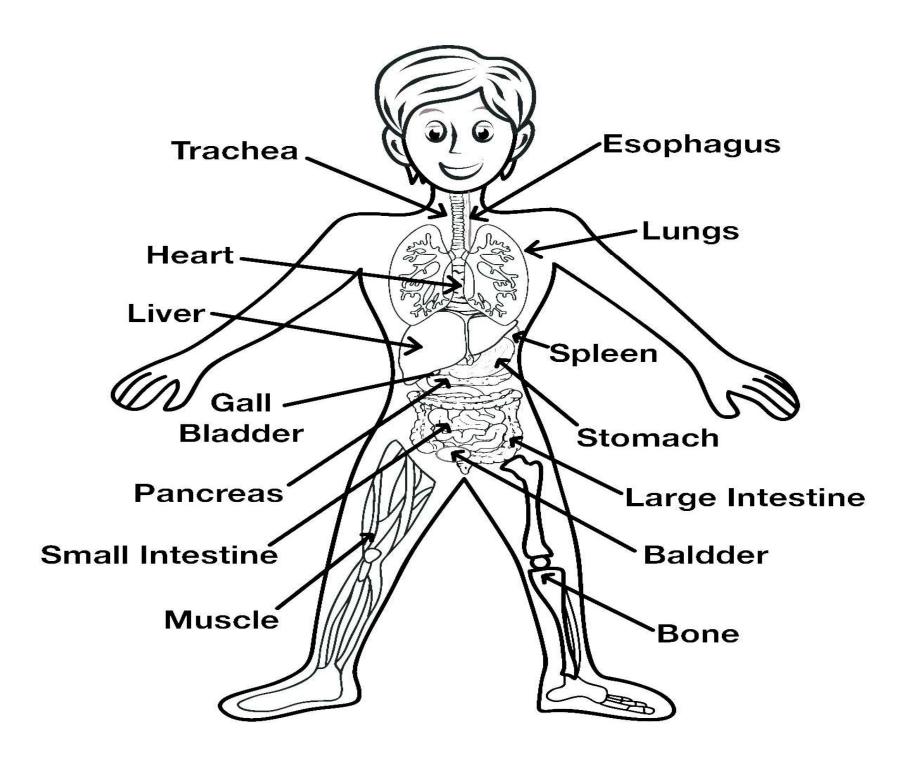
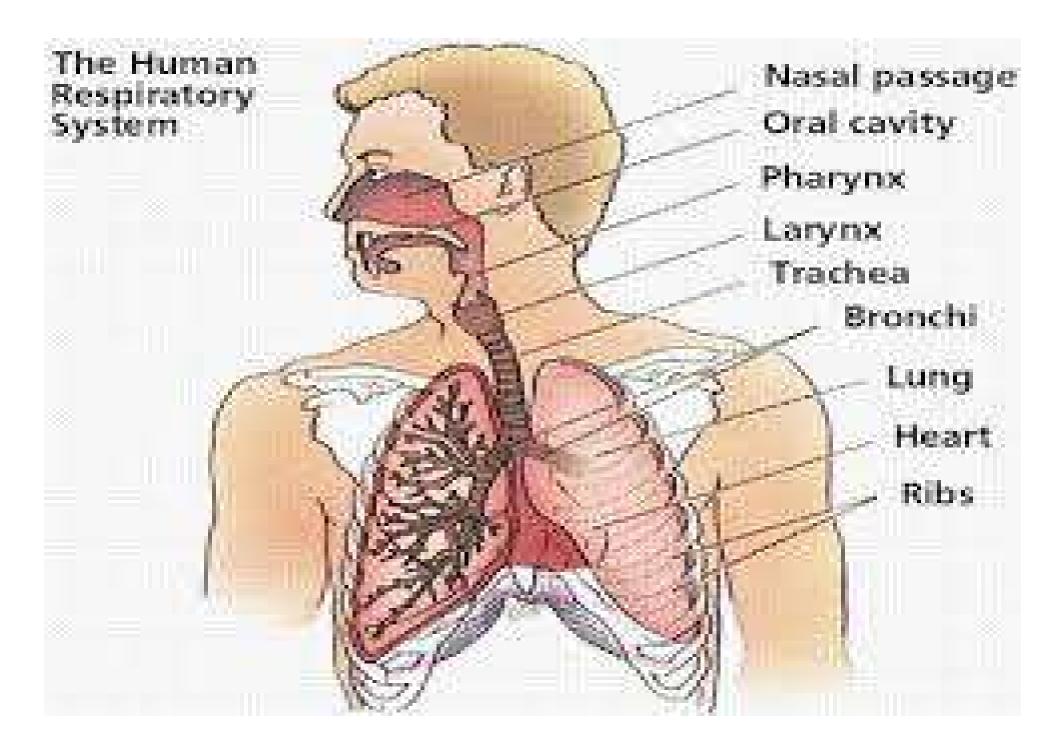
