Medical Language &
Medical Terminology

English for Medical Profession
(499508)

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History of medical language

- Read this article:
  “The language of medicine”  โดย Henrik R. Wulff

Medical Language

- The Greek Era
- Medical Latin
- National Medical Languages
- Medical English

[Image of Hippocrates]
Greek alphabets and Diphthongs

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*Little authorities: Reinhold: οὐδὲ ἐν τῇ λίγῃ κατάστασις*

http://utilis.net/hippo.htm

The Hippocratic Oath

I swear by Apollo Physician and by Asclepius and by Cæsareus and by all the gods and goddesses, making them my witnesses, that I will fulfill according to my ability and judgment this oath and this covenant:

To hold him who has taught me this Art, as a partner of life, in business of health, and will not talk of his secrets, but will preserve them as he would the eyes of his own soul.

I will respect the sacredness of feminine life and will not give to a woman an abortive remedy. I will not cut for pus. I will do no greater harm to the patient than is necessary.

I will not neglect the opportunities of treatment and will provide freely and for nothing and in particular at the time of4parturition of woman, and in the time of the woman child and in the case of abortion and in the case of smallpox and in the case of natural deaths. I will not give to a woman an abortive remedy, in purity and holiness I will keep my life and my art.

I will keep to myself all things that are made known to me in the business of health and healthlikeness according to the law of healing. I will keep this oath until the end of my life.

For to me, a physician, to transgress this oath is anathema.

http://utilis.net/hippo.htm

05/01/58
Medical Language

- **Dyspnea (or dyspnoea)**
  - **Greek**: δύσπνοια, δύσπνοια
  - **Latin**: dyspnoea
  - **shortness of breath** (SOB), or **air hunger**, is the subjective symptom of breathlessness.

- **Diarrhea (or diarrhoea)**
  - **Greek**: διάρροια, from δια *dia* "through" + ρέω *rheo* "flow" meaning "flowing through"

Greek Medicine

- Greek Medicine from the Gods to Galen

- Greek Words in the Modern English Medical Vocabulary
Classical Latin alphabet contains 21 letters

Letters: J, U, W, Y, Z have been added later

Aulus Cornelius Celsus
- A Roman writer
- De medicina octo libri
- The first translation of Greek medical terms into Latin
  - Imported a few Greek terms directly
  - Latinized Greek words
  - Translated Greek terms into Latin
- The Eight Books of Medicine

Example
- πυλωρός (pyloros); pulōros = pylorus
- εἰλεός (eileos) = lleus = ileus (bowel)
- stomachus = stomach
- brachium = upper arm
- Κυνόδοντες (kynodontes) (dog teeth);
  dentes canini = canines
- Τυφλόν (typhlon) (blind); caecum
  = cecum or caecum
"An Anatomical Exercise on the Motion of the Heart and Blood in Living Beings"

William Harvey

De corporis humani fabrica libri septem
(Seven books on the fabric of the human body)

Andreas Vesalius
(1514-1564)

Opera of Hippocrates and Galen
edited by Renatus Charter, 1678-1679

The library's acquisition of this ten-volume set of parallel Greek and Latin texts completed its collection of Greek originals of Hippocrates and Galen's works.

Hippocrates, The Writings of Hippocrates and Galen [1846]
Epitomised from the Original Latin translations,
by John Redman Coxe
(Philadelphia: Lindsay and Blakiston, 1846)

Author: Hippocrates
Author: Galen
Translator: John Redman Coxe
Historical Root of Languages

- Proto-Indo-European
  - Germanic
    - West Germanic → English, German, Dutch
  - Italic (Romance)
    - Latin → French, Italian, Spanish, Portuguese

Indo-European Language Tree

Languages marked with a dagger (†) are extinct.

Proto-Indo-European

Saturan languages

Italic

Celtic

Germanic

Indo-Iranian
Historical Root of Languages

- ภาษาไทย อยู่ในตระกูลภาษาไท-กะได (เป็นตัวโดยมีรากภาษาบาลีและสันสกฤต) และมีคำที่มีรากศัพท์มาจากภาษาบาลีและสันสกฤตด้วย
  - Indo-Iranian
  - Indo-Aryan → Sanscrit, Pali

Indo-Iranian
- Indo-Aryan → Sanscrit, Pali

National Medical Languages

- Especially French, German, English used for international communication
- Most derived from Medical Latin
- Germanic languages (German, Dutch, Scandinavian): often imported directly with correct Latin endings
  - nervus musculocutaneous
  - ulcerus ventriculi
- Romance languages (French, Italian): usually “naturalized”
  - le nerf musculo-cutané
  - l’ulcère gastrique
- English (Germanic language): tends to follow the Romance pattern except in placing the adjective before the noun
  - the musculocutaneous nerve
  - gastric ulcer
  - -abilis = -able; -ivus = -ive; -osus = -ous; -orius = ory

