Latin and Greek in Scientific Terminology, Lecture 2

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# Introduction

## Last Time

* Examined the content of the course (everything is on the syllabus).
* Went through the Greek alphabet (we will be looking at its transliteration today).
* Introduced common Greek prefixes.
* Looked at Turmezei (2012).

## This Class

* Learning how to read Greek using words you already know.
* Looking at adjective-forming suffixes.
* Introducing more base forms.
* Examining compound suffixes.

## Turmezei (2012)

* Explained that about 89 per cent of anatomical vocabulary comes from Greek and Latin.
  + Breakdown: Classical Latin (62%), Classical Greek (24%), Old English (7%), Post-Classical Latin (3%), other (4%).
* Gives you a sense of how words are formed through various examples.

## Learning Strategies

* Flashcards are really good for memorizing vocabulary.
* Speaking words aloud can make them easier to recall.
* Rehearse vocabulary even in spare moments (on the bus, in the shower, while you’re doing the dishes).
* Make sure you think about meaning. When you’re learning the elements of a word and its definition, consider what the elements of a word have to do with its meaning. This way, your recall will be better and the you’ll remember the word for longer.

# The Greek Alphabet

## Α α

alpha > a

## Β β

beta > b

## Γ γ

gamma > g (*hard*)

## Δ δ

delta > d

## Ε ε

epsilon > e (*short*)

## Ζ ζ

zeta > z

## Η η

eta > e (*long*)

## Θ θ

theta > th

## Ι ι

iota > i

## Κ κ

kappa > c *or* k

## Λ λ

lambda > l

## Μ μ

mu > m

## Ν ν

nu > n

## Ξ ξ

xi > x

## Ο ο

omicron > o (*short*)

## Π π

pi > p

## Ρ ρ

rho > r *or* rh

## Σ σ/ς

sigma/final sigma > s

## Τ τ

tau > t

## Υ υ

upsilon > y *or* u

## Φ φ

phi > ph

## Χ χ

chi > ch *or* kh (*hard*)

## Ψ ψ

psi > ps

## Ω ω

omega > o (*long*)

# Reading Greek

## What do these words look like?

* Note: γ before γ, κ, ξ, or χ becomes *n*, not *g*:
  + σπόγγος = *spongos* (sponge)
  + πλαγκτόν = *plankton*
  + λάρυγξ = *larunx* (larynx)

## Rough Breathing

* When a word has what appears to be an opening single quotation mark above a letter, it uses an h- sound.
  + ἱπποπόταμος = *hippopotamos* (hippopotamus)
  + ἁρμονία = *harmonia* (harmony, agreement)
  + διάῤῥοια = *diarrhoia* (diarrhoea)

## ἀήρ

* aēr (air, as in aerodynamics)

## ἀέριος

* aerios (aerial)

## ἄλφα

* alpha

## Ἀμαζών

* Amazōn

## ἀμνησία

* amnēsia

## ἀμφίβιος

* amphibios

## ἀνά

* ana (again)

## ἀνάθεμα

* anathema (accursed)

## ἀναισθησία

* anaisthēsia (anaesthesia)

## ἀνάλογος

* analogos (proportionate)

## ἀναλφάβητος

* analphabētos (uneducated)

## ἀνάμνησις

* anamnēsis (recollection)

## ἀνατομία

* anatomia

## ἀναχρονισμός

* anakhronismos (wrong time reference): anachromism

## ἄνθραξ

* anthrax

## ἄνθρωπος

* anthrōpos (human being)

## ἀνταρκτικός

* antarktikos (Antarctic)

## ἀντί

* anti (opposite)

## ἀντίδοτον

* antidoton (antidote)

## ἀπολογία

* apologia (apology)
* apo = ‘away’
* -logia = denoting a subject of study or interest (psychology)

## ἀρθρίτις

* arthritis (inflammation of the joint; *arthron* = joint)

## Ἀκαδημία

* Akadēmia (gymnasium near Athens where Plato and his successors taught, school of philosophy founded by Plato)

## ἄρκτος

* arktos (bear, Ursa Major, pole star)

## ἀσθένεια

* astheneia (weakness): asthenia

## ἄσθμα

* asthma

## Ἀσία

* Asia

## ἀσπάραγος

* asparagos

## ἀστήρ

* astēr (star): asteroid

## Ἄτλας

* Atlas

## ἄτομος

* atomos (indivisible): atomic

## αὐθεντικός

* authentikos (original): authenticity

## αὐστηρός

* austēros (harsh): austerity

## αὐτοψία

* autopsia (from *autoptēs* ‘eyewitness’, from *autos* ‘self’ + *optos* ‘seen’)

## Ἀφροδίτη

* Aphroditē (literally ‘foam-born’, from *aphros* ‘foam’): aphrodisiac

## βακτήριον

* bactērion (staff, cane)

