, ae f | * pill; |
| Plantago, inis f | * plantain; |
| planus, a, um | * flat; |
| pleuralis, e | * pleural, relating to pleura; |
| plexus, us m | * plexus; a brade (a network or interjoining of nerves and blood vessels or of lymphatic vessels); |
| plica, ae f | * fold, crease; |
| Plumbum, i n | * lead; |
| pollex, icis m | * thumb; |
| posterior, ius | * posterior; |
| Potassium (Kalium), i n | * potassium; |
| praecipitatus, a, um | * precipitated; |
| processus, us m | * process, a projection or outgrowth; |
| profundus, a, um | * deep, profound; |
| proprius, a, um | * proper; |
| pterygoideus, a, um | * pterygoid - wing-shaped; |
| pulmo, onis m | * lung; |
| pulmonalis, e | * pulmonary; |
| pulveratus,a, um | * powdered; |
| pulvis, eris m | * powder; |
| pupilla, ae f | * pupilla; pupil (of the eye); |
| purificatus, a, um | * purified (water); |
| purus, a, um | * pure; |
| pyramis, idis f | * pyramid; |
| **Q** | |
| quadriceps, quadicipitis (adj.) | * quadriceps; four-cephalous; |
| Quercus, us f | * oak tree; |
| **R** | |
| radialis, e | * radial, relating to radius; |
| radius, i m | * radius; |
| radix, icis f | * root; |
| ramus, i m | * branch; |
| recipio, ere III | * to take; |
| rectificatus, a, um | * purified (alcohol, turpentine oil) |
| rectum, i n | * rectum, the straight gut; |
| rectus, a, um | * straight; |
| reductus, a, um | * reduced; |
| regio, onis f | * region; |
| ren, renis m | * kidney; |
| renalis, e | * renal; relating to the kidney |
| repeto, ere III | * to repeat; |
| retina, ae f | * retina, nervous tunic of the eyeball; |
| retinaculum, i n | * retinaculum, a halter, a band; |
| Rheum, i n | * rababaer; |
| rhizoma, atis n | * rhizome; |
| Ricinus, i m | * castor(-oil) plant; |
| Rosa, ae f | * rose (dog rose); |
| rotundus, a, um | * round; |
| ruber, bra, brum | * red; |
| Rubus (i m) idaeus (i m) | * raspberry; |
| **S** | |
| sacer, cra, crum | * sacral (for bone – *os sacrum*); |
| Saccharum, i n | * sugar; |
| sacralis, e | * sacral; relating to the sacrum; |
| Salvia, ae f | * sage; |
| sanguineus, a, um | * blood (attr.); |
| sanguis, inis m | * blood; |
| sanus, a, um | * sound, healthy; |
| scapula, ae f | * scapula; |
| sella, ae f | * saddle; |
| semen, inis n | * seed; |
| septum, i n | * septum, partition; |
| serosus, a, um | * serous (relating to, containing, or producing serum or a substance having a watery consistency); |
| siccus, a, um | * dry; |
| sigmoideus, a, um | * sigmoid; in the shape of the Greek letter “σ”; |
| Silicium, i n | * silicon; |
| simplex, icis (adj.) | * simple; |
| sinister, tra, trum | * left; |
| sinus, us m | * sinus; cavity, channel; |
| sirupus, i m | * syrup; |
| Sodium (Natrium), i n | * sodium; |
| solutio, onis f | * solution; |
| species, ei f | * species (as in Biology); |
| species, erum (f) (plural) | * tea; (Pharmacy) |
| sphenoidalis, e | * sphenoid; resembling a wedge; |
| spina, ae f | * spine, a thorn, backbone; |
| spinalis, e | * + spinal - 1. relating to any spine or spinous process; 2. relating to the vertebral column; |
| spinosus, a, um | * spinous; thorny; |
| spiritus, us m | * alcohol, spirit; |
| spissus, a, um | * dense, thick; |
| splen, splenis m | * spleen; |
| spongiosus, a, um | * spongeous; |
| squama, ae f | * squama, scale; |
| squamosus, a, um | * squamous, squamate, scaly - covered with scales; |
| stapes, edis m | * stapes, stirrup; |
| Stibium, i n | * antimony; |
| stroma, atis n | * stroma; the framework (usually of connective tissue); |
| sublingualis, e | * sublingual - located under the tongue; |
| substantia, ae f | * substance; |
| sulcus, i m | * sulcus, groove; |
| Sulfur, uris n | * sulphur; |
| supercilium, i n | * eyebrow; |
| superficialis, e | * superficial, relating to, affecting, or located on or near the surface of something; |
| superior, ius | * superior; |
| suppositorium, i n | * suppository; |
| suprarenalis, e | * suprarenal - located above the kidney; |
| supremus, a, um | * supreme, the highest; |
| suspensio, onis f | * suspension; |
| sutura, ae f | * suture; suture joint; |
| systema, atis n | * system; |
| **T** | |
| tabuletta, ae f | * tablet; |
| tegmen, inis n | * roof; |
| temporalis, e | * temporal; relating to the temple; |
| tempus, oris n | * 1. temple; 2- time; |
| tendo, inis m | * tendon; |
| tendineus, a, um | * tendinous; relating to, composed of or resembling a tendon; |
| tenuis, e | * thin (in the name of the small intestine); |
| Terebinthina, ae f | * turpentine; |
| teres, etis (adj.) | * round (for muscles and ligaments); |
| Thallium, i n | * thallium; |
| trochanter, eris m | * trochanter; |
| thoracicus, a, um | * thoracic; relating to the chest; |
| thorax, acis m | * thorax; breastplate, the chest; |
| thyreoideus, a, um | * thyroid - in the shape of a shield; |
| tibia, ae f | * tibia; |
| tinctura, ae f | * tincture; |
| tractus, us m | * tract (path, track, way); |
| transversus, a, um | * transverse; |
| trapezoideus, a um | * trapezoid; resembling a trapezium; |
| triceps, tricipitis (adj.) | * triceps; tri-cephalous; |
| truncus, i m | * trunk; |
| tuber, eris, n | * tuber; protuberance; eminence; |
| tuberculum, i n | * tubercle, a small tuber; |
| tuberositas, atis f | * tuberosity (elevation, esp. from the surface of the bone); |
| tunica, ae f | * tunic; |
| tunica mucosa | * mucous tunic or membrane; |
| tunica serosa | * serous membrane; |
| tympanicus, a, um | * tympanic, relating to a tympanum; |
| tympanum, i n | * tympanum, the eardrum or the cavity of the middle ear; |
| **U** | |
| ulna, ae f | * ulna; the bone of the elbow; |
| unguentum, i n | * ointment |
| ureter, eris m | * ureter - urinary canal; |
| uretericus, a, um | * ureteral, ureteric, relating to ureter; |
| urethra, ae а | * urethra; urogenital canal; a canal leading from the bladder, discharging then urine externally; |
| Urtica, ae f | * stinging nettle |
| ustus, a, um | * burnt |
| uterinus, a, um | * uterine; relating to the uterus; |
| uterus, i m | * uterus; womb; |
| **V** | |
| vagina, ae f | * 1. vagina (organ), 2. sheath; |
| vaginalis, e | * vaginal; relating to the vagina; |
| Valeriana, ae f | * valerian; |
| valvula, ae f | * valvule; a valve, especially one of the small size; |
| vas, vasis n | * vessel; |
| vena, ae f | * vein; |
| vena portae(porta, ae f) | * portal vein; |
| vena cava | * vena cava (hollow vein); |
| venosus, a, um | * venous; |
| venter, tris m | * venter - the wide swelling part of a muscle; |
| ventralis, e | * ventral; pertaining to the belly; |
| ventriculus, i m | * ventricle (of the heart, brain, etc.); |
| venula, ae f | * venule, small vein; |
| vertebra, ae f | * vertebra; |
| vertebralis, e | * vertebral; relating to a vertebra; |
| vertex, icis m | * vertex, top; the topmost point |
| verto, ere III | * to turn; |
| vestibulum, i n | * vestibule - enclosed space like a lobby; |
| vitreus, a, um | * vitreous, relating to the vitreous humor of the eye; |
| vomer, eris m | * vomer, ploughshare - flat bone, forming nasal septum; |
| **Z** | |
| **LATIN** | **ENGLISH** |
| Zincum, i n | * zinc; |
| zygoma, atis n | * zygoma; |
| zygomaticus, a, um | * zygomatic; relating to the zygoma. |