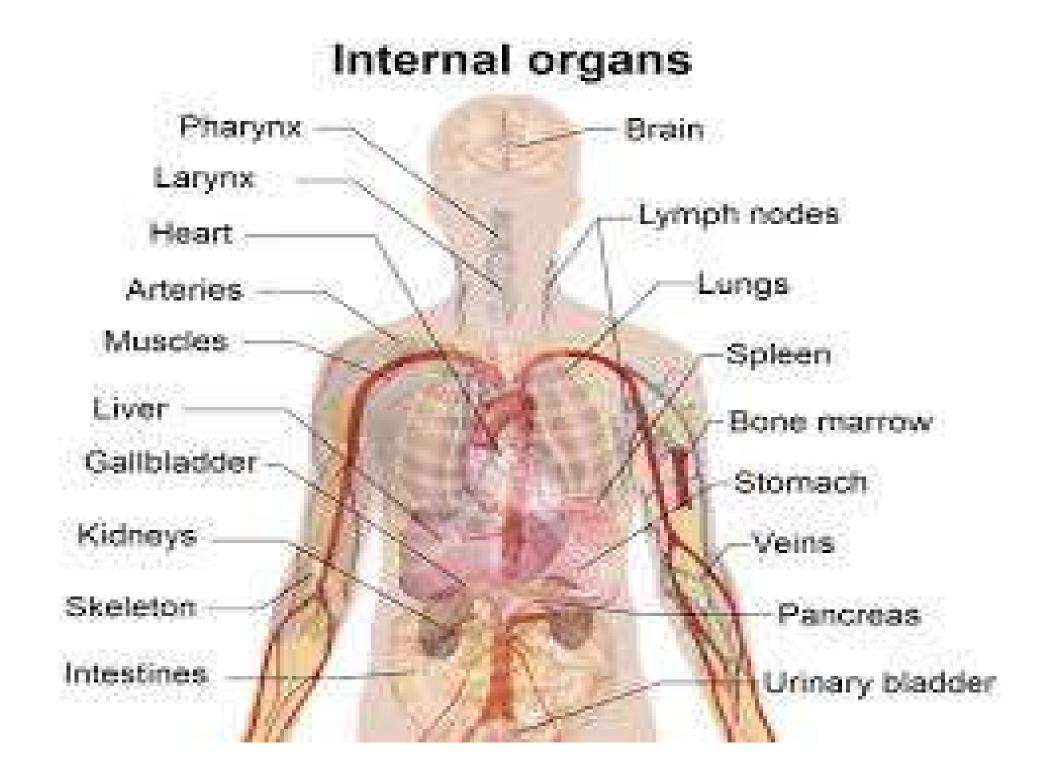
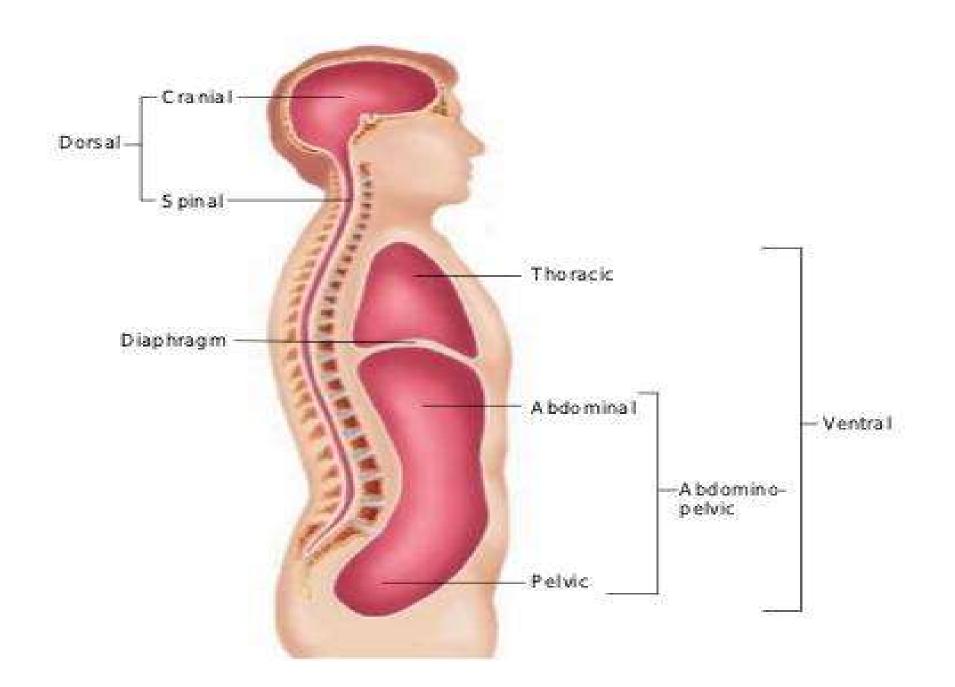
Body Structure