## βαπτίζω

* baptizō (dip, immerse): baptize

## βάρβαρος

* barbaros (stranger): barbarian

## βάρος

* baros (weight): barometer, millibar

## βιβλίον

* biblion (book): bibliography, bibliomania, Bible

## βίος

* bios (life): biology

## βλάσφημος

* blasphēmos (evil-speaking): blaspheme

## βορέας

* boreas (north): hyperborean, an inhabitant of the extreme north

## γάμμα

* gamma: gamut (from *gamma ut*)

## γένεσις

* genesis (birth): gene, genetic

## γῆρας

* gēras (old age): geriatric

## γλωσσίς

* glōssis (tongue): polyglot

## γυνή

* gunē (woman): gynecology, misogynist

## δαίμων

* daimōn (deity, genius): demon

## διάβολος

* diabolos (accuser, slanderer): devil, diabolic

## διάκονος

* diakonos (servant): deacon

## ἐλαστικός

* elastikos (elastic)

## ἕλιξ

* helix (spiral ornament): helicopter

## ἔλλειψις

* elleipsis (ellipse, from elleipein, ‘leave out’): ellipsis

## ἔμφασις

* emphasis

## ἐνέργεια

* energeia (energy)

## ζῷον

* zōon (animal): zoology

## ἦθος

* ēthos (moral): ethics

## ἥλιος

* helios (sun): helium, heliotropism

## δέλτα

* delta

## θέσις

* thesis (placing, a proposition)

## θεραπεία

* therapeia (healing): therapeutics

## θερμός

* thermos (hot): hypothermia, thermal

## θησαυρός

* thēsauros (storehouse, treasure): thesaurus, treasure

## θρόνος

* thronos (an elevated seat): throne

## θέατρον

* theatron (a place for viewing, especially a theatre)

## ἴππος

* hippos (horse): hippodrome, hippopotamus

## ἱστορία

* historia (history)

## κίνημα

* kinēma (movement): cinema, cineamatic

## κλῖμαξ

* klimax (ladder): climax

## κόσμος

* kosmos (order, the universe, ornament): cosmetic, cosmology, cosmic, cosmopolitan

## κρυπτός

* kruptos (hidden)

## δίλημμα

* dilēmma (di- ‘twice’ + lēmma ‘premise’)

## λόγος

* logos (thought, word): pathology (from *pathos*, ‘suffering, disease’), analogy, geology, catalogue

## μαθηματικός

* mathēmatikos (fond of learning): mathematical, polymath

## μακρός

* makros (long): macrobiotic, macroeconomics

## μανία

* mania (madness, passion, frenzy): manic

## μέθοδος

* methodos (following after, pursuit, method, system): method, methodical, Methodist

## μικρός

* mikros (small): micron, microscope

## νάνος

* nanos (dwarf): nanometry, nanosecond, nanotechnology

## ναυτικός

* nautikos (sailor, ship): aeronautics, astronaut, nautical

## νέκταρ

* nektar (drink of the gods): nectar

## νέος

* neos (new, young): neologism, neophyte

## νεῦρον

* neuron (nerve, sinew): neurology

## νίκη

* nikē (victory)

## πρόγραμμα

* programma (proclamation, agenda): programmer, program

## πρό

* pro (before): prologue

## σοφία

* sophia (knowledge, wisdom): philosophy

## στροφή

* strophē (turning): catastrophe (from cata-, 'down')

## σύμβολον

* sumbolon (symbol): symbolic, symbolism

## σύστημα

* sustēma (system): systematic

## τἣλε

* tēle (afar, far off): telegram, telephone, television

## τοξικόν

* toxikon (poison): toxic, toxicology

## τόπος

* topos (place): dystopia, topology, utopia

## τρόπαιον

* tropaion (monument of an enemy's defeat): trophy

## τροπικός

* tropikos (of the turning of the sun): tropical, tropics

## τοπικός

* topikos (of or pertaining to τόπος a place): topic, topical

## ὕπέρ

* huper (above, super-): hyperactive, hyperbole

## φαντασία

* phantasia (imagination): fantasy, fantastic, fantasia

## φοβία

* phobia (irrational fear, fear)

## φωνή

* phōnē (voice): phoneme, phonetic, phonograph, telephone

## χάος

* khaos (vast chasm, void): chaos, chaotic, gas (with Dutch g representing Greek kh)

## χαρακτήρ

* kharaktēr (character)

## ψεῦδος

* pseudos (false, a falsity); pseudonym, pseudoscience

## ὥρα

* hōra (season, hour): horology, horoscope

# Practice

## [The Neanderthal Meal: A New Perspective Using Faecal Biomarkers](http://dx.doi.org/10.1371/journal.pone.0101045)

## Words

* archaeological
* biomarkers
* cholesterol
* chromatographic
* coprostanol
* faecal
* herbivores
* isotope
* microfossils
* micromorphological
* neanderthal
* omnivorous
* palaeobotanical
* palaeodietary
* Pleistocene
* primates
* stratigraphic
* zooarchaeological

# Adjective-Forming Suffixes

## What is a suffix?

* Suffixes attach to bases, and appear at the end of the word. Like prefixes, they modify the meaning of a base, conveying a little more information.
* They differ from prefixes in their position, but also in that they determine the word’s part of speech. We will see bases that form adjectives, nouns and verbs.
* Džuganová (1998) provides a full overview of the possibilities for affixation.