**2. CLINICAL TERMINOLOGY**

**Non-motivated simple root words of Greek and Latin origin:**

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| **LATIN** | **ENGLISH** | | | | **MEANING** |
| **A** | | | | | |
| abscessus, us m | abscess | | | | a circumscribed collection of pus appearing in an acute or chronic localized infection, associated with tissue destruction, and frequently, swelling |
| acutus, a, um | acute | | | | 1. of short and sharp course, not chronic;  2. sharp; pointed at the end |
| **B** | | | | | |
| benignus, a, um | | benign | denoting the mild character of an illness or the nonmalignant character of neoplasm | | |
| **C** | | | | | |
| cancer, cri m | cancer | | | general term frequently used to indicate any of various types of malignant neoplasms, most of which invade surrounding tissues, may metastasize to several sites, and are likely to recur after attempted removal and to cause death of the patient | |
| chronicus, a, um | chronic | | | of long duration; denoting a disease of slow progress and long continuance | |
| colica, ae f | colic | | | 1. spasmodic pains in the stomach or abdomen | |
| coma, atis n | coma | | | a state of profound unconsciousness from which one cannot be roused; | |
| comatosus, a, um | comatous; comatose | | | in a state of coma | |
| cysta, ae f | cyst | | | 1. any bladder;  2.pathological cavity; sac containing gas, fluid, etc. | |

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| **D** | | | | | | | | | | | | | | | | | | | |
| diabetes, ae f | | | | | | | | | | diabetes | | | | | | | | disease having the symptom polyuria | |
| diabeticus, a, um | | | | | | | | | | diabetic | | | | | | | | relating to diabetes | |
| **F** | | | | | | | | | | | | | | | | | | | |
| fractura, ae f | | | | | | fracture | | | | | | | | a break, especially the breaking of a bone or cartilage | | | | | |
| **G** | | | | | | | | | | | | | | | | | | | |
| gangraena, ae f | | | | | | | gangrene | | | | | | | | | mortification; necrosis due to obstruction, loss, or diminution of blood supply | | | |
| gangraenosus, a, um | | | | | | | gangrenous | | | | | | | | | mortified; related to or  affected with gangrene | | | |
| glaucoma, atis n | | | | | | | glaucoma | | | | | | | | | a disease of the eye characterized by the increase of intraocular pressure, excavation, and atrophy of the optic nerve | | | |
| **H** | | | | | | | | | | | | | | | | | | | |
| hepar, atis n | | | | | liver | | | | | | | liver | | | | | | | |
| hernia, ae f | | | | | hernia | | | | | | | protrusion of a part or structure through the tissue normally containing it | | | | | | | |
| **I** | | | | | | | | | | | | | | | | | | | |
| icterus, i m | | | | | | | | | jaundice | | | | | | | | | | yellow coloring of the tissue |
| ileus, i m | | | | | | | | | ileus | | | | | | | | | | mechanical, dynamic, or adynamic *obstruction of the bowel* ; |
| infantilis, e | | | | | | | | | infantile | | | | | | | | | | 1. relating to, or characteristic of infants or infancy;  2. denoting childish behavior |
| infectio, onis f | | | | | | | | | infection | | | | | | | | | | endoparasitism; multiplication of parasitic organisms within the body |
| infectiosus, a, um | | | | | | | | | infectious | | | | | | | | | | 1. capable of being transmitted by infection, with or without actual contact;  2. infective;  3. denoting a disease due to the action of microorganism |
| inflammatio, onis f | | | | | | | | | inflammation | | | | | | | | | | a fundamental pathologic process consisting a dynamic complex of cytologic and histologic reactions that occur in the affected blood vessels and adjacent tissues |
| **J** | | | | | | | | | | | | | | | | | | | |
| juvenilis, e | | | | | | | | | juvenile | | | | | | | | | | that of young age |
| **M** | | | | | | | | | | | | | | | | | | | |
| malignus, a, um | | | malignant | | | | | | | | | | | | resistant to treatment; occurring in severe form, and frequently fatal | | | | |
| morbus, i m | | | disease | | | | | | | | | | | | *Syn*.:1. morbus, 2. illness, 3. sickness | | | | |
| **O** | | | | | | | | | | | | | | | | | | | |
| oedema, atis n | | edema | | | | | | | | | an accumulation of excessive amount of  watery fluid in the cells, tissues or serous cavities | | | | | | | | |
| **P** | | | | | | | | | | | | | | | | | | | |
| paralysis, is f | | | | paralysis | | | | | | | | | | | 1. loss of power of voluntary movement in a muscle through injury to or disease of its nerve supply;  2. loss of any function, sensation, secretion or mental ability | | | | |
| paralyticus, a, um | | | | paralytic | | | | | | | | | | | relating to paralysis or to suffering from paralysis | | | | |
| paresis, is f | | | | paresis | | | | | | | | | | | partial or incomplete paralysis | | | | |
| pneumonia, ae f | | | | pneumonia | | | | | | | | | | | inflammation of the lung parenchyma ; | | | | |
| **S** | | | | | | | | | | | | | | | | | | | |
| senilis, e | senile | | | | | | | | | | | | relating to or characteristic of old age | | | | | | |
| serosus, a, um | serous | | | | | | | | | | | | relating to, containing, or producing serum or a substance having a watery consistency | | | | | | |
| spasmus, i m | spasm | | | | | | | | | | | | an involuntary muscular contraction; if painful, usually referred to as cramp; if violent, a convulsion | | | | | | |
| **T** | | | | | | | | | | | | | | | | | | | |
| trauma, atis n | | | | | | | | trauma | | | | | | | | | an injury, physical or mental | | |
| traumaticus, a, um | | | | | | | | traumatic | | | | | | | | | relating to or caused by trauma | | |
| **U** | | | | | | | | | | | | | | | | | | | |
| ulcus, eris n | | | ulcer | | | | | | | | | a lesion on the surface of the skin or a mucous surface, caused by superficial loss of tissue, usually with inflammation | | | | | | | |
| ulcerosus, a, um | | | ulcerous | | | | | | | | | relating to, affected with or containing an ulcer | | | | | | | |

**Greek and Latin duplicates of the names of organs and tissues**

**A**

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| **Greek CF** | **English equivalent** | **Latin** | **Meaning** |
| -aemia | -emia | sanguis, inis m | **in the blood** |
| acro- | acro- | 1. membrum, i n  2. acer, cris, cre | **1. extremity,** tip, end, peak, topmost;  **2. extreme** |
| adeno- | adeno- | glandula, ae f nodus lymphaticus | **1. gland, adenoid,**  **2. lymph node** |
| angio- | angio- | vas, vasis n | **vessels** |
| arthro- | arthro- | articulatio, onis f | **a joint** or **articulation** |

**B**

|  |  |  |  |
| --- | --- | --- | --- |
| bio- | bio- | vita, ae f | **life** |

**C**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| cardio-, cardi-,  -cardium | cardio-, cardi-,  -cardium | cor, cordis n | | **1. the heart;**  **2. the cardia** (ostium cardiacum) | |
| -cele | -cele | hernia, ae f | | **swelling or hernia** | |
| cysto- | cysto- | vesica, ae  vesica urinaria | | 1. any **bladder;**  **2. urinary bladder;**  3. the **cystic duct;**  4. a **cyst** | |
| cyto-, cyt-,  -cytus | cyto-, cyt-, -cytus | cellula, ae f | | **cell; cellule** | |
| cheilo-, cheilia | cheilo-, -cheilia | labium, i n | | **lip** | |
| cheiro-, chiro- | cheiro-, chiro- | manus, us f | | **hand** | |
| cholangio- | cholangio- | ductus beliferi | | **bile ducts** | |
| -chole, -cholia | -cholia | fel, fellis n,  bilis, is f | | **bile** | |
| cholecysto- | cholecysto- | vesica fellea, seu vesica biliaris | | **gallbladder** | |
| choledocho-,  choledoch- | choledocho-,  choledoch- | ductus choledochus | | **common bile duct** | |
| chondro- | chondro- | | cartilago, inis f | | **cartilage** or **cartilaginous** | |
| chylo-, -chylia | chylo-, -chylia | | lympha, ae f | | **chyle** | |

**D**

|  |  |  |  |
| --- | --- | --- | --- |
| dermo-, dermato-, -dermia | dermo-, dermato-, -dermia | cutis, is f | the **skin** |

**E**

|  |  |  |  |
| --- | --- | --- | --- |
| -aemia | -emia | sanguis, inis m | **in the blood** |
| entero-, enter-,  -enterium | entero-, enter-,  -enterium | intestinum, i n  intestinum tenue | **intestines;**  **small intestine** |

