

Medical Terminology

TYPES OF HEALTHCARE TERMS

Decodable Terms

Decodable terms are those terms that can be broken into their **Greek and Latin** word parts and given a working definition based on the meanings of those word parts.

Most medical terms are decodable, so learning word parts is important.

The word parts are:

- **Combining form:** word root with its respective combining vowel.
 - • **Word root:** word origin.
 - • **Combining vowel:** a letter sometimes used to join word parts. Usually an "o" but occasionally an "e" or "i".
- **Suffix:** word part that appears at the end of a term. Suffixes are used to indicate whether the term is an anatomic, pathologic, or procedural term.
- **Prefix:** word part that sometimes appears at the beginning of a term. Prefixes are used to further define the absence, location, number, quantity, or state of the term.

unacceptable



root word

prefix

suffix



gloss **itis**
word root suffix
glossitis

Fig. 1-1 Decoding of the term **glossitis**.



sub **lingu** **al**
prefix word root suffix
sublingual

Fig. 1-2 Decoding of the term **sublingual**.

Building terms

Prefix/root/o/suffix

Prefix/root/suffix starts with vowel

prefix/root/o/root/o/suffix

**here combining vowel between word roots is must even if 2nd word root starts with vowel

- E.g. Gastroenteritis

** keep anatomical order of the word roots if possible

Building terms

With a few exceptions, decodable healthcare terms follow five simple rules.

1. If the suffix starts with a vowel, a combining vowel is not needed to join the parts.

the combining form hepat/o and suffix -itis to build the term hepatitis

The combining vowel "o" is not needed because the suffix starts with the vowel "i."

2. If the suffix starts with a consonant, a combining vowel is needed to join the two word parts.

For example, when building a term using hepat/o and -megaly, hepatomegaly

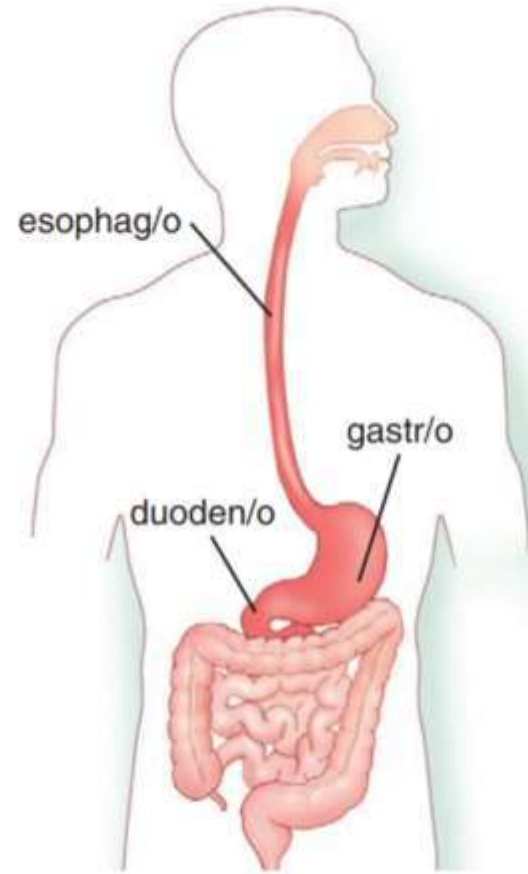
3. If a combining form ends with the same vowel that begins a suffix, one of the vowels is dropped.

cardi/o + -itis would result in cardiitis. Instead, one of the i's is dropped, and the term is spelled carditis.

4. If two or more combining forms are used in a term, the combining vowel is retained between the two, regardless of whether the second combining form begins with a vowel or a consonant.

For example, joining gastr/o and enter/o (small intestine) with the suffix -itis, results in the term gastroenteritis.

5. Sometimes when two or more combining forms are used to make a medical term, special notice must be paid to the order in which the combining forms are joined. For example, joining esophag/o (which means esophagus), gastr/o (which means stomach), and duoden/o (which means duodenum, the first part of the small intestines) with the suffix -scopy (viewing), produces the term esophagogastroduodenoscopy. An esophagogastroduodenoscopy is a viewing of the esophagus, stomach, and duodenum.



esophag > o > gastr > o > duoden > o > scopy

Fig. 1-5 The decoding of the term **esophagogastroduodenoscopy**.

Alex was diagnosed with glossitis
which made it difficult for him to speak.



Fig. 1-3 How to decode a healthcare term using the **CARD** method.

Samples of Decodable Terms

Term	Word Origins	Definition
arthralgia	<i>arthr/o</i> joint <i>-algia</i> pain of	Pain of a joint. Also called arthrodynia .
gastrotomy	<i>gastr/o</i> stomach <i>-tomy</i> cutting	Incision of the stomach.
hepatitis	<i>hepat/o</i> liver <i>-itis</i> inflammation	Inflammation of the liver.
ophthalmoscope	<i>ophthalm/o</i> eye <i>-scope</i> instrument to view	Instrument used to view the eye.
otology	<i>ot/o</i> ear <i>-logy</i> study of	Study of the ear.
rhinoplasty	<i>rhin/o</i> nose <i>-plasty</i> surgically forming	Surgical formation of the nose.

TYPES OF HEALTHCARE TERMS

Non decodable Terms

words used in medicine whose definitions must be memorized without the benefit of word parts.

because the word origins either are not helpful or don't exist.

Examples :

- Cataract
- Asthma
- Diagnosis dia-, meaning "through," "complete"; and -gnosis, meaning "state of knowledge"
- Prognosis pro-, meaning "before" or "in front of"; and -gnosis, meaning "state of knowledge", but this does not give the true definition of the term, which is "a prediction of the probable outcome of a disease or disorder."

TYPES OF HEALTHCARE TERMS

Other types of terms that are not built from word parts include the following:

- **Eponyms**: Terms that are named after a person or place associated with the term.

Examples include:

- Alzheimer's disease

Prefixes

Prefixes modify a medical term by indicating a structure's or a condition's:

- Absence
- Location
- Number or quantity
- State

Sometimes, as with other word parts, a prefix can have one or more meanings.

To spell a term with the use of a prefix, simply add the prefix directly to the beginning of the term. No combining vowels are needed

Prefix	Meaning	Example	Word Origins	Definition
a-	no, not, without	apneic	a- no, not, without pne/o breathing -ic pertaining to	Pertaining to without breathing.
an-	no, not, without	anophthalmia	an- without ophthalm/o eye -ia condition	Condition of without an eye.
ante-	forward, in front of, before	anteversion	ante- forward vers/o turning -ion process of	Process of turning forward.
anti-	against	antibacterial	anti- against bacteri/o bacteria -al pertaining to	Pertaining to against bacteria.
dys-	abnormal, difficult, bad, painful	dystrophy	dys- abnormal -trophy process of nourishment	Process of abnormal nourishment.
endo-, end-	within	endoscopy	endo- within -scopy viewing	Viewing within.
epi-	above, upon	epigastric	epi- above gastr/o stomach -ic pertaining to	Pertaining to above the stomach.
hyper-	excessive, above	hyperglycemia	hyper- excessive, above glyc/o sugar, glucose -emia blood condition	Blood condition of excessive sugar.
hypo-	below, deficient	hypoglossal	hypo- below gloss/o tongue -al pertaining to	Pertaining to below the tongue.

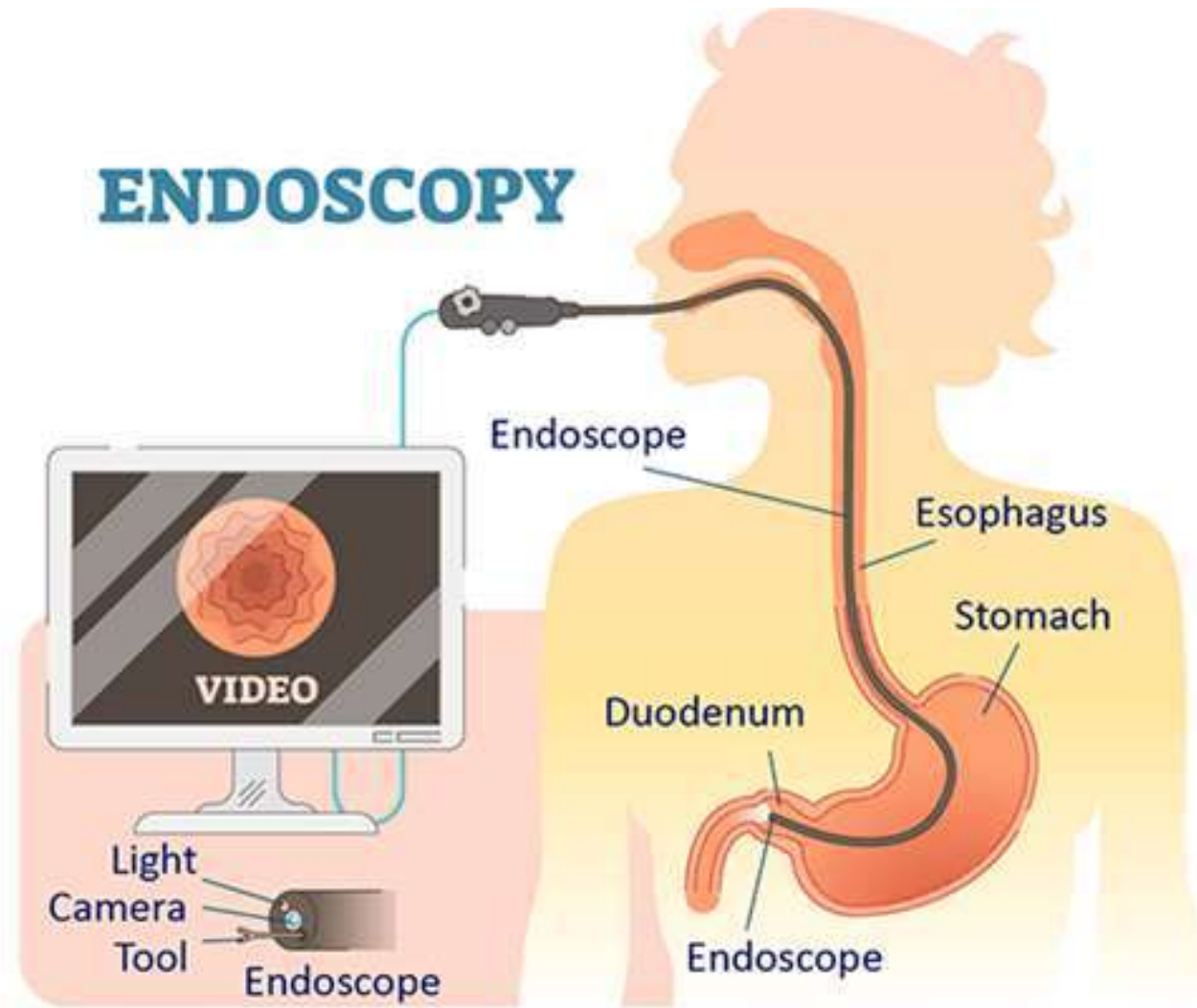


Anteverted uterus
(normal)



Retroverted uterus

ENDOSCOPY



Hypo- Hyper-

Tachy- Brady-

Prefix	Meaning	Example	Word Origins	Definition
inter-	between	intervertebral	<i>inter-</i> between <i>vertebr/o</i> vertebra, backbone <i>-al</i> pertaining to	Pertaining to between the backbones.
intra-	within	intramuscular	<i>intra-</i> within <i>muscul/o</i> muscle <i>-ar</i> pertaining to	Pertaining to within the muscle.
neo-	new	neonatal	<i>neo-</i> new <i>nat/o</i> birth, born <i>-al</i> pertaining to	Pertaining to a newborn.
par-	near, beside	parotid	<i>par-</i> near <i>ot/o</i> ear <i>-id</i> pertaining to	Pertaining to near the ear.
para-	near, beside, abnormal	paraphilia	<i>para-</i> abnormal <i>phil/o</i> attraction <i>-ia</i> condition	Condition of abnormal attraction.
per-	through	percutaneous	<i>per-</i> through <i>cutane/o</i> skin <i>-ous</i> pertaining to	Pertaining to through the skin (Fig. 1-11).
peri-	surrounding, around	pericardium	<i>peri-</i> surrounding <i>cardi/o</i> heart <i>-um</i> structure	Structure surrounding the heart.
poly-	many, much, excessive, frequent	polyneuritis	<i>poly-</i> many, much, excessive, frequent <i>neur/o</i> nerve <i>-itis</i> inflammation	Inflammation of many nerves.

Prefix	Meaning	Example	Word Origins	Definition
post-	after, behind	postnatal	post- after, behind nat/o birth, born -al pertaining to	Pertaining to after birth.
pre-	before, in front of	prenatal	pre- before nat/o birth, born -al pertaining to	Pertaining to before birth.
sub-	under, below	subhepatic	sub- under hepat/o liver -ic pertaining to	Pertaining to under the liver.
trans-	through, across	transurethral	trans- through urethr/o urethra -al pertaining to	Pertaining to through the urethra.

Medical Terminology

suffixes

Suffixes usually can be grouped according to their purposes. The following tables cover the major categories :

Noun-Ending Suffixes

Noun endings are used most often to describe anatomic terms. Noun endings such as -icle, -ole, and -ule describe a diminutive structure.

Noun-Ending Suffixes				
Suffix	Meaning	Example	Word Origins	Definition
-icle	small, tiny	cuticle	<i>cut/o</i> skin <i>-icle</i> small	Small skin (surrounding the nail).
-is	structure, thing	hypodermis	<i>hypo-</i> under <i>derm/o</i> skin <i>-is</i> structure	Structure under the skin.
-ole	small, tiny	arteriole	<i>arteri/o</i> artery <i>-ole</i> small	Small artery.
-ule	small, tiny	venule	<i>ven/o</i> vein <i>-ule</i> small	Small vein.
-um	structure, thing, membrane	endocardium	<i>endo-</i> within <i>cardi/o</i> heart <i>-um</i> structure	Structure within the heart.
-y	condition, process of	polydactyly	<i>poly-</i> many, much, excessive, frequent <i>dactyl/o</i> digitus (finger, toe) <i>-y</i> condition, process of	Condition of excessive fingers or toes.

Adjective Suffixes

Adjective suffixes such as those listed below usually mean “pertaining to.” For example, when the suffix **-ac** is added to the combining form **cardi/o**, the term **cardiac** is formed, which means “pertaining to the heart.”

Remember that when you see an adjective term, you need to see what it is describing. For example, cardiac pain is pain of the heart, and cardiac surgery is surgery done on the heart. An adjective tells only half of the story.

Adjective Suffixes				
Suffix	Meaning	Example	Word Origins	Definition
-ac	pertaining to	cardiac	<i>cardi/o</i> heart <i>-ac</i> pertaining to	Pertaining to the heart.
-al	pertaining to	cervical	<i>cervic/o</i> neck <i>-al</i> pertaining to	Pertaining to the neck.
-ar	pertaining to	valvular	<i>valvul/o</i> valve <i>-ar</i> pertaining to	Pertaining to a valve.
-ary	pertaining to	coronary	<i>coron/o*</i> heart, crown <i>-ary</i> pertaining to	Pertaining to the heart.
-eal	pertaining to	esophageal	<i>esophag/o</i> esophagus <i>-eal</i> pertaining to	Pertaining to the esophagus.
-ic	pertaining to	hypodermic	<i>hypo-</i> below <i>derm/o</i> skin <i>-ic</i> pertaining to	Pertaining to below the skin.
-ous	pertaining to	subcutaneous	<i>sub-</i> under <i>cutane/o</i> skin <i>-ous</i> pertaining to	Pertaining to under the skin.

Pathology Suffixes

Pathology suffixes describe a disease process or a sign or symptom. The meanings vary according to the dysfunctions that they describe.

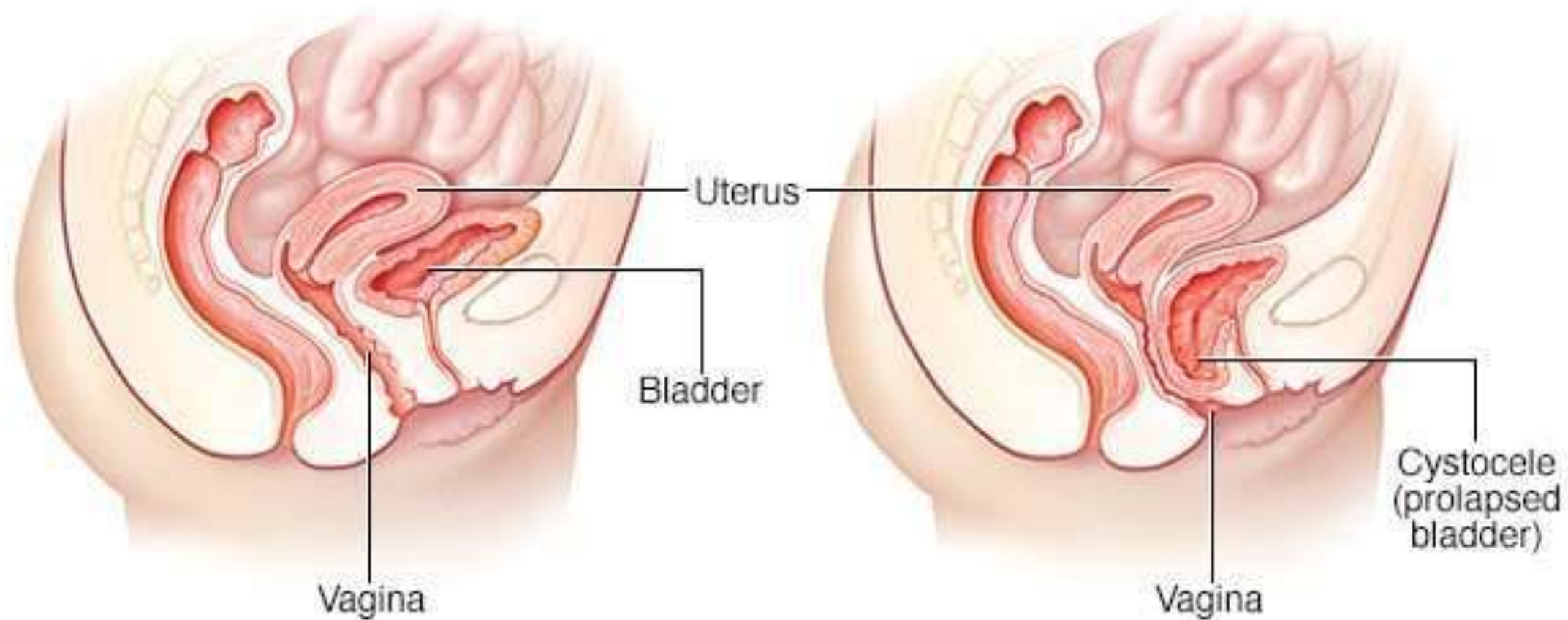
Signs : objective findings of the doctor on the patient

Symptoms : subjective complains of the patient about his disease

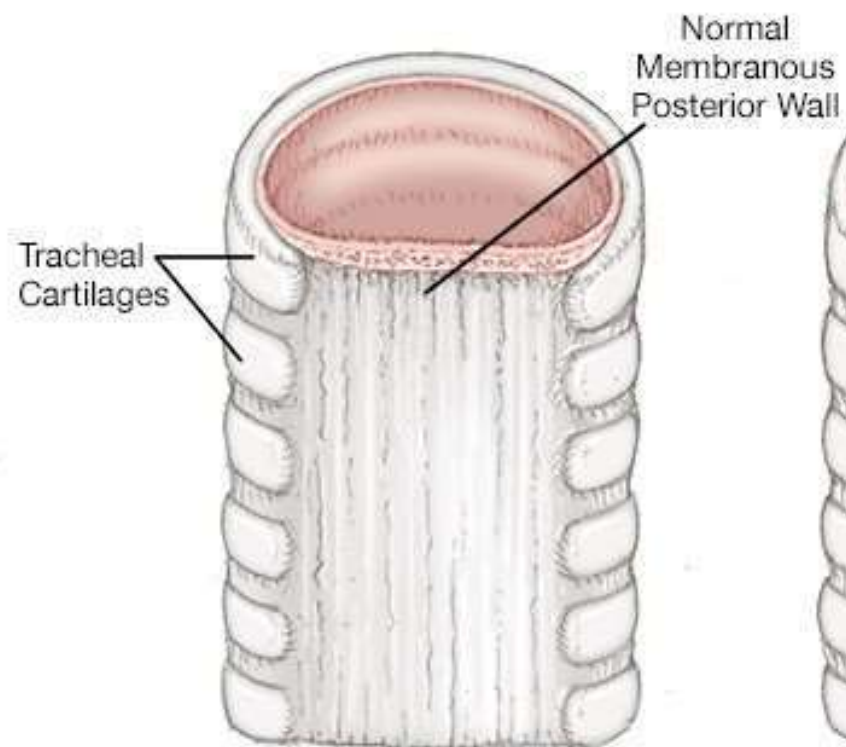
Pathology Suffixes				
Suffix	Meaning	Example	Word Origins	Definition
-algia	pain	cephalalgia	<i>cephal/o</i> head <i>-algia</i> pain	Pain in the head.
-cele	herniation	cystocele	<i>cyst/o</i> bladder, sac <i>-cele</i> herniation, protrusion	Herniation of the bladder.
-dynia	pain	cardiodynia	<i>cardi/o</i> heart <i>-dynia</i> pain	Pain in the heart.
-emia	blood condition	hyperlipidemia	<i>hyper-</i> excessive <i>lipid/o</i> fats <i>-emia</i> blood condition	Excessive fats in the blood.
-ia	condition	agastria	<i>a-</i> without <i>gastr/o</i> stomach <i>-ia</i> condition	Condition of having no stomach.
-itis	inflammation	gastroenteritis	<i>gastr/o</i> stomach <i>enter/o</i> small intestine <i>-itis</i> inflammation	Inflammation of the stomach and small intestine.
-malacia	softening	chondromalacia	<i>chondr/o</i> cartilage <i>-malacia</i> softening	Softening of the cartilage.
-megaly	enlargement	splenomegaly (Fig. 1-6)	<i>splen/o</i> spleen <i>-megaly</i> enlargement	Enlargement of the spleen.
-oma	tumor, mass	osteoma	<i>oste/o</i> bone <i>-oma</i> tumor, mass	Tumor of a bone.

Normal

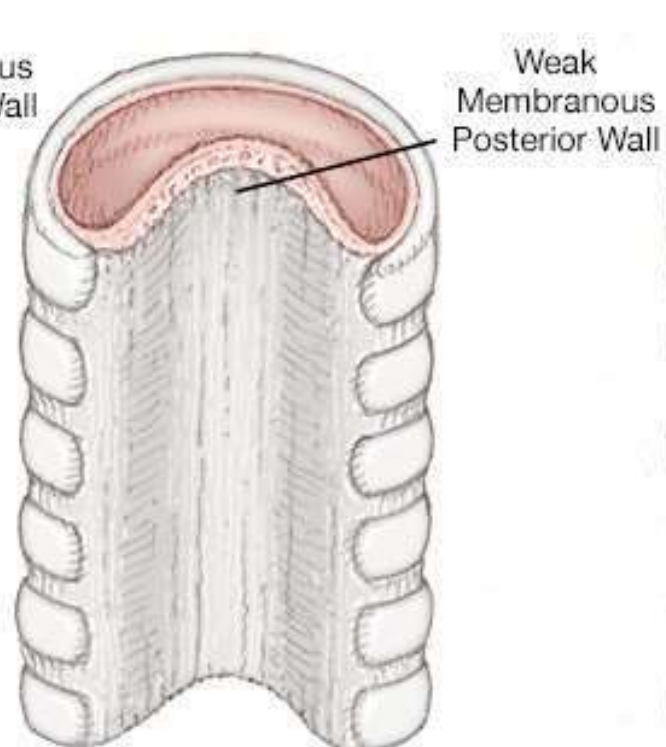
Anterior prolapse (cystocele)