## New Suffixes

* More than one suffix (or prefix) can be found in a single word.

## LOG, ‘reason’ + -ic, ‘pertaining to’ = Logic

* LOG, ‘reason’ + -ic, ‘pertaining to’ + -al, ‘pertaining to’ = logical (‘pertaining to / having to do with what pertains to reasoning’)

## -al, ‘pertaining to’, ‘like’, ‘belonging to’, ‘having the character of’

* BIO- ‘life’ + -logy, ‘science of’ + ic + al

## -an (-ian), ‘pertaining to’, ‘like’, ‘one connected with’

* amphi-, ‘both’ + BI-, ‘life’ + -ian
* PROTO-, ‘first’ + ZO-, ‘life’ + -an
* THE, ‘god’ + -logy, ‘study of’ + -an

## -ous (-ious), ‘full of’, ‘having’, ‘pertaining to’, ‘like’

* amphi- + BI-, ‘life’ + -ous
* syn- + ONYM-, ‘name’ + -ous
* HOMO-, ‘same’ + GENE-, ‘kind’ + -ous

## -ic, -tic, (-ac after -i), ‘pertaining to’, ‘like’

* GASTR-, ‘stomach’ + -ic
* STA-, ‘to stand’ + -ic
* CARDI-, ‘heart’ + -ac

## -ics, -tics, ‘art, science or study of’

* PHYS-, ‘nature’ + -ics
* GENE-, ‘to be produced’ + -tics
* PED, ‘child’ + IATR-, ‘doctor’ + -ics

## -oid, -ode, ‘like’, ‘having the shape of’

* SPHER-, ‘sphere’ + -oid
* ADEN-, ‘gland’ + -oid
* NEMAT-, ‘thread’ + -ode
* PHYLL-, ‘leaf’ + -ode

# Bases

## What is a base?

* Bases are the main part of a word, and they carry most of the word’s force. For the most part, they were originally nouns and verbs.

## ARTHR- ‘joint’, ‘speech sound’, ‘articulation’

* E.g., dys-ARTHR-ia, impairment of speech articulation

## BI-, ‘life’

* E.g., sym-BIO-sis, living together for mutual benefit

## BALL-, BOL-, BLE-, ‘to throw’, ‘to put’

* E.g., em-BOL-ism, destruction of a blood vessel by foreign matter lodged in it; em-BOLO-LAL-ia, insertion of meaningless words into speech.

## BRADY-, ‘slow’

* E.g., BRADY-LEX-ia, slowness in reading; BRADY-CARD-ia, slowness of the heart

## CRYPT-, ‘hidden’

* E.g., CRYPTO-PHYTE, a plant the produces buds underground or underwater; CRYPT-ORCH-ism; condition wherein the testes do not descend.

## DROM-, ‘running’, ‘course’

* E.g., syn-DROME, symptoms that occur together and characterize a particular disease; a-DROM-ia; failure of impulse conduction in muscles or nerves

## GE-, ‘earth’

* E.g., amphi-GE-an; living around the world; GEO-CARP-y, ripening of fruits underground (peanuts, for instance)

## HOD-, OD-, ‘road’, ‘way’

* E.g., HODO-PHOB-ia, fear of travel; UR-OD-eum, a tract for carrying urine

## MNE-, ‘to remember’

* E.g., a-MNE-sia, loss of memory; ACOU-st-a-MNE-sia, inability to remember sound; AUTO-ana-MNE-sia; history related by the patient

## MORPH-, ‘form’

* E.g., meta-MORPHO-sis; changing form; PHYLLO-MORPHO-sis; variation of leaves in different seasons

## ODONT-, ‘tooth’

* E.g., ex-ODONT-ist, a specialist in tooth extraction; pros-TH-ODONT-ia; the replacement of teeth by artificial means, a branch of dentistry

## PHOR-, PHER-, ‘to bear’, ‘to go’

* E.g., eu-PHOR-ia, exaggerated feeling of well-being; meta-PHER-y, displacement of organs

## PLEX-, ‘stroke’; PLEX-, ‘paralysis’

* E.g., apo-PLEX-y, sudden paralysis with loss of consciousness, when a blood vessel in the brain breaks or is blocked

## POD-, -PUS, ‘foot’

* E.g., CEPHALO-POD; mollusc with sucker-bearing arms on its head, such as an octopus

## PROCT-, ‘anus’, ‘rectum’

* PROCTO-LOG-y; medical specialty concerned with the anus, the rectum and the sigmoid colon

## STOL-, STAL-, -STLE, ‘to send’, ‘to contract’

* E.g., peri-STAL-sis, rhythmic contraction of the alimentary canal that sends its contents downward; ana-STAL-sis, its opposite, the same as anti-peri-STAL-sis; sy-STOLE, contraction of the heart

## STOM-, STOMAT-, ‘mouth’, ‘opening’

* E.g., STOMAT-itis; inflammation of the mouth, not the stomach; ENTERO-STOM-y; operation to form an opening into the intestine; MICRO-STOME, a small opening or orifice

## TROP-, TREP-, ‘to turn’, ‘response to stimulus’

* E.g., apo-TROP-aic; intended to avert evil; ap-HELIO-TROP-ism, turning away from the sun; TREP-omena, a genus of spiral bacteria, including *Trepomena pallidum*, which causes syphilis.

