

# Unit 1

## Introduction unit

### Latin Alphabet and Pronunciation

At present the Latin language is a dead language. It belongs among the Indo – European languages which are the following: Anatolian, Indo–Iranian, Baltic, Albanian, Celtic, Greek, and Italic, Germanic or Slavic and many others. Currently the Latin alphabet consists of 24 letters: Aa, Bb, Cc, Dd, Ee, Ff, Gg, Hh, Ii, Kk, Ll, Mm, Nn, Oo, Pp, Qq, Rr, Ss, Tt, Uu, Vv, Xx, Yy, Zz. Originally there were missing some letters, e.g. the letter Jj (instead of which there was used Ii) but in the medical terminology there started to be used Jj and concretely this was at the beginning of the word and in front of a vowel or in the middle of the word between two vowels. Originally the other missing letters were also K which appeared by only these words which were of Greek origin. (kynophobia). The same can be said in the relation to the letters Y and Z which also appeared by words being of Greek origin. (zoonosis etc.).

The Latin pronunciation is relatively easy but different comparing to the English language. There are three groups of sounds in Latin: vowels: short vowels (a, e, i, o, u, y) and long vowels (ā, ē, ī, ō, ū, ŷ); diphthongs (ae, oe, eu) and consonants (e.g.: b, c, d, r, s, l, m, n, p, x etc.). The vowels are both: short and long, the diphthongs are only long.

#### **Vowels: short**

- a** like cut (glandula – gland)
- e** like let (membrum – extremity)
- i** like finger (minimus – minimal)
- o** like on (foramen – opening, aperture)
- u** like put (cum – with)
- y** like lady (lymphā – lymph)

#### **Vowels: long**

- ā** like car (sānus - healthy)
- ē** like term (vēna - vein)
- ī** like seem (vīta - life)
- ō** like door (gelatinōsus – jelly)
- ū** like boom (pūrus- clean)
- ŷ** like analysis (hypophŷsis - hypophysis) - occurs mostly in words of Greek origin.

Note: In written texts there often happens that the length of vowels is not marked and this practice was used in this textbook as well.

## Diphthongs

**ae** like care (anaemia – anaemia)

**oe** like care (lagoena – bottle)

**eu** only in words of Greek origin and they are pronounced in the phonetic way “eu” i.e. pneumonia – inflammation of lungs etc.

Note: the diphthong “oe” is pronounced like o–e in the phonetic manner and this is concretely at the end of the words of Greek origin: apnoe, dyspnoe.

## Consonants:

**b** like in back (bonus – good)

**c** like in tsar when followed by e, i. or diphthongs (certus – sure, caecus – blind) or like –k- in medical terms when followed by –a, –o, –u: (cancer – cancer, costa – rib)

**d** like dear (duo – two)

**f** like friend (fibula – fibula)

**g** like ground (gutta – drop) when followed by –u- plus a vowel the pronunciation is gv (lingua – tongue, language)

**h** like in house (herba –plant)

**j** like in yes; (it is written both as –i- and –j-) iunctura – connection, injectio – injection); written –j- is preferred in medical terminology

**k** is mostly substituted by –c- (see above) but it can appear by some words of Greek origine e. g. keratinum

**l** like in look (labium – lip)

**m** like mother in (musculus – muscle)

**n** like in nobody (nasus – nose) when followed by –i- the pronunciation is hard like after –d-, e.g. manipulatio or nimis (– too much)

**p** like in present (palbera – eyelid) but when followed by h as “ph” mostly in words of Greek origin), then the pronunciation is –f- (physiologia – physiology, pharmacia - pharmacy)

**q** like in request (aqua – water); the group q+u is pronounced as kv

**r** like in rupture (without using uvular “r”; e.g. rima – slit); when followed by –h- there is a little aspiration (haemorrhagia – bleeding)

**s** like in some (sutura – suture) and like –z- e.g. organize when between two vowels or proceeded by –r- (vesica)

**t** like in tongue (trauma – wound) when followed by –i- then the pronunciation is hard; see “d” and “t” above (tibia – tibia); when followed by –h- there is a little aspiration r(h)aphe rhaphe. When the above mentioned group is followed by –ia. –ie, –io, –iu the pronunciation is –ts- (partialis – partial, operatio – operation). When the mentioned group is preceded by –s or –x then the pronunciation is –t- (ostium – orifice, bestia –animal)