**G**

|  |  |  |  |
| --- | --- | --- | --- |
| gastro-,-gastria | gastro-,-gastria | ventriculus, i m | **stomach** |
| geno-,-genia | geno-, -genia | mandibula, ae f | **mandible, lower jaw** |
| gloss-, glosso-, -glot-, -glossia | glosso-, -glot-,-glossia | lingua, ae f | **tongue, language** |
| gnatho-, -gnathia | gnatho- | maxilla,ae f | relating to the **jaw,**  **the upper jaw** |

**H**

|  |  |  |  |
| --- | --- | --- | --- |
| haemo-, haemat-,  haemato-, | hemo-, hemat-  hemato-, | sanguis, inis m | **blood** |
| hidro- | hidro-, hidr- | sudor, oris m | **sweat** or  **sweat glands** |
| histo- | histo-, | textus, us m | **tissue** |
| hydro- | hydro- | aqua, ae f | 1. **water** or association with **water;**  2. **Hydrogen** |
| hystero- | hystero-, hyster- | uterus, i m | the **uterus;**  *See also* metra-, metro- |

**K**

|  |  |  |  |
| --- | --- | --- | --- |
| kephalo-, cephalo-, - cephalia | kephalo-, cephalo-, cephal-, | caput, itis n | the **head** |

**L**

|  |  |  |  |
| --- | --- | --- | --- |
| lipo- | lipo- | adeps, adipis m | **fat or lipid** |
| litho-, lithus, -  -lithiasis | litho-,  -lithiasis | calculus, i m | **1. a stone or calculus,** or to **calcification**  **2. stone formation** of any kind |

**M**

|  |  |  |  |
| --- | --- | --- | --- |
| masto- | masto- | mamma, ae f | the **breast** |
| metra-, metro-,  -metrium | metr-, metra-, metro-, -metrium | uterus, i m | the **uterus (womb)**  **(** See also **hystero-)** |
| myelo-, -myelia | myel-, myelo- | medulla ossium  medulla spinalis | **1. the bone marrow;**  **2. the spinal cord and medulla oblongata;**  **3. the myelin sheath of nerve fibers** |
| myo-, -mysium | myo-, -mysium | musculus, i m | **muscle** |

**N**

|  |  |  |  |
| --- | --- | --- | --- |
| neuro-, neuri- | neuro-, neuri- | nervus, i m | a **nerve** or the **nervous system** |
| nephro- | nephro- | ren, renis m | the **kidney** |

**O**

|  |  |  |  |
| --- | --- | --- | --- |
| odonto-, -odontia | odonto-;-odontia | dens, ntis m | **tooth** or **teeth** |
| onco- | onco- | tumor, oris m | 1. a **tumor** or some relation to a tumor,or to  **2. bulk, volume** |
| op-, -opt, opto-,  optic-, -optico, | op-, -opt, opto-,  optic-, -optico | visus, us m | **vision** or **optics** |
| opthalmo-,  - ophthalmia | opthalmo-,  - ophthalmia | oculus, i m | the **eye** |
| osteo- | osteo- | os, ossis n | the **bone** |
| oto-, - otia | oto-, - otia | auris, is f | the **ear** |

**P**

|  |  |  |  |
| --- | --- | --- | --- |
| podo-, -podia | podo-, -podia | pes, pedis m | the **foot** |
| pyelo- | pyelo- | pelvis renalis | the **pelvis of the** **kidney** |
| pyo-, | pyo-, | pus, uris n | the **pus** |
| pharmaco- | pharmaco- | remedium, i n | **remedy** or **drug** |
| phlebo- | phlebo- | vena, ae f | the **vein** |
| pneumo-, pneumono- | pneumo-, pneumono- | pulmo, onis m | the **lung** |
| procto- | procto- | anus, i m  rectum, i n | the **anus** or **rectum** |
| psycho-,  -psychia | psychics - | mens, mentis f | 1.soal, psychics;  2. mental abilities |

**R**

|  |  |  |  |
| --- | --- | --- | --- |
| rhino- | rhino- | nasus, i m | the **nose** |

**S**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| sialo-, -sialia | | sialo-, -sial- | saliva, ae f | the **saliva** |
| somato-,-soma | | somato-,-soma | corpus, oris n | the **body** |
| splanchno- | | splanchno- | viscus, eris n | the **internal organs** |
| spleno- | | spleno- | lien, enis m | the **spleen** |
| spondylo-, -spondylia | | spondylo-, -spondyl- | vertebra, ae f | **vertebra or**  **vertebral column** |
| stetho- | stetho- | | pectus, oris n thorax, acis m | the **chest,**  **thorax** |
| stomato- | stomato- | | os, oris n | the **mouth** |

**T**

|  |  |  |  |
| --- | --- | --- | --- |
| teno- | tendo, inis m | tendo, inis m | the **tendon** |
| topo-,-topia | topo-, -topia | locus, i m | **place** |

**U**

|  |  |  |  |
| --- | --- | --- | --- |
| ulo- | ulo- | gingival, ae f | the **gum** |
| urano- | urano- | palatum durum | the **hard palate** |
| uro-, -uria, -uresis | uro-, -uria, -uresis | urina, ae f | urine, in the urine urination |
| splancno- | splancno- | viscus, eris n | internal organs |

**COMBINING FORMS**

**denoting: science, methods of diagnostics, treatment, disease;pathological conditions in tissues and organs; therapeutical and surgical methods; functions, pathological conditions and processes**

**A**

|  |  |  |
| --- | --- | --- |
| **Greek** | **English equivalent** | **Meaning** |
| aesthesio-, -aesthesia | -esthesia | 1. perception;  2. sensitivity |
| aëro- | aëro- | air or gas |
| aetio- | etio- | cause |
| -alg-, -algia, -algesia | -alg-, -algia, algesia | pain or painful condition |
| allo- | allo- | other or differing from the normal |
| andro-, -andria | andro- | man/ male |
| auto- | auto- | self, same |

**B**

|  |  |  |
| --- | --- | --- |
| brady- | brady- | slow |
| brachy- | brachy- | short |

**C**

|  |  |  |
| --- | --- | --- |
| cyano- | cyano- | 1. blue;  2. relating to cyanic group |
| chloro- | chloro- | 1. green;  2. association with chlorine |
| crino-, -crinia | crino-, -crinia | production of secretions by specific glands |
| chromato-, chromo-,  chrom-, - chromia | chromato-, -chromo-, chrom- | color |
| cryo- | cryo- | relating to cold |

**D**

|  |  |  |
| --- | --- | --- |
| dynamo-, -dynamia | dynamo-, -dynamics | force or energy |

**E**

|  |  |  |
| --- | --- | --- |
| -ectasia, -ectasis | -ectasis | dilation or expansion |
| -ectomia | -ectomy | removal of any anatomical structure |
| -ergo-, -ergia, -urgia | -ergy | relating to work or reactivity |
| -eurysis | -eurysis | surgical procedure of dilating an organ |

**G**

|  |  |  |
| --- | --- | --- |
| geno-, -genesis, -genesia | -genesis | 1.formation with the following development  3. development (in the embryo) |
| geri-, gero-, geronto- | geri-, gero-, geronto- | old age |
| -gnosis, -gnosia | -gnosis, -gnosia | 1. knowledge  2. the perceptive faculty enabling one to recognize the form and the nature of persons and things |
| -gramma | -gram | 1. something written (a line or tracing denoting varying values or commodities, temperatures, etc.);  2. result of X-ray examination |
| -graphia | -graphy | 1 registration of the work of the organ; recording some signals;  2. X-ray or radiographic examination |
| gyno-, gynaeco- | gyno-, gynaeco- | woman/ female |

**H**

|  |  |  |
| --- | --- | --- |
| hemi-, semi- | hemi-, semi- | one-half |
| hetero- | hetero- | other or different |
| homo-, homeo- | homo-, homeo- | the same or alike |

**I**

|  |  |  |
| --- | --- | --- |
| - iatro-, -iatria | iatro-, -iatry, -iatrics | treatmentof large groups of people or diseases |
| -iater | -iater | physician |

**K**

|  |  |  |
| --- | --- | --- |
| -kinesia,  kinemato-, kinemo-, kineto- | kinesia,  kinemato-, kinemo-, kineto- | motion |

**L**

|  |  |  |
| --- | --- | --- |
| -logia  logos  -logo- | logy  -logo- | study of the subject noted in the body of the word;  word, speech;  relating to speech |
| -lysis, -lyt- | -lysis | 1) destruction;  2) an operation for breaking up the adhesions in an organ |