## UR-, ‘urine’, ‘urinary system’ (URE-, ‘to urinate’)

* E.g., UR-EM-ic, describes the presence of urine in the blood; UR-OD-eum, a tract for carrying urine

## BUL- (BOUL-), ‘will’, ‘volition’

* E.g., a-BUL-ia, loss of ability to make decisions

## CARDI-, ‘heart’

* E.g., MYO-CARDI-al, pertaining to the muscular tissue of the heart

## CEPHAL-, ‘head’ (enCEPHAL-, ‘brain’)

* E.g., CEPHALO-POD; pros-ENCEPHAL-on, forebrain or anterior brain vesicle of the embryo; met-ENCEPHAL-on

## CHONDR-, CHONDRI-, ‘cartilage’, ‘granule’ (orig, ‘groat (hulled grain) of wheat’)

* E.g., peri-CHONDRI-um; fibrous connective tissue covering cartilage

## DEM-, ‘people’, ‘country’

* E.g., apo-DEMI-ALG-ia; morbid dislike of home life and a desire to wander; epi-DEM-ic, occurring widely within a certain geographic area; ec-DEM-ic, of foreign origin, opp. of en-DEM-ic

## DERM-, ‘skin’

* E.g., PODO-DERM; dermal layer of a hoof; the DERM-is is between the epi-DERM-is and the subcutaneous tissues

## GAM-, ‘marriage’, ‘union’

* a-GAMO-GENE-sis, asexual reproduction; GAM-ete, a sexual cell capable of uniting with another to form a new individual, such as sperms and eggs

## LECITH-, ‘yolk’

* E.g., CENTRO-LECITH-al, having the yolk aggregated in the centre; LECITH-in describes a group of yellow-brown fatty substances first isolated in egg yolks

## OPHTHALM-, ‘eye’

* E.g., MEGAL-OPHTHALM-us or MEG-OPTHALM-us, excessive largeness of the eyes

## OST(E)-, ‘bone’

* E.g., OSTEO-DERM-ia, bony formations in the skin; OSTE-ana-GENE-sis, regeneration of bone

## PHYLL-, ‘leaf’

* E.g., PHYLLO-POD-ous, having leaflike swimming feet, as in branchiopods, (some shrimp, for instance)

## PHYT-, ‘plant’, ‘growth’

* E.g., ento-(or endo-)-PHYTE, a plant growing within another; ZOO-PHYTE, an animal resembling a plant, such as a sponge

## PLAS(T)-, ‘to form’, ‘to mould’

* E.g., hyper-PLAS-ia, excessive formation of tissue; meta-PLAS-ia, transformation of one form of adult tissue to another

## SOM-, SOMAT-, ‘body’

* E.g., SOM-ESTHE-sia, sensibility to bodily sensations; GYMNO-SOMAT-ous, having no shell or mantle, as certain molluscs

## THEC-, ‘case’, ‘sheath’

* E.g., THECA, spore or pollen case; THECA-PHORE, a structure on which a theca is borne; THEC-ODONT, having teeth in sockets

## THERM-, ‘heat’

* E.g. a-dia-THERM-ancy, imperviousness to heat waves; hyper-THERM-algesia, abnormal sensitivity to heat

## TOM-, ‘cut’, ‘section’ (enTOM-, ‘insect’)

* E.g. LITHO-TOM-ous, stone-boring, as certain molluscs

## TOP-, ‘place’

* E.g. a-TOPO-GNO-sia, lack of ability to locate a sensation accurately; OST-ec-TOP-y, displacement of a bone

## TROPH-, ‘nourishment’, ‘development’

* E.g. AUTO-TROPH, organism capable of self-nourishment; TROPHO-TROP-ism, tendency of an organism to turn towards its food supply; dys-TROPH-y; deficiency of nourishment

## ZO-, ‘animal’, ‘living being’

* E.g. ZOO-logy; ZOO-GAM-y, sexual reproduction in animals; ZOO-PHYTE

## ACOU-, (ACU-), ‘to hear’

* E.g. ACOU-smat-a-GNO-sis; inability to recognize spoken words; an-ACU-sia, complete deafness

## AMBLY-, ‘dull’

* E.g. AMBLY-CEPHAL-idae, a genus of broad-headed, nonpoisonous snakes, bluntheads; AMBLY-ACU-sia

## ANTH-, ‘flower’

* E.g. ANTHO-PHIL-ous, attracted by flowers, feeding on flowers; ex-ANTH-ema, an eruption on the skin

## CHROM-, CHROMAT-, CHRO-, ‘colour’

* E.g. meta-CHRO-sis, the change or play of colours seen in the squid, chameleon, etc.

