

GUIDE TO BASIC MEDICAL TERMINOLOGY

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KAROLINUM

Guide to Basic Medical Terminology

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PREFACE

The Guide offers an introduction to Latin Medical Terminology on a level and in accordance with requirements of the university programmes of dentistry and general medicine. As these study programmes are accredited in the Czech Republic, the course has to reflect certain specifics of the Czech medical environment, most notably its strong focus on Latin grammar. In this sense the Guide differs from textbooks that are used for the same subject in other European countries, because they often emphasise medical aspect of the Medical Terminology, while the Czech course aims to build a philological understanding.

Among other things the difference is apparent from the structure of foreign textbooks, where lessons are often concentrated on various anatomical structures, pathological, or physiological principles. Contrariwise, this Guide is built around philological principles describing types of nouns, adjectives, and later even prepositions or verbs used in Latin language. As a result the students following our course will have knowledge of Medical Terminology which probably surpasses that of an ordinary English, French, or German student of medicine. On the other hand there are disadvantages as well, because the general overview of the human body, usually offered in the courses of medical terminology has to be provided by different subjects like anatomy or physiology.

Apart from this fundamental difference from other courses of Medical Terminology, we would like to comment on four points, which seem important for understanding the exposition, the aim, and the structure of this book. First, our goal was to provide as unsophisticated description of grammatical features as possible. Consequently, we had to sacrifice certain philological principles that would perhaps point to a wider context, but make the subject more difficult to understand for an ordinary student of medicine or dentistry with no interest in further pursuing the study of Latin.

Second, we had to take in consideration a broad spectrum of foreign students who take courses of general medicine or dentistry in the Czech Republic. Therefore we have also strived to create a textbook free from the language and cultural background. This requirement means that there are some parts of the exposition which may seem superfluous to students, whose mother language belongs to Indo-European language family. For similar reasons we also focus on repetition of certain fundamental

grammatical and syntactical features, which is why nearly every lesson is provided with a review at the beginning and a summary wrapping up the exposition itself.

Third, we do not want to interrupt the continuity of education of the Medical Terminology at the First Faculty of Medicine. As a result, the bulk of the vocabulary and most of the grammar in this Guide are similar to these, which are used by the textbook written by Dana Svobodová.¹ What is different, however, is a general approach and structure of the course.

And finally, unlike the already existing textbook, this Guide offers two-layered approach. What does it mean? Let us take the structure of Latin nouns as an example. The existing textbook distributes five declensions over most of the year so that during the winter term students are taught first three with the rest coming during the summer term. This approach is acceptable for the study of general medicine, which has, at the First Faculty of Medicine, a two-term course of Medical Terminology. On the other hand, it makes the adaptation of Svobodová's textbook to the curriculum of dentistry very difficult, because dentistry has only one-term course.

To avoid this difficulty, the Guide consists of two independent parts; the first one contains the whole Latin grammar, but only on the basic level, while the second part discusses the same grammatical and syntactical features but in much greater detail. We believe that this approach has three advantages. The first part of this Guide can be used both by students of general medicine and dentistry while offering a simple but comprehensive insight into the subject. The second part forces students of general medicine to review the basics from the winter term as they are led once again through the same topics. Finally, it allows students of dentistry, who would be interested in further study of Latin, to continue the course in form of non-compulsory subject studying together with a general medicine group.

¹ Dana Svobodová: *An introduction to Greco-Latin medical terminology*. Prague, 2006.

PART 1:
DENTISTRY AND GENERAL MEDICINE
- 1ST TERM

GLOSSARY OF BASIC TERMS

ABLATIVE GRAMMATICAL CASE

Ablative grammatical case, abbreviated Abl., is form of noun or adjective, which follows after some prepositions.

ACCUSATIVE GRAMMATICAL CASE

This grammatical case, abbreviated Acc., is used with part of prepositions.

ADJECTIVE

An Adjective is a word class which qualifies noun. It describes a particular quality or property of a noun.

DICTIONARY FORM

The Dictionary form of word contains the word itself and additional information which is necessary for its correct use.² It is called “dictionary” because it usually serves as a dictionary entry. Structure of the dictionary form varies depending on word class, because it has to provide different information for each.

GENITIVE GRAMMATICAL CASE

Genitive Grammatical Case, abbreviated Gen., is a form of noun or adjective which is used in nominal attributes. It is similar to preposition “of” or possessive “’s” in English.

² Let us take Latin word *corpus* (body) as an example. The word itself doesn't provide sufficient information on grammar. Therefore the whole dictionary form *corpus, -poris n.* is necessary to know that *corpus* (a) belongs to the 3rd declension, (b) its genitive singular is *corporis*, and (c) its gender is neutral.