Dr. Shukir Saleem Msc. PhD.









Directional Terms

- Term Definition
 Abduction Movement away from the midsagittal (median) plane of the body or one of its parts.
- Adduction Movement toward the midsagittal (median) plane of the body

This section introduces combining forms, suffixes, and prefixes related to body structure. Word; analyses are also provided.

Elements	Meaning	Word analysis
cyt/o	cell	cyt/o/logist (s ⁻ i-TOL- [~] o-j [~] ist): specialist in study of cells -logist: specialist in the study of Cytologists study the formation, structure, and function of cells.
Hist/o	tissue	hist/o/logy (h˜is-TOL- ¯o-j¯če): study of tissues -logy: study of. Histology is the branch of science that investigates the microscopic structures and functions of tissues.

Elements	Meaning	Word analysis
kary/o	Nucles	kary/o/lysis (k ar- e-OL- i-s is): destruction of the nucleus -lysis: separation; destruction; loosening Karyolysis results in death of the cell.
nucle/		nucle/ar (NU-kl e- ̆ar): pertaining to the nucleus -ar: pertaining to
anter/	anterior, front	anter/ior (~an-TER- e-or): pertaining to the front -ior: pertaining to
Dors/	back (of body)	dors/al (DOR-s [~] al): pertaining to the back (of the body) -al: pertaining to

Elements	Meaning	Word analysis
infer/	lower, below	 infer/ior (~in-FER-r e-or): pertaining to a lower (structure or surface) -ior: pertaining to The inferior surface is the undersurface of a structure or organ, or a place below a structure or organ.
poster	back (of body), behind, posterior	poster/ior (p ⁻ os-TER- e-or): pertaining to the back (of the body) -ior: pertaining to

ventr	belly, belly side	ventr/al (VEN-tr ~ al): pertaining to the belly side (front of the body) -al: pertaining to
cervic	neck; cervix uteri (neck of uterus)	cervic/al (SER-v ̆ ı-k ̆ al): pertaining to the neck -al: pertaining to

Elements	Meaning	Word analysis
Lumb/	loins (lower back)	lumb/ar (LUM-b ^{~~} ar): pertaining to the loins (lower back) -ar: pertaining to
Pelv/i	pelvis	pelv/i/meter* (p ~el-V ~IM- ~e-t ~er): instrument for measuring the pelvis -meter: instrument for measuring pelv/ic (PEL-v~~ Ik): pertaining to the pelvis -ic: pertaining to
spin	spine	spin/al (SPI ⁻ -n [~] al): pertaining to the spine -al: pertaining to
umbilic	umbilicu s, navel	umbilic/al (`um-B`IL-`ı-k`al): pertaining to the navel -al: pertaining to

Elements	Meani ng	Word analysis
leuk/o	White	leuk/o/cyte (LOO-k ⁻ o-s ⁻ ıt): white cell -cyte: cell A leukocyte is a white blood cell
chlor/o	Green	chlor/opia (kl ⁻ o-RO-p ⁻ e- ^{~-} a): green vision -opia: vision
Cirrh/o	Yellow	cirrh/osis (s ĭr-RO-s ⁻ ıs): abnormal yellowing -osis: abnormal condition; increase (used primarily with blood cells)
jaund		jaund/ice (JAWN-d˘ıs): yellowing -ice: noun ending Jaundice is caused by an abnormal increase of bilirubin (a yellow compound formed when red blood cells are destroyed) in the blood.

Elements	Meani ng	Word analysis
xanth/o	Yellow	xanth/o/cyte (ZAN-th ~~ o-s-īt): yellow cell -cyte: cell
cyan/o	Blue	cyan/o/tic (s ⁻ ı- [°] an-OT- ^{°°} ık): pertaining to blueness -tic: pertaining to Cyanosis is associated with lack of oxygen in the blood.
erythr/o	red	erythr/o/cyte (~e-R~ITH-r -o-s-it): red cell -cyte: cell An erythrocyte is a red blood cell
melan/o	black	melan/oma (m el- a-NO-m a): black tumor -oma: tumor Melanoma is a malignancy that arises from melanocytes.

poli/o	gray; gray matter (of brain or spinal cord)	poli/o/myel/itis (p ol-ce-com- el-l-t is): inflammation of the gray matter of the spinal cord. myel: bone marrow; spinal cord -itis: inflammation
acr/o	Extremity	acr/o/cyan/osis (`ak-r ⁻ o-s ⁻ ı- [°] a-NO-s ^{°-} ıs): abnormal condition in which the extremities are blue cyan: blue -osis: abnormal condition; increase (used primarily with blood cells)

eti/o	causes	eti/o/logy (⁻ e-t ⁻ e-OL- ⁻ o-j ^{-~} e): study of the causes of disease -logy: study of
ldi/o	Unknown causes	idi/o/path/ic (~id-~e-~o-PATH-~~~ik): pertaining to an unknown (cause of) disease path: disease -ic: pertaining to
path/o	disease	path/o/logist (p`a-THOL-` ⁻ o-j`ıst): specialist in the study of disease -logist: specialist in the study of
radi/o	radiation, x-ray	radi/o/logist (r ⁻ a-d ⁻ e-OL- [~] [~] o-j [~] ıst): specialist in the study of radiation -logist: specialist in the study of Radiologists are physicians who employ imaging techniques for diagnosing and treating disease.