**M**

|  |  |  |
| --- | --- | --- |
| -malacia | -malacia | softening or loss of consistency and contiguity in any of the organs or tissues |
| megalo-, -megalia | megalo-, megal-,  -megaly | enlargement of an organ |
| melano- | melan-, melano- | black or extreme darkness of hue |
| -metria, -metr- | -metric | quantitative relation to measurement |
| morpho- | morpho- | form, shape or structure |
| -mnesia | -mnesia | memory (ability to remember) |

**N**

|  |  |  |
| --- | --- | --- |
| necro- | necro- | relating to death or necrosis |
| noso- | noso- | relating to disease |

**O**

|  |  |  |
| --- | --- | --- |
| -odynia | -odynia | pain, |
| oligo- | oligo- | a few or a little |
| ortho- | ortho- | 1. straight;  2. correct, normal or in a proper order |

**P**

|  |  |  |
| --- | --- | --- |
| -paedia  paedio-, paedo- | -pedics  pedio-, pedo- | 1. methods of corrective treatment;  2. child |
| pan-, panto- | pan-, panto- | all, entire |
| patho-, -pathia | -pathy | feeling, suffering, disease |
| -penia | -penia | deficiency of blood cells |
| -pexia | -pexy | fixation, usually surgical |
| - pnoë | -pnea | breathing |
| -poësis, -poët- | poiesis | production; creation |
| polio- | polio- | denoting gray or the gray matter |
| poly- | poly- | denoting multiplicity |
| phago-, -phagia | phago-, -phagy | eating or devouring, swallowing |
| philo-, -philia | philo-, -philic, -philia | 1. affinity for or craving for;  2. liking |
| phobo-, -phobia | phobo-, -phobia | any objectively unfounded morbid dread or fear |
| -plasia | -plasia | formation ( of new cells and tissues) |
| - plastica | -plasty | 1. plastic surgery;  2. rstoration of the shape and function of the organs and tissues |
| -plegia | -plegia | paralysis, stroke |
| pseudo- | pseudo- | denoting a resemblance, often deceptive |
| -ptosis | -ptosis | a falling or downward displacement of an organ |

**R**

|  |  |  |
| --- | --- | --- |
| -rrhagia | -(r)rhagia, -rhage | blood discharge; bleeding |
| -rrhaphia | -(r)rhaphy | surgical suturing |
| -rrhoea | -(r)rhea | discharge of any fluid form the organ |

**S**

|  |  |  |
| --- | --- | --- |
| -scopia | -scopy | an action or activity involving the use of an instrument for viewing |
| sclero-, -sclerosis | sclero-, -sclerosis | 1. hardness (induration);  2. relationship to the sclera |
| -stasis | -stasis | 1. stagnation of the blood or other fluids;  2. slow flow. persistency |
| steno-, -stenosis | -stenosis | narrowness, constriction |
| -stomia | -stomy | 1. artificial or surgical opening;  2. creation of an anastomosis |
| -sthenia- | -sthenia | a condition of activity and apparent force;  strength |

**T**

|  |  |  |
| --- | --- | --- |
| tachy-, tacho- | tachy-, tacho- | rapid |
| tele-, telo-, teleo- | tele-, telo-, teleo- | distance, end or other end |
| -tensio | -tension | 1. strain;  2. the condition of being stretched or tense;  3. blood pressure (B. P.) |
| -tomia | -tomy | 1. incision;  2. a cutting operation |
| -tono, -tonia | -tonia | 1. tension;  2. firmness of the tissues |
| -therapia | -therapy | 1. the treatment of a disease by various methods;  2. non-surgical treatment |
| -tropho-, -trophia | -trophy | food or nutrition |
| -tropo-, tropia | -tropo-, -tropia | a turning toward |

**X**

|  |  |  |
| --- | --- | --- |
| xero- | xero- | dry |

**ENGLISH – LATIN VOCABULARY**

**1. ANATOMICAL AND PHARMACEUTICAL TERMINOLOGY**

|  |  |
| --- | --- |
| **ENGLISH LATIN** | |
| **A** | |
| abdomen; belly | * abdomen, inis n; |
| abdominal | * abdominalis, e; |
| accessory | * accessorius, a, um; |
| acid | * acidum, i n; |
| acetysalycilic acid | * acidum acetylsalicylicum; |
| arsenous acid | * acidum arsenicosum; |
| ascorbic acid | * acidum ascorb(in)icum; |
| carbolic acid | * acidum carbolicum; |
| carbonic acid | * acidum carbonicum; |
| citric acid | * acidum citricum; |
| folic acid | * acidum folicum; |
| formic acid | * acidum formicicum; |
| glutamic acid | * acidum glutam(in)icum; |
| hydrochloric acid | * acidum hydrochloricum; |
| hydrocyanic acid | * acidum hydrocyanicum; |
| hydrofluoric acid | * acidum hydrofluoricum; |
| hydroiodic acid | * acidum hydroiodicum; |
| hydrosulphuric acid | * acidum hydrosulfuricum; |
| lactic acid | * acidum lacticum; |
| nicotinic acid | * acidum nicotinicum; |
| nitric acid | * acidum nitricum; |
| nitrous acid | * acidum nitrosum; |
| propionic acid | * acidum propionicum; |
| sulphuric acid- | * acidum sulfuricum; |
| sulphurous acid | * acidum sulfurosum; |
| tartaric acid | * acidum tartaricum; |
| tellurous acid | * acidum tellurosum; |
| acromion | * acromion, i n; |
| adipose | * adiposus, a, um; |
| add (verb) | * addo, ere III; |
| additional | * accessorius, a, um; |
| adonis | * Adonis, idis f; |
| aёrosol | * aёrosolum, i n; |
| alar | * alaris, e; relating to a wing; |
| alcohol | * spiritus, us m; |
| aloё | * Aloё, es f; |
| alveolar | * alveolaris, e; relating to an alveolus; |
| almond (fruit) | * Amygdala, ae f; |
| ampule | * ampulla, ae f; |
| anise | * Anisum, i n; |
| angle | * angulus, i m; |
| anhydric | * anhydricus, a, um; |
| anterior | * anterior, ius; |
| antimony | * Stibium, i n; Antimonium, i n |
| anus | * anus, i m; |
| aorta | * aorta, ae f; |
| aortic | * aorticus, a, um; |
| aperture | * apertura, ae f; |
| apex | * apex, icis m; |
| apical | * apicalis, e; |
| appendage; appendix | * appendix, icis f; |
| arch; arc | * arcus, us m; |
| arsenic | * Arsenicum, i n; |
| artery  carotid artery | * arteria, ae f; * arteria carotis (carotis, tidis f); |
| articular | * articularis, e; |
| articulation ; joint | * articulatio, onis f; |
| atlas (the first cervical vertebra) | * atlas, atlantis f; |
| atrium | * atrium, i n; |
| axis (the second cervical vertebra) | * axis, is m; |