## DACTYL-, ‘finger’, ‘toe’

* DACTYLO-LY-sis, a tropical disease in which a toe is slowly and spontaneously amputated by a fibrous ring

## DE-, ‘to bind’; DESM-, ‘binding’, ‘ligament’

* E.g. amphi-DESM-ic, furnished with a double ligament; syn-DESMO-logy, the study of ligaments; syn-DE-sis, the state of being bound together

## ENTER-, ‘intestine’

* E.g. an-ENTER-ous, having no alimentary tract; MY-ENTER-ic, relating to the muscular coat of the intestine; dys-ENTER-y

## ERG-, ‘work’

* E.g. endo-ERG-ic; relating to the absorption of heat, endothermic; ADREN-ERG-ic, activated by adrenaline

## ESTHE-, (AESTHE-), ‘to feel’, ‘to perceive’

* E.g. syn-ESTH-esia, a secondary sensation accompanying an actual perception; ACANTH-ESTH-esia, a sensation as of pricking with a needle

## GER-, GERONT-, ‘old person’, ‘old age’

* E.g. GERONTO-phobia, morbid fear of old age; GER-ODONT-ia, dentistry for the aged; GERONTO-logy

## GNATH-, ‘jaw’

* E.g. dys-GNATH-ic, pertaining to improperly developed jaws; GNATHO-THECA, the horny outer covering of a bird’s lower jaw

## GNO-, ‘to know’

* E.g. BAR-a-GNO-sis; loss of perception of weight; AUTO-TOP-a-GNO-sia, loss of ability to orient parts of one’s own body

## GRAPH-, ‘to write’; GRAM-, ‘thing written’

* E.g. DROMO-GRAPH, instrument for registering the velocity of blood current

## HEPAT-, HEPAR-, ‘liver’

* E.g. HEPAR-in, a substance or mixture of substances occurring in liver and other tissues having the property of prolonging the clotting time of blood; HEPAT-itis, inflammation of the liver

## KINE- (CINE-), ‘to move’

* E.g. a-KIN-ESTH-esia, loss of muscle sense or sense of movement; eu-KINE-sia; normal power of movement; TELE-KINE-sis; the alleged ability to move objects without touching them

## LEX-, ‘to read’

* E.g. BRADY-LEX-ia, abnormal slowness in reading; dys-LEX-ia, impairment of the ability to read

## MY-, MYS-, MYOS-, ‘muscle’

* E.g. MYO-CHROME, any muscle pigment; MY-ENTER-ic; MYO-CARDI-al

## NEPHR-, ‘kidney’

* E.g. peri-NEPHR-ium, the connective or adipose tissue surrounding a kidney

## OSM-, ‘smell’

* E.g. an-OSM-ia, absence of the sense of smell; MACR-OSM-atic, possessing a highly developed sense of smell

## THE-, ‘to put’, ‘to place’

* E.g. ALL-en-THE-sis, introduction of foreign substance into the body; meta-THE-sis, a chemical reaction in which there is an exchange of radicals

## AMYGDAL-, ‘almond’, ‘tonsil’

* E.g. AMYGDAL-itis; inflammation of the tonsils, tonsillitis; AMYGDALAE, almond-shaped structures in the medial temporal lobes of the brain, responsible for memory and emotional reactions

## ANDR-, ‘man’, ‘male’

* E.g. ANDRO-GYN-y, hermaphroditism; ERG-at-ANDR-ous, having worker-like males

## ANTHROP-, ‘human being’

* E.g. ANTHROPO-logy; ANTHROPO-MORPH-ism; ANTHROPO-PHIL-ic, showing a preference for human beings over other animals

## CHRON-, ‘time’

* E.g. HETERO-CHRON-ism, departure from typical sequence in time of formation of organs; ana-CHRON-ism

## CLAD-, ‘branch’

* E.g. HETERO-CLAD-ic, describing a communication between branches of different arteries; PHYLLO-CLAD (or CLADO-PHYLL), a green, flattened or round stem that functions as a leaf, as in cacti.

## DYNAM-, DYN-, ‘power’

* E.g. a-DYNAM-ia, loss of vital strength or muscular power, weakness; DYNAMO-MET-er, an instrument for the measurement of muscular strength

## EME-, ‘to vomit’

* E.g. hyper-EME-sis, excessive vomiting; EME-tic, having the power to evoke vomiting

## GYMN-, ‘naked’, ‘uncovered’

* E.g. GYMNO-SOMAT-ous; GYMNO-CARP-ous, with naked fruit (applicable to lichens with uncovered apothecia); GYMNO-RHIN-al, having nostril region not covered by feathers, as some birds

## GYN(E), GYNEC-, (GYNAEC-), ‘female’

* E.g. GYNECO-logy; ERG-ato-GYNE, female ant resembling a worker; GYN-ANDR-ous, having stamens fused with pistils, as some orchids; GYNECO-MAST-ia, enlargement of the mammary gland in the male

## HELIC-, HELIX, ‘spiral’

* E.g. HELIX, the rounded, convex margin of the ear; ant-HELIX, the curved ridge of the pinna just anterior to the helix