GRAMMATICAL CASE

The grammar “case” is a form of word (usually noun, pronoun or adjective) which express its role in a sentence. In English, the “case” is indicated either by word order or by the ending, with the former possibility being much more prevalent. However, many languages use different approach and rely heavily on a system of endings which signify the “case” instead of the word order. Number of cases used in various languages differs significantly, Latin employs six cases (nominative, genitive, dative, accusative, vocative, and ablative) with only four actually useful for purpose of the medical terminology (those are: **nominative**, **genitive**, **accusative**, and **ablative**).

GRAMMATICAL NUMBER

Grammatical number is a grammatical category of nouns, adjectives, and other word classes, which expresses count distinctions. In Latin as well as English there are only two possible sub-categories: **singular** (signifies only one thing) and **plural** (more than one thing).

GRAMMATICAL GENDER

Gender is a grammatical category of nouns and pronouns. In Latin, there are three genders: **masculine**, **feminine**, and **neutral**. Every Latin noun has a gender. In English, genders are usually assigned to nouns on the basis of natural gender, which means that terms for individuals who are males are considered masculine, terms for female individuals are feminine, and all the rest is generally thought to be neutral. In other languages (German, Czech as well as Latin) the gender of noun results from an arbitrary convention; therefore it is not important whether we consider the thing to be “male” or “female”. This type of gender cannot be guessed from the word itself, it is something you have to remember.

NOMINATIVE GRAMMATICAL CASE

Nominative Grammatical Case, abbreviated Nom., is the basic form of noun or adjective. In complex medical expressions the subject is given in Nominative.

NOUN

Noun is a word class used to name a person, animal, place, thing or abstract idea. It is the most frequent word class in the medical terminology. Most medical expressions contain at least one noun, which may or may not be accompanied by an adjective.

PARADIGM

Word “Paradigm” is used throughout this textbook to describe specific pattern of endings expressing different grammatical cases. By “paradigm” we usually also refer to a **sample word** which serves as reference pattern for particular declension. For example in the first declension the paradigm would be *vena* (vein) with all its subsequent changes i.e. *venae, venam, vena, venae, venarum, venas, venis*.

WORD CLASSES

The Word Class is a linguistic category which describes word as a subject of morphological and syntactic changes. In medical terminology generally only four word classes are used – prepositions, nouns, adjectives,³ and verbs. Furthermore from these four only two (**nouns** and **adjectives**) are common. Combinations involving **verbs** are less frequent, since we use them nearly exclusively in imperative sentences as a part of medical prescriptions. Latin **prepositions** are usually part of anatomical descriptions, they signify that something is “above”, “under”, “outside”, or moves “through” an anatomical structure.

LIST OF ABBREVIATIONS

Abl.	Ablative grammatical case
Acc.	Accusative grammatical case
f.	Feminine grammatical gender
Gen.	Genitive grammatical case
m.	Masculine grammatical gender
n.	Neutral grammatical gender
Nom.	Nominative grammatical case
Pl.	Plural grammatical number
Sg.	Singular grammatical number

3 For purpose of this course we will consider numerals to be adjectives.

LESSON 1

(GENERAL OVERVIEW, NOTES ON PRONUNCIATION, READING)

GENERAL OVERVIEW

Medical Terminology describes an artificial form of communication which is used to convey professional information in medical context. It does not cover all the interaction which happens in the medical environment, because of its limitation to professionals. The medical terminology is not and should not be used in a dialog between medical professionals and patients where the natural language is preferable.

Despite its resemblance to language, the medical terminology should rather be regarded as a special form of code. This stems from fact that the very purpose of medical terminology is opposite to many inherent functions of natural languages. An ordinary phrase in our mother language is often inaccurate, vague, approximate, “fuzzy”, which is a feature necessary to describe our everyday life with all its emotions, feelings, idiosyncrasies, and so on.

Contrary to the mundane use of language, the medical terminology strives to avoid any uncertainty; it aims to achieve “machine-like” or “computer-like” form of communication. This feature makes medical terminology both easier and more difficult to comprehend. The simplicity is based on fact, that to achieve the desired clarity we limit the spectrum of language tools to minimum. On the other hand the clarity requires precise use of these tools, there is no place for improvisation or uncertainty.

This textbook is divided into two parts; the first one is compulsory for both students of general medicine as well as dentistry, while the second part is relevant only for general medicine. Before we proceed further, let us enlist main problems, which will be discussed in the first part of the course:

- Latin nouns, which are divided into five groups called “declensions”.
- Latin adjectives are treated in two groups.
- Each of these seven groups of words has its own vocabulary.
- Two types of syntactical relations (noun + noun, noun + adjective).
- Clinical terminology (Greek stems, Greek endings).