|  |  |
| --- | --- |
| **B** | |
| (the) back of the body | * dorsum, i n; |
| bag | * bursa, ae f; |
| base | * basis, is f; |
| basin; pelvis | * pelvis is f; |
| bark; cortex | * cortex, icis m; |
| barium | * Barium, i n; |
| belladonna | * Belladonna, ae f; |
| belly; abdomen | * abdomen, inis n; |
| Bicephalous; biceps | * biceps, bicipitis (adj.); |
| biceps | * biceps, bicipitis (adj.); |
| bile | * bilis, is f; chole,es f; fel,fellis n |
| bismuth | * Bismuthum, i n; |
| black | * niger, gra, grum; |
| blood (attr.) | * sanguineus, a, um; |
| blood | * sanguis, inis m; |
| body | * corpus, oris, n; |
| bone | * os, ossis n; |
| bone marrow | * medulla ossium; |
| bony; osseous | * osseus, a, um; |
| border; margin | * margo, inis m; |
| boron | * Borum, i n; |
| bottom | * fundus, i m; |
| brachial | * brachialis, e; |
| brade | * plexus, us m; |
| brain | * encephalon, i n; |
| branch | * ramus, i m; |
| breast | * pectus, oris n; |
| breastplate; chest; thorax | * thorax, acis m; |
| broad | * latus, a, um; |
| broadest | * latissimus, a, um; |
| bromine | * Bromum, i n; |
| bud | * gemma, ae f ; |
| burnt | * ustus, a, um; |
| **C** | |
| calcaneal | * calcaneus, a, um; |
| calcaneus | * calcaneus, i m; |
| calcium | * Calcium, i n; |
| canal | * canalis, is m; |
| capillary (adj.) | * capillaris, e; |
| capsule | * capsula, ae f; |
| carbon | * Carboneum, i n; |
| cardiac | * cardiacus, a, um; |
| carotid | * caroticus, a, um (for *glome, canal*,etc.); * carotis, tidis f (for *artery*); |
| carpeal | * carpeus, a, um; |
| carpus; wrist | * carpus, i m; |
| cartilagineous | * cartilagineus, a, um; |
| castor(-oil) plant | * Ricinus, i m; |
| cavernous | * cavernosus, a, um; |
| cavity | * cavitas, atis f; cavum, i n; |
| cecum; blind gut | * caecum, i n; |
| central | * centralis, e; |
| cerebellar | * cerebellalis, e; |
| cerebellum | * cerebellum, i n; |
| cerebral | * cerebralis, e; |
| cerebrospinal | * cerebrospinalis, e; |
| cerebrum | * cerebrum, i n; |
| cervical | * cervicalis, e; |
| cervix ; neck | * cervix, icis f; |
| chamomile | * Chamomilla, ae f; |
| chiasm | * chiasma, atis, n; |
| chest | * thorax, acis m; |
| chlorine | * Chlorum, i n; |
| ciliary | * ciliaris, e; |
| cilium | * cilium, i n; |
| clavicle | * clavicula, ae f; |
| clavicular | * clavicularis, e; |
| coated | * obductus, a, um; |
| cochlear | * cochlearis, e; |
| collateral | * collateralis, e |
| colon | * colon, i n; |
| coltsfoot | * Farfara, ae f; |
| column | * columna, ae f; |
| commissure | * commisura, ae f; |
| common | * communis, e; |
| compact | * compactus, a, um; |
| composite | * compositus, a, um; |
| concentrated ; strong | * concentratus, a, um; |
| convolution ; gyrus | * gyrus, i m; |
| copper | * Cuprum, i n; |
| cornea | * cornea, ae f; |
| cortical | * corticalis, e; |
| bortex; bark | * cortex, icis m; |
| costal | * costalis, e; |
| cotton | * Gossypium, i n; |
| cranial | * cranialis, e; |
| crest | * crista, ae f |
| to cure (verb) | * curo, are I; |
| cutaneous | * cutaneus, a um; |
| **D** | |
| decoction | * decoctum, i n; |
| deep | * profundus, a, um; |
| deltoid | * deltoideus, a, um; |
| dense; thick | * spissus, a, um; |
| dental | * dentalis, e; |
| diaphragm | * diaphragma, atis n; |
| diaphragmatic | * diaphragmaticus, a, um; |
| digitalis (name of plant) | * Digitalis, is f; |
| diluted | * dilutus, a, um; |
| dog rose | * Rosa, ae f; |
| dorsal | * dorsalis, e; |
| dragee (unchangeable) | * dragee(s); |
| drop | * gutta, ae f; |
| dry | * siccus, a, um; |
| duct | * ductus, us m; |
| duodenum | * duodenum, i n; |
| duodenal | * duodenalis, e; |
| **E** | |
| ear | * auris, is f; |
| emulsion | * emulsum, i n; |
| endocrine | * endocrinus, a, um; |
| entrance; orifice | * ostium, i n; |
| esophagus | * oesophagus, i m; |
| ether | * aether, eris m; |
| ethmoid | * ethmoidalis, e; |
| ethyl (attr.)  Ethyl (name of hydrocarbon radical) | * aethylicus, a, um; * Aethylium, i n |
| external | * externus, a, um; |
| extract | * extractum , i n; |
| Extremity; limb | * membrum, i n; |
| eye | * oculus, i m; |
| eyebrow | * supercilium, i n; |
| eyelid | * palpebra, ae f; |
| **F** | |
| face | * facies, ei f; |
| facial | * facialis,e; |
| fascia | * fascia, ae f; |
| fat (noun)  fat (adj.); adipose | * adeps,ipis m * adiposus, a, um |
| femoral | * femoralis, e; peroneus, a, um |
| femur | * femur, oris n; |
| fennel | * Foeniculum, i n; |
| fibrous | * fibrosus, a, um; |
| fibula | * fibula, ae f; |
| fibular | * fibularis, e; |
| finger | * digitus, i m; |
| little finger | * digitus minimus; |
| to finish (verb) | * finio, ire IV; |
| fissure | * fissura, ae f; |
| flat | * planus, a, um; |
| flax | * Linum, i n; |
| flexion | * flexura, ae f; |
| Flexor (muscle) | * m.flexor (oris m) |
| flower | * flos, oris, m; |
| fluid | * fluidus, a, um; |
| fluorine | * Fluorum (Phthorum), i n; |
| fold | * plica, ae f; |
| foot | * pes, edis m; |
| foramen | * foramen, inis n; |
| forefinger | * index, icis m; |
| forehead | * frons, ntis f; |
| framework | * stroma, atis n; |
| frontal | * frontalis, e; |
| foxglove (plant name) | * Digitalis, is f; |
| fruit | * fructus, us m; |
| fossa | * fossa, ae f; |
| fourcephalous ; quadriceps | * quadriceps, ipitis (adj.); |
| fovea | * fovea, ae f; |
| **G** | |
| ganglion; neural knot | * ganglion, i n; |
| gastric | * gastricus, a, um; |
| gelatinous | * gelatinosus, a, um; |
| to give (verb) | * do, are I; |
| gland | * glandula, ae f |
| parotid gland | * glandula parotidea; |
| suprarenal gland | * glandula suprarenalis; |
| thyroid gland | * glandula thyroidea; |
| glome | * glomus, eris n; |
| gluteal | * gluteus, a, um; |
| gold | * Aurum, i n; |
| great; large | * magnus, a, um; |
| greater | * major, ius; |
| greatest | * maximus, a, um; |
| great toe | * hallux, ucis m; |
| grey | * cinereus, a, um; |
| groove | * sulcus, i m |
| gum; gummi | * gummi (unchangeable); |
| gyrus; convolution | * gyrus, i m; |
| **H** | |
| hard; solid | * durus, a, um; |
| hawthorn (plant name) | * Crataegus, i f; |
| head | * caput, itis n; |
| healthy | * sanus, a, um; |
| hepatic | * hepaticus, a, um; |
| herb | * herba, ae f; |
| highest | * supremus, a, um (position); * maximus,a, um (amount) |
| hip; femur | * femur, oris n; |
| hollow; empty | * cavus, a, um; |
| horizontal | * horizontalis, e; |
| horn | * cornu, us n; |
| humerus | * humerus, i m; |
| humor | * humor, oris m; |
| hydrogen | * Hydrogenium, i n; |
| hydroxide | * hydroxydum,i n; |
| hyoid | * hyoideus, a, um; |
| hypoglossal | * hypoglossus, a, um; |
| **I** | |
| iliac | * iliacus, a, um; |
| impression | * impressio, onis f; |
| index finger | * index, icis m; |
| inferior | * inferior, ius; |
| infusion | * infusum, i n; |
| injection | * injectio, onis f; |
| incisive | * incisivus, a, um; |
| intercostal | * intercostalis, e; |
| internal | * internus, a, um; |
| interosseous | * interosseus, a, um; |
| intestinal | * intestinalis, e; |
| intestine | * intestinum, i n; |
| iliac intestine | * ileum, i n; |
| large intestine | * intestinum crassum; |
| small initestine | * intestinum tenue; |
| iodine | * Iodum, i n; |
| iris (of the eye) | * iris, idis f; |
| iron | * Ferrum, i n ; |
| ischial | * ischiadicus, a um; |
| ischium | * ischium, i n; |
| **J** | |
| joint; articulation | * articulatio, onis f; |
| jugular | * jugularis, e; |
| juncture | * junctura, ae f; |
| **K** | |
| kidney | * ren, renis m; |
| knee | * genu, us n; |
| knee cup | * patella, ae f; |
| knot, neural | * ganglion, i n; |
| **L** | |
| lacrimal | * lacrimalis, e; |
| large | * magnus, a, um; |
| laryngeal | * laryngeus, a, um; |
| larynx | * larynx, ngis m; |
| lead | * Plumbum, i n; |
| leaf | * folium, i n; |
| least; smallest | * minimus, a, um; |
| left | * sinister, tra, trum; |
| leg | * crus, cruris n; |
| lens | * lens, lentis f; |
| lesser | * minor, us; |
| ligament | * ligamentum, i n; |
| lilly-of-the-valley | * Convallaria, ae f; |
| limb; extremety | * membrum, i n; |
| liniment | * linimentum, i n; |
| lip | * labium, i n; |
| liquid | * liquor, oris m; |
| to listen (verb) | * audio, ire IV; |
| lithium | * Lithium, i n; |
| liver | * hepar, atis n; |
| lobe | * lobus, i m; |
| lobate | * lobatus, a, um; |
| lobous | * lobosus, a, um; |
| lobar | * lobaris, e |
| long | * longus, a, um; |
| longest | * longissimus, a, um; |
| longitudinal | * longitudinalis, e; |
| lung | * pulmo, onis m; |
| lymph (attr.) ; lymphatic | * lymphaticus, a, um; |
| lymph (noun) | * lympha,ae f |
| **M** | |
| man | * homo, inis m; |
| marigold (plant name) | * Calendula, ae f; |
| magnesium | * Magnesium, i n; * Magnium, i n; |
| major; greater | * major, ius; |
| mandible | * mandibula, ae f; |
| mandibular | * mandibularis, e; |
| manganese | * Manganum, i n; |
| margin; border | * margo, inis m; |
| marginal | * marginalis, e; |
| marrow | * medulla, ae f; |
| bone marrow | * medulla ossium; |
| spinal cord | * medulla spinalis; |
| mastoid | * mastoideus, a, um; |
| maxilla | * maxilla, ae f; |
| maxillary | * maxillaris, e; |
| maximum | * maximus, a, um; |
| medial | * medialis, e; |
| median (adj.); central | * medianus, a, um; |
| medius, a, um | * middle |
| medullary | * medullaris, e; |
| medullary tunic | * meninx, ngis f; mater, tris f; |
| dura mater (hard medullary tunic) | * dura mater; |