## HYDR-, ‘water’, ‘fluid’

* E.g. HYDR-ARTHR-osis, accumulation of fluid in a joint; HYDRO-TROP-ism, response to the stimulus of water

## IATR-, ‘physician’, ‘medical treatment’

* E.g. PSYCH-IATR-y; POD-IATR-ist; IATRO-GEN-ic, induced by a physician; effect of physician’s words or actions upon a patient

## MELAN-, ‘black’, ‘dark’

* E.g. MELAN-CHOL-y; MELAN-in, a dark brown or black animal or plant pigment; MELAN-IDR-osis, a form of chromhidrosis in which the sweat is dark coloured or black

## NECR-, ‘corpse’, ‘dead tissue’

* E.g. NECRO-TOX-in, a toxin produced by the death of cells; NECRO-PHAG-ous, eating carrion

## OLIG-, ‘few’, ‘scanty’

* E.g. OLIG-ANDR-ous, having few stamens; OLIGO-HYDR-UR-ia, urine with a relative diminution of water, highly concentrated urine

## PAED- (PED-), ‘child’ (-pedia, ‘instruction’)

* E.g. PED-AGOG-y; PED-IATR-ics; PEDO-MORPH-ic, pertaining to retention in the adult of youthful and juvenile characteristics

## PHAG-, ‘to eat’

* E.g. PHAGO-CYTE, colourless blood corpuscle which tends to ingest foreign particles; PHYLLO-PHAG-ous, feeding on leaves

## PHIL-, ‘to love’, ‘have an affinity for’

* E.g. GEO-PHIL-ous, living on or around earth; POLY-CHROMATO-PHIL-ism, capacity to be stained with more than one dye

## POLY-, ‘many’, ‘much’

* POLY-ESTH-esia, an abnormality of sensation in which a single touch is felt in two or more places at the same time; POLY-PHAG-ous, eating various kinds of food; POLY-POD, furnished with many feet or legs

## TARS-, ‘instep’, ‘edge of the eye’

* E.g. TARS-ALG-ia, pain, especially of neuralgic character, in the tarsus of the foot; TARSO-PLAST-y, plastic surgery of the eyelid

## ACR-, ‘extremity’, ‘summit’

* ACRO-MICR-ia, underdevelopment of the extremities and of the skull as contrasted with visceral development; ACRO-GER-ia, premature aging of skin of the hands and feet

## AMYL-, ‘starch’

* E.g. AMYLO-LYSIS, the digestion of starch or its conversion to maltose; AMYLO-PLAST, a leucoplast or colourless, starch-forming granule

## BAR-, ‘weight’, ‘pressure’; BARY-, ‘heavy’

* E.g. BAR-ESTH-esia, perception of weight or pressure; BAR-ODONT-ALG-ia, dental pain occurring in individuals exposed to decreased barometric pressures such as occur in high-altitude flying, also called AER-ODONT-ALG-ia

## BLENN-, ‘mucus’

* E.g. BLENN-OPHTHALM-ia, catarrhal conjunctivitis; OLIGO-BLENN-ia, a deficient secretion of mucus

## CYT-, ‘cell’

* E.g. CHROMO-CYTE, any coloured cell; CYTO-DERM, in botany, a cell wall; CYTO-STOME, the oral aperture of a unicellular organism

## DIPS-, ‘thirst’

* a-DIPS-ia, absence of thirst, avoidance of drinking; DIPSO-phobia, a morbid fear of drinking;

## DREPAN-, ‘sickle’

* E.g. DREPANO-CYTE, a crescent-shaped cell

## ERYTHR-, ‘red’

* E.g. an-ERYTHRO-BLEPS-ia or an-ERYTH-OPS-ia, impaired colour perception of red, red blindness; ERYTHRO-PHYLL, a red colouring matter in some leaves and red algae

## GLYC-, ‘sugar’; GLYCOS-, ‘sugar’, ‘glucose’

* GLYCO-LYSIS, the process of conversion of carbohydrate in tissue into pyruvic acid or lactic acid; hyper-GLYCOS-UR-ia, the presence of excessive amounts of sugar in the urine [note: the def. in your textbook is mistaken!]

## HIST-, HISTI-, ‘tissue’

* E.g. HISTO-KINE-sis, movement that takes place in the minute structural elements of the body; HISTO-meta-PLAS-tic, causing the transformation of one tissue into another type

## HYSTER-, ‘uterus’, ‘hysteria’

* E.g. HYSTER-ia; HYSTERO-TOM-y, incision of the uterus

## ICHTHY-, ‘fish’

* E.g. ICHTY-ODONT, a fossil fish tooth; ICHTHYO-TOX-ismus, food poisoning from fish

## IRID-, IRIS-, ‘iris’, ‘rainbow’

* E.g. IRIDO-CYTE, a special cell responsible for the iridescence (!) of many fishes; IRIDO-dia-LY-sis, the separation of the iris from its attachments; IRIDO-KINE-sia, any movement of the iris; IRIDO-PLEG-ia, paralysis of the sphincter pupillae of the iris

## ISCH-, ‘to suppress’

* E.g. ISCHO-MEN-ia, suppression of the menstrual flow; ISCH-UR-ia, retention or suppression of the urine