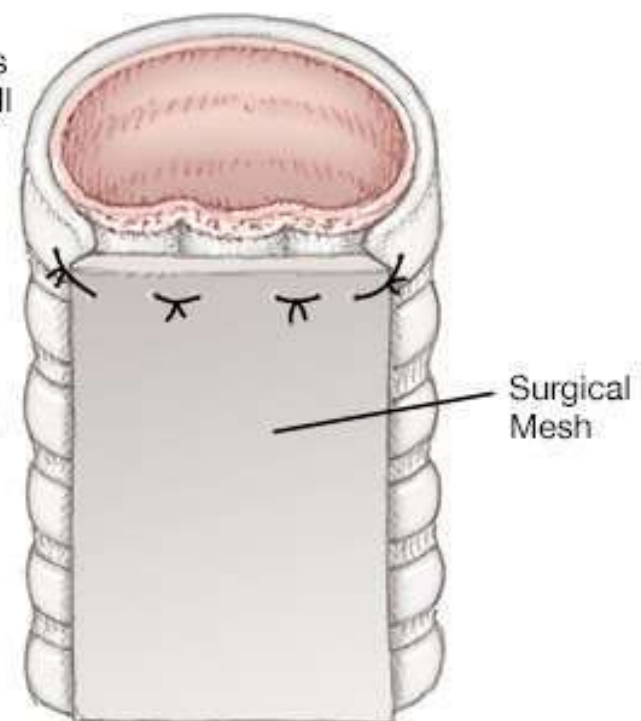
Normal Trachea



Tracheomalacia

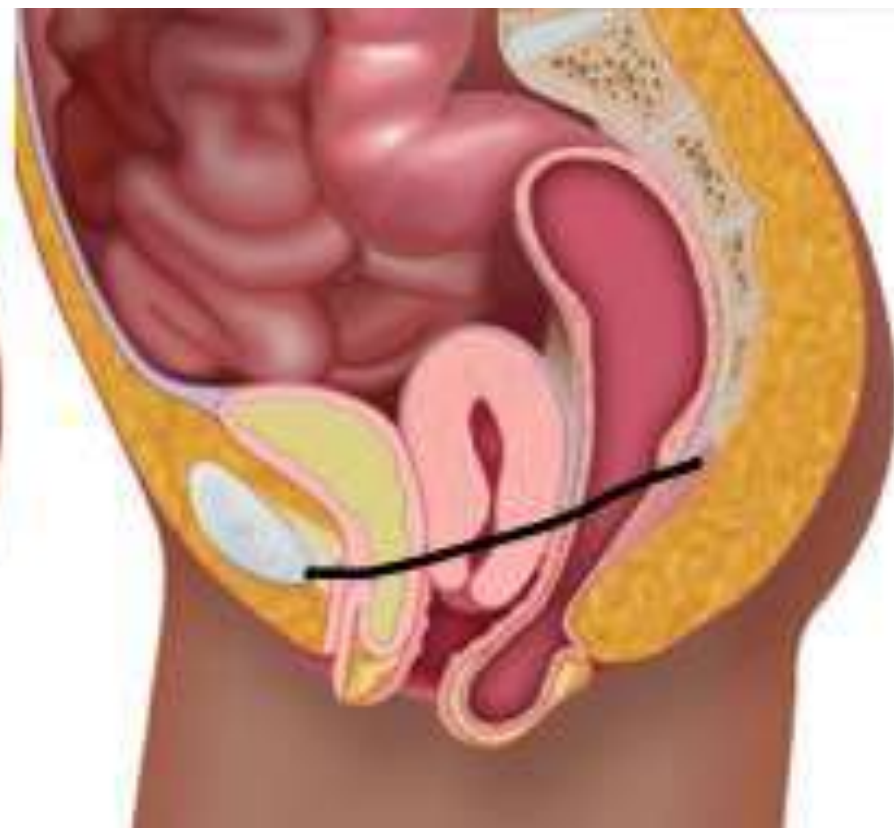
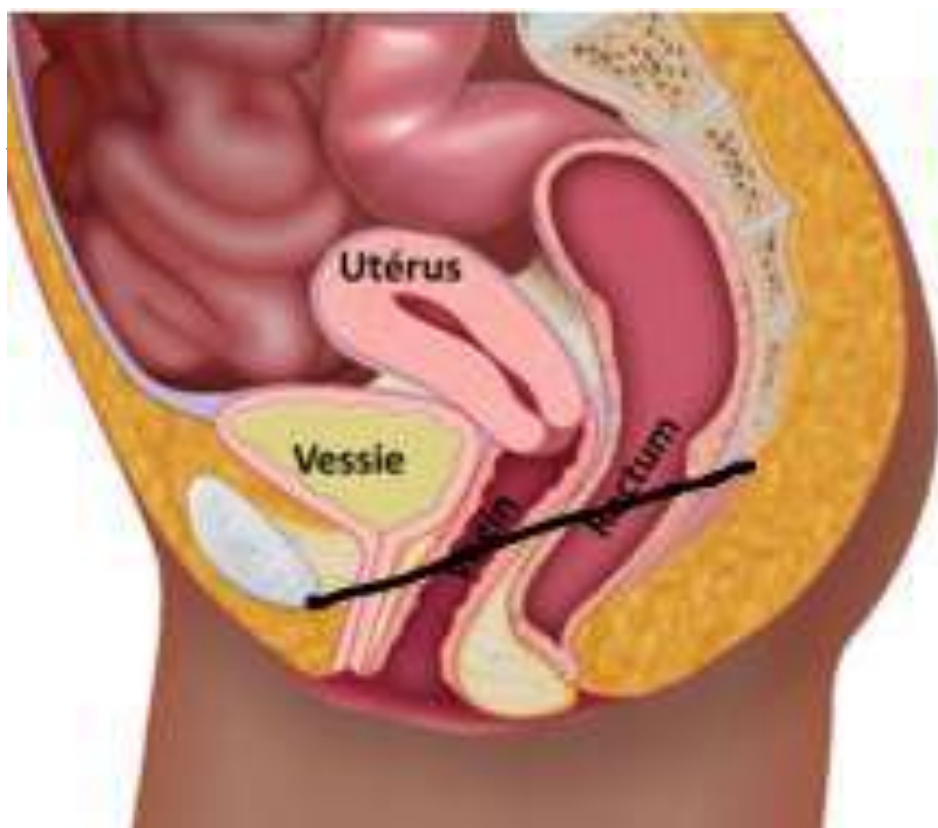


Surgical Repair - Tracheoplasty



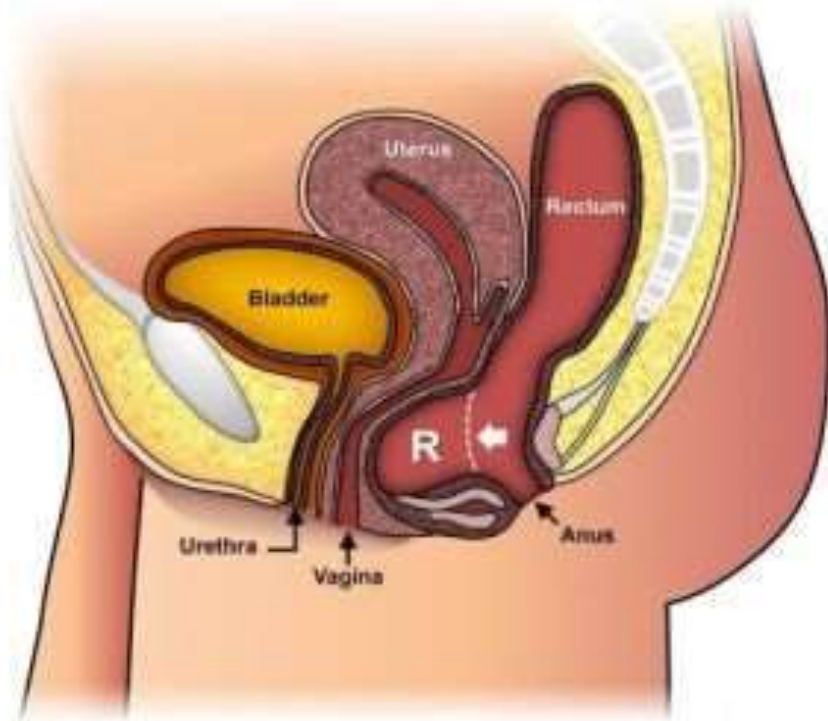
Pathology Suffixes—cont'd

Suffix	Meaning	Example	Word Origins	Definition
-osis	abnormal condition	psychosis	<i>psych/o</i> mind <i>-osis</i> abnormal condition	Abnormal condition of the mind.
-pathy	disease process	gastropathy	<i>gastr/o</i> stomach <i>-pathy</i> disease process	Disease process of the stomach.
-ptosis	prolapse, drooping	hysteroptosis	<i>hyster/o</i> uterus <i>-ptosis</i> prolapse, drooping	Prolapse of the uterus.
-rrhage, -rrhagia	bursting forth	hemorrhage	<i>hem/o</i> blood <i>-rrhage</i> bursting forth	Bursting forth of blood.
-rrhea	discharge, flow	otorrhea	<i>ot/o</i> ear <i>-rrhea</i> discharge, flow	Discharge from the ear.
-rrhexis	rupture	cystorrhesis	<i>cyst/o</i> bladder, sac <i>-rrhexis</i> rupture	Rupture of the bladder.
-sclerosis	abnormal condition of hardening	arteriosclerosis	<i>arteri/o</i> artery <i>-sclerosis</i> abnormal condition of hardening	Abnormal condition of hardening of an artery.
-stenosis	abnormal condition of narrowing	tracheostenosis	<i>trache/o</i> trachea, windpipe <i>-stenosis</i> abnormal condition of narrowing	Abnormal condition of narrowing of the trachea or windpipe.