| pia mater (soft medullary tunic) | * pia mater; |
| membrane | * membrana, ae f; |
| arachnoid membrane | * arachnoidea, ae f; |
| mucous membrane | * mucosa, ae f, * tunica mucosa; |
| mercury | * Hydrargyrum, i n; * Mercurium, i n; |
| middle | * medius, a, um; |
| minimum | * minimus, a, um; |
| Minor; lesser | * minor, us; |
| mint | * Mentha, ae f; |
| to mix (verb) | * misceo, ere II; |
| mobile | * mobilis, e; |
| mouth | * os, oris n; |
| mucous | * mucosus, a, um; |
| muscle | * musculus, i m; |
| abductor muscle | * m. abductor; |
| adductor muscle | * m. adductor; |
| cheek muscle | * m. buccinator; |
| constrictor muscle | * m. constrictor; |
| corrugator muscle | * m. corrugator; |
| depressor muscle | * m. depressor; |
| dilator muscle | * m. dilatator; |
| elevator muscle | * m. levator; |
| extensor muscle | * m. extensor; |
| flexor muscle | * m. flexor; |
| masseter muscle | * m. masseter; |
| pronator muscle | * m. pronator; |
| rotator muscle | * m. rotator; |
| sphincter muscle | * m. sphincter; |
| supinator muscle | * m. supinator; |
| tensor muscle | * m. tensor; |
| muscular | * muscularis, e; |
| **N** | |
| nape | * nucha, ae f; |
| nasal | * nasalis, e; |
| neck; cervix | * cervix, icis f, * collum, i n; |
| nerve | * nervus, i m; |
| nervous | * nervosus, a, um; |
| nitrogen | * Nitrogenium, i n; |
| node | * nodus, i m; |
| nodule | * nodulus, i m; |
| nose | * nasus, i m; |
| notch | * incisura, ae f; |
| nuchal | * nuchalis, e; |
| nucleus | * nucleus, i m; |
| **O** | |
| oak-tree | * Quercus, us f; |
| oblique | * obliquus, a, um; |
| occipital | * occipitalis, e; |
| occiput | * occiput, itis n; |
| oil | * oleum, i n; |
| turpentine (oil) | * oleum Terebinthinae; |
| castor oil | * oleum Ricini; |
| almond oil | * oleum Amygdalarum; |
| olive oil | * oleum Olivarum; |
| peach oil | * oleum Persicorum; |
| oily (in oil) | * oleosus, a, um; |
| ointment | * unguentum, i n; |
| olive | * Oliva, ae f; |
| opening; foramen | * foramen, inis n; |
| optic | * opticus, a, um; |
| oral | * oralis, e; |
| orbit | * orbita, ae f; |
| orbital | * orbitalis, e; |
| orifice; entrance | * ostium, i n; |
| osseous; bony | * osseus, a, um; |
| ostium; (orifice, entrance) | * ostium, i n; |
| oval | * ovalis, e; |
| oxide | * oxydum, i n; |
| oxygen | * Oxygenium, i n; |
| **P** | |
| palatal; palatine | * palatinus, a, um; |
| palate | * palatum, i n; |
| pancreas | * pancreas, atis n; |
| pancreatic | * pancreaticus, a, um; |
| parietal | * parietalis, e; |
| part | * pars, partis f; |
| passage | * meatus, us m; |
| paste | * pasta, ae f ; |
| patella | * patella, ae f; |
| peach | * Persicum, i n; |
| pectoral | * pectoralis, e; |
| pedicle | * pediculus, m; |
| pelvic | * pelvinus, a, um; |
| pelvis | * pelvis, is f; |
| renal pelvis | * pelvis renalis; |
| perforate (plant name) | * Hypericum, i n; |
| perineum | * perineum, i n; |
| peritoneum | * peritoneum, i n; |
| peroneal; fibular | * peroneus, a, um; fibularis,e |
| peroxide | * peroxydum, i n; |
| petrosal; petrous | * petrosus, a, um; |
| phalangeal | * phalangeus, a, um |
| phalanx | * phalanx, ngis f; |
| pharyngeal | * pharyngeus, a, um; |
| pharynx | * pharynx, ngis m; |
| phosphorus | * Phosphorus, i m; |
| pill | * pilula, ae f; |
| plantain (plant name) | * Plantago, inis f; |
| plaster | * emplastrum, i n; |
| plate | * lamina, ae f; |
| pleural | * pleuralis, e; |
| plexus | * plexus, us m; |
| ploughshare; vomer | * vomer, eris m; |
| potassium | * Kalium, i n; * Potassium, i n; |
| posterior | * posterior, ius; |
| powder | * pulvis, eris m; |
| powdered | * pulveratus,a, um; |
| praecipitated | * precipitatus, a, um; |
| process | * processus, us m; |
| profound | * profundus, a, um; |
| proper | * proprius, a, um; |
| pterygoid | * pterygoideus, a, um; |
| pulmonary | * pulmonalis, e; |
| pupil of the eye | * pupilla, ae f; |
| pure | * purus, a, um; |
| purified (sulphur) | * depuratus, a, um; |
| purified (water) | * purificatus, a, um; |
| purified (alcohol, tupentine oil) | * rectificatus, a, um; |
| pyramid | * pyramis, idis f; |
| **R** | |
| rababaer (plant name) | * Rheum, i n; |
| radial | * radialis, e; |
| radius | * radius, i m ; |
| root | * radix, icis f; |
| raspberry (plant name) | * Rubus idaeus (i m); |
| red | * ruber, bra, brum; |
| reduced | * reductus, a, um; |
| region | * regio, onis f; |
| renal | * renalis, e; |
| to repeat (verb) | * repeto, ere III; |
| retina | * retina, ae f; |
| retinaculum | * retinaculum, i n; |
| rhizome | * rhizoma, atis n; |
| rib | * costa, ae f; |
| ridge; crest | * crista, ae f; |
| right | * dexter, tra, trum; |
| roof | * tegmen, inis n; |
| round | * rotundus, a, um, * teres, etis (adj) - *for muscles and ligaments;* |
| **S** | |
| scapula | * scapula, ae f; |
| sacral | * sacer, cra, crum (*for bone*); * sacralis, e; |
| saddle | * sella, ae f |
| sage (plant name) | * Salvia, ae f; |
| scale; squama | * squama, ae f; |
| scaly; squamous | * squamosus, a, um; |
| sciatic; ischial | * ischiadicus, a, um; |
| seed | * semen, inis n; |
| septum | * septum, i n; |
| serous | * serosus, a, um; |
| sheath | * vagina,ae f; |
| shell; concha | * concha, ae f; |
| shoulder | * brachium, i n; |
| sigmoid | * sigmoideus, a, um; |
| silicon | * Silicium, i n; |
| silver | * Argentum, i n; |
| simple | * simplex, icis (adj); |
| sinus, us m; | * sinus; |
| skin | * cutis, is f; |
| skull | * cranium, i n; |
| slanted; oblique | * obliqus, a, um; |
| small | * parvus, a, um; |
| smallest | * minimus, a, um; |
| sodium | * Natrium , i n; * Sodium, i n; |
| solution | * solutio, onis f ; |
| species; | * species, ei f; |
| sphenoid | * sphenoidalis, e; |
| spinal | * spinalis, e; |
| spine | * spina, ae f; |
| spinous; thorny | * spinosus, a, um; |
| spleen | * lien, lienis m, * splen, splenis m; |
| spongeous | * spongiosus, a, um; |
| squama | * squama, ae f; |
| squamate; squamous | * squamosus, a, um; |
| stapes | * stapes, edis m; |
| stinging nettle (plant name) | * Urtica, ae f; |
| straight | * rectus, a, um; |
| Stirrup; stapes | * stapes, edis m; |
| stomach | * gaster, tris f; |
| sublingual | * sublingualis, e; |
| substance | * substantia, ae f; |
| sugar | * Saccharum, i n; |
| sulcus; groove | * sulcus, i m; |
| sulphur | * Sulfur, uris n; |
| sunflower | * Helianthus, i m; |
| surface | * facies, ei f; |
| superficial | * superficialis, e; |
| superior | * superior, ius; |
| suppository | * suppositorium, i n; |
| suprarenal | * suprarenalis, e; |
| supreme | * supremus, a, um, |
| suspension | * suspensio, onis f; |
| suture | * sutura, ae f; |
| syrup | * sirupus, i m; |
| system | * systema, atis n; |
| **T** | |
| tablet | * tabuletta, ae f; |
| tea | * species, erum (f) (plural); |
| to take (verb) | * recipio, ere III; |
| temporal | * temporalis, e; |
| temple | * tempus, oris n; |
| tendon | * tendo, inis m; |
| tendineous | * tendineus, a, um; |
| thallium | * Thallium, i n; |
| thin | * tenuis, e; |
| tip | * apex, icis m; |
| thoracic | * thoracicus, a, um; |
| thorax | * thorax, acis m; |
| thorn; spine | * spina, ae f; |
| Thorny; spinous | * spinosus, a, um; |
| thumb | * pollex, icis m; |
| thyroid | * thyroideus, a, um; |
| tibia | * tibia, ae f; |
| tincture | * tinctura, ae f; |
| tongue | * lingua, ae f; |
| tooth | * dens, dentis m; |
| topmost point; vertex | * vertex, icis m; |
| tract | * tractus, us m; |
| transverse | * transversus, a, um; |
| trapezoid | * trapezoideus, a um; |
| Triceps; tricephalous | * triceps, ticipitis (adj.); |
| trochanter | * trochanter, eris m; |
| trunk | * truncus, i m; |
| tuber | * tuber, eris, n; |
| tubercle | * tuberculum, i n; |
| tuberosity | * tuberositas, atis f; |
| tunic | * tunica, ae f; |
| conjuctive tunic | * conjuctiva, ae f; |
| mucous tunic | * tunica mucosa; * mucosa, ae f |
| serous tunic | * tunica serosa; |
| to turn (verb) | * verto, ere III; |
| turpentine | * Terebinthina, ae f; |
| tympanic | * tympanicus, a, um; |
| tympanum | * tympanum, i n. |
| **U** | |
| ulna | * ulna, ae f; |
| ureter | * ureter, eris m; |
| ureteral; ureteric | * uretericus, a, um; |
| urethra | * urethra, ae f; |
| uterine | * uterinus, a, um; |
| uterus | * uterus, i m; |
| **V** | |
| vagina; sheath | * vagina, ae f; |
| vaginal | * vaginalis, e; |
| valerian | * Valeriana, ae f; |
| valvule | * valvula, ae f; |
| vault | * fornix, icis m; |
| vein | * vena, ae f; |
| portal vein | * vena portae, (porta, ae f); |
| venous | * venosus, a, um; |
| venter; (wide swelling part of a muscle) | * venter, tris m; |
| ventral | * ventralis, e; |
| ventricle | * ventriculus, i m; |
| venule | * venula, ae f, |
| vertebra | * vertebra, ae f; |
| vertebral | * vertebralis, e; |
| Vertex; topmost point | * vertex, icis m; |
| vessel | * vas, vasis n; |
| vestibule | * vestibulum, i n; |
| vitreous | * vitreus, a, um; |
| vomer | * vomer, eris m; |
| **W** | |
| wall | * paries, etis m; |
| water | * aqua, ae f; |
| water (attr.); watery (in water) | * aquosus, a, um; |
| white | * albus, a, um; |
| wing | * ala, ae f; |
| womb; uterus | * uterus, i m; |
| wormwood (plant name) | * Absinthium, i n; |
| wrist | * carpus, i m; |
| **Y** | |
| yellow | * flavus, a, um; |
| **Z** | |
| zinc | * Zincum, i n; |
| zygoma | * zygoma, atis n; |
| zygomatic | * zygomaticus, a, um. |