son/o	sound	son/o/graphy (s ⁻ o-NOG-r a-f ~ e): process of recording sound; also called ultrasonography -graphy: process of recording
graph	instrument for recording	radi/o/graph (RA-d ⁻ e- ⁻ o-gr ^{~-} af): instrument for recording x-rays radi/o: radiation, x-rays; bone show
graphy	process of recording	arthr/o/graphy (`ar-THROG-r`` a-f ⁻ e): process of recording a joint arthr/o: joint Arthrography is an x-ray examination of a joint, such as the knee, shoulder, or elbow, usually with the use of a contrast medium
Logist	specialist in the study of	dermat/o/logist (dčer-mča-TOL-čo-jčist): specialist in the study of the skin dermat/o: skin

Logy	Study of	hemat/o/logy (h ⁻ e-m [°] a-TOL- ⁻ o-j ^{-°} e): study of blood hemat/o: blood
meter	Heat	therm/o/meter (thřer-MOM-řře-třer): instrument for measuring heat therm/o: heat
metry	act of measuring	ventricul/o/metry (v ~en-tr~ik- ~u-LO~ M- ~e- tr ~e): act of measuring the ventricles ventricul/o: ventricle (of heart or brain)
peri	around	peri/cardi/al (p ~er-~ı-KA~ R-d~e-~al): pertaining to (the area) around the heart cardi: heart -al: pertaining to

Supper -		super/ior (soo-PE ⁻ -r ⁻ e-or): pertaining to the upper (area) -ior: pertaining to
ultra	excess , beyon d	ultra/son/ic (`ul-tr`a-SO` N-`ık): pertaining to beyond (audible) sound son: sound -ic: pertaining to Ultrasound includes sound frequencies too high to be perceived by the human ear

laparoscopy l`ap-`ar-OS-k` ⁻ o-p ⁻ e lapar/o: abdomen -scopy: visual examination	Visual examination of the organs of the pelvis and abdomen through very small incisions in the abdominal wall
thoracoscopy thor-~a-KOS-k ~~ a- p~e thorac/o: chest -scopy: visual examination	Examination of the lungs, pleura, and pleural space with a scope inserted through a small incision between the ribs Thoracoscopy is an endoscopic procedure usually performed for lung biopsy, repairing perforations in the lungs, and diagnosing pleural disease.

complete blood count (CBC)	Common blood test that enumerates red blood cells, white blood cells, and platelets; measures hemoglobin (the oxygen-carrying molecule in red blood cells); estimates red cell volume; and sorts white blood cells into five subtypes with their percentages CBC can be performed using a manual or automated method.
computed	Imaging technique achieved by rotating an x-
tomography (CT)	ray emitter around the area to be scanned and
k om-PU -t ed	measuring the intensity of transmitted rays
t o-MOG-r a-	from different angles; formerly called
f e	computerized axial tomography
tom/o: to cut	In a CT scan, the computer generates a
-graphy: process	detailed cross-sectional image that
of recording	appears as a slice.

Doppler DOP-l ^{~~} er	Ultrasound technique used to detect and measure blood-flow velocity and direction through the cardiac chambers, valves, and peripheral vessels by reflecting sound waves off moving blood cells Doppler ultrasound is used to identify irregularities in blood flow cause by blood clots, venous insufficiency, and arterial blockage.
fluoroscopy floo-or-OS-k	Radiographic technique in which x-rays are directed through the body to a fluorescent
o-p e	screen that displays continuous motion images
fluor/o:	of internal structures
luminous,	Fluoroscopy is used to view the motion of
fluorescent	organs, such as the digestive tract,
-scopy: visual examination	heart, and joints, or to aid in the placement of catheters or other devices.