## LAPAR-, ‘abdomen’, ‘soft part of the body between the ribs and abdomen’

* E.g. LAPARO-TRACHELO-TOM-y; low caesarian section

## LIP-, ‘fat’

* E.g. LIPO-CHROME or CHROMO-LIPO-id, any one of the group of fat-like substances containing a pigment or colouring matter and occurring in natural fats such as egg yolks;

## MAST-, MAZ-, ‘breast’

* E.g. ACRO-MAST-itis, inflammation of a nipple; hyper-MAST-ia, overgrowth of the mammary gland; a-MAST-ia, congenital absence of the mammae

## PHREN-, ‘mind’, ‘diaphragm’

* E.g. PHREN-ic, pertaining to the mind or the diaphragm; GASTRO-PHREN-ic, pertaining to the stomach and the diaphragm, as the gastrophrenic ligament; HEBE-PHREN-ia, a type of schizophrenia characterized by extreme mannerisms, often caricaturing adolescent behaviour

## PY-, ‘pus’

* E.g. HYDRO-PYO-NEPHRO-sis, distention of the pelvis of the kidney with urine and pus; PYO-RRHE-a, a purulent discharge

## THANAT-, ‘death’

* E.g. THANTO-id, resembling death; THANATO-logy, the study of the phenomenon of organic death; THANATO-phobia, a morbid fear of death

## ACANTH-, ‘thorn’, ‘prickle’

* E.g. ACANTH-ESTHE-sia, a sensation as of pricking with needles; ACANTHO-CLAD-ous, having spiny branches

## AER-, ‘air’, ‘gas’

* E.g. AERO-CYST, an air vescicle of algae; AERO-CYSTO-SCOP-y, examination of the interior of the urinary bladder with a cystoscope, with the bladder distended with air; AERO-PHYTE, a plant which grows attached to an aerial portion of another plant

## AUT-, ‘self’

* E.g. AUT-OPS-y; AUTO-CYTO-TOX-in, a cell toxin produced against the cells of one’s own body; AUT-ODONT, designating or pertaining to teeth not directly attached to jaws, as in cartilaginous fish; AUTO-PHAG-ia, self-consumption, emaciation; biting of one’s own flesh, as in dementia

## BLEPHAR-, ‘eyelid’

* E.g. a-BLEPHAR-y, congenital absence of the eyelids; BLEPHARO-PLAST-y, operation for the restoration of the eyelids; sym-BLEPHAR-osis, adhesion of the eyelids to the globe of the eye or to each other

## CARCIN-, ‘cancer’

* E.g. CARCINO-GEN, any cancer-producing substance; MASTO-CARCIN-oma, malignant mammary tumour

## CHEIL-, CHIL-, ‘lip’

* E.g. a-CHEIL-ia, congenital absence of the lips;

## COL-, ‘colon’

* E.g. COLO-PROCTO-STOM-y, formation of a new passage between the colon and the rectum; para-COL-itis; inflammation of the tissue adjacent to the colon; PHREN-ico-COL-ic or PHRENO-COL-ic, pertaining to the diaphragm and the colon

## COPR-, ‘excrement’

* E.g. COPR-OD-aeum, the division of the cloaca which receives the rectum (cf. UR-OD-aeum); COPRO-LITH, a hard mass of faecal matter in the bowels

## CRY-, CRYM-, ‘cold’, ‘ice’

* E.g. CRY-ESTHE-sia, abnormal sensitiveness to cold

## CYST-, ‘bladder’, ‘cyst’, ‘sac’

* E.g. CYST-itis, inflammation of the urinary bladder; HEMATO-CYST; a cyst containing blood; POLY-CYST-ic, containing many cysts

## DACRY-, ‘tear’ (i.e. from crying, etc.)

* E.g. DACRYO-CYST-itis, inflammation of the lacrimal sac

## GASTR- (GASTER-), ‘stomach’, ‘belly of a muscle’

* E.g. GASTRO-POD, a mollusc with ventral muscular disc adapted for creeping; meta-GASTR-ic, pertaining to posterior gastric regions

## HELMINTH-, ‘worm’

* E.g. ant-HELMINT-ic,destructive to worms; HELMINTHO-logy, the study of parasitic worms; HELMINTH-oma, a tumour caused by the presence of a parasitic worm

## HETER-, ‘other’, ‘different’

* E.g. HETERO-CHROM-ia, a difference in coloration in two parts or structures that are normally alike, as the the irises of the eyes; HETERO-PHOR-ia, any tendency of the eyes to turn away from the position correct for binocular vision; HERTERO-PHOR-ALG-ia, pain caused by heterophoria

## HYGR-, ‘moisture’

* E.g. HYGRO-KINE-sis, movement in response to changes in humidity; HYGRO-STOM-ia, chronic salivation

## MEN-, ‘moon’, ‘menstruation’

* E.g. MENO-PAUSE; ISCHO-MEN-ia

## OT-, ‘ear’

* E.g. di-OT-ic, binaural, pertaining to both ears; OTO-CYST, in invertebrates, an auditory vesicle, otocell or otidium, or in vertebrates, an embryonic auditory vesicle; OTO-LITH, calcareous particles or platelike structures found in the auditory organ of many mammals