1. **CLINICAL TERMINOLOGY**

**Names of Organs and Tissues**

**A**

|  |  |
| --- | --- |
| **English** | **Greek CF** |
| adenoid | adeno- |
| anus | procto- |
| articulation | arthro- |

**B**

|  |  |
| --- | --- |
| bile | -chole-, -cholia |
| bile ducts | cholangio- |
| body | somato-, -soma |
| bone | osteo- |
| bone marrow | myelo-, -myelia |
| blood  in the blood | haemo-, haemato-  -aemia |
| breast | masto- |

**C**

|  |  |
| --- | --- |
| calculus  formation of calculi | litho-, - lithus  -lithiasis |
| cartilage | chondro- |
| cell | cyto-, -cytus |
| cheek | melo- |
| chest | stetho- |
| common bile duct | choledocho- |
| chyle | chylo-, -chylia |
| cyst | cysto- |

**D**

|  |  |
| --- | --- |
| drug | pharmaco- |

**E**

|  |  |
| --- | --- |
| ear | oto-, -otia |
| eye | opthalmo-, -ophthalmia |
| eyesight | -opia, -opsia |
| extremity, extreme | acro- |

**F**

|  |  |
| --- | --- |
| fat | lipo- |
| foot | podo-, -podia |

**G**

|  |  |
| --- | --- |
| gallbladder | cholecysto- |
| gum | ulo- |
| gland | adeno- |

**H**

|  |  |
| --- | --- |
| hand | cheiro-, chiro- |
| hard palate | urano- |
| head | kephalo-, cephalo-, - cephalia |
| heart | cardio-, cardi- |
| hernia | cele- |
| Hydrogen | hydro- |

**I**

|  |  |
| --- | --- |
| in the blood | -aemia |
| internal organs | splanchno- |
| intestine | entero-, enter- |

**J**

|  |  |
| --- | --- |
| joint | arthro- |
| juice | chylo-, chylia- |

**K**

|  |  |
| --- | --- |
| kidney | nephro- |

**L**

|  |  |
| --- | --- |
| language | gloss-, glosso-, -glot-, -glossia |
| life | bio- |
| lip | cheilo-, -cheilia |
| lipid | lipo- |
| lower jaw | geno-, -genia |
| lung | pneumo-, pneumono- |
| lymph node | adeno- |
| lymph vessels | angio- |

**M**

|  |  |
| --- | --- |
| mandible, mandibulum | geno-, -genia |
| mental abilities | psycho-, psychia- |
| mouth | stomato- |
| muscle | myo-, -mysium |
| myelin sheath of nerve fibers | myelo-, -myelia |

**N**

|  |  |
| --- | --- |
| nerve, nervous system | neuro-, neuri- |
| nose | rhino-, |

**P**

|  |  |
| --- | --- |
| peak | acro- |
| pelvis of the kidney | pyelo- |
| place | topo-, -topia |
| pus | pyo- |

**R**

|  |  |
| --- | --- |
| rectum | procto- |
| remedy | pharmaco- |

**S**

|  |  |
| --- | --- |
| saliva | sialo-, -sialia |
| sharp | acro- |
| skin | dermo-, dermato- |
| small intestine | entero- |
| soal | psycho-, -psychia |
| spinal code | myel(o)-, -myelia |
| spleen | spleno- |
| stomach | gastro-, -gastria |
| stone | litho- |
| stone formation | -lithiasis |
| sweat | hidro- |