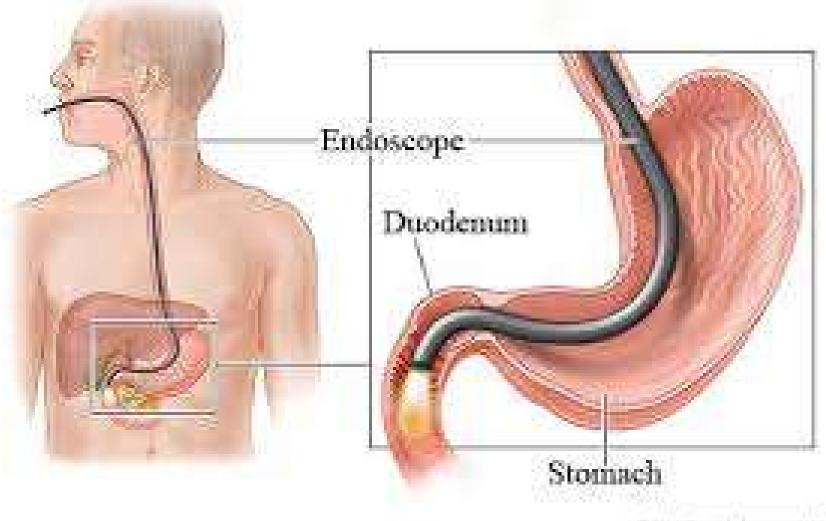
magnetic resonance imaging (MRI) m`ag-NET-˘̆ ık REZ-˘´ en-˘ans ˘IM-˘aj-˘ıng	Noninvasive imaging technique that uses radiowaves and a strong magnetic field rather than an x-ray beam to produce multiplanar cross sectional images
radiography r ⁻ a-d ⁻ e-OG-r ^{~~} a-f ⁻ e radi/o: radiation, x-ray, radius (lower arm bone on thumb side) -graphy: process of recording	Imaging technique that uses x-rays passed through the body or area and captured on a film; also called x-ray. On the radiograph, dense material, such as bone, appears white, and softer material, such as the stomach and liver, appears in shades of gray.

tomography	Radiographic technique that
t ⁻ o-MOG-r ^{~~} a-f ⁻ e	produces an image representing a
tom/o: to cut	detailed cross-section, or slice, of an
-graphy: process of	area, tissue, or organ at a
recording	predetermined depth
ultrasonography (US) ul-tr a-s on-OG-r a- f e ultra-: excess, beyond son/o: sound -graphy: process of recording	Imaging procedure using high- frequency sound waves (ultrasound) that display the reflected "echoes" on a monitor; also called ultrasound, sonography, echo, and echography

biopsy (bx) BI- ^{~-} op-s ⁻	Representative tissue sample removed from a body site for microscopic examination, usually to establish a diagnosis
needle	Removal of a small tissue sample for examination using a hollow needle, usually attached to a syringe

Endoscopy





G Haldhorph, Incorporated

Endoscopy



Stethoscope

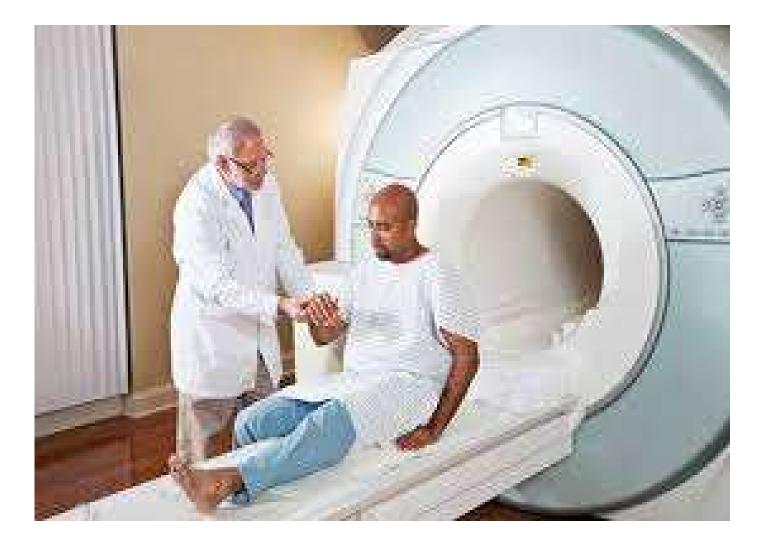


Ultrasound



magnetic resonance imaging MRI

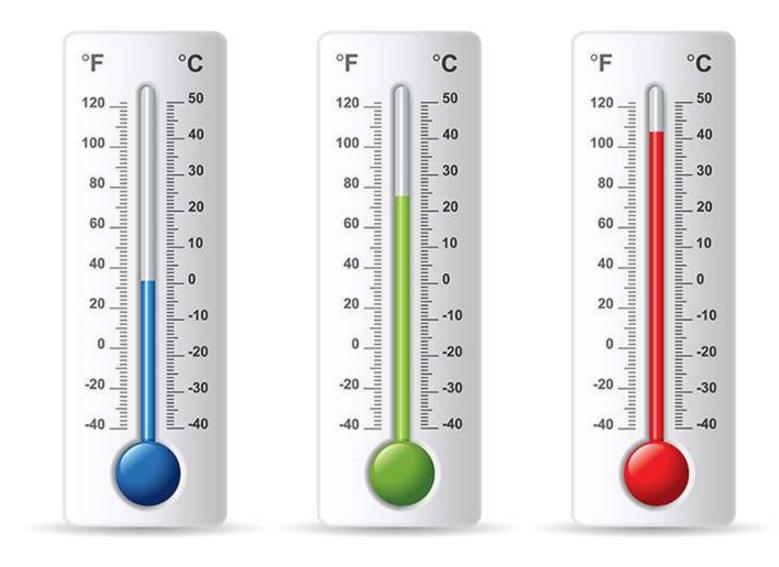




Sphygmomanometer



Thermomerter



Radiology



Terms related to gastrointestinal system

Diagnostic and Therapeutic Procedures—cont'd

- Skin graft : Surgical procedure to transplant healthy tissue by applying it to an injured site
- Allograft. (AL-⁻ o-gr aft) : Transplantation of healthy tissue from one person to another person; also called *homograft*
- Autograft (AW-t⁻ o-gr⁻aft) : Transplantation of healthy tissue from one site to another site in the same individual