Difference Between

Rectocele



Rectal Prolapse



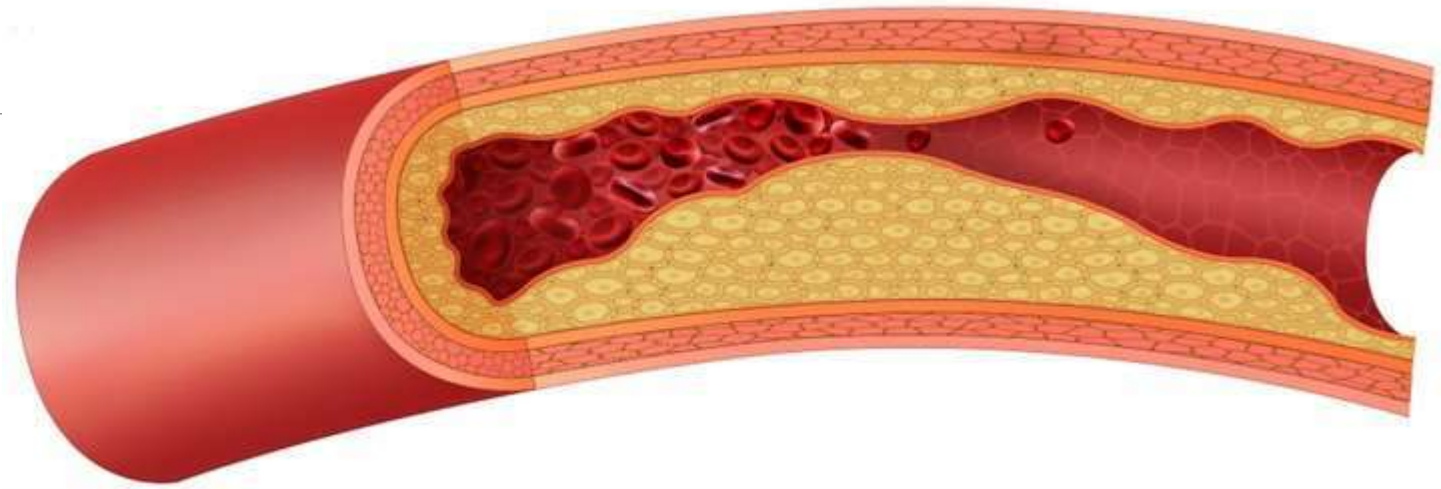
Typical
rectum



Rectal
prolapse

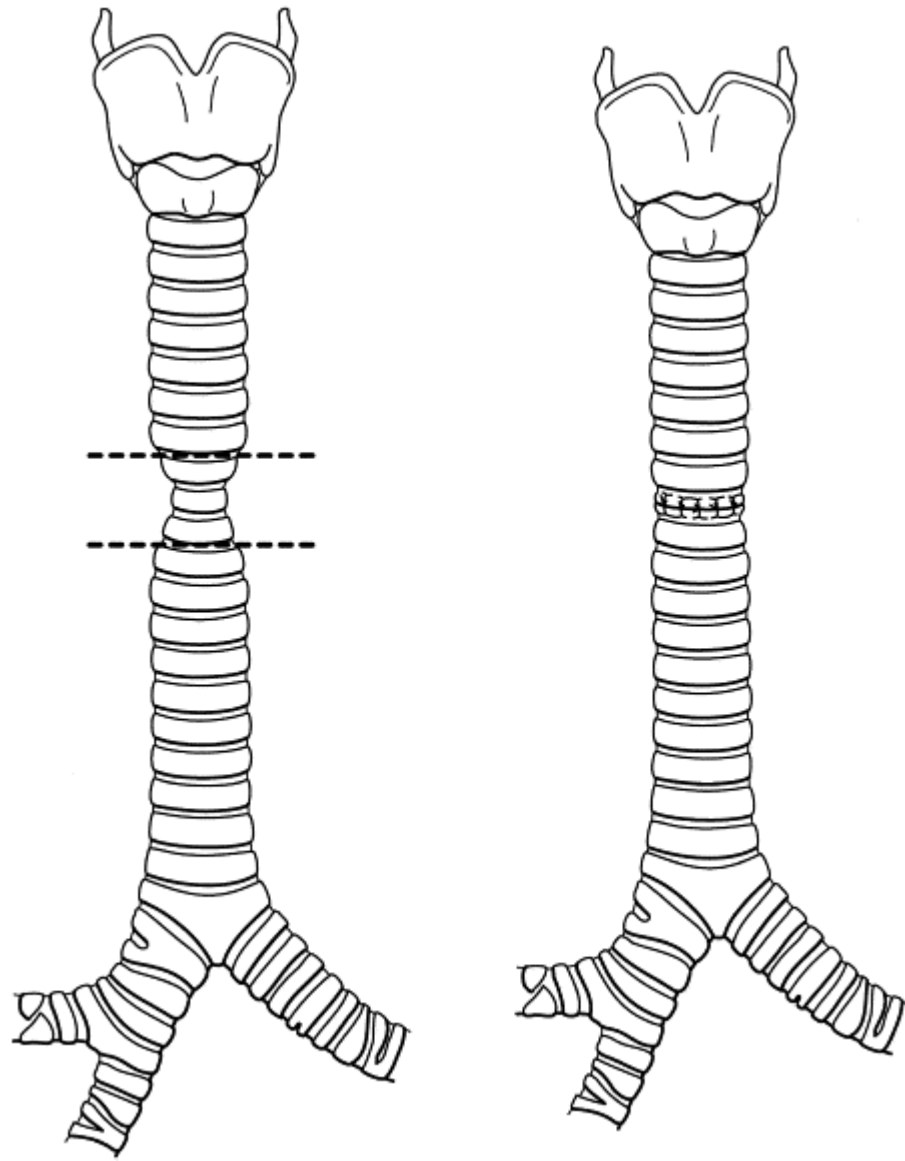


systemic sclerosis



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arteriosclerosis



Upper respiratory tract

Nasal cavity

Pharynx

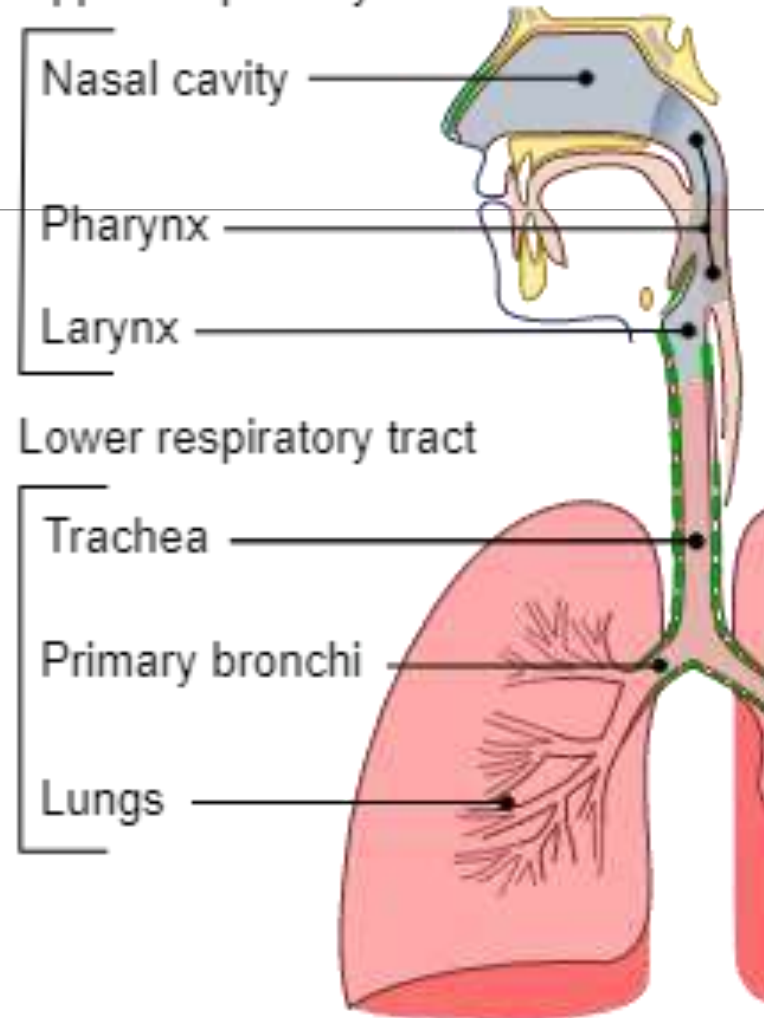
Larynx

Lower respiratory tract

Trachea

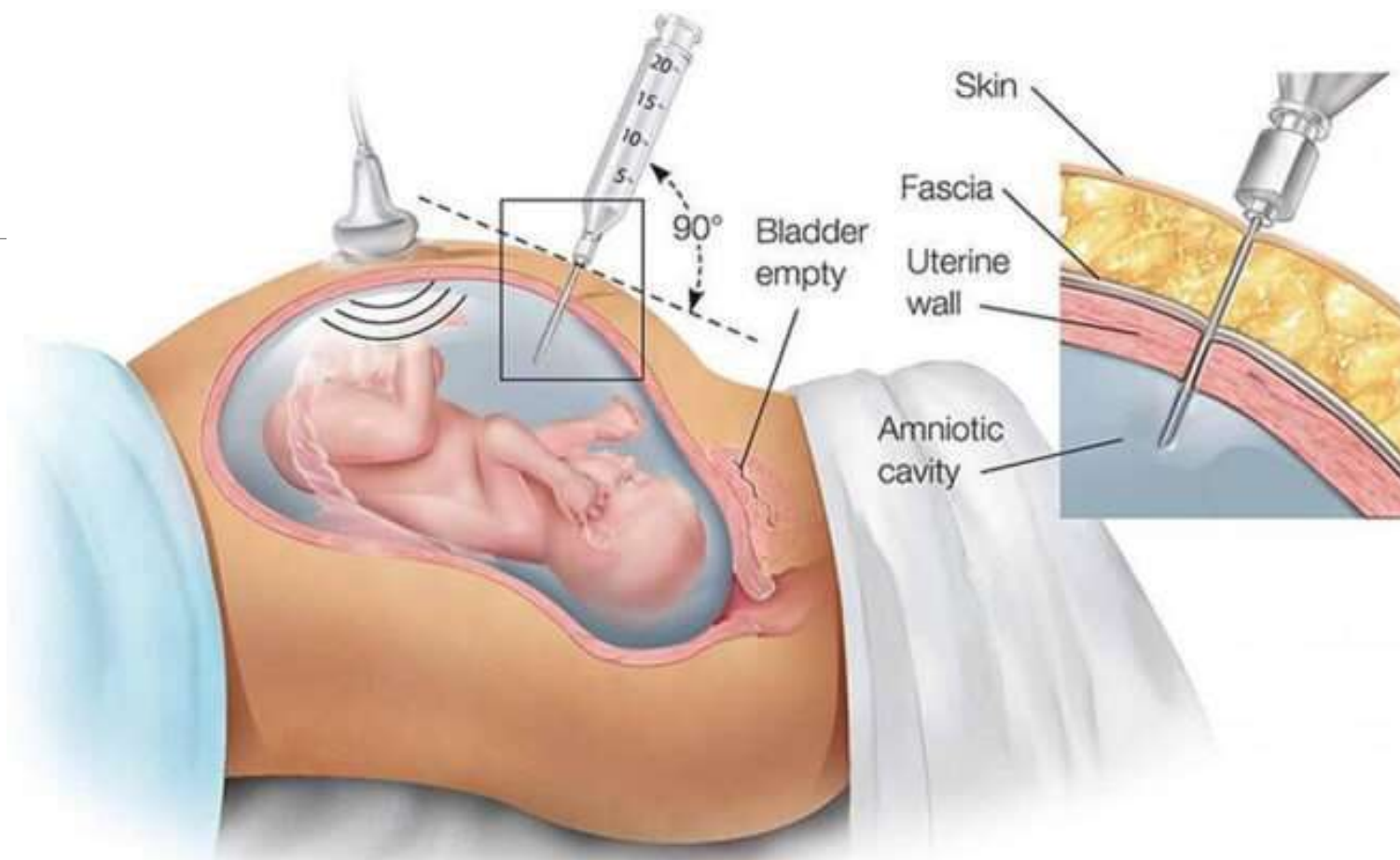
Primary bronchi

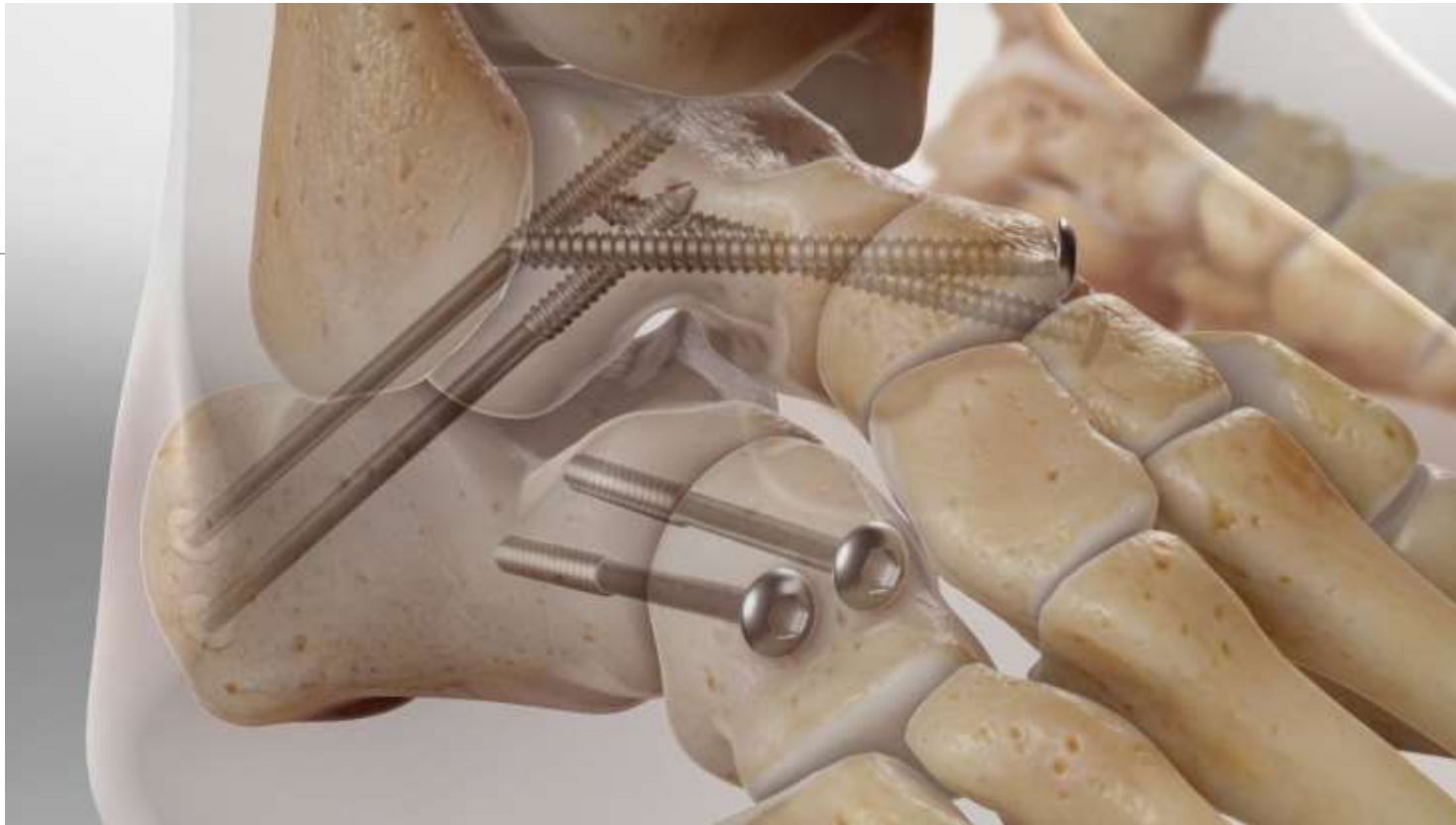
Lungs

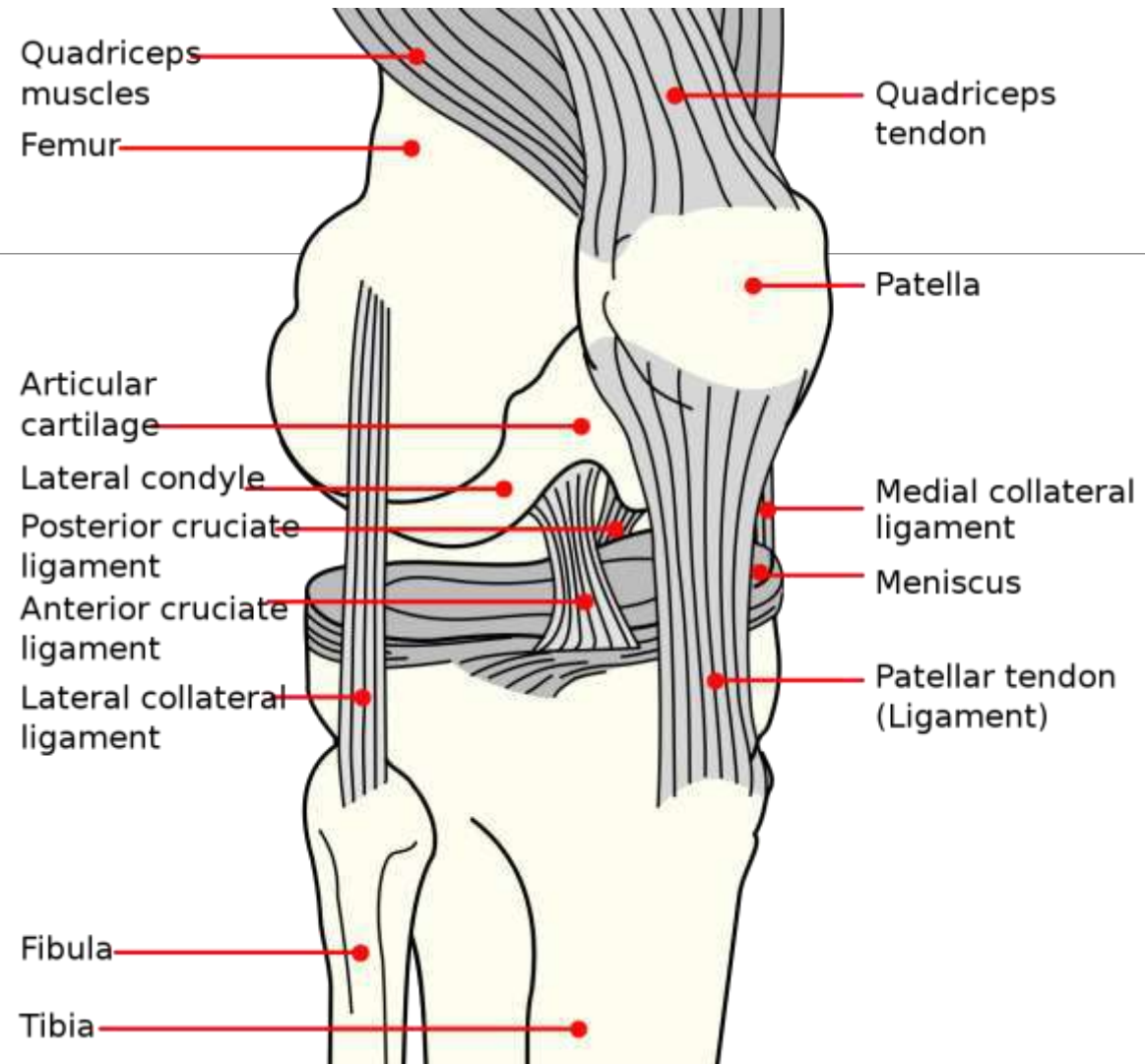


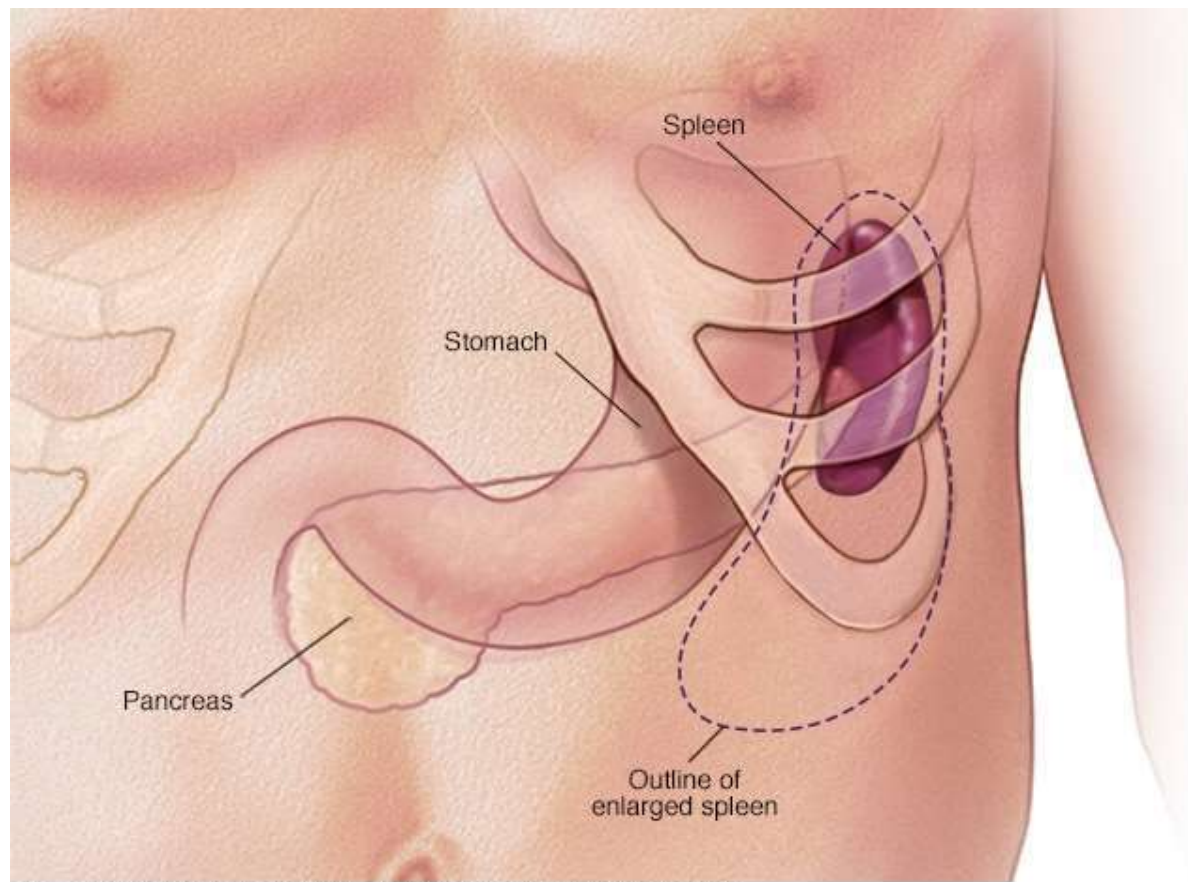
Procedures suffixes

Suffix	Meaning	Example	Word Origins	Definition
-centesis	surgical puncture	amniocentesis	<i>amni/o</i> amnion, inner fetal sac <i>-centesis</i> surgical puncture	Surgical puncture of the inner fetal sac.*
-desis	binding	arthrodesis	<i>arthr/o</i> joint <i>-desis</i> binding	Binding of a joint.
-ectomy	cutting out	tonsillectomy	<i>tonsill/o</i> tonsil <i>-ectomy</i> cutting out	Cutting out the tonsils.
-graphy	recording	mammography	<i>mamm/o</i> breast <i>-graphy</i> recording	Recording the breast.
-metry	measuring	spirometry	<i>spir/o</i> breathing <i>-metry</i> measuring	Measuring breathing (Fig. 1-7).
-opsy	viewing	biopsy	<i>bi/o</i> living, life <i>-opsy</i> viewing	Viewing living tissue.
-pexy	suspension, fixation	patellapexy	<i>patell/a</i> kneecap, patella <i>-pexy</i> suspension, fixation	Suspension of the kneecap.
-plasty	surgically forming	rhinoplasty	<i>rhin/o</i> nose <i>-plasty</i> surgically forming	Surgically forming the nose.
-rrhaphy	suturing	splenorrhaphy	<i>splen/o</i> spleen <i>-rrhaphy</i> suturing	Suturing the spleen.
-scopy	viewing	esophagogastroduodenoscopy	<i>esophag/o</i> esophagus <i>gastr/o</i> stomach <i>duoden/o</i> duodenum <i>-scopy</i> viewing	Viewing the esophagus, stomach, and duodenum.

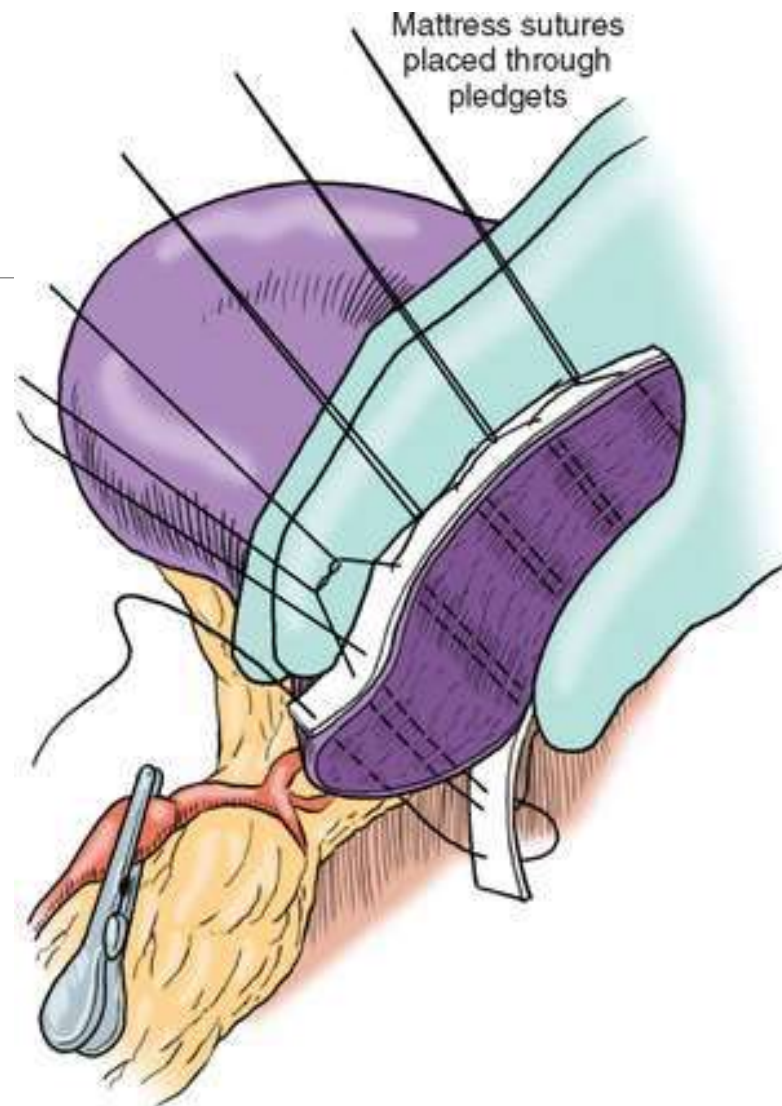








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Procedure Suffixes—cont'd				
Suffix	Meaning	Example	Word Origins	Definition
-stomy	making a new opening	colostomy	<i>col/o</i> colon, large intestine <i>-stomy</i> making a new opening	Making a new opening in the colon or large intestine (Fig. 1-8).
-tomy	cutting	osteotomy	<i>oste/o</i> bone <i>-tomy</i> cutting	Incision into the bone.
-tripsy	crushing	lithotripsy	<i>lith/o</i> stone <i>-tripsy</i> crushing	Crushing of stones.

Before

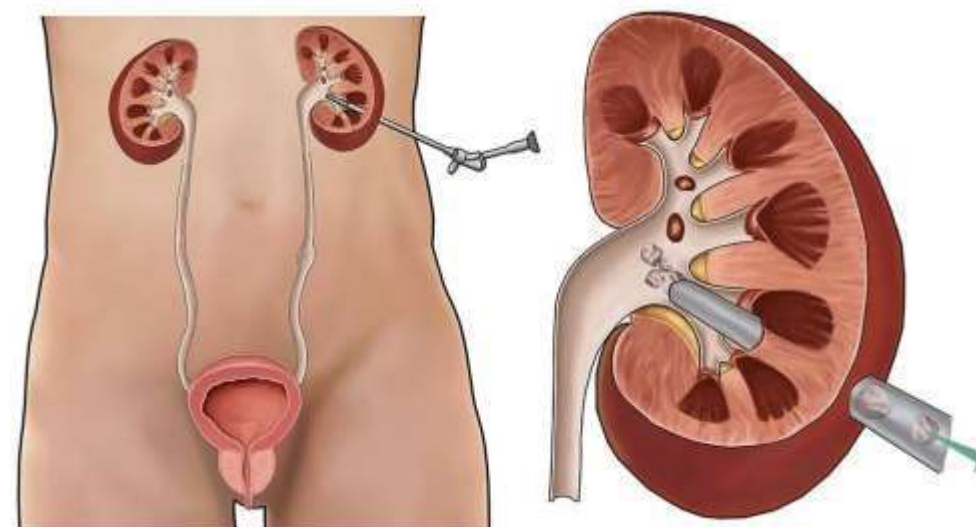
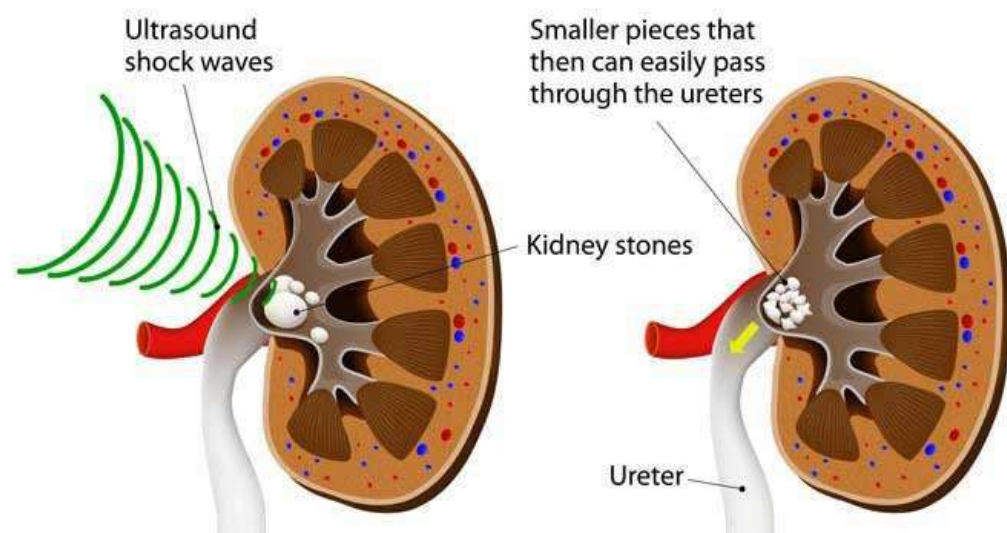


After



Pouch





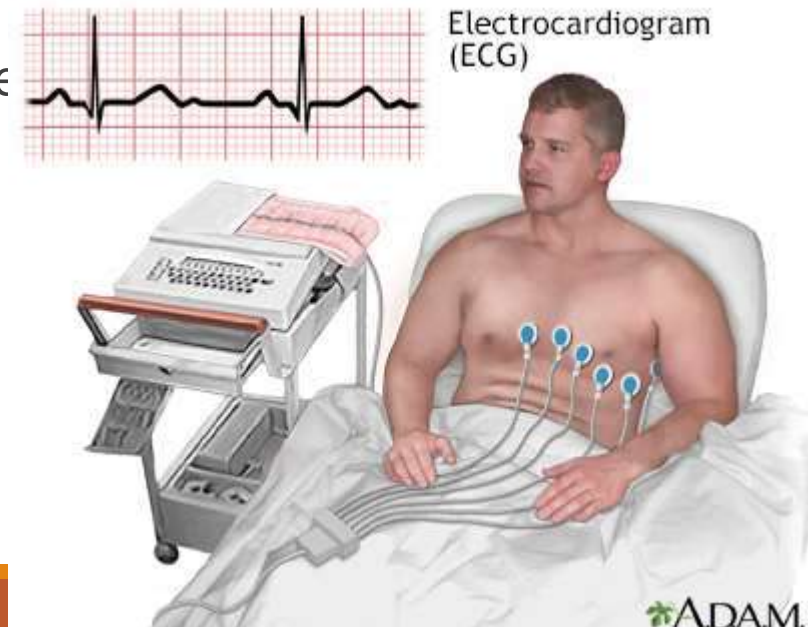
Instrument Suffixes

Instruments are indicated by yet another set of suffixes. Note the obvious similarities to their procedural "cousins."

For example,

electrocardiography is a diagnostic **procedure** that is done to measure the electrical activity in the heart

electrocardiograph is the **instrument** that is used to pe



Instrument Suffixes				
Suffix	Meaning	Example	Word Origins	Definition
-graph	instrument to record	electrocardiograph	<i>electr/o</i> electricity <i>cardi/o</i> heart <i>-graph</i> instrument to record	Instrument to record the electricity of the heart.
-meter	instrument to measure	thermometer	<i>therm/o</i> temperature, heat <i>-meter</i> instrument to measure	Instrument to measure temperature.
-scope	instrument to view	ophthalmoscope	<i>ophthalm/o</i> eye <i>-scope</i> instrument to view	Instrument to view the eye.
-tome	instrument to cut	osteotome	<i>oste/o</i> bone <i>-tome</i> instrument to cut	Instrument to cut bone (Fig. 1-9).
-tripster	machine to crush	lithotripter	<i>lith/o</i> stone <i>-tripster</i> machine to crush	Machine to crush stone.
-trite	instrument to crush	lithotrite	<i>lith/o</i> stone <i>-trite</i> instrument to crush	Instrument to crush stones (Fig. 1-10).



Fig. 1-9 Osteotome.

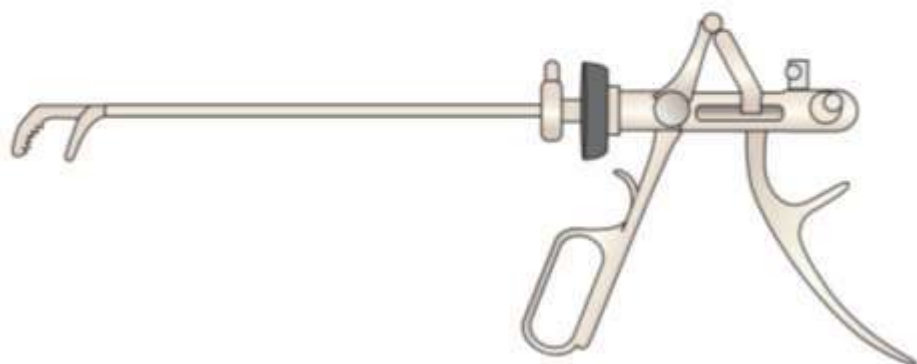


Fig. 1-10 Lithotrite.

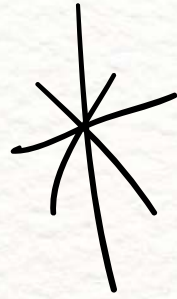
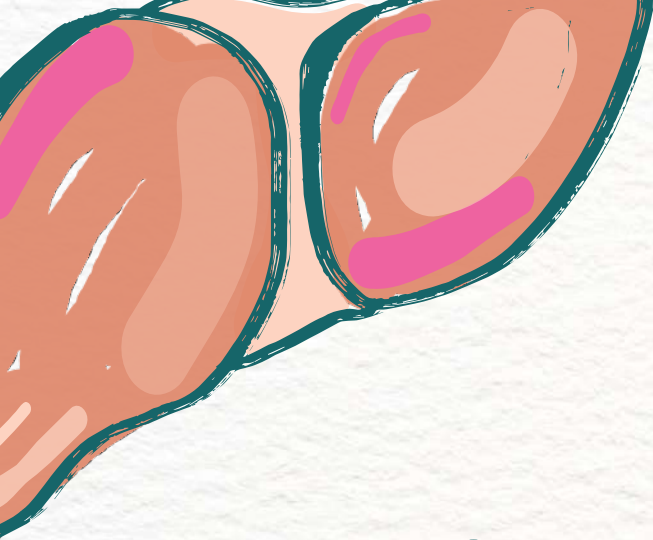


Rules for Using Singular and Plural Endings

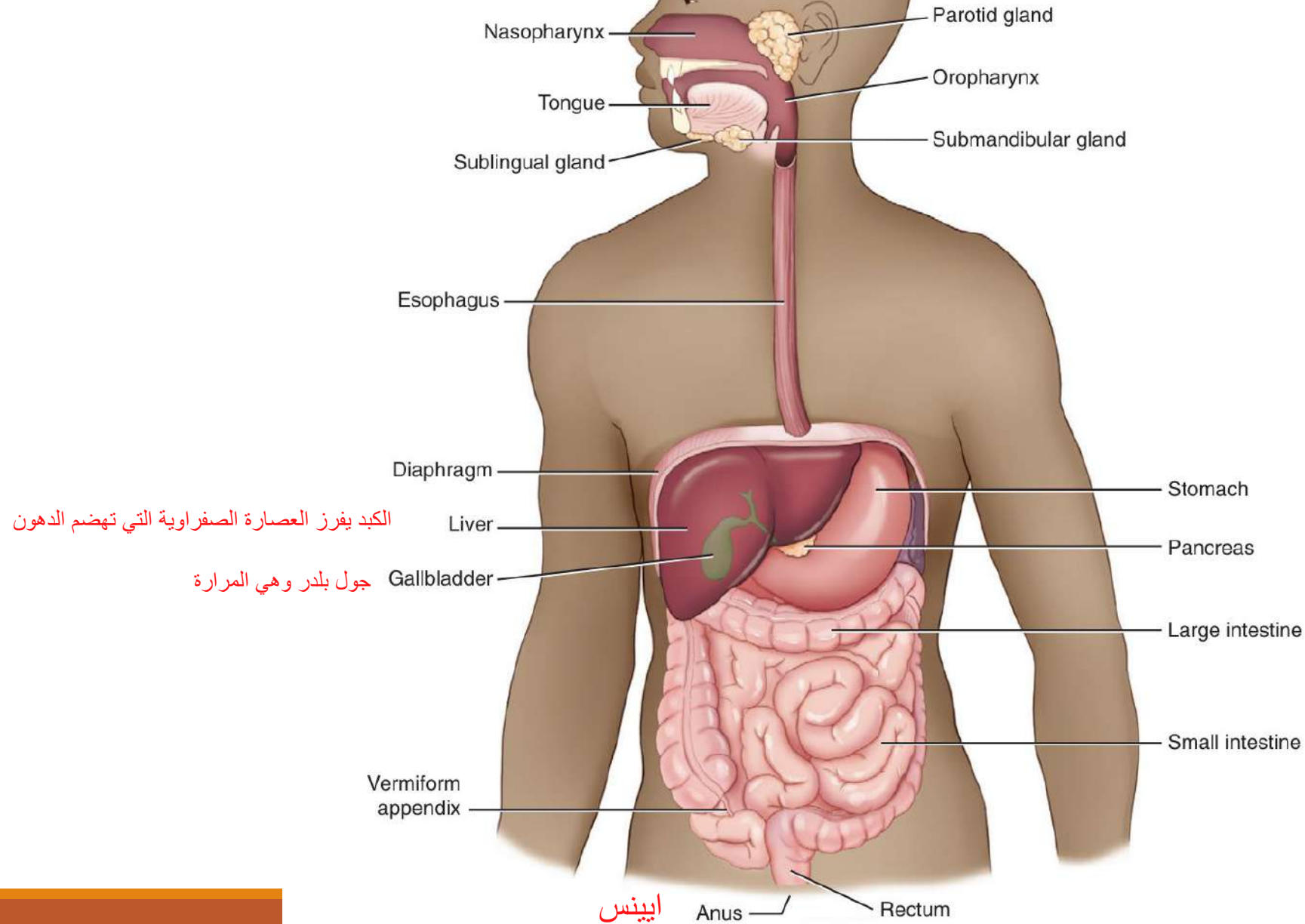
If a Term Ends in:	Form the Plural by:	Singular Example	Plural Example	Plural Pronounced as:
-a	dropping the -a and adding -ae	vertebra a (a bone in the spine)	vertebra ae	Long a, e, or i, depending on the term
-is	dropping the -is and adding -es	arthros is (an abnormal condition of a joint)	arthros es	seez
-ix or -ex	dropping the -ix or -ex and adding -ices	append ix	append ices	seez
-itis	dropping the -itis and adding -itides	arthr itis (inflammation of a joint)	arthr itides	deez
-nx	dropping the -nx and adding -nges	phalan nx (a bone in the fingers or toes)	phalan ges	ng (as in sing) and jeez
-um	dropping the -um and adding an -a	endocard ium (the structure inside the heart)	endocard ia	ah
-us	dropping the -us and adding an -i	digit us (a finger or toe)	digit i	eye
-y	dropping the -y and adding -ies	therap y (a treatment)	therap ies	eez

Digestive System I

Dr Asmaa Abed



الجهاز الهضمي يسمى بالقناة الهضمية لانه على شكل مسار (قناة) ب



الكبد يفرز العصارة الصفراوية التي تهضم الدهون

جول بلدر وهي المرارة

البنكرياس يفرز انزيمات تساعد على هضم الطعام

ايبينس

Fig. 5-1 The digestive system.

FUNCTIONS OF THE DIGESTIVE SYSTEM

يوفر الجهاز الهضمي العناصر الغذائية اللازمة للخلايا وأنسجة الجسم

The digestive system provides the nutrients needed for cells and body tissues

This is done through several distinct processes:

انجسشن

1. ingestion, the intake of food; **الابتلاع، تناول الطعام؛**
2. digestion, the mechanical and chemical breakdown of food; **الهضم، التحلل الميكانيكي والكيميائي للطعام؛**
3. absorption, the process of extracting nutrients; **الامتصاص، عملية استخلاص العناصر الغذائية؛** ابزروبشن
4. and elimination, the excretion of any waste products. **والإخراج، وإخراج أي نفايات.**

Other names for this system are

اهم عضوين بالجهاز الهضمي

gastrointestinal (GI) tract, which refers to the two main parts of the system (the stomach and intestines)

gastrointestinal **gastr/o** = stomach **intestin/o** = intestines **-al** = pertaining to

القناة الهضمية

the **alimentary canal**, which refers to the function of the tubelike nature of the majority of the digestive system, which starts at the mouth and continues in varying diameters to the anus.

alimentary **aliment/o** = nutrition **-ary** = pertaining to

Gastroenter**ology** -ology = science of

Gastroenter**ologist** -ologist = one who studies the topic

الجهاز الهضمي يتكون من 4 طبقات

Most of the alimentary canal is has four layers:

- the mucosa, اميوكوزا
- the submucosa,
- the muscularis,
- and the serosa/adventitia .

1. The inner layer is the **mucosa**, which *secretes gastric juices, absorbs nutrients, and protects the tissue through the production of mucus.* الطبقة الداخلية هي الغشاء المخاطي الذي يفرز العصارة المعدية، ويمتص العناصر الغذائية، ويحمي الأنسجة من خلال إنتاج المخاط.

2. The **submucosa**, the layer underneath the mucosa, *holds blood, lymphatic, and nervous tissues that serve to nourish, protect, and communicate.* تحتوي الطبقة تحت المخاطية على الدم والأنسجة الليمفاوية والعصبية التي تعمل على التغذية والحماية والتواصل.
النسيج الضام

submucosa sub- = under mucos/o = mucus

3. The next layer is the **muscularis** muscles that *contract and relax around the tube in a wavelike movement termed peristalsis.* الطبقة التالية هي العضلات العضلية التي تنقبض وتسترخي حول الأنبوب في حركة تشبه الموجة تسمى التمعج.
peristalsis **peri-** = surrounding **-stalsis** = contraction
محيط انقباض
او الحركة الدودية للجهاز الهضمي

4. The outermost layer has different names in the digestive system, depending on whether it occurs within or outside of the peritoneal cavity. الطبقة الخارجية لها أسماء مختلفة في الجهاز الهضمي، اعتمادًا على ما إذا كانت تحدث داخل أو خارج التجويف البريتوني.

If outside, an outer tunic covering that serves to bind a structure together is called the **adventitia** . إذا كان الغلاف الخارجي الذي يعمل على ربط البنية معًا يسمى الغلاف الخارجي.
The tunic within the peritoneal cavity that emits a slippery fluid to counteract friction, is termed the **serosa**. (serous membrane) سيروزا
الغلاف الموجود داخل التجويف البريتوني والذي يفرز سائلًا زلقًا لمقاومة الاحتكاك يسمى الغشاء المصلي.