Exceptions

- English direct-loaned words from Latin
  - Medulla oblongata
  - Diabetes mellitus
- German: from naturalized Latin terms
  - Die Koronararterien (Arteriae coronariae)
- German: from translated Latin terms
  - Koronar- oder Herzkrankgefäβ (coronary vessel)
  - Magengeschwür (ulcus ventriculi, gastric ulcer)
Medical English

English Medical Terminology
- Terms built from Greek and Latin word parts
  - prefix (อุปสรรค, คำเสริมหน้า)
  - suffix (อาคม, ปัจจัย, คำต่อท้าย)
  - word root and combining form
- Terms NOT built from Greek and Latin word parts:
  - English modern language, acronyms, eponyms, and other languages

Prefixes
- ab-
- ad-
- anti-, contra-, counter-
- brady-, tachy-
- neo-
- hyper-, hypo-
- intra-, extra-, inter-, para-, peri-, juxta-
- super-, supra-, epi-, infra-, sub-
- poly-

Suffixes
- -algia, -algesia
- -itis
- -oma
- -logy, -iatrics, -iatry, -logist, -ian
- -ase
- -ectomy, -tomy
- -emia, -hemia
- -plasty, -rhaphy, -stomy
- -scope, -scopy, -graph, -graphy, -gram etc.
Word roots – combining forms

- Adenocarcinoma
  - Aden/o + carcin/o + -oma
- Choledocholithiasis
  - Choledoch/o + lith + -iasis
- Erythrocyte
  - Erythr/o + -cyte
- Pathology
  - Path/o + -logy
- Pediatrics, pediatrician
  - Ped/o + -iatrics ; -ian
- Podiatry, podiatric medicine, podiatrist
  - Pod/o + -iatry ; -ic ; -ist

To coin a new medical term

- Most of terms composed of Greek rather than Latin roots
  - Nephrectomy – excisio renis
  - Ophthalmoscopy – insectio oculorum
  - Erythrocyte – Cellula rubra
- Prefix – Suffix
  - Hyper- [Greek ūnép- ] & Super- [Latin] = over
  - -itis [Greek -ιτις ]; -oma [Greek -ωμα ]
- Greek – Latin hybrid
  - Hypertension: “Hyper” + “tension”
    - Ancient Greek unia (huper, “over”).
    - From Middle French tension, from Latin tensionem (stretching)

English modern language

- Contemporary, ordinary words
  - Bypass operation, clearance, screening, scanning
- Advance in science and technology for diagnosis and treatment
  - PET scan
  - LASER, laser
- New drugs, generic name and trade name
  - Epinephrine – Adrenalin® (Parke-Davis)

English modern language

- Contemporary, ordinary words
  - Bypass operation, clearance, screening, scanning
- Advance in science and technology for diagnosis and treatment
  - Positron emission tomography (PET scan)
  - Light amplification by stimulated emission of radiation (LASER, laser)
- New drugs, generic name and trade name
  - Epinephrine – Adrenalin® (Parke-Davis)
Eponyms

- Synonym: namegiver
- Possessive form ending with ‘s is becoming less common
- Down syndrome
  - John Langdon Down, English physician
- Parkinson syndrome
  - James Parkinson, English physician
- Alzheimer’s disease
  - Alois Alzheimer, German psychiatrist & neuropathologist
- Babinski sign
  - Joseph Babinski, French neurologist of Polish origin

Acronyms, Abbreviations

- Appear both with and without periods
- AIDS = acquired immunodeficiency syndrome
- AML = acute myelogenous leukemia
- CT = computed tomography
- ERCP = endoscopic retrograde cholangiopancreatography
- PTCA = percutaneous transluminal coronary angioplasty
- In prescription: Rx
  - Vitamin B 1 tab. p.o. t.i.d p.c. & h.s.
  =Recipe 1 tabella per os, ter in die, post cibos et hora somni
  =Take 1 tablet of Vitamin B by mouth three times per day after meals and at bedtime.

Key words

- ถูกต้อง (correct, accurate)
  - ตัวสะกด การอ่านออกเสียง ความหมาย คำจำกัดความ
- ตรงกัน (relevant, consistent)
  - ความเข้าใจ การสื่อความหมายระหว่างกัน
- เป็นกลาง (universal)
  - ภาษาอังกฤษ ภาษาไทย ภาษาอื่นๆ ที่เข้าใจดีเช่นกัน

Homework

- Exercise: Medical language and terminology
  - English → Thai
  - Thai → English
  - Meaning and pronunciation
- Understanding medical words MedlinePlus:
- Free online medical dictionary:
  http://www.dictionary.com