That is all, if you master these five topics; you have a very good chance to pass the credit test at the end of the winter term.

SPELLING IN MEDICAL TERMINOLOGY

During the Antiquity Latin served as a natural language with all the peculiarities and features typical for such socio-cultural phenomenon. Later, it gradually lost its contact with the common people and became a means of communication for elites. This led to subsequent fossilisation, as Latin ceased to exist as naturally spoken language. As a result, there are different kinds of Latin spelling and pronunciation which can be found in various contexts.

Latin basically lacks diacritical signs, the only exception which shall be occasionally used in this course is double dot called **diaeresis** or “umlaut”. For example in word *aër*, which stands for English “air”, the diaeresis is employed to signify that vowels “a” and “e” at the beginning, which would be normally pronounced as one long sound, should be treated separately.

Note: Use of square brackets [] in the following text signifies pronunciation. The text between “[” and “]” is usually in IPA (International Phonetic Alphabet).

PRONUNCIATION IN MEDICAL TERMINOLOGY

The pronunciation is a bit more problematic, because there are several different pronunciations of Latin used in different contexts. Classical philology for example tends to use the original ancient pronunciation. However, most nations across Europe use a version of medieval (also called church) Latin pronunciation. This applies notably to Germany, Austria, Poland as well as the Czech Republic.

The English speaking countries abandoned this way of pronunciation during the first half of the 20th century in attempt to introduce more “traditional” or “classical” approach. Nevertheless, result of this change is not a resurrection of truly ancient pronunciation but rather distinctive mix of classical and anglicised features. As a result, students of medical terminology may come across three different approaches: classical, medieval, and English.⁴

In our course students should choose the option which will be later most beneficial for their professional career. Therefore they should avoid strictly classical pronunciation and use either the one prevalent today among English speakers or so called “medieval” one. Both possibilities will be considered correct for purpose of the course. The relation between the English and medieval pronunciation can be summarised in the following table.

4 A good example of this is name of famous ancient politician and orator Marcus Tullius Cicero. During the classical era his own contemporaries called Marcus Tullius [ˈkɪkeroː], the medieval or church Latin pronunciation is [tsitsero], and English tend to pronounce his surname as [ˈsɪsɪroʊ].

Main differences between English and medieval pronunciation

Letters	Medieval pronunciation	English pronunciation	Example
ae (æ)	[e:]	[eɪ] or [i:]	<i>saepe, bonae</i>
oe (œ)	[e:]	[i:]	<i>foetus</i>
c (only if followed by sound [e, i])	[ts]	[s]	<i>cista, caeruleus</i>
ch	[x]	[k]	<i>pulcher</i>
e (and other vowels with macrons)	[e:]	[ɛ], [eɪ] or [i:] (depending on context)	<i>vena</i>
g (followed by [e, i])	[g]	[dʒ]	<i>agimus</i>
h	[h]	[h] or [-]	<i>homo</i>
qu	[kv]	[kw]	<i>questio</i>
sc (followed by [e, i])	[sts]	[s]	<i>ascites</i>
ti (followed by vowel and not preceded by s, x)	[tsi]	[ʃi]	<i>fractio</i>

As the English pronunciation comes naturally to native speakers, we will focus on particular features of medieval pronunciation.

AE/OE

Diphthongs “ae” and “oe” are pronounced as a long [e:], unless there is an umlaut (diaeresis) above the “e”, in which case we have to divide the pronunciation into two separate vowels pronouncing [ae] and [oe].

Examples: *taenia* [te:ni:a], *oesophagus* [e:sofagus], *lagoena* [lage:na]. However *aër* cannot be pronounced [e:r] but rather [aer]. Beware; students often confuse ae/oe combination with ea/eo, which are not diphthongs but two distinct vowels. Therefore word *area* leads to pronunciation [area], with separate vowels spoken at the end.

C

Letter “c” is normally pronounced as [k], unless it is followed by something that sounds like [e] or [i]. In such case the pronunciation changes into [ts]. Therefore “c” turns into [ts] if it is put before “e”, “i”, “y”, “ae”, or “oe” (the last two are both pronounced as long [e:]). A “c” at the beginning of the word is subject of the similar rules. If found at the end (like in *lac*), it is pronounced as [k].

Examples: *scatula* [skatula], *tinctura* [tinktura], *calvaria* [kalvaria], *clavicula* [klavikula], *fascia* [fastsia], *cellula* [tselula], *orificium* [orifitsium].

CH

Consonant combination “ch” turns in English pronunciation of Latin usually into [k] therefore *trachea* renders [trake:a], but in medieval Latin it is a sound very much like