على حسب لو كان فيها محاط بالبترونيام يسمى سيروزا ولومش جاي عليه بسميه ادفنتيشيا

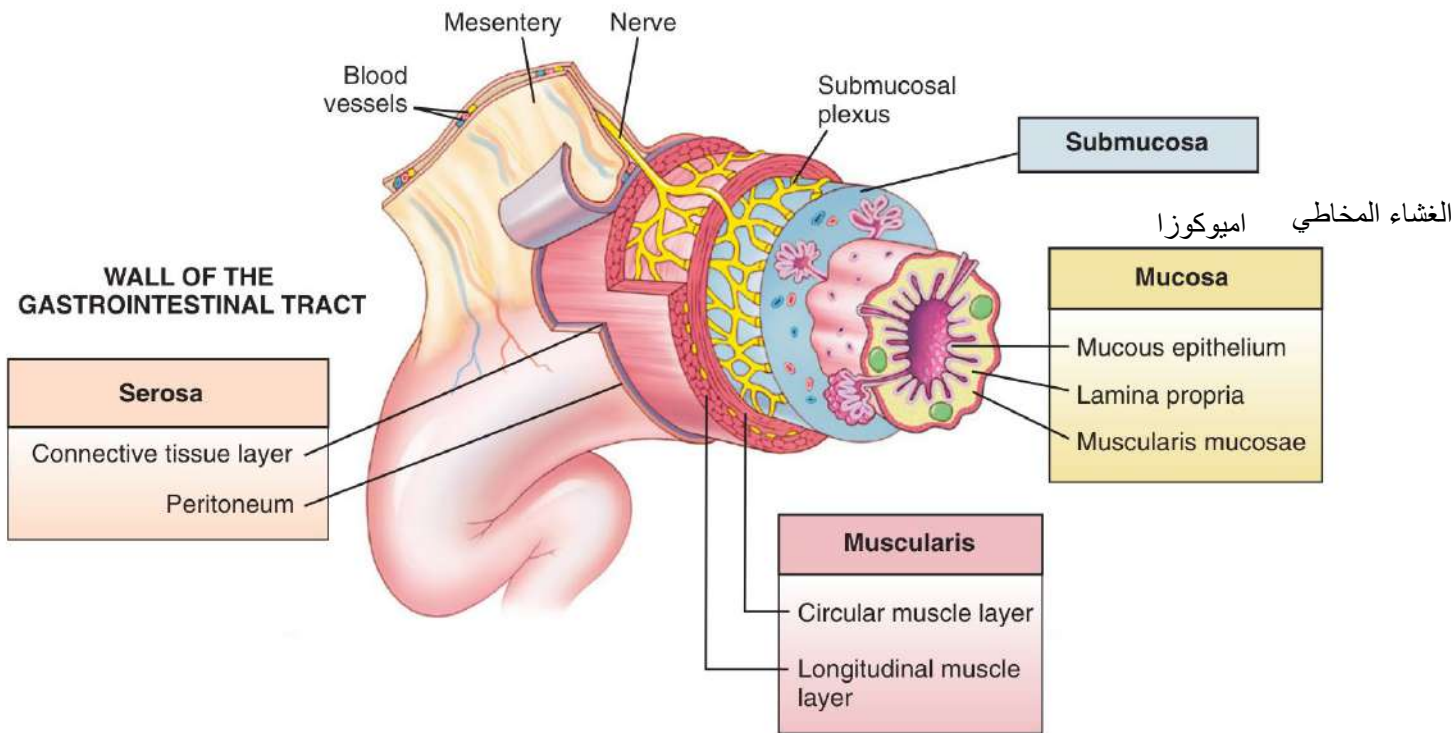
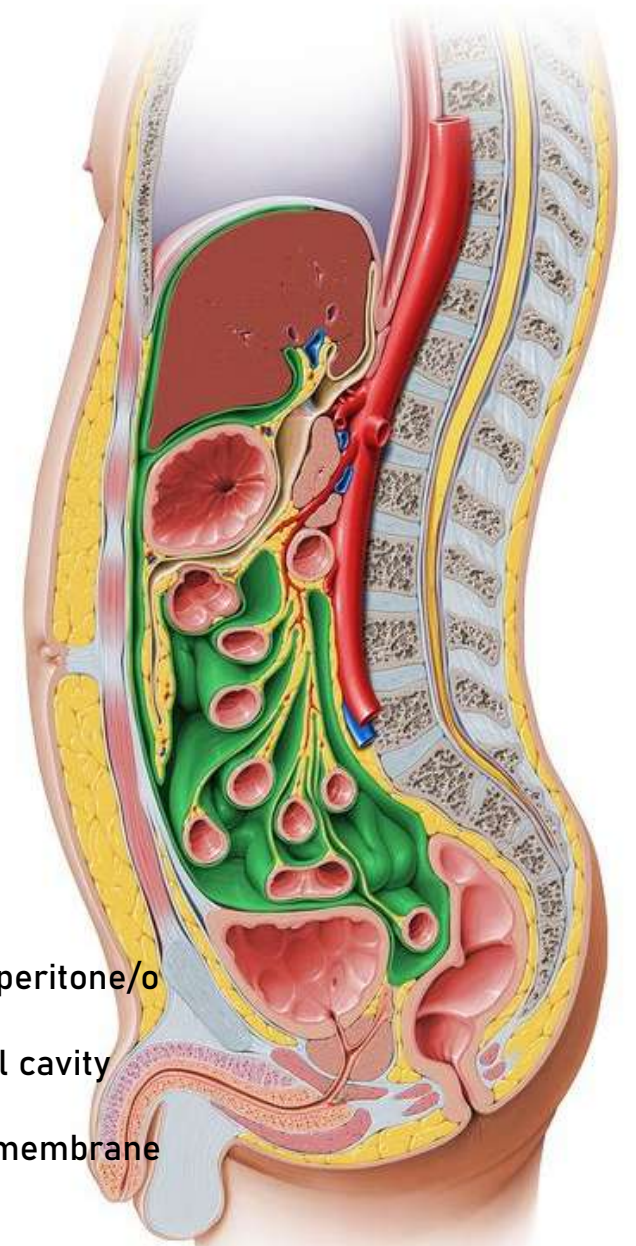


Fig. 5-2 Wall of the gastrointestinal tract.

عبارة عن غشاء يبطن الجدار تبع البطن من جوا بعد هيك بلف على الاعضاء وبغلفهم ويعمل اخر طبقة الي هيا السيروزا

الصفاق هو غشاء مزدوج الجانب يحمل العديد من الأعضاء داخل تجويف البطن والحوض

بيرتونيام
peritoneum = peritone/o
Peritoneal cavity
Peritoneal membrane



The peritoneum is a double-sided membrane that holds many of the organs inside the abdominopelvic cavity.

باراسنتيز

Paracentesis

A needle drains the fluid in the peritoneal cavity.

انو دخلت بارة وسحب السائل

Collection
Container



Abdomen

Drain

Peritoneum

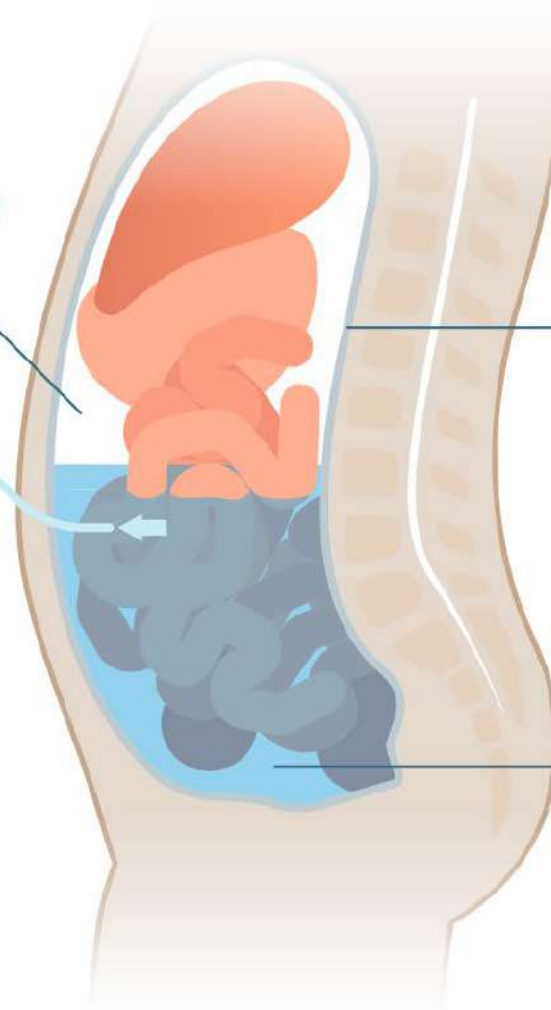
(thin lining surrounding the abdominal organs)

Ascites /
Peritoneal Effusion

(fluid in between the layers of the peritoneum)

اسايتس فيوجن

تجمع السوائل في البطن



Oral cavity

إذا في أكثر من مقطع يكون كل مقطع بيحي مع استخدام معين

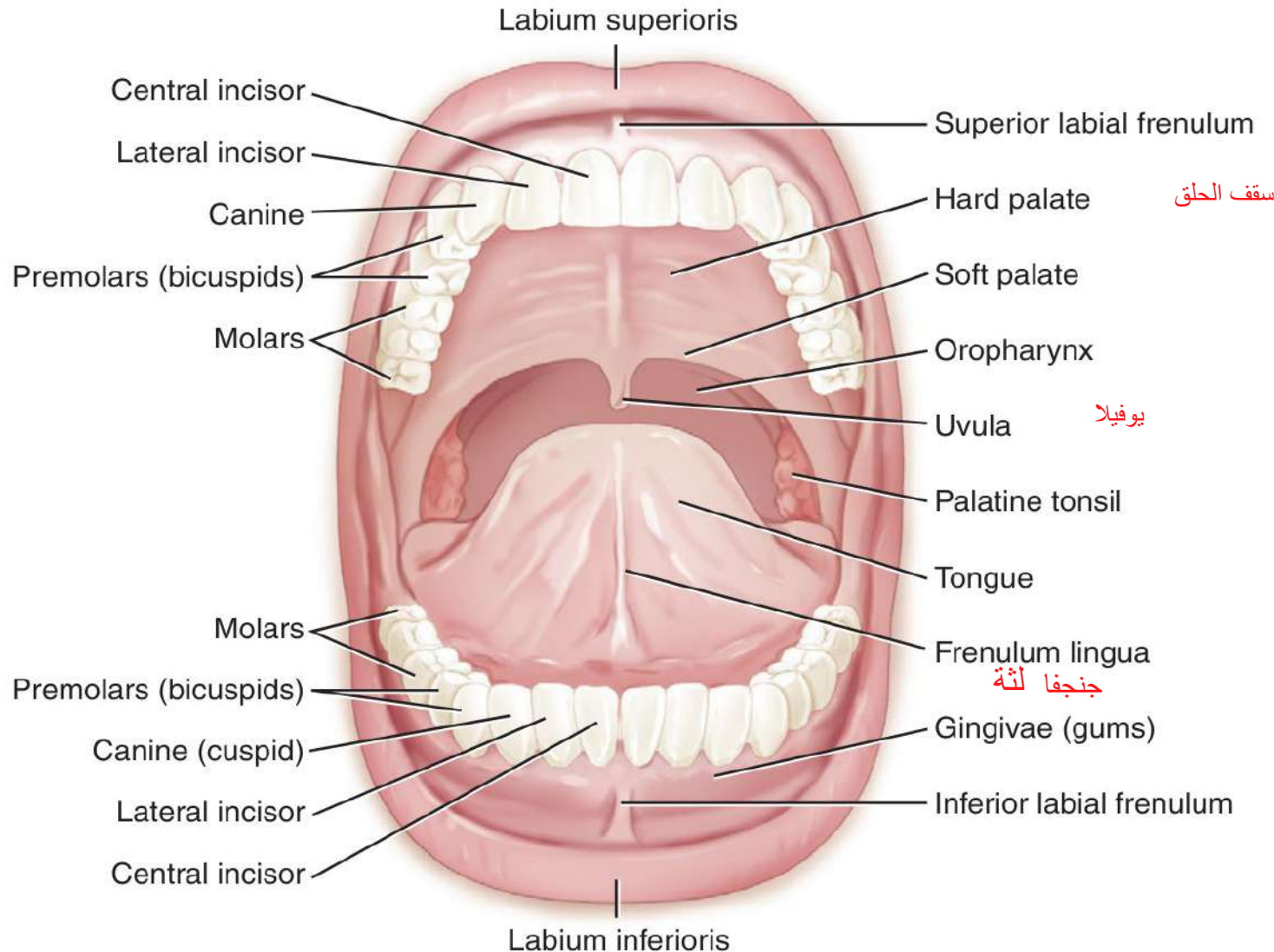


Fig. 5-3 The oral cavity.

mouth, oral cavity = or/o, stomat/o, stom/o

ليبو شلي الشفة

lips = cheil/o, labi/o

cheek = bucc/o

لسان

tongue = gloss/o, lingu/o

palate = palat/o

ماكزيلو الفك العلوي الثابت

upper jaw = maxill/o

ماندبليو الفك السفلي المتحرك

lower jaw = mandibul/o

اودنتو

teeth = dent/i, odont/o

gums = gingiv/o

إنامل الطبقة الخارجية الصلبة بالاسنان

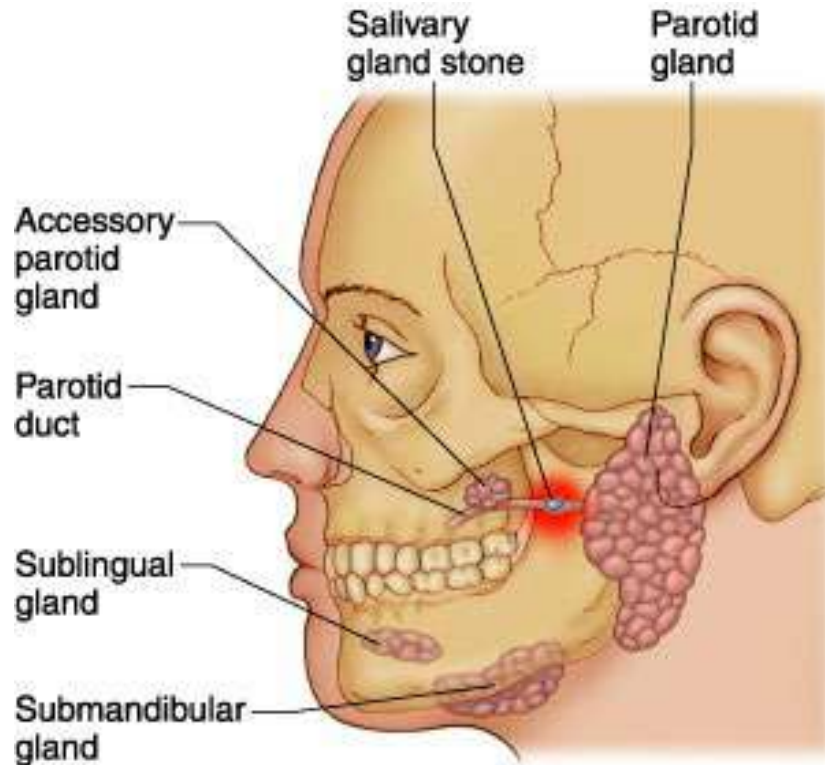
enamel = amel/o أميلو

غشاء يربط اللسان بأرضية الفم

Frenulum = fren/o

فريينو

Salivary gland



سيالو او پتيالو
saliva = sial/o, ptyal/o

ادينو
Gland = aden/o

salivary gland = sialoaden/o

باروتيد
parotid par- = near ot/o = ear -id = pertaining to
الغدة القريبة من الاذن

سب ماندبلوير
submandibular sub- = under mandibul/o = lower jaw, mandible -ar = pertaining to

سب لينجوال
sublingual sub- = under lingu/o = tongue -al = pertaining to

حصى في الغدد مثلاً
Stone = lith/o ليتو

Pharynx and esophagus

البلعوم والمرئ

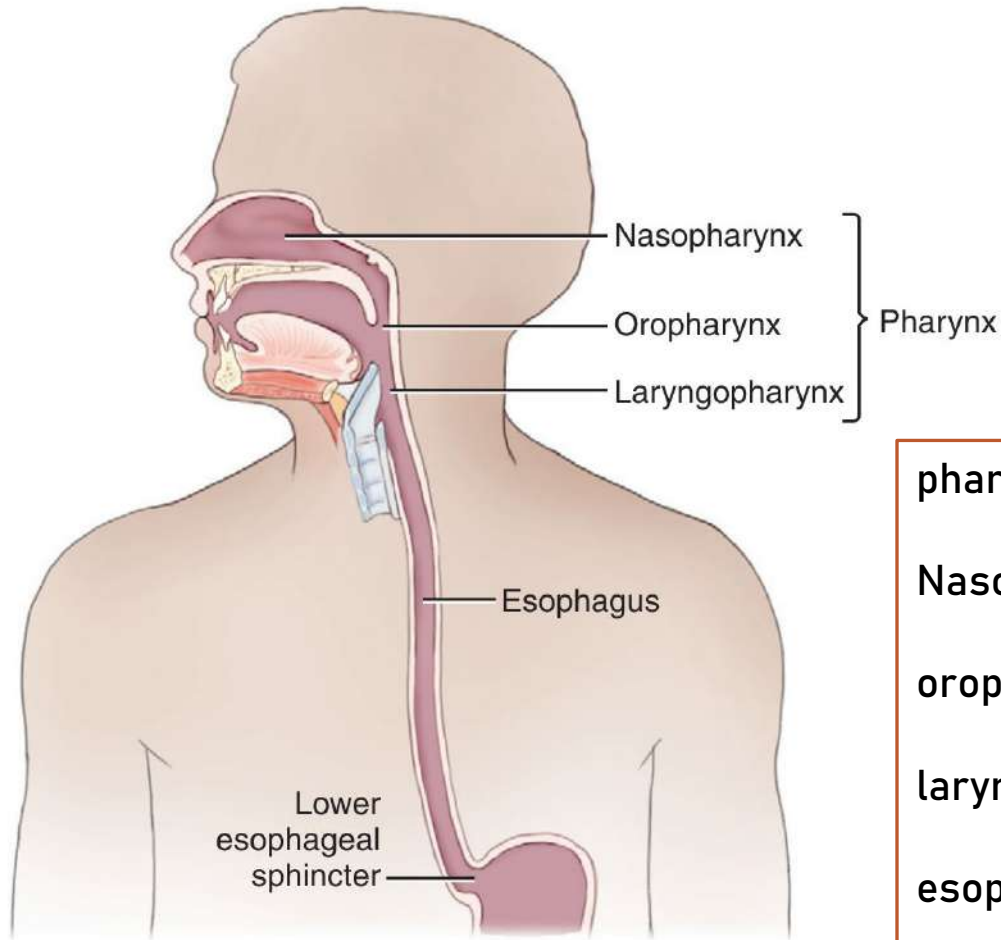


Fig. 5-5 The pharynx and esophagus.

آخر المرئ يوجد صمام يسمى اسفنجتر العضلة الي بتفتح وبتسكر عشان يعمل لوصول الطعام للمعدة واهميته عدم ارجاع الطعام من المعدة لفوق

البلعوم بيتقسم حسب هوا ورا ايش مثلا ورا الانف او الفم او الحنجرة

pharynx (throat) = pharyng/o

Nasopharynx **nas/o** = nose **pharyng/o** = pharynx (throat)

oropharynx **or/o** = mouth **pharyng/o** = pharynx (throat)

لارنجيو فارنكس
laryngopharynx **laryng/o** = larynx, (voicebox) **pharyng/o** = pharynx (throat)

esophagus = **esophag/o**

the lower esophageal sphincter (LES) = the gastroesophageal sphincter = the cardiac sphincter

Match the combining forms with the following definitions.

- | | | | |
|-------------------------|---------------------|---------------------------|---------------------|
| _____ 1. teeth | _____ 9. saliva | A. esophag/o | I. gloss/o, lingu/o |
| _____ 2. gums | _____ 10. throat | B. bucc/o | J. sial/o, ptyal/o |
| _____ 3. roof of mouth | _____ 11. esophagus | C. mandibul/o | K. pharyng/o |
| _____ 4. tongue | _____ 12. lower jaw | D. or/o, stom/o, stomat/o | L. dent/i, odont/o |
| _____ 5. mouth | _____ 13. molar | E. laryng/o | M. sialoaden/o |
| _____ 6. lips | _____ 14. upper jaw | F. palat/o | N. maxill/o |
| _____ 7. cheek | _____ 15. voicebox | G. labi/o, cheil/o | O. mol/o |
| _____ 8. salivary gland | | H. gingiv/o | |

stomach

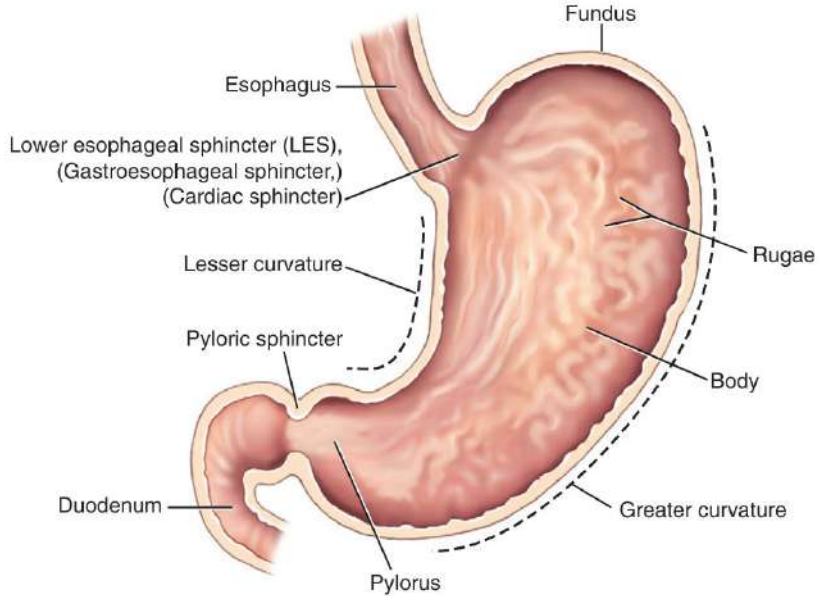


Fig. 5-7 The stomach.

The stomach is divided into three main sections:

- I. the fundus,
- II. the body,
- III. the pylorus, the pylorus is divided into
 - the pyloric antrum,
 - the pyloric canal,
 - and the pyloric sphincter.

The pyloric sphincter regulates the gentle release of food from the stomach into the small intestine.

تنقسم المعدة إلى ثلاثة أقسام رئيسية

القاع،

الجسم،

البواب، وينقسم البواب إلى الجيب البوابي،

القناة البوابية،

والعضلة العاصرة البوابية.