Drugs Used to Treat Skin Disorders

- Antifungal : Antifungals are used to treat ringworm (tinea corporis), athlete's foot (tinea pedis), and fungal infection of the nail (onychomycosis).
- antihistamines : Inhibit allergic reactions of inflammation, redness, and itching caused by the release of histamine.
- antiseptics : Topically applied agents that inhibit growth of bacteria, thus preventing infections.

 topical anesthetics: Block sensation of pain by numbing the skin layers and mucous membranes

Abbreviation Meaning Abbreviation Meaning

Abbreviation	Meaning
Bx, bx	biopsy
ID	intradermal
BCC	basal cell carcinoma
CA	cancer
IV	intravenous
decub	decubitus (ulcer)
subcu, Sub-Q, subQ	subcutaneous (injection)
derm	dermatology
ung	ointment
I&D	incision and drainage

Gastrointestinal terms

Root	Meaning	Word analysis
gloss/o	Tongue	gloss /ectomy (gl ̆os-EK-t ¯ ̆o-m ¯ e): removal of all or part of the tongue <i>-ectomy:</i> excision, removal
cheil/o	Lip	cheil /o/plasty (KI-l o-pl ⁻ as-t ⁻ e): surgical repair of a defective lip <i>-plasty:</i> surgical repair
gingiv/o	gum	gingiv /ectomy (jĭın-jĭı-VEK-t ⁻ ĭo-m ⁻ e): excision of diseased gingival tissue <i>-ectomy:</i> excision, removal
sial/o	saliva, salivary gland	sial/o /lith (s ⁻ i-AL- ⁻ [~] o-l [~] ith): calculus formed in a salivary gland or duct <i>-lith:</i> stone, calculus

Esophag/o	esophagus	esophag/o /scope (⁻ e-SOF- ⁻ a-g ⁻ o-sk ⁻ ⁻ op): instrument used to examine the esophagus
pharyng/o	pharynx (throat)	pharyng/o /tonsill/itis (f ~ a-r ~ ing-g ~ o-t ~ on-s ~ i-LI-t ~ is): inflammation of the pharynx and tonsils <i>tonsill:</i> tonsils
pylor/o	pylorus	pylor/o /spasm (p ⁻ i-LOR- ⁻ o-sp ⁻ azm): involuntary contraction of the pyloric sphincter of the stomach, as in pyloric stenosis <i>-spasm:</i> involuntary contraction, twitching
duoden/o	Duodenu m	duoden/o /scopy (d ⁻ u- [°] od- [°] e-NOS-k ⁻ o-p ⁻ [°] e): visual examination of the duodenum <i>-scopy:</i> visual examination

enter/o	intestine	enter/o/pathy (en-t er-OP-a-th en-t en-t en-t en-t en-t en-t en-t en-t
ile/o	ileum (third part of small intestine)	<pre>ile/o/stomy (~il-~ e-OS-t ~o-m~ ~ e): creation of an opening between the ileum and the abdominal wall -stomy*: forming an opening (mouth)</pre>
Append	appendix	append /ectomy (ap-en-DEK-t - o- m e): excision of the appendix <i>-ectomy:</i> excision, removal
colon/o	Colon	colon/o /scopy (k ⁻ o-l [~] on-OS-k ⁻ o-p ^{- [~]} e): visual examination of the colon <i>-scopy:</i> visual examination

hepat/o	liver	hepat/o /megaly (h ̆ ep-̆a-t [–] o-MEG-˘a- l ¯ ˘ e): enlargement of the liver <i>-megaly:</i> enlargement
pancreat/ o	Pancreas	pancreat/o /lysis (p ̆ an-kr ¯ e- ˘a-TOL-˘ ˘ ı-s ̆ıs): destruction of the pancreas by pancreatic enzymes
cholecyst /	gallbladder	cholecyst /ectomy (k ⁻ o-l ⁻ e-s ⁻ is-TEK-t ⁻ ⁻ o-m ⁻ e): removal of the gallbladder <i>-ectomy:</i> excision, removal
emesis	vomit	hyper/ emesis (h ⁻ ı-p ̆ er-EM-˘ ̆ e-s ̆ıs): excessive vomiting <i>hyper-:</i> excessive, above normal
-orexia	Appetite	an/ orexia (´an- ⁻ o-REK-s ⁻ če-ča): loss of appetite <i>an-:</i> without, not