## PSYCH-, ‘mind’, ‘soul’

* E.g. PSYCHO-logy; PSYCH-IATR-y

## RHIN-, -RRHIN-, ‘nose’

* E.g. amphi-RHIN-al, having or pertaining to two nostrils; GYMNO-RHIN-al, with nostril region not covered by feathers, as in some birds; RHIN-ENCEPHAL-on, that portion of the cerebrum concerned with olfactory impulses; RHINO-THECA, the sheath of the upper jaw of a bird

## TAC-, TAX-, ‘to arrange’, ‘to put in order’

* E.g. , ANTHO-TAX-is, arrangement of flowers on an axis; PHYLLO-TAX-is, arrangement of leaves on an axis or stem; a-MYO-TAX-ia, muscular ataxia or incoordination of spinal or cerebellar origin

# Practice

## [Skeletal Morphology of Opius dissitus and Biosteres carbonarius (Hymenoptera: Braconidae), with a Discussion of Terminology](http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0032573)

## Words

* anatomical
* braconid
* braconids
* hymenopterans
* ichneumonids
* interspecific
* koinobion
* mesothoracic
* monophyletic
* parasitic
* puparium
* taxonomic

# Compound Suffixes

## What is a compound suffix?

* Compound suffixes actually contain bases within them, some of which you’ve already learned, but the appear so frequently in this form that it is useful to treat them as suffixes themselves.
  + E.g., LOG + y = -logy

## -aemia, (-emia), ‘condition of the blood’, ‘congestion of blood’

* E.g. anaemia, leukaemia, anoxaemia

## -logy, ‘science of’

* E.g. physiology, cardiology, psychology

## -lysis, ‘dissolution of or by’ (‘surgical division or separation’)

* E.g. hydrolysis, nephrolysis, electrolysis

## -mania, ‘madness for of about’

* E.g. kleptomania, dipsomania, egomania, monomania

## -pathy, ‘disease of’, ‘treatment of disease of or by’

* E.g. osteopathy, neuropathy, hydropathy

## -phobia, ‘abnormal fear of’

* E.g. claustrophobia, agoraphobia, hydrophobia

## -therapy, ‘treatment of or by’

* E.g. chemotherapy, psychotherapy, heliotherapy

## -tomy, ‘surgical operation on’, ‘surgical cutting of’

* E.g. glossotomy, gastrotomy, lobotomy

## -ectomy, ‘surgical operation’, ‘surgical removal of’

* E.g. appendectomy, tonsillectomy

## -uria, ‘condition of the urine’

* E.g. haematuria, acetonuria, noctambulminuria

## -genous, -genic, ‘producing’, ‘produced’

* E.g. photogenic, endogenous, cytogenous

## -hedron, ‘solid figure having a (specified) number of faces’

* E.g. icosohedron, dodecahedron

## -iasis, ‘diseased condition’; often refers to an infestation by parasites

* E.g. psoriasis, amebiasis, elephantiasis,

## -meter, ‘instrument for measuring’, ‘measure’

* -metry, ‘art or science of measuring’
* E.g. thermometer, anemometer, perimeter, telemetry, optometry, photometry

## -nomy, ‘science of’, ‘system of laws governing’, ‘rules for the direction of’

* E.g. agronomy, astronomy, economy, autonomy

## -oecious, ‘having a house or dwelling’

* E.g. monoecious (having male and female sex organs in the same individual), androdioecious (having perfect and staminate flowers on different plants)

## -philous, -philic, ‘loving’, ‘thriving in’

* E.g. necrophilic, anemophilous

## -plasty, ‘formation’, ‘plastic surgical operation’

* E.g. arthroplasty, anaplasty, hysteroplasty

## -rrhoea, 'flux', ‘abnormal flow or discharge of’

* E.g. diarrhoea, gonorrhoea, logorrhoea

## -stomy-, ‘the making of a surgical opening’

* E.g. gastrostomy, arthrostomy, hepaticoenterostomy

# Inflected Languages

## Inflection

* Both Greek and Latin are *inflected languages*, which means that they can express part of their meaning through a change in the final syllable of a word.

## Conjugation

* Changing the form of a verb to show its function.
* This is found to a limited degree in English.
  + I *love*, you *love*, but he *loves*.
* This is even more common in French.
  + *J'aime* means 'I love', *tu aimes* is 'you love', and so forth. The verb 'aimer' changes its form based on the person, number, mood, and tense.

## Declension

* Varying the form of a noun, pronoun, or adjective, in order to indicate grammatical number, gender, and case.

## Cases

* A form that a noun, adjective, or pronoun can take in order to express its relationship to other words in the sentence.
* There are very limited remnants of this in English:
  + *Who* must always be the subject of the sentence. ('Who is getting married?')
  + *Whom* must be the object. ('Whom did he marry?')
  + *Whose* is a possesive. ('Whose wedding is he attending?')