تنظم العضلة العاصرة البوابية الإطلاق اللطيف للطعام من المعدة إلى الأمعاء الدقيقة.

stomach = gastr/o

fundus = fund/o

كوربور

body = corpor/o

بييلورس

pylorus = pylor/o

antrum = antr/o

Small intestine

انتيرو

small intestine = enter/o

دودينم

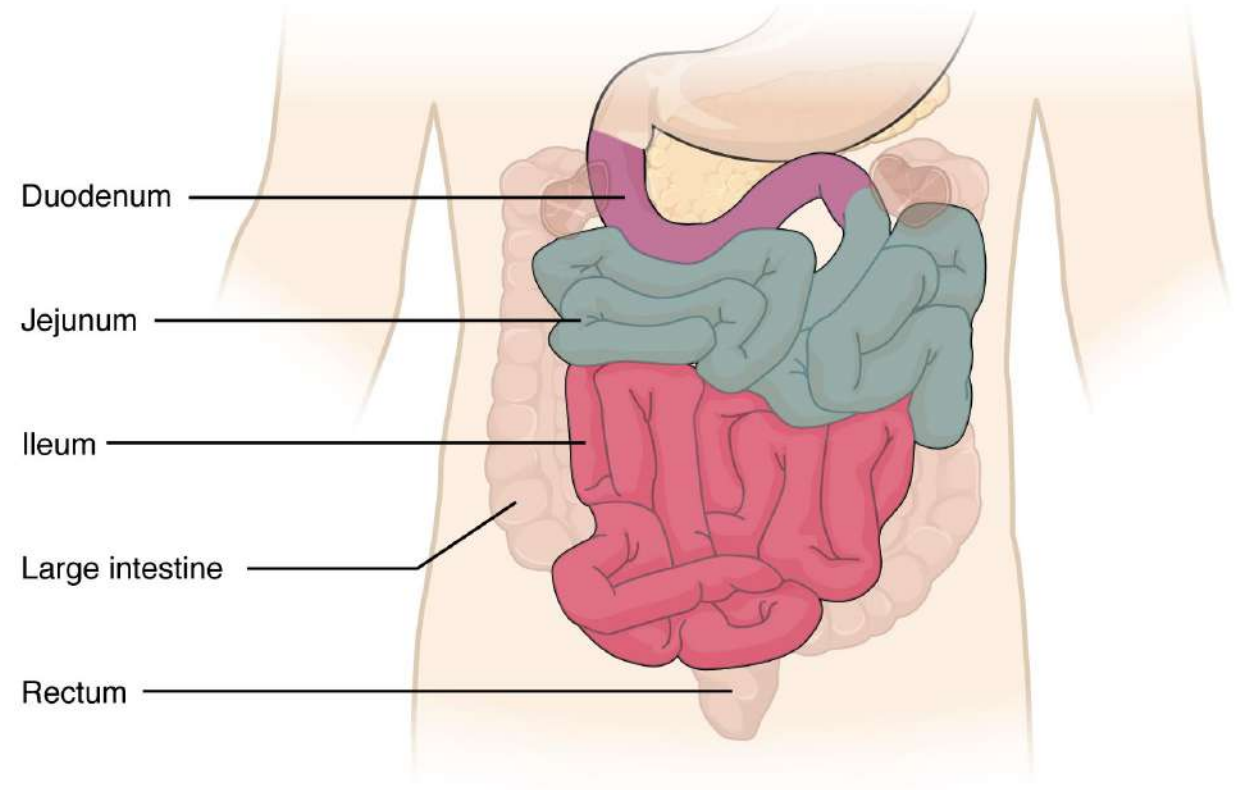
duodenum = duoden/o

جوجينم

jejunum = jejun/o

ايليم

ileum = ile/o



Large intestine

سيكم

cecum = cec/o

ابندكس

الزائدة الدودية

appendix = appendic/o, append/o

امعاء غليظة او قولون

large intestine, colon = col/o

ileocecal ile/o = ileum cec/o = cecum -al = pertaining to

sigmoid colon = sigmoid/o

rectum = rect/o

anus = an/o

rectum and anus = proct/o

feces = fec/a

فيكا هو البراز

Defecation

ديفكيشن اي اخراج البراز

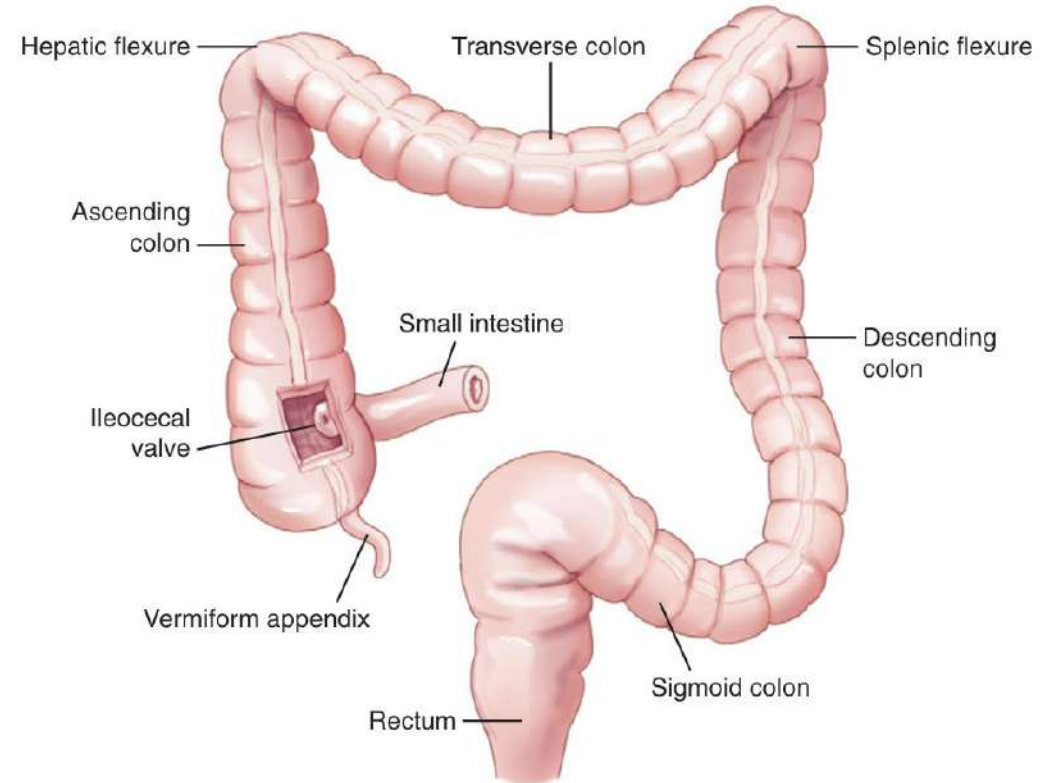
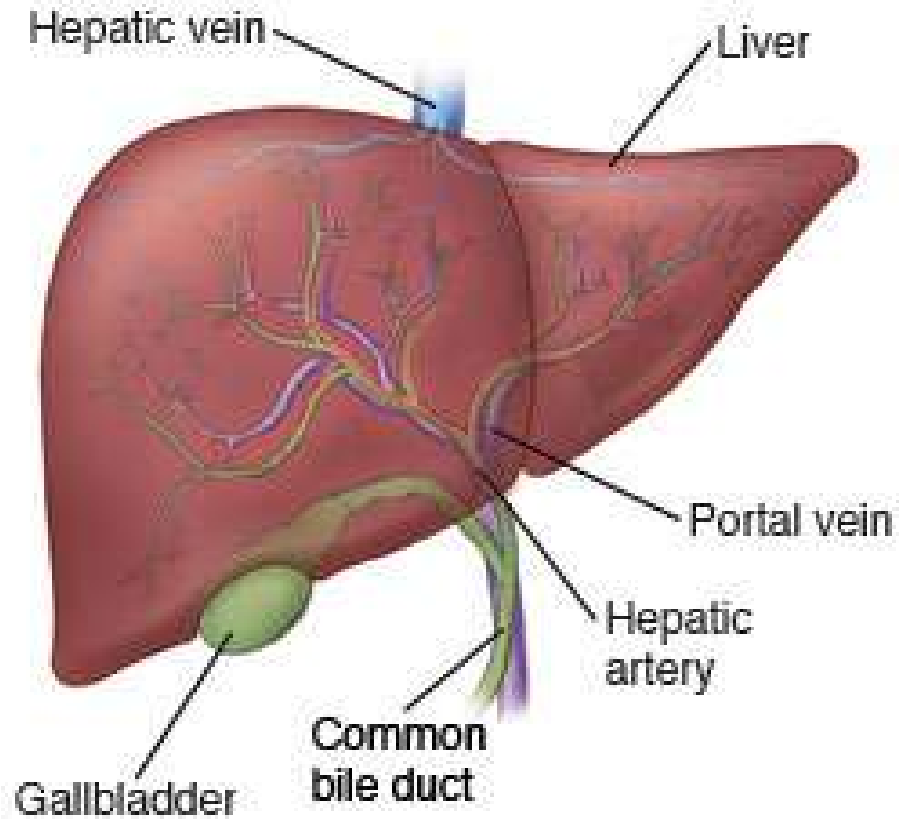


Fig. 5-8 The large intestine (colon).

Accessory Organs (Adnexa)



accessory = adnex/o

liver = hepat/o

bile = chol/e

Duct = doch/o

Common Bile duct = chol/e/doch/o

Vessel = angi/o

Bile vessels = cholangi/o کولانجیو

Bladder = cyst/o

Gall bladder = chol/e/cyst/o

- The liver forms a substance called bile, which emulsifies, or mechanically breaks down, fats into smaller particles so that they can be chemically digested.

يقوم الكبد بتكوين مادة تسمى الصفراء، والتي تعمل على استحلاب الدهون أو تفكيكها ميكانيكيًا إلى جزيئات أصغر حتى يمكن هضمها كيميائيًا.

- Bile is composed of **bilirubin**, the waste product formed by the normal breakdown of hemoglobin in red blood cells at the end of their life spans, and cholesterol, a fatty substance found only in animal tissues

جوندس

- **Jaundice**

الريقان أو الاصفرار تبع التهاب الكبد الوبائي

تتكون الصفراء من البيليروبين، وهو ناتج النفايات الناتج عن التحلل الطبيعي للهيموجلوبين في خلايا الدم الحمراء في نهاية عمرها، والكوليسترول، وهو مادة دهنية توجد فقط في الأنسجة الحيوانية.

- Bile vessels

سبب الاصفرار هو ان الجسم غير قادر على التخلص من الصبغة الصفراء

- Right and left hepatic duct



- Common hepatic duct + cystic duct



- Common bile duct

Pancreas

بنكريتكو

akzokra'in pancreas = pancreat/o afraz
exocrine exo- = outside -crine = to secrete افراز
 endo- = within -crine = to secrete اندو كراين
endocrine

لما يكون الافراز داخل الدم اندو والعكس

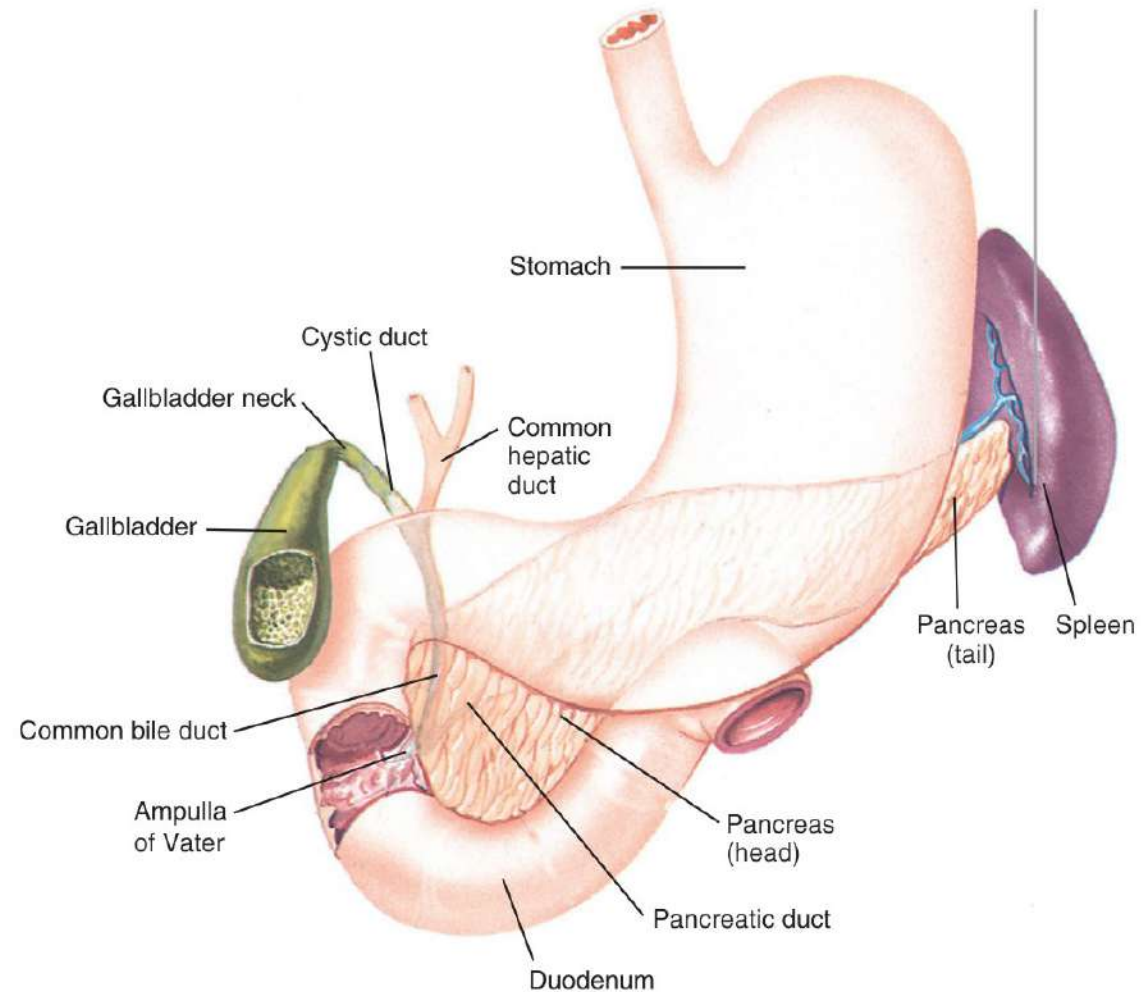


Fig. 5-10 Sources of intestinal secretions.

Terms Related to Symptoms and Signs Involving the Digestive System and Abdomen (R10-R19)

Term	Word Origin	Definition
ascites اسايتس		Excessive intraperitoneal fluid. السائل داخل البطن المفرط
diarrhea اسهال دياريا	dia- through, complete -rrhea discharge, flow ريا تستخدم بكثير مواضع بمعنى سيلان	Abnormal discharge of watery, semisolid stools. تفريغ غير طبيعي للبراز المائي شبه الصلب
dysphagia صعوبة في البلع دسفجيا	dys- difficult, bad -phagia condition of swallowing, eating البلع	Difficulty with swallowing that may be due to an obstruction (e.g., a tumor) or a motor disorder (e.g., a spasm). صعوبة في البلع قد يكون بسبب انسداد مثل ورم او اضطراب حركي مثل التشنج
eructation التطرع زي بعد شرب اشئ فيه صودا اركتيشن		Release of air from the stomach through the mouth. Eructation may be caused by rapid eating or by intentionally or unintentionally swallowing air (aerophagia). Also called burping or belching . بلبثينج بربينج
flatulence فلاتيولانس		Gas expelled through the anus. Also called flatus . فليتس طرد الغاز من خلال الفتحة الشرج وتسمى ريح البطن
gastralgia جاسترولجيا	gastr/o stomach -algia pain	Abdominal pain. Also called gastrodynia . جاسترودنيا
halitosis هليتوزس	halit/o breath -osis abnormal condition	Bad-smelling breath. رائحة الفم الكريهة
hepatomegaly هيباتوميجلي	hepat/o liver -megaly enlargement	Enlargement of the liver. تضخم الكبد
jaundice جندس		Yellowing of the skin and sclerae (whites of the eyes) caused by elevated levels of bilirubin. Also called icterus . اكرتس اصفرار الجلد والصلابة او بياض العين الناجم عن ارتفاع مستويات البيليروبين ويسمى اليرقات
nausea الشعور بالغثيان نوزيا		Sensation that accompanies the urge to vomit but does not always lead to vomiting. The abbreviation N&V refers to nausea and vomiting. The term is derived from a Greek word meaning seasickness. احساس بالتقيؤ ولكنه مش دائما بتقيؤ مشتق من كلمة معناها دوار البحر

pyrosis بيروسز	<i>pyr/o</i> fire <i>-osis</i> abnormal condition	Painful burning sensation in esophagus, usually caused by reflux of stomach contents, hyperactivity, or peptic ulcer. Also known as heartburn. هارتبيرن
vomiting التقيؤ		احساس بحرقان مؤلم في المرئ ويحدث بسبب ارجاع محتويات المعدة او قرحة هضمية Forcible or involuntary emptying of the stomach through the mouth. The material expelled is called vomitus, or emesis. ايمسس فوميتس

الافراغ القسري او اللاارادي للمعدة من خلال الفم



Exercise 7: Symptoms and Signs Involving the Digestive System and Abdomen

Matching

- | | |
|-------------------|--|
| ___ 1. flatulence | A. forcible emptying of stomach through the mouth |
| ___ 2. nausea | B. excessive intraperitoneal fluid |
| ___ 3. jaundice | C. gas expelled through the anus |
| ___ 4. diarrhea | D. sensation accompanying the urge to vomit |
| ___ 5. eructation | E. release of air from the stomach through the mouth |
| ___ 6. vomiting | F. abnormal discharge of watery, semisolid stools |
| ___ 7. pyrosis | G. heartburn; painful burning sensation in the esophagus |
| ___ 8. ascites | H. yellowing of skin and sclerae |

Build a term

9. pain in the stomach _____
10. condition of difficulty with swallowing _____
11. abnormal condition of the breath _____

Terms Related to Congenital Conditions (Q00-Q99)		
Term	Word Origin	Definition
ankyloglossia انكيلوجلوسيا اللسان المربوط	<i>ankyl/o</i> stiffening <i>gloss/o</i> tongue <i>-ia</i> condition	An inability to move the tongue freely as a result of a congenital shortened frenulum. Also referred to as being "tongue-tied". تنج تاييد عدم القدرة على تحريك اللسان نتيجة للجام الخلقي او اللسان المربوط
cleft palate اكلفت بالث الشفة الأرنبية		Failure of the palate to close during embryonic development, creating an opening in the roof of the mouth. Cleft palate often is accompanied by a cleft lip (Fig. 5-11). فشل شقف الحنك في الاغلاق اثناء التطور الجنيني مما يخلق فتحة في سقف الفم وغالبا يكون مصحوبا بشفة مشقوقة
esophageal atresia اسوفجيا ارتيزيا التسكير في المرئ	<i>esophag/o</i> esophagus <i>-eal</i> pertaining to <i>a-</i> no, not, without <i>-tresia</i> condition of an opening	Esophagus that ends in a blind pouch and therefore lacks an opening into the stomach (Fig. 5-12). باوش اي تصبح ك كيس مسكر المرئ الذي ينتهي في كيس اعمى وبالتالي يفتقر الى فتحة في المعدة
gastroschisis جاستروكيسيس	<i>gastr/o</i> stomach <i>-schisis</i> split	A congenital opening in the anterior abdominal wall. فتحة خلقية في جدار البطن الامامي ونظرا لذلك ستخرج الامعاء للخارج
Hirschsprung's disease هيرشس برج ديز		Congenital absence of normal nervous function in part of the colon, which results in an absence of peristaltic movement, accumulation of feces, and an enlarged colon. Also called congenital megacolon. كونجنتال ميكا كولون الغياب الخلقي للوظيفة العصبية الطبيعية في جزء من القولون مما يؤدي الى غياب الحركة التمعجية وتراكم البراز وتسمى ايضا تضخم خلقي
omphalocele اومفالوسيل	<i>omphal/o</i> umbilicus <i>-cele</i> herniation, protrusion	A congenital herniation at the umbilicus. Also called exomphalos. اكسوامفالو فتق خلقي في السرة
pyloric stenosis بيلورك ستينوزس	<i>pylor/o</i> pylorus <i>-ic</i> pertaining to <i>stenosis</i> narrowing	Condition in which the muscle between the stomach and the small intestine narrows or fails to open adequately to allow partially digested food into the duodenum. الحالة التي تضيق فيها العضلة بين المعدة والامعاء الدقيقة او تفشل في الفتح بشكل كاف للسماح بالطعام المهضوم جزئيا في الاثنى عشر



ankyloglossia
frenotomy



Fig. 5-11 Cleft palate and cleft lip.

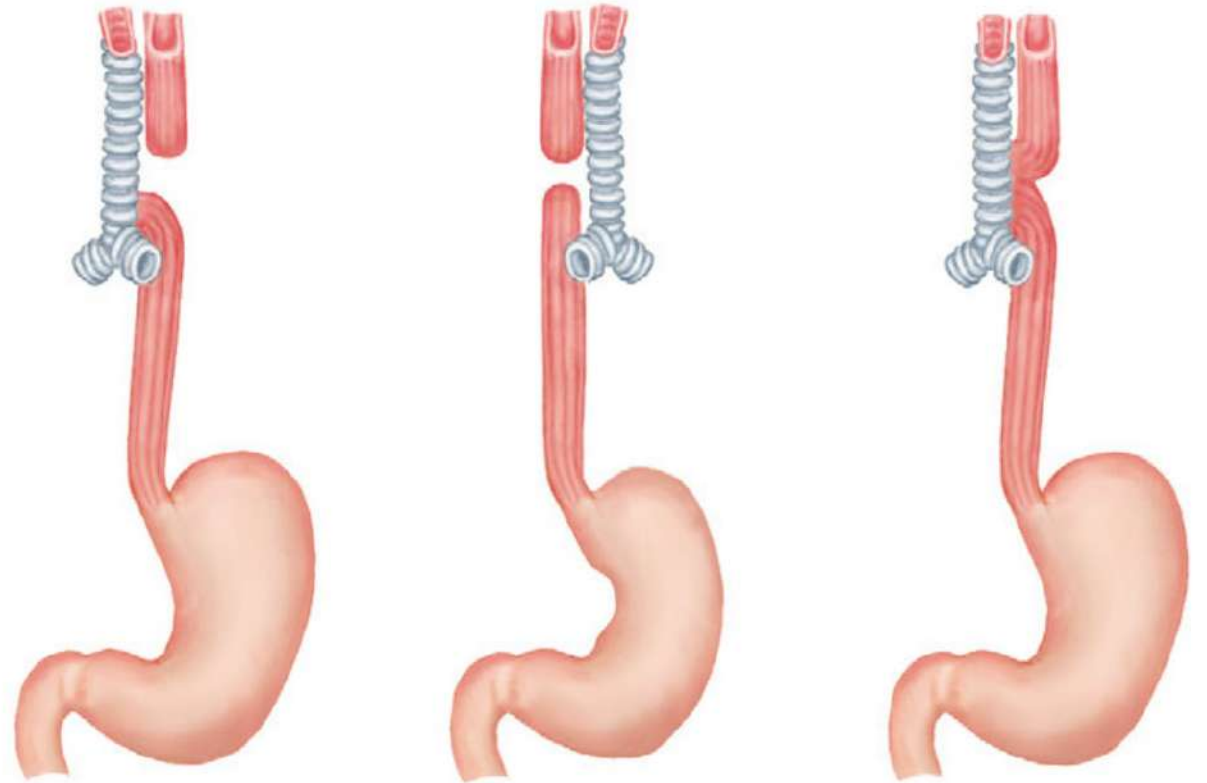
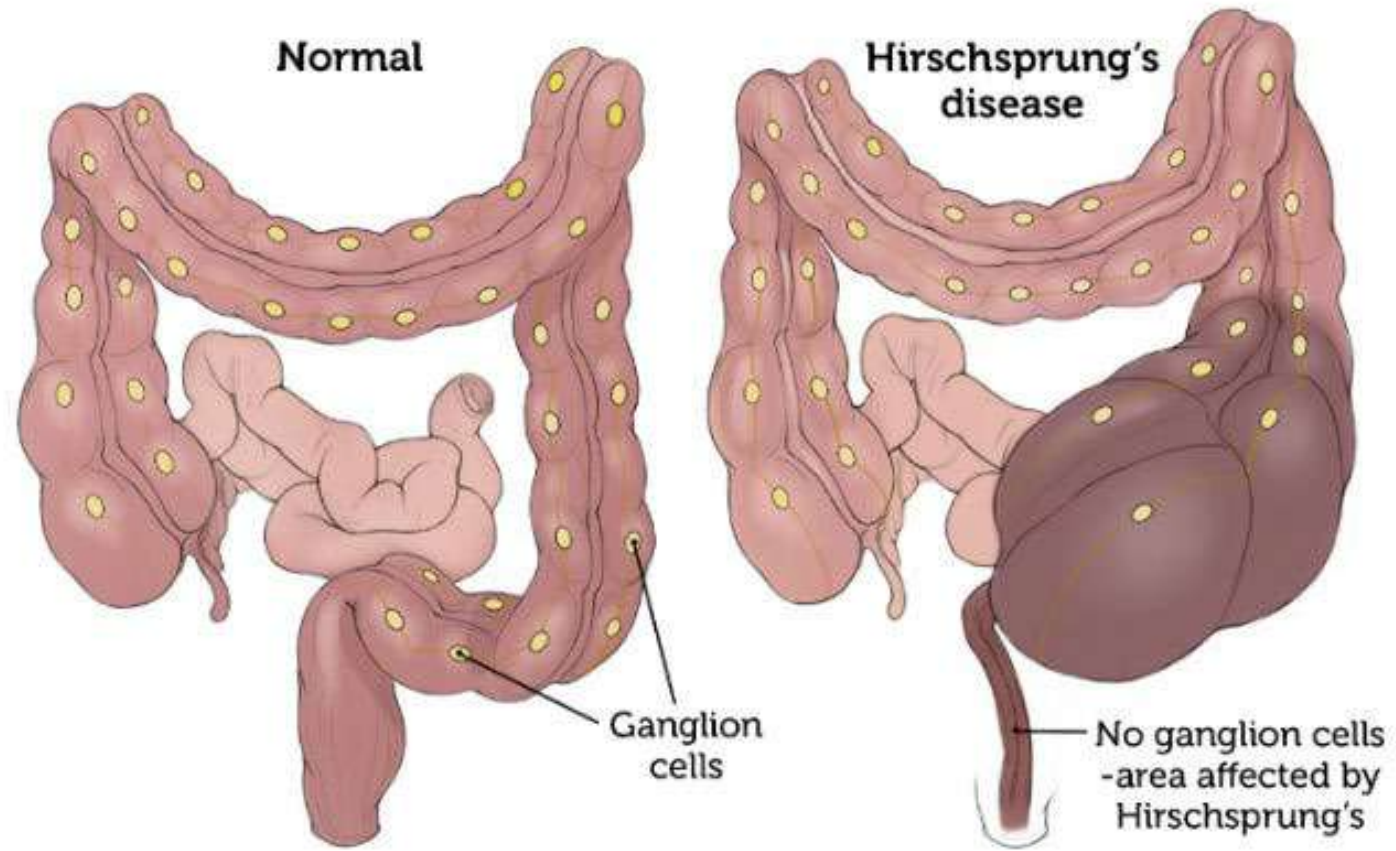
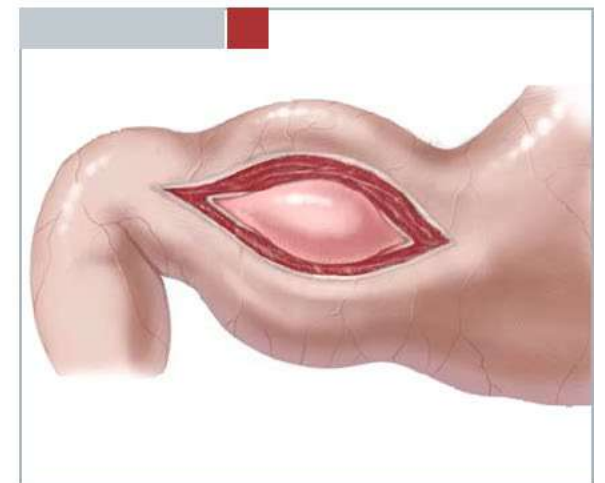
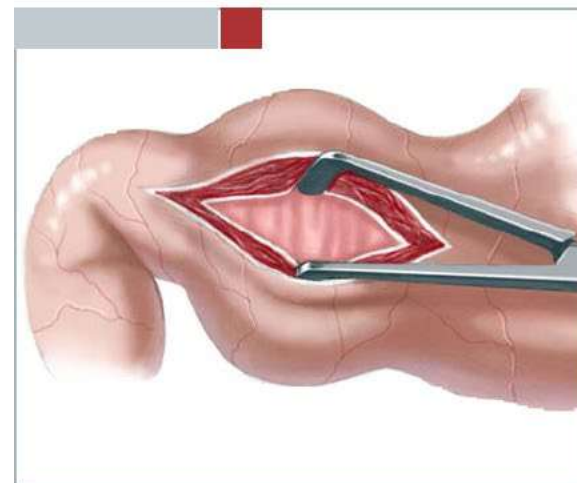
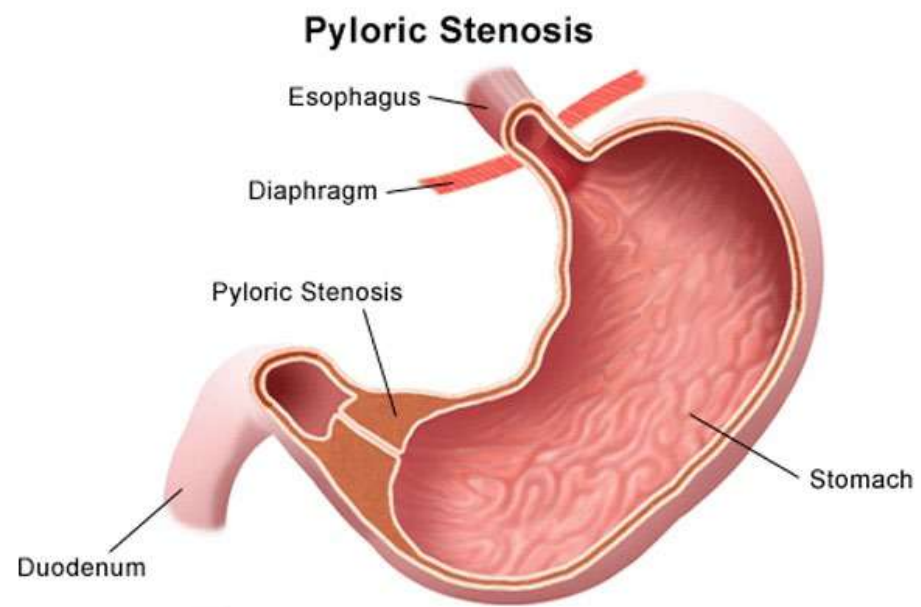


Fig. 5-12 Esophageal atresia.