**v** like in various (various – various)

**x** like in oxygen (xeroderma –dry skin)

**z** like in zone (zoonosis – animal disease) but generally –z- appears really minimally in Latin words.

## Length of Syllables and the Accent in Latin

The syllables in Latin are both short and long. (short: glandula, ae, F, long: vīvus -vivid as mentioned above). The length of syllables can be graphically marked. The diphthongs are only long. – anaemia, ae, F).

The accent is distinguished in Latin using the mark: ´ but relating to the medical terminology it is used really never or only minimally.

### Basic Grammatical Categories

As for the grammatical categories, only some of them are really applied in the medical terminology. The most important ones used in pharmaceutical, medical and veterinary terminology are:

#### 1<sup>st</sup> Word types

1. noun - substantivum
2. adjective - adiectivum
3. pronoun - pronomen
4. numeral - numerale
5. verb - verbum
6. adverb - adverbium
7. preposition - praepositio
8. conjunction - conjunctio
9. interjection - interiectio
10. particular - particula

Only some grammatical categories are fundamental for understanding professional Latin. The less important ones will not be explained within these lessons.

### Latin Nouns

There are four basis categories relating to nouns:

**1<sup>st</sup> : Gender:** M - masculine F - feminine, N - neutral

**2<sup>nd</sup> : Number:**

Latin nouns can express either singular number or plural number.

**3<sup>rd</sup> Case:**

Latin nouns change their suffix form according to their circumstances in the sentence. In

Latin there exist six following cases:

1. nominative (abbr. nom.)
2. genitive (abbr. gen.)
3. dative (abbr. dat.)
4. accusative (abbr. accus.)
5. vocative (abbr. voc.)
6. ablative (abbr. abl.)

### Latin Declension:

Latin nouns are divided into 5 groups (declensions). Each noun within the same group is declined in the same way. They are divided into the groups (declensions) according to their stem sound (the sound at the end of the part of word which is left after the removal of genitive plural ending).

	Sample	gen. pl
Group 1: 1 <sup>st</sup> declension –A- stems	gutta	gutt- <b>a</b> -rum
Group 2: 2 <sup>nd</sup> declension –O- stems	nervus	nerv- <b>o</b> -rum
Group 3: 3rd declension – consonant- stems + I- stems	dolor pelvis	dolo- <b>r</b> -um pelv- <b>i</b> -s
Group 4: 4th declension –U- stems	processus	processu- <b>u</b> -m
Group 5: 5th declension –E- stems	facies	faci- <b>e</b> -rum

### Latin Adjectives

This word category is declined in the same way as nouns belonging to them. The adjectives can be divided into 3 declensions. The adjective follows the corresponding noun in **gender, number and case**.

### Latin Verbs

Verbs are divided into four conjugations according to the ending of the infinitive stem (the vowel at the end of the part of verb which is left after the removal of the infinitive ending are:

1<sup>st</sup> conjugation: long –**ā**- stems: san-**ā**-re

2<sup>nd</sup> conjugation: long –**ē**- stems: vid-**ē**-re

3<sup>rd</sup> conjugation short –**e**-stems: scrib-**e**-re

(irregular 3<sup>rd</sup> conjugation: short –**e**-stems: recip-**e**-re)

4<sup>th</sup> conjugation: long –**ī**- stems: aud-**ī**-re

The other grammatical categories will not be explained and therefore will not be commented any more.

## Unit 2

### Latin Nouns of the 1<sup>st</sup> Declension (-A- Stems)

## Latin Adjectives of the 1<sup>st</sup> Declension

Nouns ending in **-a** in the nominative of singular and in **-ae** in the genitive of singular (e.g. gutta, ae. – drop) are declined according to this paradigm. Most of them are of a feminine gender, only a few of them can be of a masculine gender (e.g. dentista, ae, M; anatagonista, ae, M).