-iasis	abnormal condition	chol/e/lith/ iasis (k ⁻ o-l ⁻ e-l ⁻ ı-THI- ⁻ ⁻ a-s ⁻ ıs): presence or formation of gallstones in the gallbladder or common bile duct <i>chol/e:</i> bile, gall <i>lith:</i> stone, calculus
Pepsia	digestion	dys/ pepsia (d˘ıs-PEP-s ¯ č e-č a): epigastric discomfort felt after eating; also called <i>indigestion. dys-:</i> bad; painful; difficult
dia	through, across	dia /rrhea (d ⁻ ı-ča-RE-č ⁻ a): abnormally frequent discharge or flow of fluid fecal matter from the bowel <i>-rrhea:</i> discharge, flow
sub/	Under , below	<pre>sub/lingu/al (s ub-L ING-gw al): pertaining to the area under the tongue lingu: tongue, al: pertaining to</pre>

Term	Definition
Colic	Spasm in any hollow or tubular soft organ especially in the colon, accompanied by pain
dysentery DĭIS-ĭen-tĭer-⁻e	Inflammation of the intestine, especially the colon, that may be caused by ingesting water or food containing chemical irritants, bacteria, protozoa, or parasites, which results in bloody diarrhea
dysphagia dĭıs-FA-j ⁻e-ĭ ⁻ a	Inability or difficulty in swallowing; also called <i>aphagia</i>
hematemesis hĭ em-ĭ at-EM-ĭĭ e-sĭıs	Vomiting of blood from bleeding in the stomach or esophagus

irritable bowel syndrome (IBS)	Symptom complex marked by abdominal pain and altered bowel function (typically constipation, diarrhea, or alternating constipation and diarrhea) for which no organic cause can be determined; also called <i>spastic colon</i>
malabsorption syndrome m al- ab-SORP-sh un S IN-dr om	Symptom complex of the small intestine characterized by the impaired passage of nutrients, minerals, or fluids through intestinal villi into the blood or lymph

melena MEL-˘˘e-n˘a	Passage of dark-colored, tarry stools, due to the presence of blood altered by intestinal juices
pyloric stenosis p ⁻ i-LOR- ĭk st ĭ e-NO-s ̃ īs	Stricture or narrowing of the pyloric sphincter (circular muscle of the pylorus) at the outlet of the stomach, causing an obstruction that blocks the flow of food into the small intestine

Laboratory tests and Therapeutic Procedures	
liver function tests (LFTs)	Group of blood tests that evaluate liver injury, liver function, and conditions often associated with the biliary tract.
serum bilirubin	Measurement of the level of bilirubin in the blood.
Stool culture	Test to identify microorganisms or parasites present in feces.

barium enema (BE)	Radiographic examination of the rectum and colon following enema administration of barium sulfate (contrast medium) into the rectum; also called lower GI series
nasogastric intubation	Procedure that involves insertion of a nasogastric tube through the nose into the stomach to relieve gastric distention by removing gas, food, or gastric secretions; to instill medication, food, or fluids; or to obtain a specimen for laboratory analysis

Drugs Used to Treat Digestive Disorders

Drugs	Therapeutic reaction
antacids	Counteract or neutralize acidity,
antidiarrhea	Control loose stools and relieve diarrhea
antiemetic	Control nausea and vomiting by blocking nerve impulses to the vomiting center of the brain
antispasmodic	Decrease gastrointestinal (GI) spasms by slowing peristalsis and motility throughout the GI tract
laxatives	Treat constipation

Abbreviation

GI	gastrointestinal	
HAV	hepatitis A virus	
HBV	hepatitis B virus	
HCV	hepatitis C virus	
alk phos	alkaline phosphatase	
Ва	barium	

Abbreviations

HDV	hepatitis D virus
LF.T	liver function test
NG tube	nasogastric tube
PMH	past medical history
PUD	peptic ulcer disease
NPO, n.p.o.	nothing by mouth

Respiratory System

Upper Respiratory Tract

Prefix	Meaning	Word analysis
nas/o	Nose	nas /al (NA-zl): pertaining to the nose ⁻ -al: pertaining to
rhin/o		rhin/o/ plasty (RI-n o-pl [~] as-t ⁻ e): surgical repair of the nose <i>-plasty:</i> surgical repair
sept/o	Septum	<pre>sept/o/plasty (SEP-t⁻ o-pl as-t⁻ e): surgical repair of the septum -plasty: surgical repair</pre>
sinus/o	sinus, cavity	<pre>sinus/o/tomy (s⁻i-n us-OT- o-m e): incision of any of the sinuses -tomy: incision</pre>
adenoid/	adenoids	adenoid /ectomy (ad- e-noyd-EK-t o-m e): excision of adenoids <i>-ectomy:</i> excision, removal