Pyloromyotomy



Exercise 8: Congenital Conditions

Matching

- | | |
|-------------------------------|--|
| ___ 1. Hirschsprung's disease | A. esophagus ending in a blind pouch |
| ___ 2. cleft palate | B. narrowing of the muscle between the stomach and small intestine |
| ___ 3. esophageal atresia | C. congenital megacolon; lack of peristaltic movement in the colon |
| ___ 4. pyloric stenosis | D. congenital opening in the roof of the mouth |

Decode

5. gastroschisis _____
6. omphalocele _____
7. ankyloglossia _____

Terms Related to Diseases of Oral Cavity and Salivary Glands (K00-K14)

Term	Word Origin	Definition
amelogenesis imperfecta اميلى جنيسز امبيرفكيتا	<i>amel/o</i> enamel <i>-genesis</i> production, origin	An abnormal formation of tooth enamel, resulting in separation from the dentin beneath. تكوين غير طبيعي لمينا الاسنان مما يؤدي الى الانفصال عن العاج تحته
anodontia ان اودنتو	<i>an-</i> no, not, without <i>odont/o</i> teeth <i>-ia</i> condition	Either complete or partial lack of teeth. Also referred to as edentulous . ايدنتيولاس النقص الكامل او الجزئي للاسنان
aphthous stomatitis افثس ستوماتايتس	<i>aphth/o</i> ulceration قرحة <i>-ous</i> pertaining to <i>stomat/o</i> mouth <i>-itis</i> inflammation	Recurring condition characterized by small erosions (ulcers), which appear on the mucous membranes of the mouth. Also called a canker sore (Fig. 5-13). تاكلات صغيرة او قرحة تظهر على الاغشية المخاطية بالفم بالعامية الحم
cheilitis شلايتس	<i>cheil/o</i> lip <i>-itis</i> inflammation	Inflammation of the lips. التهاب الشفة
dental caries دينتال كاريز	<i>dent/i</i> teeth <i>-al</i> pertaining to	Plaque disease caused by an interaction between food and bacteria in the mouth, leading to tooth decay. Also called cavities . مرض البلاك الناجم عن تفاعل بين الطعام والبكتيريا في الفم مما يؤدي الى تسوس الاسنان

Terms Related to Diseases of Oral Cavity and Salivary Glands (K00-K14)—cont'd

Term	Word Origin	Definition
gingivitis جنگفايتس	<i>gingiv/o</i> gums <i>-itis</i> inflammation	Inflammatory disease of the gums characterized by redness, swelling, and bleeding (Fig. 5-14). مرض التهابي في اللثة يتميز بالاحمرار والتورم والنزيف
glossitis جلوسايتس	<i>gloss/o</i> tongue <i>-itis</i> inflammation	Inflammation of the tongue. التهاب في اللسان
oral mucositis اورل ميوسايتس	<i>or/o</i> mouth <i>-al</i> pertaining to <i>mucos/o</i> mucus <i>-itis</i> inflammation	Inflammation of the mucous membranes of the mouth. Gastrointestinal mucositis may be an adverse effect of chemotherapy and can occur throughout the GI tract. التهاب الأغشية المخاطية للفم وقد يكون التهاب الغشاء المخاطي المعدي تأثيرا سلبيا للعلاج الكيميائي ويمكن ان يحدث في جميع انحاء
oral leukoplakia اورل لوكو بلنكيا	<i>or/o</i> mouth <i>-al</i> pertaining to <i>leuk/o</i> white <i>-plakia</i> condition of patches	Condition of white patches that may appear on the lips and buccal mucosa (Fig. 5-15). It usually is associated with tobacco use and may be precancerous. حالة البقع البيضاء التي تظهر على الشفاه والغشاء المخاطي الشدق عادة ما يكون مرتبط بتعاطي التبغ وقد يكون سرطانيا
periodontal disease بري اودنتال ديزيز	<i>peri-</i> surrounding <i>odont/o</i> tooth <i>-al</i> pertaining to	Pathologic condition of the tissues surrounding the teeth. الحالة المرضية للانسجة المحيطة بالاسنان

ptyalism بتيالزم	<i>ptyal/o</i> saliva <i>-ism</i> condition	Condition of excessive salivation. حالة الإفراط في إفراز اللعاب
sialoadenitis سيالو ادونايتيس	<i>sialoaden/o</i> salivary gland <i>-itis</i> inflammation	Inflammation of a salivary gland. التهاب الغدة اللعابية
sialolithiasis سيالولثييزس	<i>sial/o</i> saliva <i>lith/o</i> stone <i>-iasis</i> presence of, condition	Condition of stones in a salivary gland or duct. حالة الحصوات في الغدة اللعابية أو القناة



Fig. 5-15 Leukoplakia.

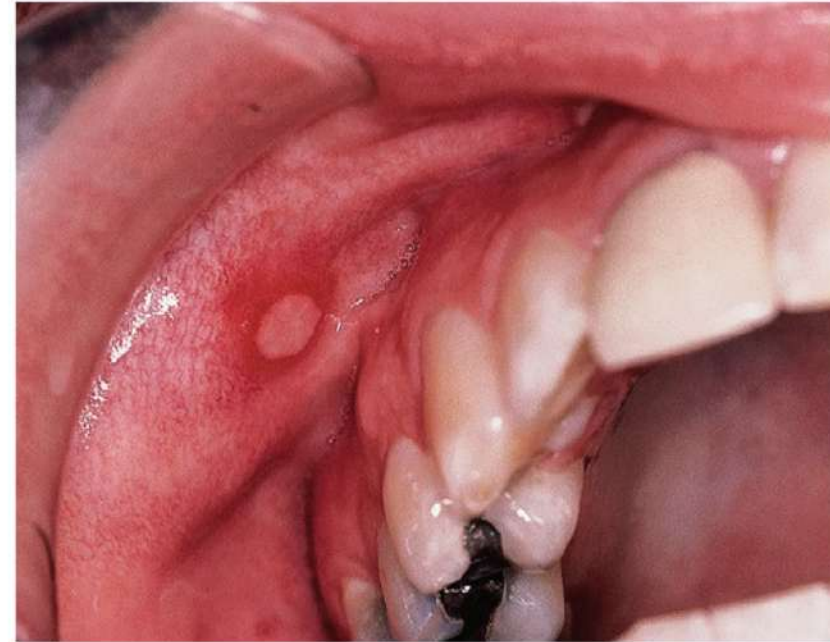


Fig. 5-13 Aphthous stomatitis.



Exercise 9: Diseases of the Oral Cavity and Salivary Glands

Match the terms to their definitions.

- ___ 1. ptyalism
- ___ 2. aphthous stomatitis
- ___ 3. sialolithiasis
- ___ 4. periodontal disease
- ___ 5. amelogenesis imperfecta
- ___ 6. mucositis
- ___ 7. dental caries
- ___ 8. leukoplakia

- A. plaque disease leading to tooth decay
- B. canker sore
- C. inflammation of mucous membrane
- D. excessive salivation
- E. abnormal formation of enamel
- F. stones in a salivary gland
- G. disease of tissue surrounding teeth
- H. white patches on lips and buccal mucosa

Decode the terms.

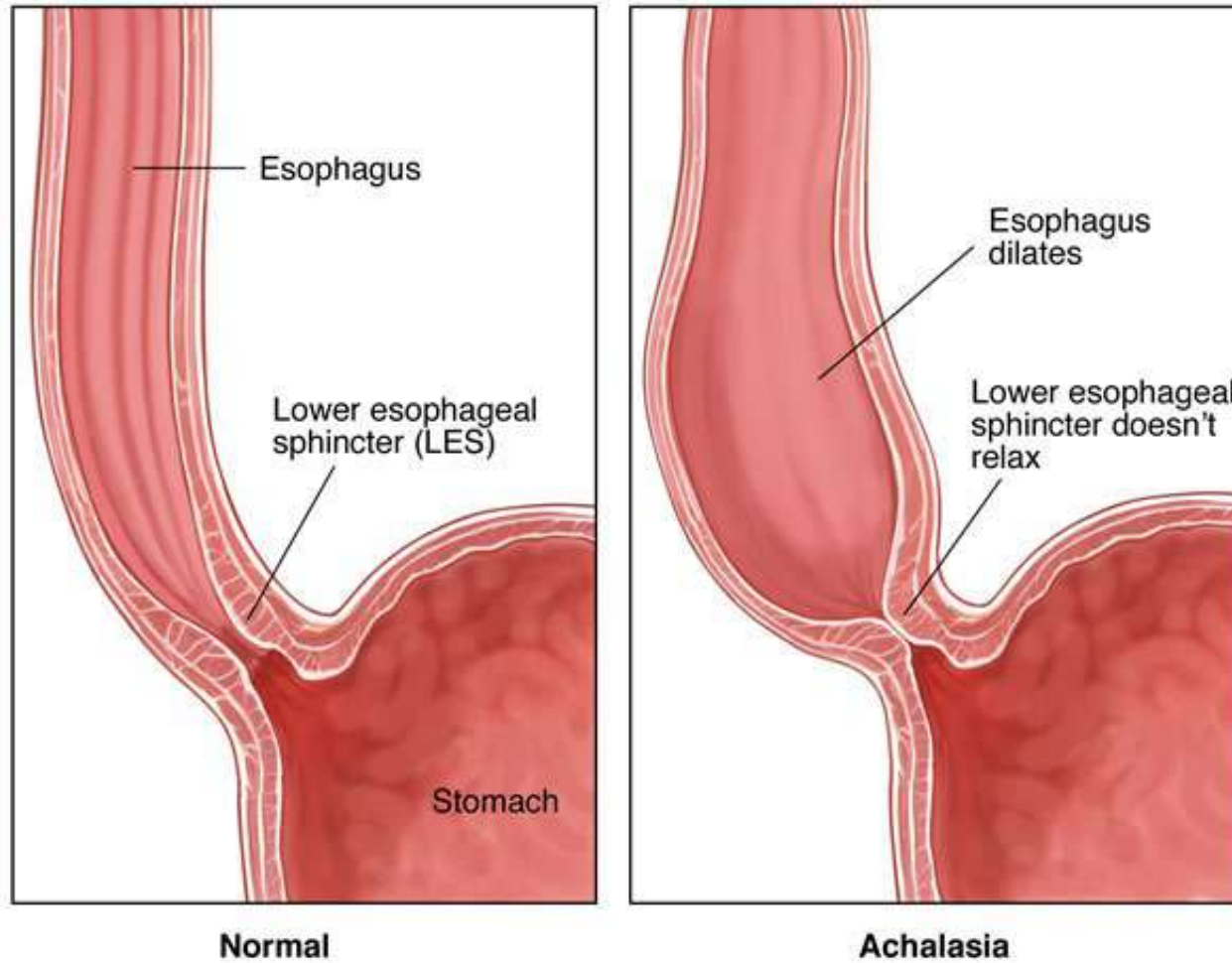
- 9. gingivitis _____
- 10. glossitis _____
- 11. anodontia _____
- 12. sialoadenitis _____
- 13. cheilitis _____

Terms Related to Diseases of Esophagus, Stomach, and Duodenum (K20-K31)

امراض متعلقة ب المريء او المعدة او الامعاء

Term	Word Origin	Definition
achalasia اكليزيا	a- without -chalasia condition of relaxation	Impairment of esophageal peristalsis along with the lower esophageal sphincter's inability to relax. Also called cardiospasm , esophageal aperistalsis , and megaesophagus .
dyspepsia دس بيسيا	dys- abnormal, bad -pepsia digestion condition	Feeling of epigastric discomfort that occurs shortly after eating. The discomfort may include feelings of nausea, fullness, heartburn, and/or bloating. Also called indigestion.
esophagitis اسفوجايتيس	esophag/o esophagus -itis inflammation	Inflammation of the esophagus.
gastritis غاسترايتيس	gastr/o stomach -itis inflammation	Acute or chronic inflammation of the stomach that may be accompanied by anorexia (lack of appetite), nausea, and vomiting, or indigestion.
gastroesophageal reflux disease (GERD) جاسترواسوفجال رفليكس ديزيز	gastr/o stomach esophag/o esophagus -eal pertaining to re- back -flux flow	Flowing back, or return, of the contents of the stomach to the esophagus caused by an inability of the lower esophageal sphincter (LES) to contract normally; characterized by pyrosis with or without regurgitation of stomach contents to the mouth (Fig. 5-16). Barrett's esophagus is a condition caused by chronic reflux from the stomach. It is associated with an increased risk of cancer.
peptic ulcer disease (PUD) بيتيك السر ديزيز		An erosion of the protective mucosal lining of the stomach or duodenum (Fig. 5-17). Also called a gastric or duodenal ulcer , depending on the site.

فاكل البطانة المخاطية الواقية للمعدة او الاثني عشر او قرحة المعدة تسمى



Esophageal Achalasia

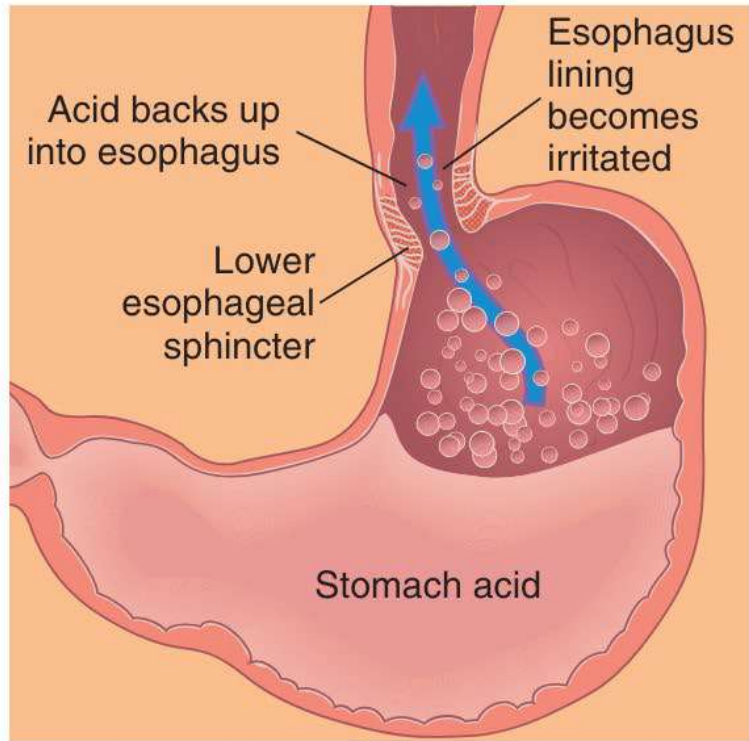


Fig. 5-16 GERD.

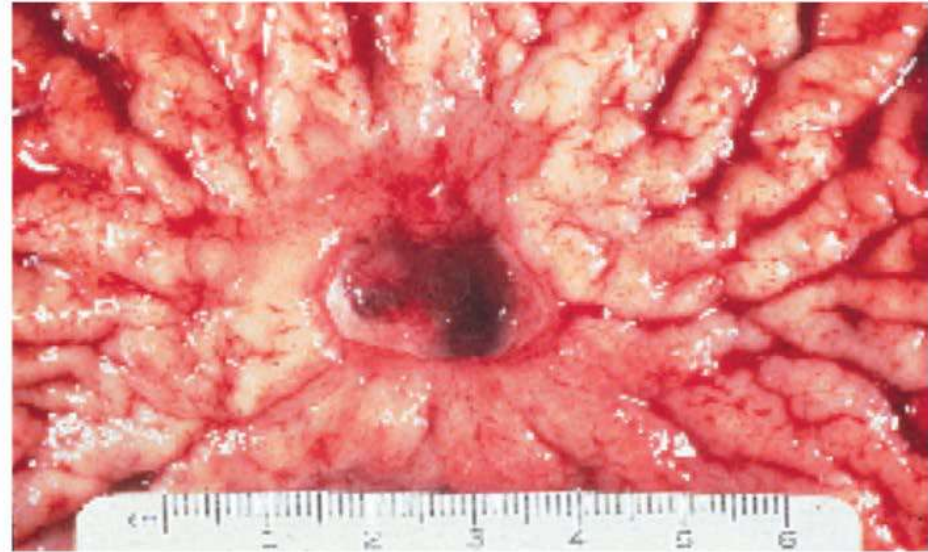


Fig. 5-17 Chronic peptic ulcer.



Fig. 5-18 Appendicitis. Note the darker pink color of the appendix, indicating the inflammation.

Terms Related to Diseases of Appendix (K35-K38)

Term	Word Origin	Definition
appendicitis ابندسايتس	<i>appendic/o</i> appendix <i>-itis</i> inflammation	Inflammation of the vermiform appendix (Fig. 5-18). May be acute or chronic, with or without peritonitis.

التهاب الزائدة الدودية قد يكون حاد او بدون التهاب

Terms Related to Hernias (K40-K46)

hiatal hernia

هييتا هيرنيا

hiat/o an opening
-al pertaining to

Protrusion of a portion of the stomach through the diaphragm. Also known as a **diaphragmatic hernia** and **diaphragmatocele** (Fig. 5-19).

نتوء جزء من المعدة من خلال الحجاب الحاجز ويعرف باسم الفتق الحجابي

umbilical hernia

امبيالكل هيرنيا

umbilic/o umbilicus
-al pertaining to

Protrusion of the intestine and omentum through a weakness in the abdominal wall at the navel (Fig. 5-20). An **omphalocele**, a herniation of the umbilicus, is a congenital condition.

نتوء الامعاء والسرة من خلال ضعف في جدار البطن في السرة

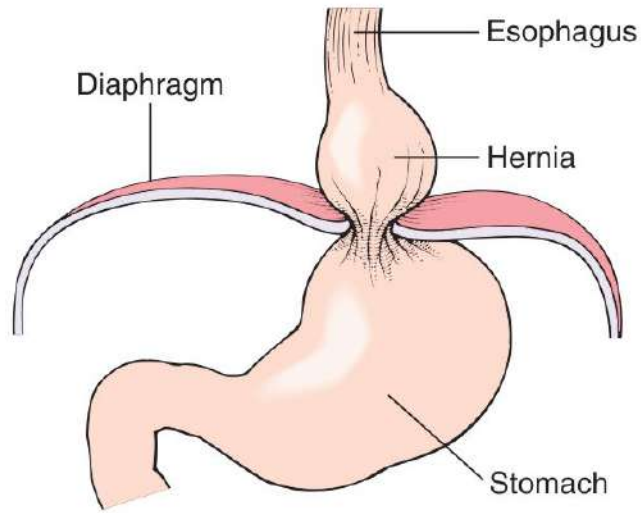


Fig. 5-19 Hiatal hernia.

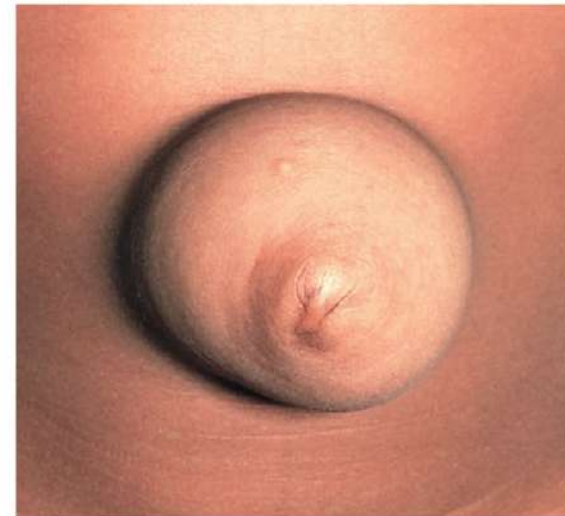
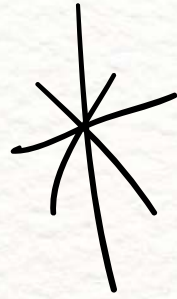


Fig. 5-20 Umbilical hernia.

Digestive System II

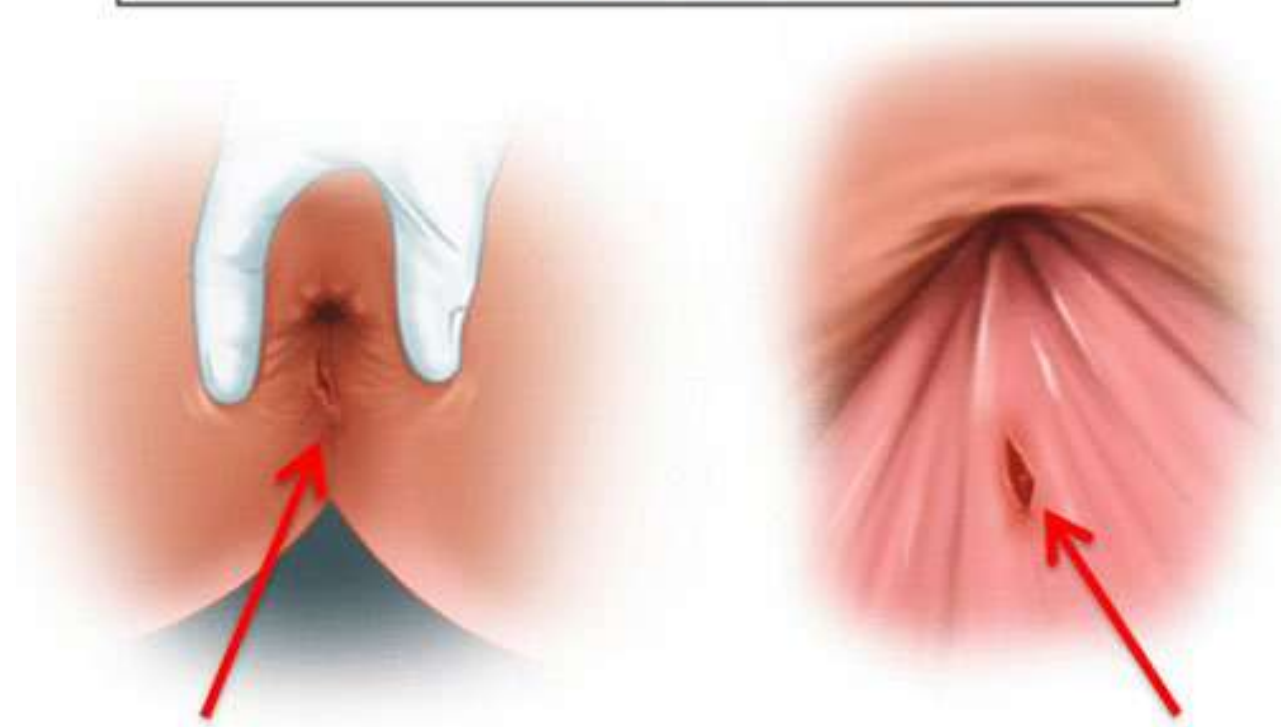
Dr Asmaa Abed



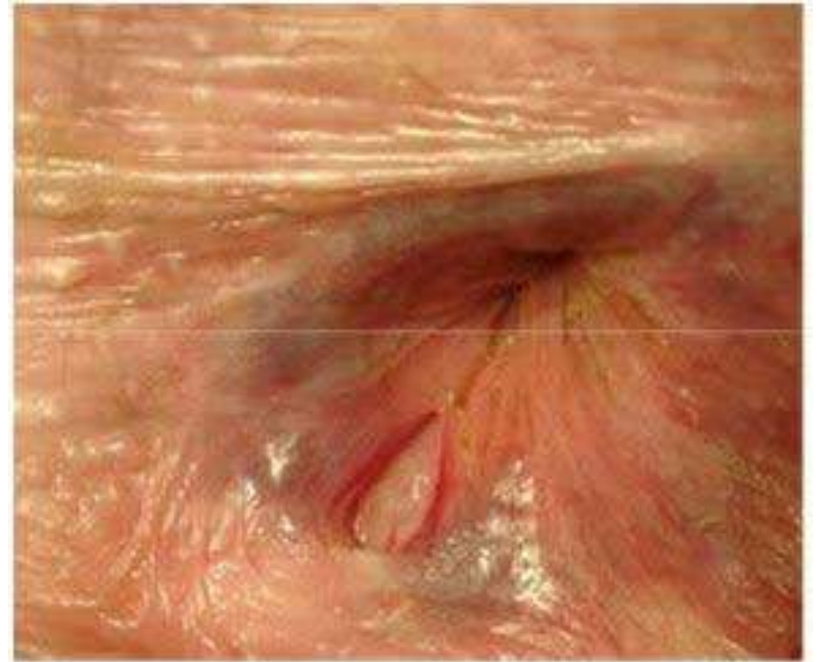
Terms Related to Other Diseases of the Intestines (K55-K63)