### Paradigm: gutta

#### Singular (sg.)

1. gutt-a
2. gutt-ae
3. gutt-ae
4. gutt-am
6. gutt- a

#### Plural (pl.):

- gutt-ae
- gutt-arum
- gutt-is
- gutt-as
- gutt- is

### Case endings of the 1<sup>st</sup> declension:

#### Sg.

1. -a
2. -ae
3. -ae
4. -am
6. -a

#### Pl.

- ae
- arum
- is
- as
- is

### Adjectives of the 1<sup>st</sup> Declension:

There are adjectives which belong to the 1<sup>st</sup> declension e.g. amara (bitter), dextra (right), pura (clean). We decline them in the same way as the nouns of this declension.

### Example of this paradigm: gutta pura

#### Sg.

1. gutta pura
2. gutt-ae pur-ae
3. gutt-ae pur-ae
4. gutt-am pur-am
6. gutt-a pur-a

#### Pl.

- gutt-ae pur-ae
- gutt-arum pur-arum
- gutt-is pur-is
- gutt-as pur-as
- gutt-is pur-is

Note: a noun+ an adjective they have the same case, gender and number but sometimes the declension may vary depending on the type of the noun. It is the noun that indicates

these three categories – the gender, number and case; the adjective conforms to the noun and follows the noun.

Words expressing the quality of nouns are classified as attributes. An attribute may be close – expressed by an adjective or loose - expressed by a noun in genitive.

### **Exercises:**

#### **1. Read and translate**

Lagoena. Tinctura. Scatula. Costa. Vertebrae. Clavicula. Mandibula et maxilla. Venae et arteriae. Arteria coronaria. Vesica fellea. Vesica urinaria. Tibia sinistra. Fibula dextra. Spina scapulae. Vena cava. Valvulae venarum . Glandula thyreoidea. Fascia lata. Fractura complicata. Ruptura tunicae mucosae.

Aqua purificata. Tinctura amara. Olla pastae. Lagoena aquae carminativae. Scatula pulmonariae herbae. Capsulae gelatinosae in scatula. Tabulettae obductae. Lagoena mixturae. Ad chartas certas. Capsulae gelatinosae in scatula. Valerianae guttae. Lagoena mixturae.

#### **2. Add a corresponding loose attribute to each expression:**

tunica mucosa (lingua, vesica urinaria)

aqua (purus, a, um)

fractura (vertebra, costae, fibula sinistra)

scatula (tabulettae, herba, capsulae gelatinosae)

spina (scapula)

therapia (chirurgicus, a, um)

#### **3. Form plural:**

Fibula dextra. Ruptura tunicae mucosae. Spina scapulae. Fractura complicata. Lagoena aquae carminativae. Olla pastae. Vesica urinaria. Fascia lata. Vertebra fracta. Ruptura aortae. Melissa herba. Planta primulae. Mixtura menthae et matricariae.

#### **4. Translate into Latin:**

A bottle of distilled water, tincture of chamomile, composed tablets, gallipot, white wax, complicated fracture of collar bone, mucous membrane, thoracic vertebrae.

### Survey of the main pharmaceutical abbreviations used in prescriptions:

Latin abbreviation:	Complete Latin form	English meaning:
amp.	ampulla	ampule
aq.	aqua	water
aq. purif.	aqua purificata	purified water
aq. ophth.	aqua ophthalmica	ophthalmic water
c.f.(form)	cum formula	with a copy of a prescription
caps., cps.	capsula, capsulae	capsule
gtt., gutt.	gutta, guttae	drop
herb.	herba	herb
lag.	lagoena	bottle
mixt.	mixtura	mixture
oll.	olla	gallipot
past., pst.	pasta	paste
scat.	scatula	box
sig.	signatura, signum	signature
tab(l)., tbl.	tabulett(a), tabulettae	tablet
tct., tinct.	tinctura	tincture