**T**

|  |  |
| --- | --- |
| tendon | teno- |
| thorax | stetho- |
| tip | acro- |
| tissue | histo-, histio- |
| tongue | gloss-, glosso-, -glot-, -glossia |
| tooth | odonto-, -odontia |
| tumor | onco- |

**U**

|  |  |
| --- | --- |
| upper jaw | gnatho-, -gnathia |
| urinary bladder | cysto- |
| urination | -uresis |
| uterus (womb) | metro-, -metra, -metrium; hystero- |

**V**

|  |  |
| --- | --- |
| vein | phlebo- |
| vertebra | spondylo-, -spondylia |
| vessel | angio- |
| vision | -opia, -opsia |
| volume | onco- |

**W**

|  |  |
| --- | --- |
| water | hydro- |

**PREFIXES AND SUFFIXES**

|  |  |
| --- | --- |
| **Latin/ English** | **Meaning** |
| **A** | |
| a-, an- | 1. absence, without;  2. facilitation of action |
| ab- | 1. from, away from, off; 2. increase, adherence, motion towards, and sometimes with an intensive meaning |
| ad- | to; coming together |
| ana- | upward, up, apart |
| ante- | before |
| anti- | against; opposing, or, in relation to symptoms and diseases, curative |

**C**

|  |  |
| --- | --- |
| cata- | downward |
| circum- | 1. around;  2. a circular movement, or a position surrounding the part indicated by the word to which it is joined |
| con-, com- | with, together, in association |
| contra- | opposed; against |

**D**

|  |  |
| --- | --- |
| de-, des - | 1. away from, without;  2. separation  **NB!**  de(s) + quality means *worsening of this quality* |
| dia- | through, throughout, completely |
| dys- | bad, painful, difficult, malfunction |

**E**

|  |  |
| --- | --- |
| ecto- | outer, the outside |
| endo- | within, inner |
| ento- | inner or within |
| epi- | above, above, upper layer |
| eu- | normal function, good, well |
| ex- | outside motion, out of, from, away from |
| exo- | external, or outside |
| extra- | without, outside of |

**F**

|  |  |
| --- | --- |
| -fer (a, um) | carrying or conducting  **Engl. -ferous** |

**G**

|  |  |
| --- | --- |
| -genus (a, um) | 1. causing some *process or disease*  2. caused by damage in an *organ*  **Engl. –genic; -genous** |

**H**

|  |  |
| --- | --- |
| hyper- | 1. excessive or above the normal;  2. excessive function |
| hypo- | 1 below;  2. low or deficient function |

**I**

|  |  |
| --- | --- |
| -id(eus, a, um); -id(alis, e) | in the form of, looking like  **Engl. –oid(al)** |
| in- | 1. inside motion;  2. absence of some quality |
| infra- | below, beneath, a position below the part denoted by the word to which it is joinedl |
| inter- | between, among |
| intra- | inside, within |
| - io, ionis f | the process or result of an action  **Engl. –tion, - sion** |
| -ismus, i m | 1. phenomenon, quality, fact;  2. deviation from some standard, norm;  3. addiction to so some substance, dependence;  4. poisoning  **Engl. - ism** |
| -itis, itidis f | 1. inflammatory disease;  2. inflammation  **Engl. -itis** |
| -iv (us, a, um) | able to do something  **Engl. able to do sth.** |

**M**

|  |  |
| --- | --- |
| meso- | between, middle (layer)  **NB!**  meso- + name of an intraabdominal organ designates *mesentery of this organ* |
| meta- | after, between, over, after subsequent to, behind, or hindmosr |

**O**

|  |  |
| --- | --- |
| -oma, omatis n | 1. tumor, any *benign neoplasm* (newly formed tissue);  2. localized collection of some *fluid* in the tissues  **Engl. -oma** |
| -or/-er | the doer of the action  **Engl. –or; -er** |
| -os (us, a, um) | rich in, having plenty of, characterized by  **Engl. -ous** |
| -osis, osis f | 1. any process or its result;  **NB!**  2. a disease, caused by some agent or substance;  3. a chronic pathological condition in some organ or tissue;  4. abnormally large number or amount (esp. of blood cells, tissue cells and tumors)  **Engl. -osis** |

**P**

|  |  |
| --- | --- |
| para- | 1. (adj.) located near sth*;*  **NB!**  2.(noun) in combination with the name of an organ means *"tissue, especially connective, adjacent to this organ";*  3. in combination with the name a function - *a departure from the normal;*  4. in combination with the name of a disease *– disease, resembling the mentioned one* |
| per- | 1. through; throughout, extremely  2. facilitation of action |
| peri- | 1. (adj.) located around sth,*;*  **NB!**  2.(noun) when taken with the name of the organ, means “*capsule, tunic of connective tissue enveloping this organ”* |
| -phor (us, a, um) | carrying or conducting  **Engl. - phorus** |
| post- | after, behind, or posterior |
| prae- | anterior, before in space or time  **Engl. -pre** |

**R**

|  |  |
| --- | --- |
| re- | 1. repeated action;  2. response;  3. backward motion |
| retro- | behind, backward |

**S**

|  |  |
| --- | --- |
| se- | setting apart or dividing |
| sub- | under, beneath, less than normal or typical |
| super-, supra- | above, beyond, superior, the upper part of |
| syn-, sym- | with, together, joined |

**T**

|  |  |
| --- | --- |
| trans- | across, through, beyond |

**U**

|  |  |
| --- | --- |
| -cul | diminutives – nouns, designating smaller structures  **Engl. – (u)le; -cle** |
| -ol | diminutives – nouns, designating smaller structures  **Engl. – ole; -olus** |
| -ul | diminutives – nouns, designating smaller structures  **Engl. – (u)le;** |
| -ura | the result of an action  **Engl. – ure; -tion; -sion** |

**THEORETICAL QUESTIONS**

**IN LATIN MEDICAL TERMINOLOGY**

1. The function of a term. Terminology. Medical terminology, its structure.

2. Latin alphabet Rules of reading: vowels, consonants, diphthongs & digraphs.

3. Rules for putting stress in the Latin language. Long & short suffixes.

4. The structure of an anatomical term. Non – agreed attribute. Word order in anatomical terms with non-agreed attributes. Examples.

5. The structure of an anatomical term. Agreed attribute. Word order in anatomical terms with agreed attributes. Examples.

6. Noun. System of declensions. Dictionary form. Examples.

7. Two groups of adjectives. Dictionary form. Examples.

8. Degrees of Comparison of adjectives in Latin. Comparative & Superlative Degrees. Three Degrees of Comparison of adjectives “great” & “small”

9. Declination of adjectives in the Positive, Comparative & Superlative Degrees. Examples.

10. Nouns of the masculine gender of the 3rd Declination. Exceptions.

11. Names of muscles according to their function. Suffixes – or, - er. Examples.

12. Nouns of the Feminine gender of the 3rd declination. Exceptions. Meaning of the suffix –io.

13. Nouns of the neuter gender of the 3rd Declination. Exceptions.

14. Nominative Plural of nouns & adjectives. Abbreviations in the anatomical terminology.

15. Genitive plural of nouns and adjectives. Latin plurals in English.

16. Clinical Terminology – definition. Types of clinical terms.

17. Compound Terms. A Combining Form – definition. Examples.

18. Suffixation. Terminological suffixes: - osis, -itis, - oma, -ismus.

19. Prefixation. Function of prefixes. Prefixes characterizing the state of function.

20. The structure of clinical terms – word combinations. Examples.

21. The Basic Terms of Pharmacy: pharmaceutical substance, raw material, drug form, pharmaceutical speciality.

22. Types of Drug Names: Scientific Name, Trade Name.

23. Types of Drug names: names of pharmaceutical substances: Generic name, International Non-Proprietary Name (INN)

24. Names of compound drugs, vitamins, enzymes. Examples

25. Common Stems in drug names: drugs with antimicrobic effect. Examples

26. Common Stems in drug names: names of hormones. Examples

27. Common Stems in drug names: names of cardiovascular drugs. Examples

28. Chemical Nomenclature: names of chemical elements and acids. Examples.

29. Chemical Nomenclature: names of salts & esters. Examples.

30. Latin prescription. Two models of the prescription line.

**Dear Friend!**

You have just finished studying the course of the Latin medical terminology.

We are glad, that you have come into contact with the international language of communication of physicians.

We hope that it will help you to master your future profession and to achieve professional understanding on any level.

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