



“LEXIC-SEMANTIC TRANSLATION OF SCIENTIFIC MEDICAL DOCUMENTS ”

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ABSTRACT

This article is about learning lexic and semantic translation of scientific medical documents. The information in this article will be used for improving the knowledge in the medical science

When translating medical documents and texts, the translator should know the way of lexic-semantic translation, which is very important to reach the target translation for readers. Lexic-semantic translation is that translating medical texts in the context according to their meaning. However, as mentioned above, translating medical texts is considered difficult because it requires high experience and knowledge from the medical translators. They must know all medical terminologies. So, in the medical translation, medical terminology cannot be ignored. In medical translation, it is very important to know medical terms, their origins, its roots, such as prefixes and suffixes.

Medical terminology is the special vocabulary developed over time for use by physicians to “accurately describe the human body and associated components, conditions, processes and procedures in a science based manner.” Medical terminology has also been defined as “the science which deals with the investigation, arrangement and construction of medical terms.” It is this second definition that has developed the corpus described in the first definition, the roots of which can be found in the historical records of medical history. Although the history of medicine is quite long, virtually as long as human history itself, modern medical terminology rests primarily upon a Greek and Roman foundation.

Medical students need to take a systematic approach to medical word building and term comprehension. In order to facilitate the building of this knowledge, students will first need to become familiar with the most common word roots, prefixes, and suffixes. In brief, a word root is a component derived from a source language such as Greek or Latin, and usually describes a body part. A prefix is a segment that can be added to the front of a term to modify a word root by giving additional information about the location of an organ, the number of parts, or time involved. Suffixes are segments attached to the end of a word root to add meaning such as condition, disease process, or procedure. If students can learn and understand the origins of medical terms and realize



that complex words are just an assembly of smaller components, then building a medical vocabulary becomes much easier.

In the tables below, I have arranged information into a simple format (segment, root, example) and in small-sized chunks for easier acquisition. I suggest medical students study each table in turn, employing whatever learning strategies work best for them, and endeavor to make more word associations with each primary root, prefix or suffix to anchor these most common segments in their memories. Later, when coming across new medical terms, students should first de-construct the term and examine its various parts for the segments they are familiar with and attempt to formulate a meaning; of course, when time permits, they should also check an appropriate medical dictionary for accuracy.

Word roots

A good place to start is with root words for major parts of the human body and for descriptors. The following tables contain sets of common terms 5 for body parts . It is important that students pay particular attention to how the Greek or Latin root is used in the formation of the example medical term shown at the end of each row; in these examples, the root word is used as the head of the medical term with a suffix added to indicate a particular function, event or disease.

Word roots for body parts

| Body element | Greek root | Lotin root | Example |
|--------------|------------|------------|------------------|
| Abdomen | Lapar(O) | Abdomen | Laparoscopy |
| Artery | Arterie(o) | - | Arteriosclerosis |
| Blood | Hemat | Sangui | Hammorage |
| Blood clot | Thromb (o) | - | Thromboembolism |
| Bone | Osteo | - | Osteoarthritis |
| Brain | Encephala | Cerebr(o) | Encephalitis |

Root words for body parts

| Body element | Greek root | Lotin root | Example |
|------------------------------|------------|------------|-------------|
| hroat (upper throat cavity) | Pharyng | | Pharyngitis |
| Throat (lower throat cavity) | laryng(o) | | Laryngitis |
| Tooth | odont(o) | Dent | Dentist |
| Tongue | Glott | lingu(a) | Glossitis |

Root words for human body parts

| Body element | Greek root | Lotin root | Example |
|--------------|------------|----------------|------------|
| Kidney | Neprho | Ren | Renal |
| Liver | Hepat | - | Hepatitis |
| Lungs | Pneumon | Pulmoni /pulmo | Pneumonia |
| Mind | Psych | | Psychology |



Students should first learn to examine the whole medical word and then break it down into its various parts. For example, the term “pancytopenia” should first be broken down into its component parts - “Pancyto- penia” - and then the meaning can be determined. In this example, “pan” means all or total, “cyto” refers to cells, and “penia” indicates a deficiency. So the definition of pancytopenia is a deficiency of all blood cells. For another example, “lipodystrophy” can be broken down into “lipo” referring to fat, “trophy” is about growth or development, and “dys” here means an abnormality. Therefore, lipodystrophy can now be understood as an abnormal development of fat. Another approach involves breaking down the medical term by evaluating the meaning of the suffix first, then prefix, and finally the word root. This will generally produce a reasonable understanding of the term’s meaning. Of course, when in doubt, the result should be verified by a medical terminology dictionary.

Finally, students need to be aware of another general rule of medical terminology. That is, when more than one body part is used in the formation of a medical term, the individual word roots are joined together by using the combining form using the letter “o” to indicate the joining together of various body parts. For example, an inflammation of the stomach and intestines would be written as *gastro* and *enter* plus *itis* to form the term “gastroenteritis”. In this example, the “o” signals the joining together of the two body parts.

When translating medical texts by means of lexico-semantic meaning, there are two main translation techniques: direct translation techniques and oblique translation techniques.

Direct Translation Techniques

Direct translation occurs when there is an "exact structural, lexical, even morphological equivalence between two languages", only possible when the two 40 languages are very close to each other²³. These translation procedures are borrowing, calque and literal translation.

Borrowing in translation does not refer to the words borrowed "officially", but mostly to the ones that are unknown to the reader. The sentence uses two different terms for the concept described. At the beginning, we have "tomografie computerizata." which in English would be "computed tomography". Nevertheless, the abbreviation given in parenthesis is "CT". which is actually the English abbreviation for "computed tomography." Irrespective of the purpose, this is clearly an instance of borrowing. The problem in this case is with borrowing abbreviations, since a reader without any medical or linguistic background regarding English language would not know what the abbreviation stands for and where it comes from.

Oblique translation technique

According to Molina and Hurtado Albir, “oblique translation occurs when word for word translation is impossible”. The oblique translation procedures are transposition, modulation, equivalence and adaptation. By means of transposition, the sequence of different parts of speech is changed during translation: for example, in the table above, the expression "neurological disorders" is translated in Romanian ²³ Lucia Molina and Amparo Albir.

The technique also consists in replacing a grammatical category in the source language by another in the target language, without changing the meaning of the message. For example, "hand



stitched" in English - noun and participle becomes Romanian "cusut la'de mana" - participle and adverbial phrase, and the meaning stays the same.

To sum up, Medical term is an important skill that medical students need to master early in their studies. When translating medical texts by means of lexico-semantic meaning, there are two main translation techniques: direct translation techniques and oblique translation techniques. And, they will help to understand the full meaning of medical terms

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