### Vocabulary:

ad	to, into
aqua, ae, F	water
amarus, a, um	bitter
arteria, ae, F	artery
capsula, ae, F	capsule
carminativus, a, um	against being inflated
cavus, a, um	hollow
clavicula, ae, F	collar bone
complicatus, a, um	complicated, difficult
coronarius, a, um	coronary
costa, ae, F	rib
dexter, a, um	right
felleus, a, um	of gall
fibula, ae, F	fibula

fractura, ae, F                      fracture

gelatinosus, a, um	jelly
glandula, ae, F	gland
gutta, ae, F	drop
herba, ae, F	plant
charta, ae, F	chart
lagoena, ae, F	bottle
mandibula, ae, F	lower jaw
maxilla, ae, F	upper jaw
mixtura, ae, F	mixture
mucosus, a, um	mucosal
obductus, a, um	coated
olla, ae, F	galipot
pasta, ae, F	paste
pulmonarius, a, um	pulmonary
purificatus, a, um	purified
ruptura, ae, F	rupture
scapula, ae, F	shoulder blade
scatula, ae, F	box
sinister, a, um	left
spina, ae, F	back spine
tabuletta, ae, F	tablet, pill
thyroideus, a, um	thyroid
tibia, ae, F	tibia
tinctura, ae, F	tincture
tunica, ae, F	tunic, layer, coat
urinarius, a, um	urinary
valvula, ae, F	valve
vena, ae, F	vein
vertebra, ae, F	vertebra
vesica, ae, F	bladder

### Unit 3

**Latin Nouns of the 2<sup>nd</sup> Declension (-O- Stems)**  
**Latin Adjectives of the 2<sup>nd</sup> Declension**



### **Nouns of the 2<sup>nd</sup> Declension:**

Nouns ending in the nominative of singular in the **-us** or **-er** and in **-i** in the genitive of singular (e.g. sirupus, i, M; nervus, i, M) are declined according to this paradigm. The vowel -e- may be omitted in this declension: e.g. cancer, **cancri** against puer, pueri, M (boy). The representative of this masculine paradigm is: **sirupus**, i, M. Most nouns of the 2<sup>nd</sup> declension are of a masculine gender, only a few of them are of a feminine gender (e.g. methodus, i, F etc.). The neutrum paradigm is very close to masculine suffixes; i.e. in the nominative of singular in the ending **-um** and in **-i** in the genitive of singular (e.g. atrium, i, N; organum, i, N etc.). The main neutrum representative is **unguentum**, i, N (ointment).

### **Paradigm of masculine nouns: sirupus**

<b>Singular (sg.)</b>	<b>Plural (pl.)</b>
1. sirup <b>-us</b>	sirup- <b>i</b>
2. sirup- <b>i</b>	sirup- <b>orum</b>
3. sirup <b>-o</b>	sirup- <b>is</b>
4. sirup- <b>um</b>	sirup- <b>os</b>
6. sirup- <b>o</b>	sirup- <b>is</b>

### **Case endings of the 2<sup>nd</sup> masculine declension:**

1. <b>- us, -er</b>	<b>-i</b>
2. <b>- i</b>	<b>-orum</b>
3. <b>- o</b>	<b>-is</b>
4. <b>- um</b>	<b>-os</b>
6. <b>- o</b>	<b>-is</b>

### **Paradigm of neuter nouns: unguentum**

<b>Sg.</b>	<b>Pl.</b>
1. unguent <b>-um</b>	unguent- <b>a</b>
2. unguent- <b>i</b>	unguent- <b>orum</b>
3. unguent- <b>o</b>	unguent- <b>is</b>
4. unguent- <b>um</b>	unguent- <b>a</b>
6. unguent- <b>o</b>	unguent- <b>is</b>

### **Case endings of the 2<sup>nd</sup> neuter declension:**

<b>Sg.</b>	<b>Pl.</b>
1. <b>- um</b>	<b>-a</b>

2. - i	-orum
3. - o	- is
4. - um	-a
6. - o	- is

### **Adjectives of 2<sup>st</sup> Declension:**

There are some adjectives the forms of which belong to the 2<sup>st</sup> declension and they have two forms, one for masculines e.g. amarus, longus and one for neuters, e.g. amarum longum. Remember that feminine form is amara, longa etc. and they declined according to the 1<sup>st</sup> declension (gutta).