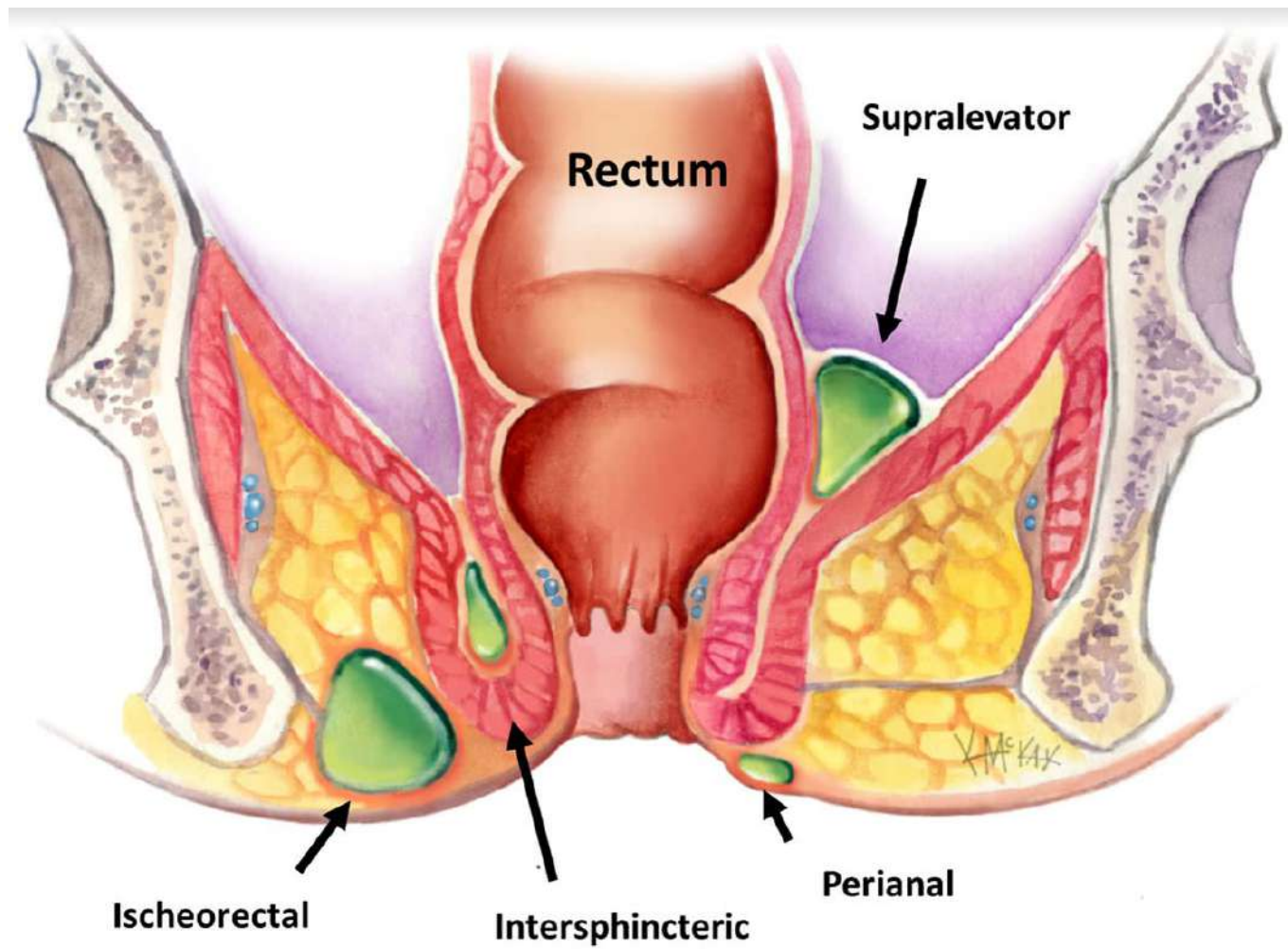
Term	Word Origin	Definition
anal fissure اينل فيشر	<i>an/o</i> anus <i>-al</i> pertaining to	Cracklike lesion of the skin around the anus. شرخ في الجلد حول فتحة الشرج
anorectal abscess ايننو ريكتل ابسس	<i>an/o</i> anus <i>rect/o</i> rectum <i>-al</i> pertaining to	Circumscribed area of inflammation in the anus or rectum, containing pus. ابسس اي الدملي وفيها الصديد منطقة الالتهاب المحصورة في فتحة الشرج او المستقيم
anorectal fistula ايننو ريكتل فستولا	<i>an/o</i> anus <i>rect/o</i> rectum <i>-al</i> pertaining to	Abnormal channel between the rectum and the anus. Fistulas may occur between organs or between an organ and the surface of the body. قناة غير طبيعية بين المستقيم والشرج وقد يحدث الناسور بين الاعضاء او بين العضو وسطح الجسم
constipation كونستيبيشن		Infrequent, incomplete, or delayed bowel movements. Obstipation is intractable (difficult to manage) constipation or an intestinal obstruction. حركات الامعاء غير المتكررة او غير المتكررة يعني الامساك المستعصي
diverticulitis دايفر تكيولايتس	<i>diverticul/o</i> diverticulum <i>-itis</i> inflammation	Inflammation occurring secondary to the occurrence of diverticulosis. الالتهاب الذي يحدث بشكل ثانوي لحدوث الكيس
diverticulosis دايفر تكيولوسيس	<i>diverticul/o</i> diverticulum <i>-osis</i> abnormal condition	Development of diverticula, pouches in the lining of the intestines (Fig. 5-21) both large and small. تطور في اكياس البطانة الامعاء كبيرة وصغيرة
Ileus ايليس		Obstruction. Paralytic ileus is lack of peristaltic movement in the intestinal tract. Also called adynamic ileus . انسداد او الشلل هو نقص الحركة الدودية في الامعاء

EXAMINATION OF ANAL FISSURES

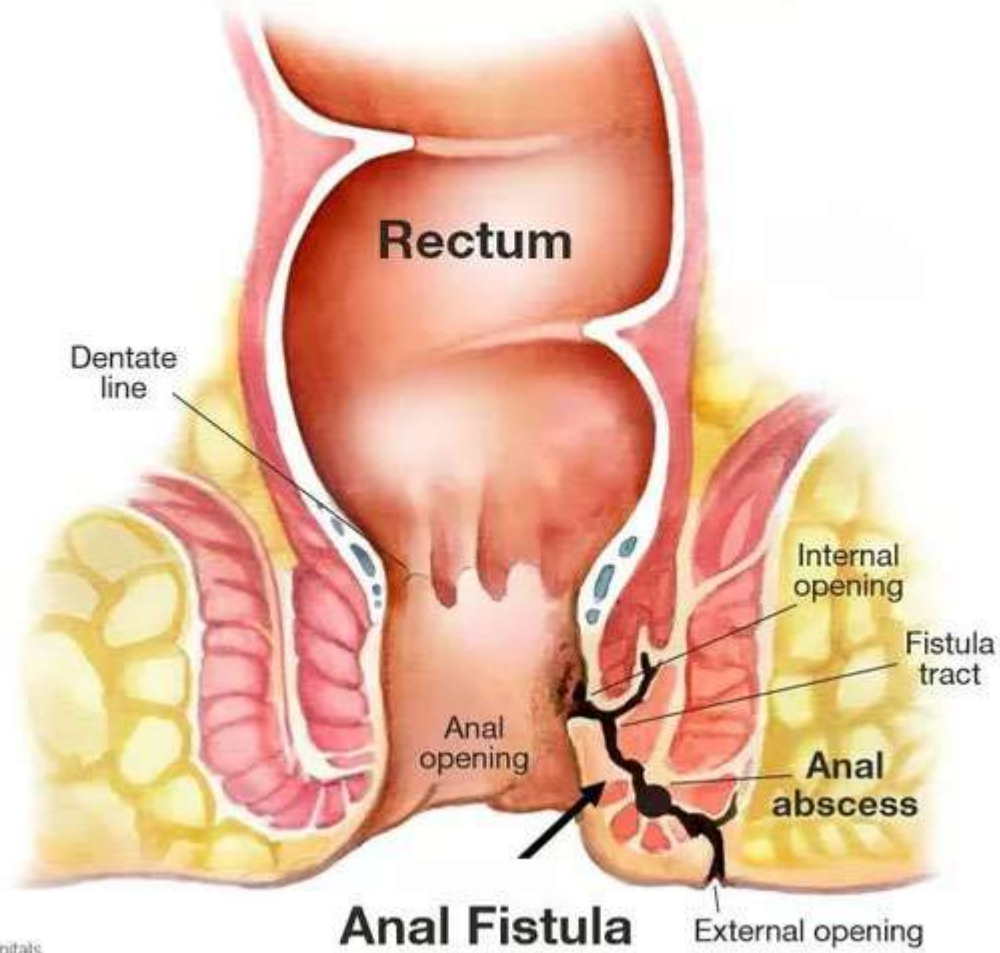


wound or cut at the anus





Anal Fistula



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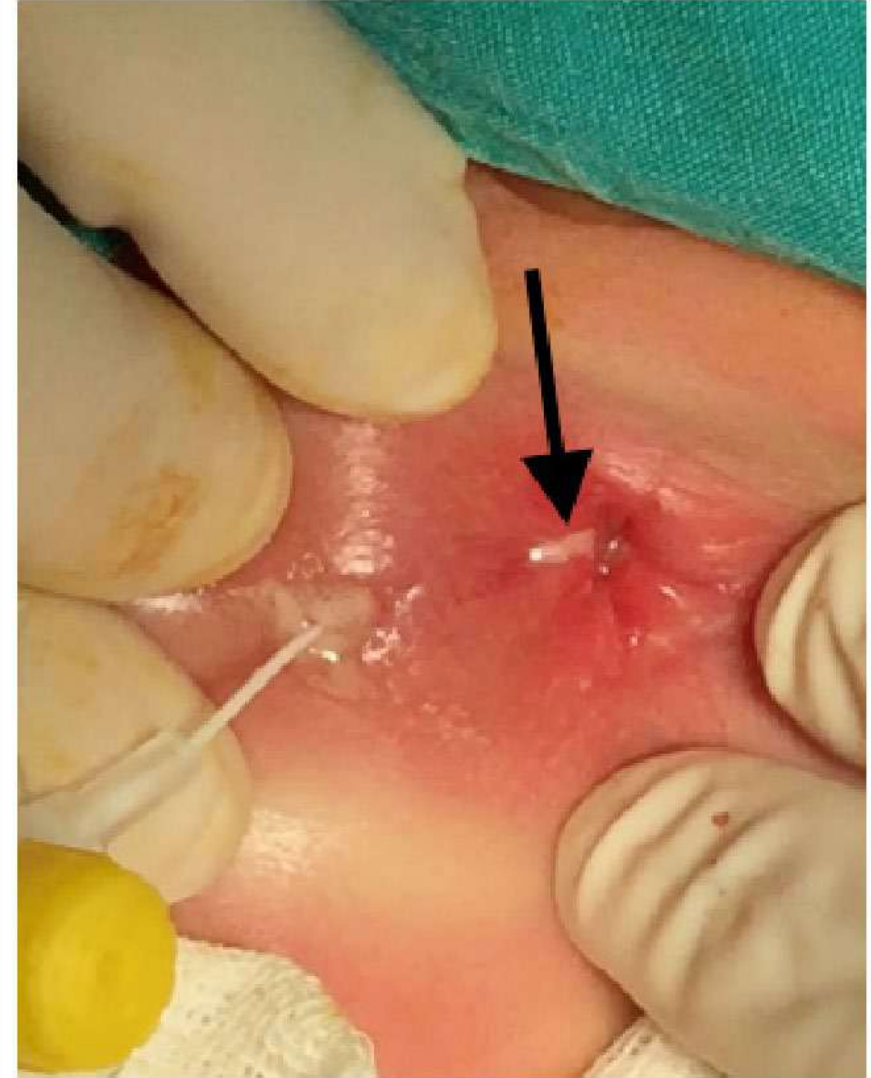
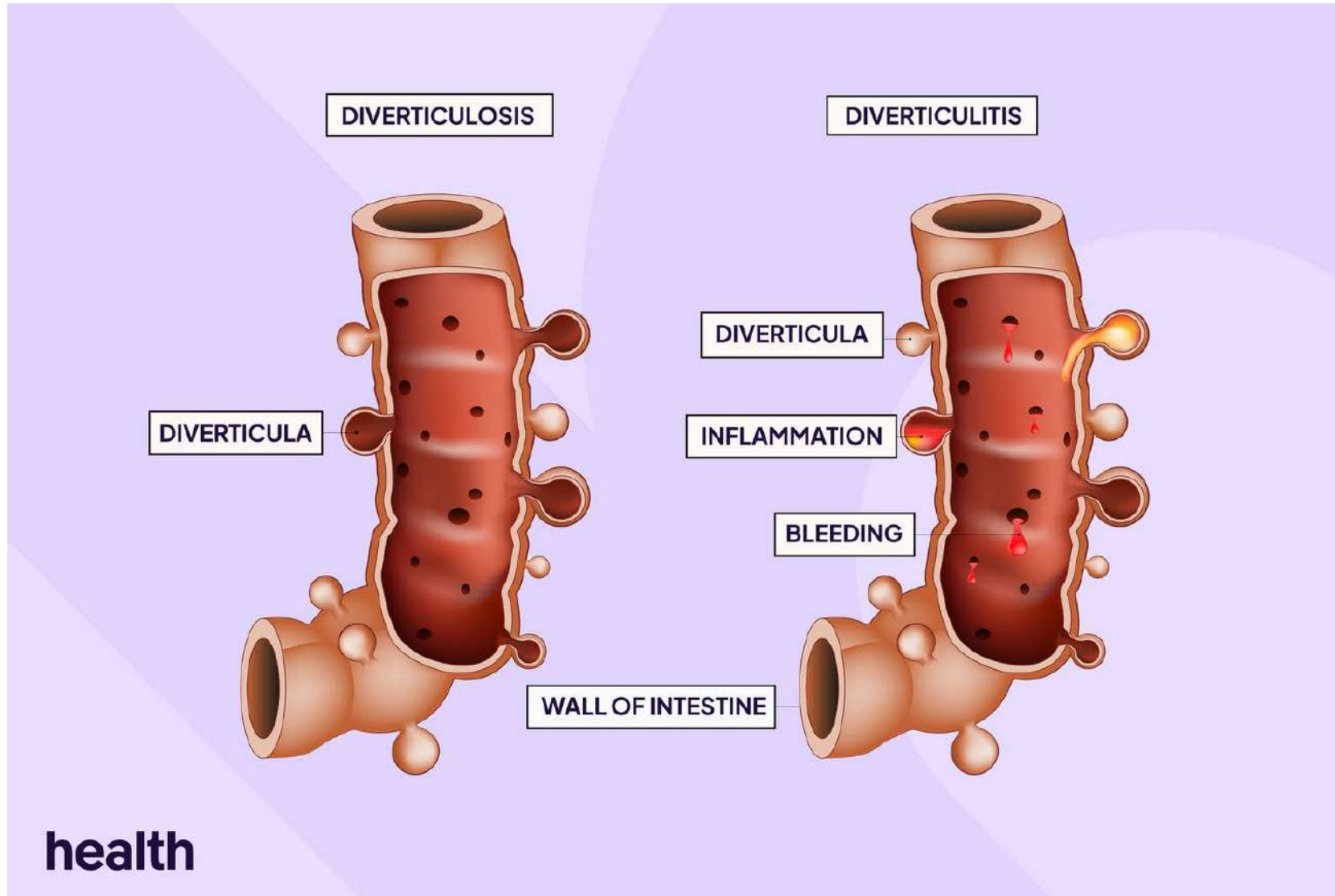
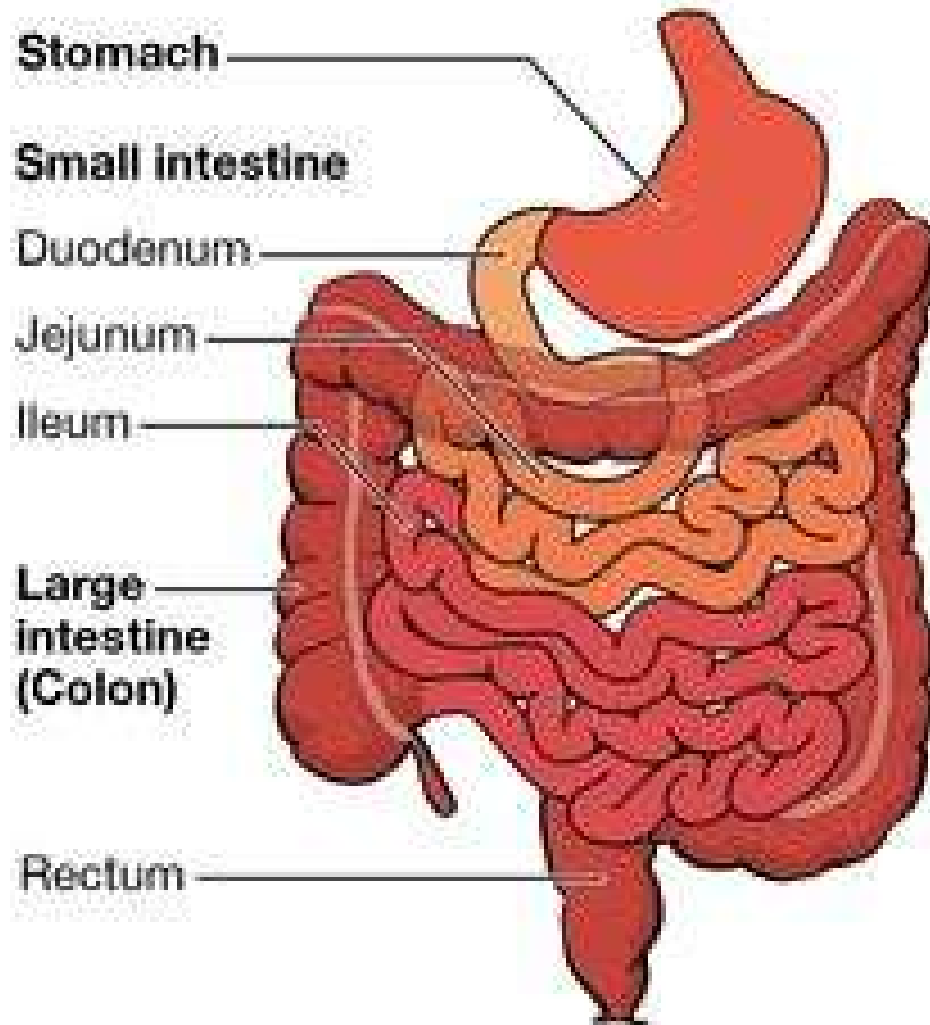


Figure 1: Bubbles in anal canal that shows anal fistula.

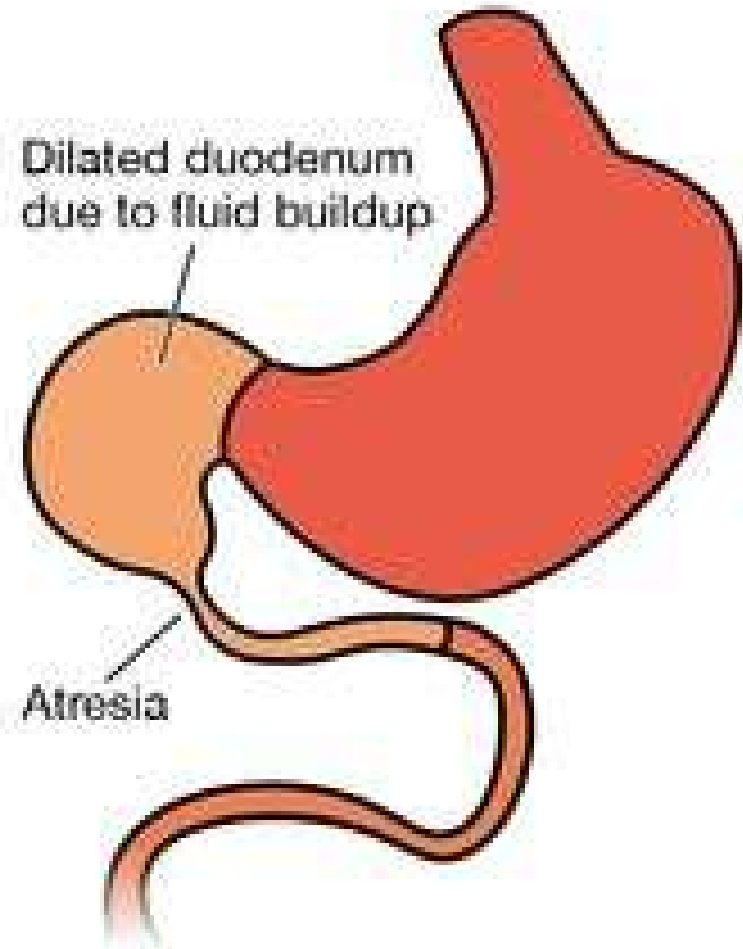
Diverticulum : an outpouching of a hollow (or a fluid-filled) structure in the body



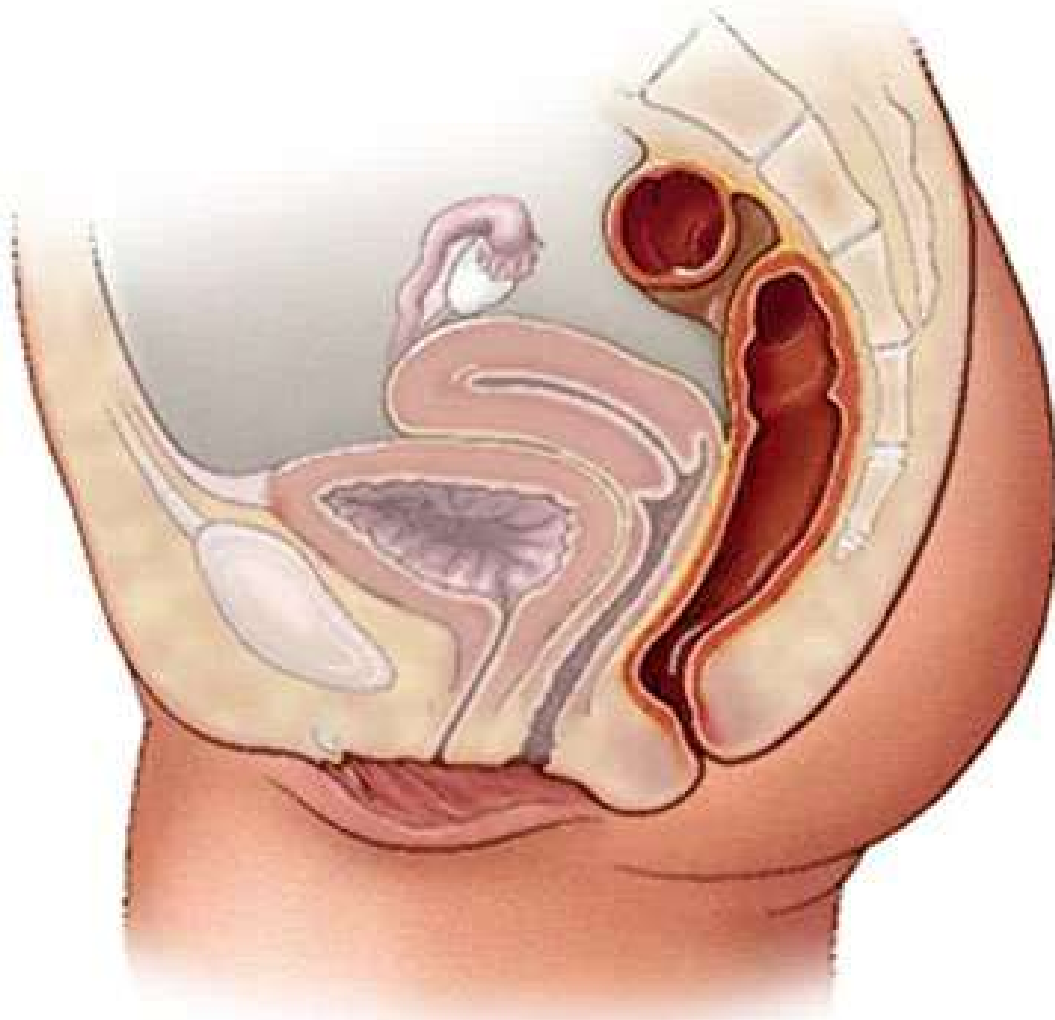
Normal Anatomy



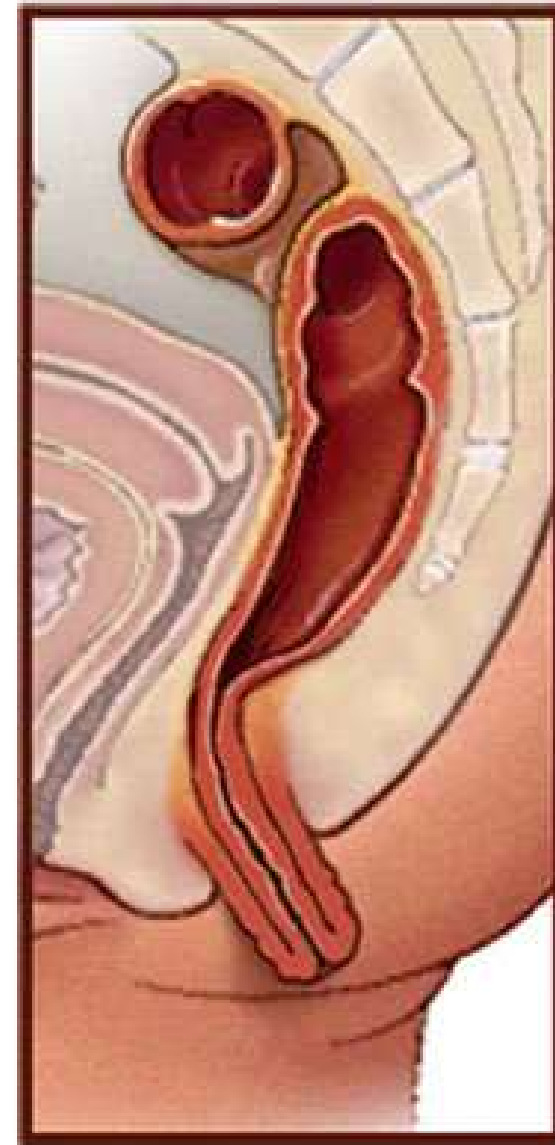
Duodenal atresia



Term	Word Origin	Definition
proctitis بركتائيتس	<i>proct/o</i> rectum and anus <i>-itis</i> inflammation	Inflammation of the rectum and anus. Also called rectitis . التهاب المستقيم والشرج ويسمى التهاب المستقيم
proctoptosis بركتبوسيس	<i>proct/o</i> rectum and anus <i>-ptosis</i> drooping, prolapse	Prolapse of the rectum outside of the anus. هبوط المستقيم خارج فتحة الشرج
volvulus فالوفلاس		Twisting of the intestine. التواء في الامعاء
intussusception انتاسيشن		Inward telescoping of the intestines (Fig. 5-22). تصغير داخلي للامعاء او انو تدخل في بعض زي عصاية السلفي
irritable bowel syndrome (IBS) ريتبيل باونل سندروم القولون العصبي		Diarrhea, gas, and/or constipation resulting from stress with no underlying disease. الاسهال والغازات او الامساك الناتج عن الاجهاد مع عدم وجود مرض اساسي
polyp of colon بولب اوف كولون		Benign growth on the mucous membrane of large intestine. نمو حميد على الغشاء المخاطي للامعاء الغليظة
colitis كول ايتس	<i>col/o</i> colon <i>-itis</i> inflammation	Inflammation of the large intestine.