Prefix	Meaning	Word analysis
Tonsill/o	Tonsils	peri/ tonsill /ar (p er-ı́-TON-s ı́-l ar): pertaining to (the area) around the tonsils <i>peri-:</i> around
pharyng/o	pharynx (throat)	<pre>pharyng/o/scope (f ~ ar-~IN-g ~ o-sk ~ op): instrument for examining the pharynx -scope: instrument for examining</pre>
laryng/o	larynx (voice box)	<pre>laryng/o/plegia (l a-r in-g o-PLE-j e- a): paralysis of the (vocal cords and) larynx -plegia: paralysis</pre>
trache/o	trachea (windpipe)	trache/o /plasty (TRA-k ⁻ e- ⁻ o-pl ^{~ -} as-t ⁻ e): surgical repair of the trachea <i>-plasty:</i> surgical repair

Lower Respiratory Tract

bronchi/o	bronchus (plural, bronchi)	bronchi /ectasis (br ̆ ong-k [¯] e-EK-t̆a-s˘ ̆ ıs): dilation of (one or more) bronchi <i>-ectasis:</i> dilation, expansion
		bronch/o /scope (BRONG-k ⁻ [°] o-sk ⁻ op): instrument for examining the bronchus or bronchi <i>-scope:</i> instrument for examining
bronchiol/ o	bronchiole	bronchiol /itis (br ong-k e- o-Ll-t is): inflammation of the bronchioles <i>-itis:</i> inflammation
alveol/o	alveolus; air sac	alveol/ar (~ al-VE- o-l~ ar): pertaining to the alveoli - <i>ar:</i> pertaining to

pleur/o	pleura	pleur/o /centesis (ploo-r ⁻ o-s ~en-TE-s ^{~ -} is): surgical puncture of the pleural cavity; also called <i>thoracocentesis</i> or <i>thoracentesis</i> -centesis: surgical puncture
pneum/o	air; lung	pneum /ectomy (n ⁻ um-EK-t ⁻ [~] o-m ⁻ e): excision of (all or part of) a lung <i>-ectomy:</i> excision
pneumo n/o		pneumon /ia (n ⁻ u-MO-n ⁻ e- ^{~ -} a): condition of inflammation of the lungs <i>-ia:</i> condition
pulmon/ o	lung	<pre>pulmon/o/logist (p ul-m o-NOL-o-j d variable): specialist in the study (and variable) of lungs (and respiratory diseases) -logist: specialist in the study of</pre>

anthrac/o	coal, coal dust	 anthrac/osis (~ an-thr~a-KO-s~ - is): abnormal condition of coal dust (in the lungs) -osis: abnormal condition; increase (used primarily with blood cells) Anthracosis is a chronic occupational disease found in coal miners and those associated with the coal industry.
atel/o	incomplete; imperfect	atel/ectasis (ăt- e-LEK-t ă-s is): incomplete expansion of the lung; also called <i>airless lung</i> or collapsed lung -ectasis: dilation, expansion
coni/o	dust	pneum/o/coni/osis (n ⁻ u-m ⁻ o-k ⁻ o-n ⁻ e-O-s ⁻ ⁻ is): condition of dust in the lungs <i>pneum/o:</i> air; lung <i>-osis:</i> abnormal condition; increase (used primarily with blood cells) <i>Pneumoconiosis is usually caused by mineral dusts of</i> <i>occupational or environmental origin. Forms of</i> <i>pneumoconiosis include silicosis, asbestosis, and</i> <i>anthracosis.</i>

orth/o	straight	 orth/o/pnea (or-THOP-n⁻ e- a): breathing in a straight (or upright position) <i>-pnea:</i> breathing Various lung disorders cause a patient to experience diff iculty breathing in any position other than sitting or standing erect
ox/i	oxygen	 ox/i/meter (~ ok-S~IM-~ e-t~ er): instrument used for measuring oxygen <i>meter:</i> instrument for measuring An oximeter is usually attached to the tip of a f inger but may also be placed on a toe or ear lobe. It provides a measurement of the oxygen saturation level of the blood.
ox/o		hyp/ ox /emia (h ⁻ ı-p ̆ oks-E-m ⁻ ¯ e-˘ a): deficiency of oxygen in blood <i>hyp-:</i> under, below, deficient <i>-emia:</i> blood condition

thorac/o	Chest	thorac/o /pathy (th ⁻ o-r ⁻ ak-OP- ⁻ a-th ⁻ ⁻ e): disease of the chest <i>-pathy:</i> disease
phren/o	diaphragm ; mind	phren/o /spasm (FREN- ⁻ ⁻ o-sp ⁻ azm): involuntary contraction of the diaphragm <i>-spasm:</i> involuntary contraction, twitching
spir/o	breathe	<pre>spir/o/meter (sp⁻i-ROM-[~] et-[~] er): instrument for measuring breathing -meter: instrument for measuring A spirometer measures how much air the lungs can hold (vital capacity) as well as how much and how quickly air can be exhaled.</pre>