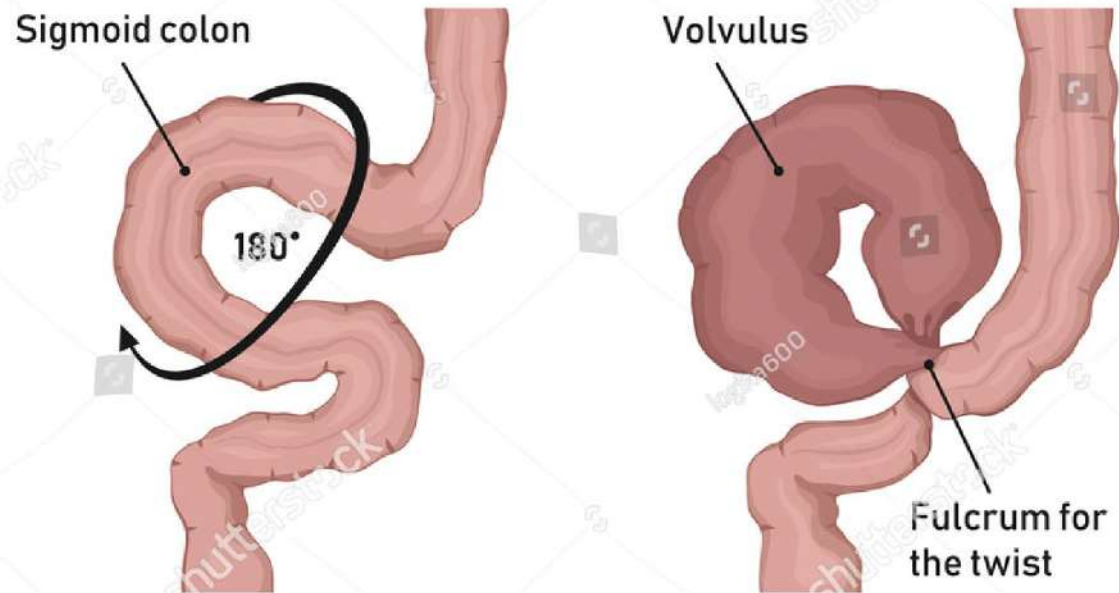


Typical
rectum

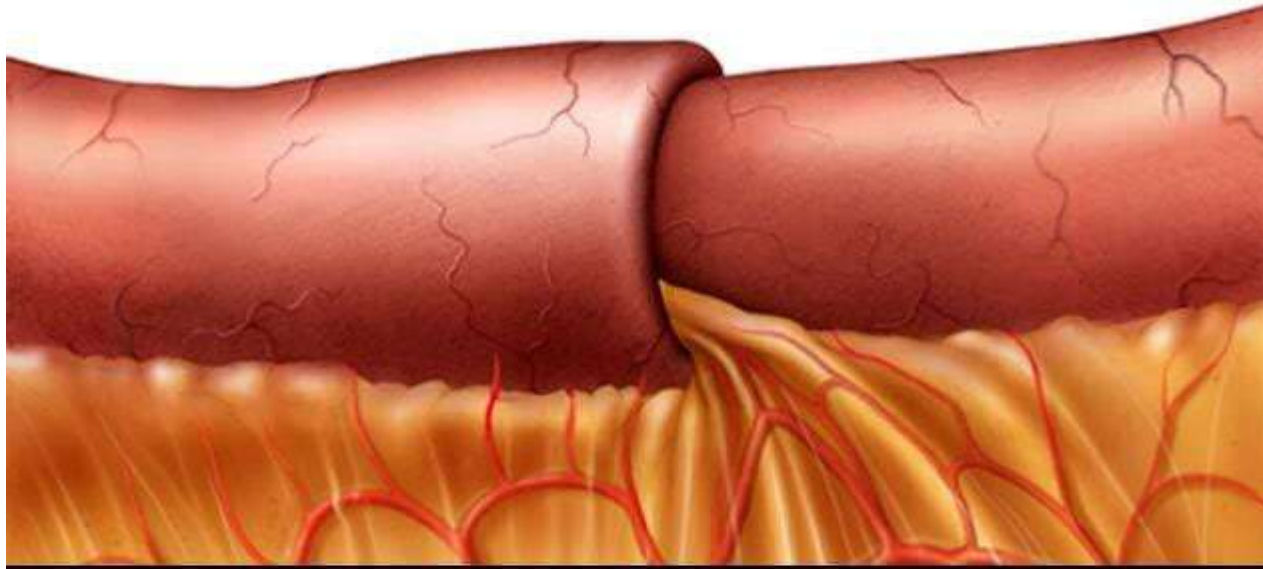


Rectal
prolapse

VOLVULUS OF THE COLON

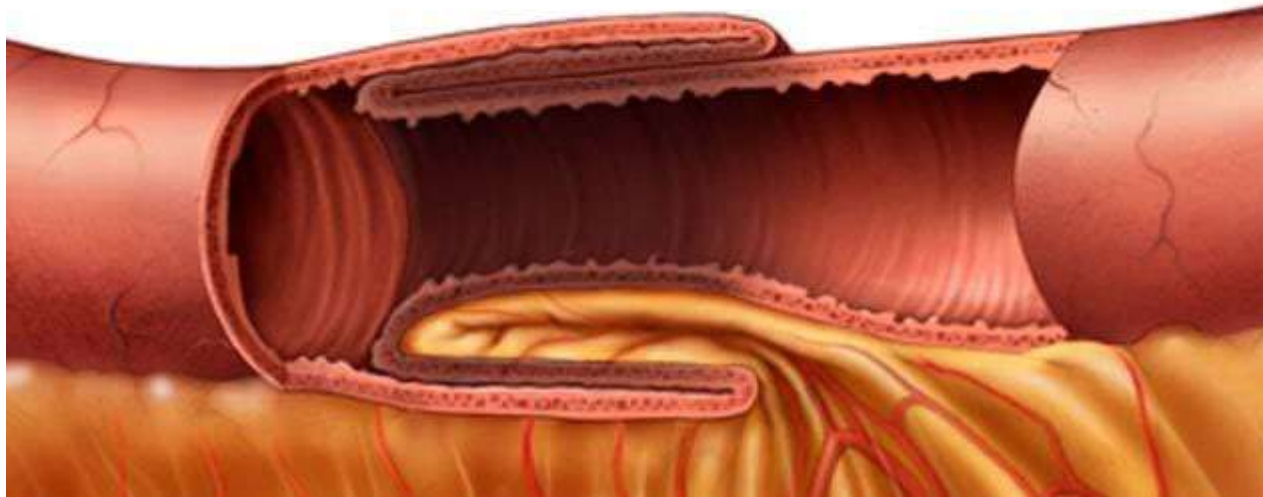


Small intestine with intussusception

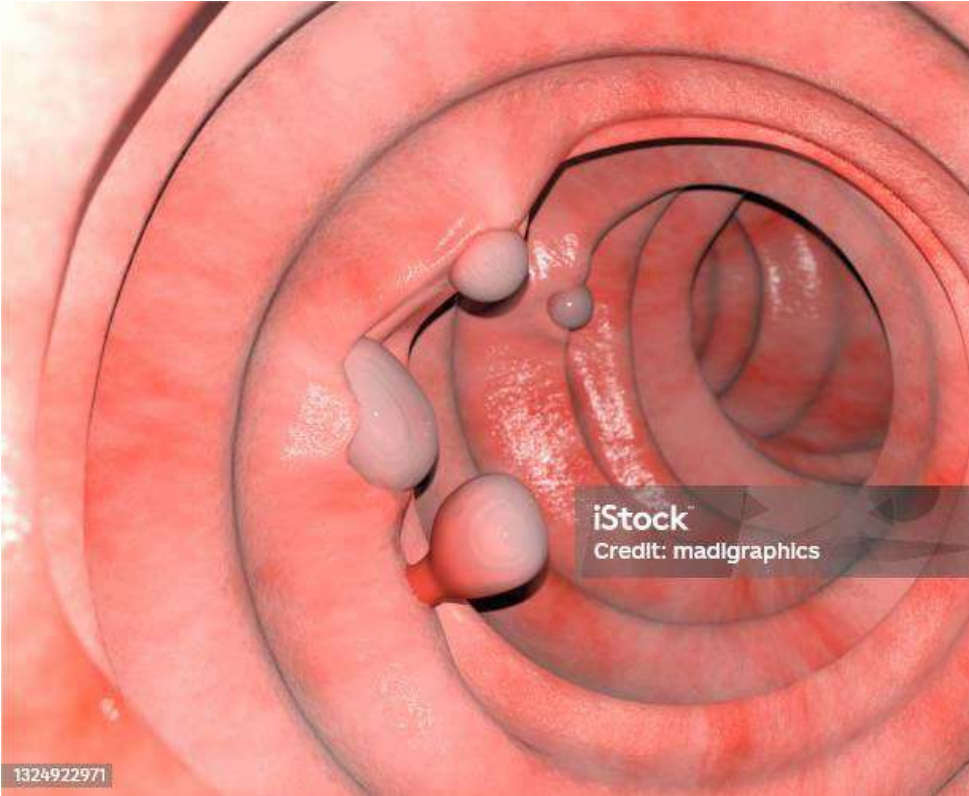


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Intussusception (cross section view)



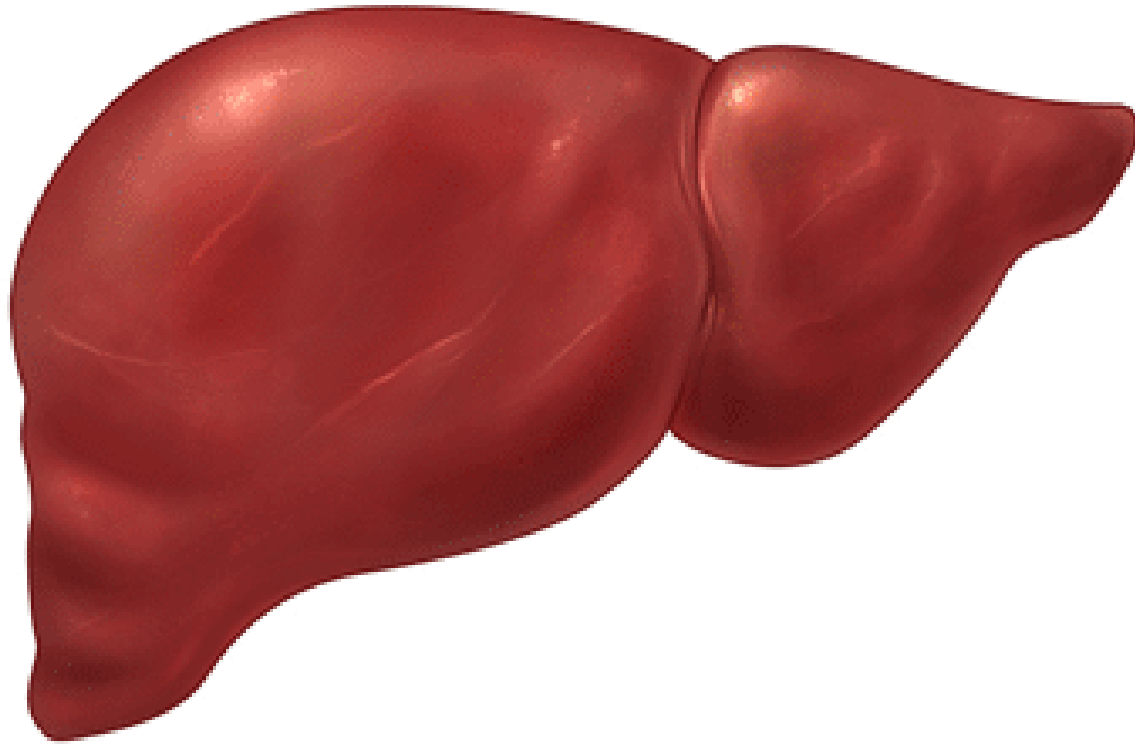
A polyp is an inward projecting growth of tissue from a surface in the body



Terms Related to Diseases of Peritoneum and Retroperitoneum (K65-K68) and Diseases of Liver (K70-K77)

Term	Word Origin	Definition
cirrhosis سروسز	<i>cirrh/o</i> orange-yellow <i>-osis</i> abnormal condition	Chronic degenerative disease of the liver, commonly associated with alcohol abuse, chronic liver disease, and biliary tract disorders (Fig. 5-23). مرض تنكسي مزمن في الكبد يرتبط بتعاطي الكحول وأمراض الكبد المزمنة واضطرابات القناة الصفراوية
peritonitis بيروتونايتيس	<i>peritone/o</i> peritoneum <i>-itis</i> inflammation	Inflammation of the peritoneum that most commonly occurs when an inflamed appendix ruptures. An additional code is needed to identify an infectious agent. التهالِب في البيروتونِيام

Normal Liver



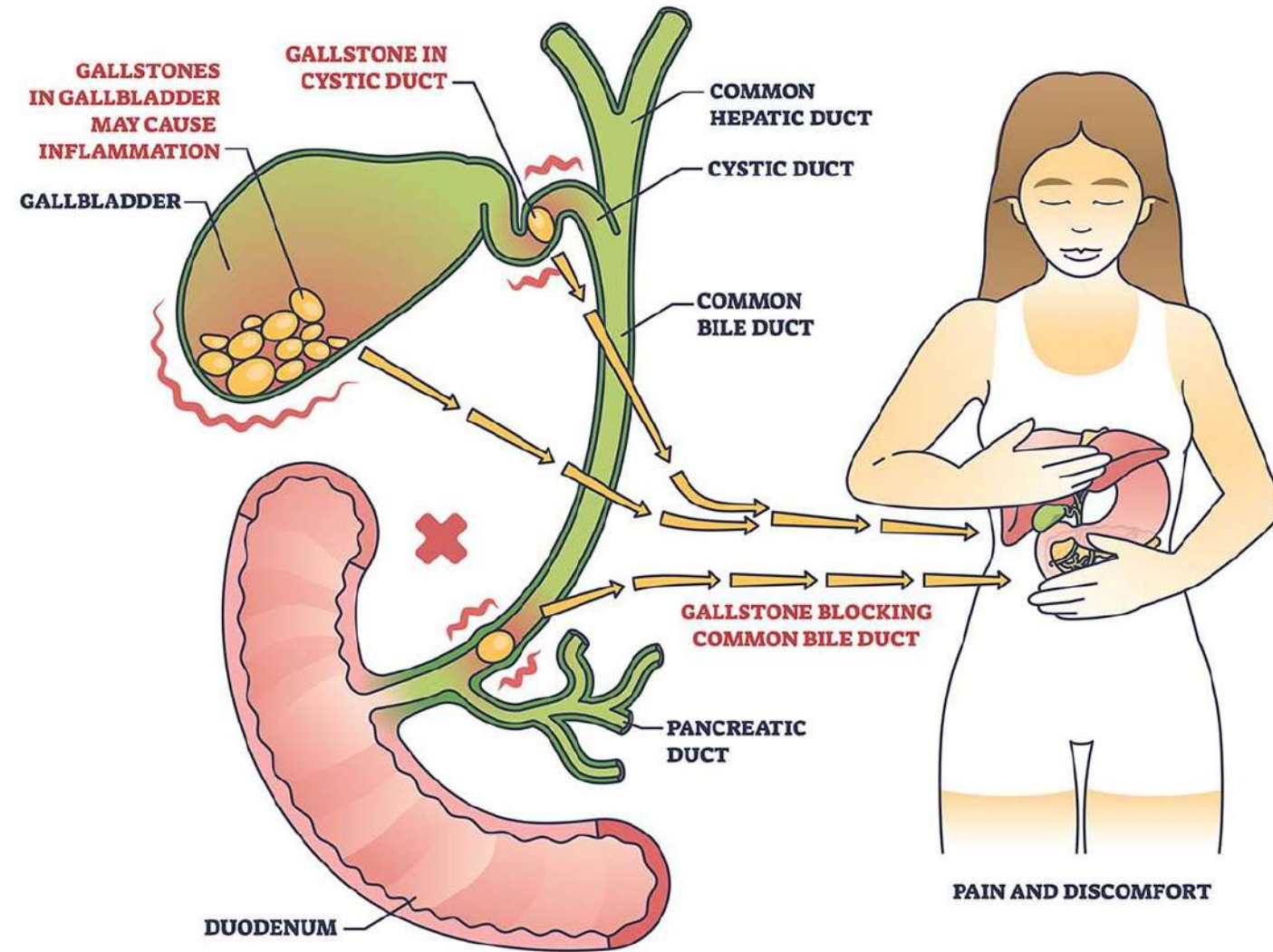
Liver with Cirrhosis



Terms Related to Diseases of Gallbladder, Biliary Tract, and Pancreas (K80-K87)

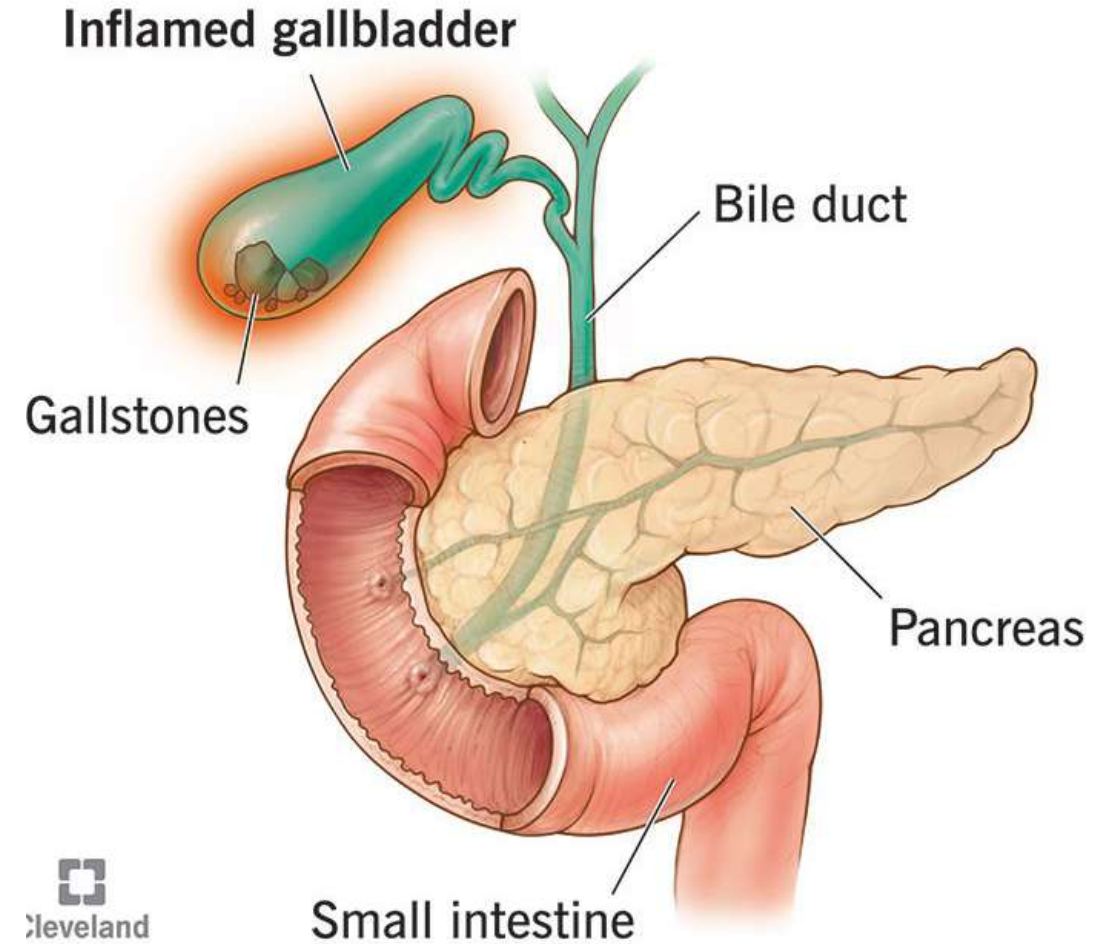
Term	Word Origin	Definition
cholangitis كولانجايتيس	<i>cholangi/o</i> bile vessel <i>-itis</i> inflammation	Inflammation of the bile vessels. التهاب الاوعية الدموية
cholecystitis كولي سستاييتيس	<i>cholecyst/o</i> gallbladder <i>-itis</i> inflammation	Inflammation of the gallbladder, either acute or chronic. May be caused by choledocholithiasis or cholelithiasis. التهاب المرارة اما حاد او مزمن قد يكون سببه تحصر صفراوي
choledocholithiasis كولدو كولثيسيس	<i>choledoch/o</i> common bile duct <i>lith/o</i> stones <i>-iasis</i> presence of	Presence of stones in the common bile duct. وجود الحجارة في القناة الصفراوية المشتركة
cholelithiasis كوليثيسيس	<i>chol/e</i> gall, bile <i>lith/o</i> stones <i>-iasis</i> presence of	Presence of stones (calculi) in the gallbladder, sometimes characterized by right upper quadrant pain (biliary colic) with nausea and vomiting (Fig. 5-24). وجود الحجارة في المثانة
pancreatitis بنكريتايتيس	<i>pancreat/o</i> pancreas <i>-itis</i> inflammation	Inflammation of the pancreas, which may be acute or chronic.

CHOLECYSTITIS



Cholecystitis

Gallbladder inflammation



hematemesis

هيماتوسيس

hemat/o blood
-emesis vomiting

Vomiting of blood.

تقيؤ دم

melena

ملينا

melan/o black, dark

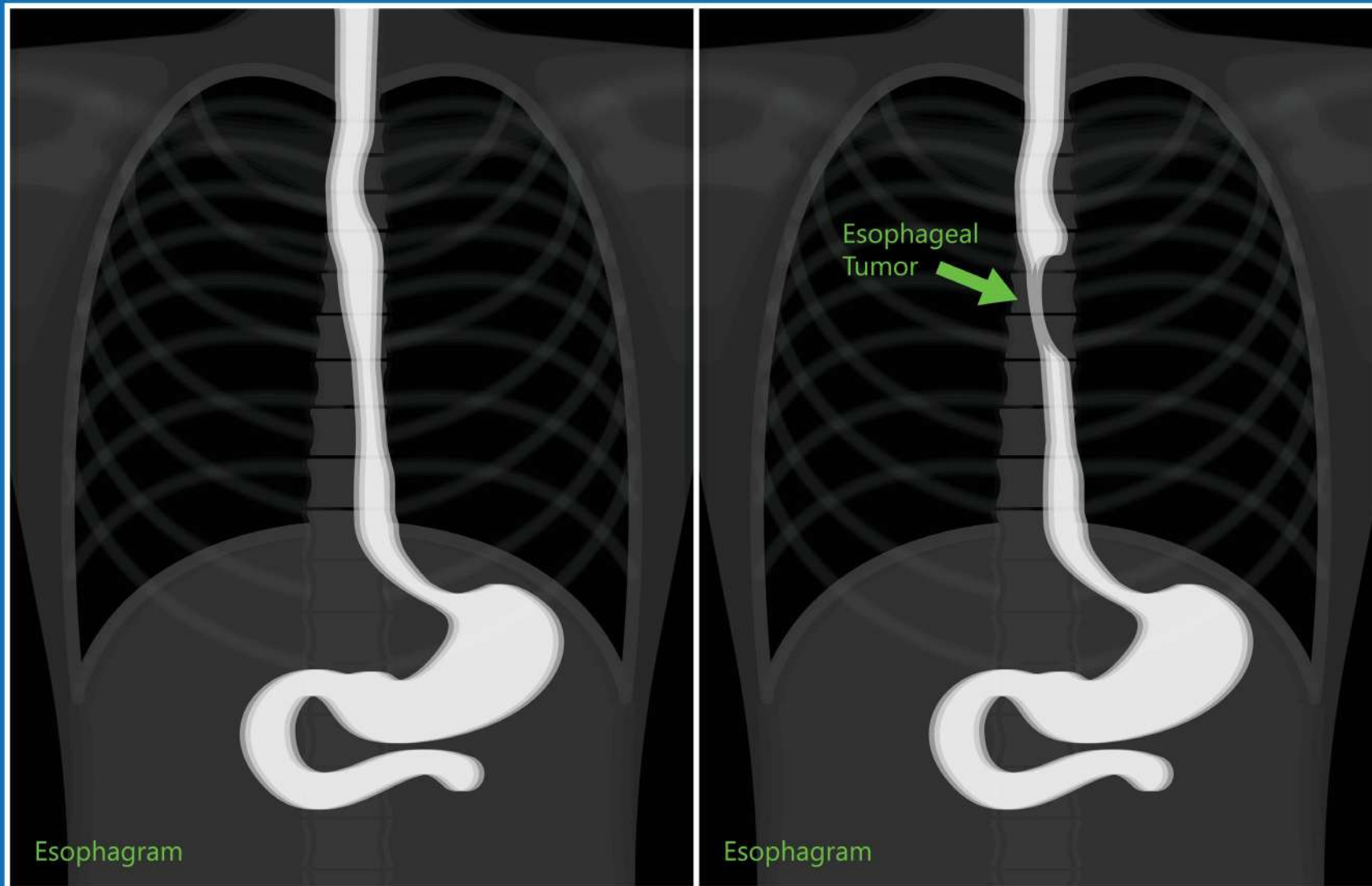
Black, tarry stools caused by the presence of partially digested blood.



Terms Related to Upper GI Procedures

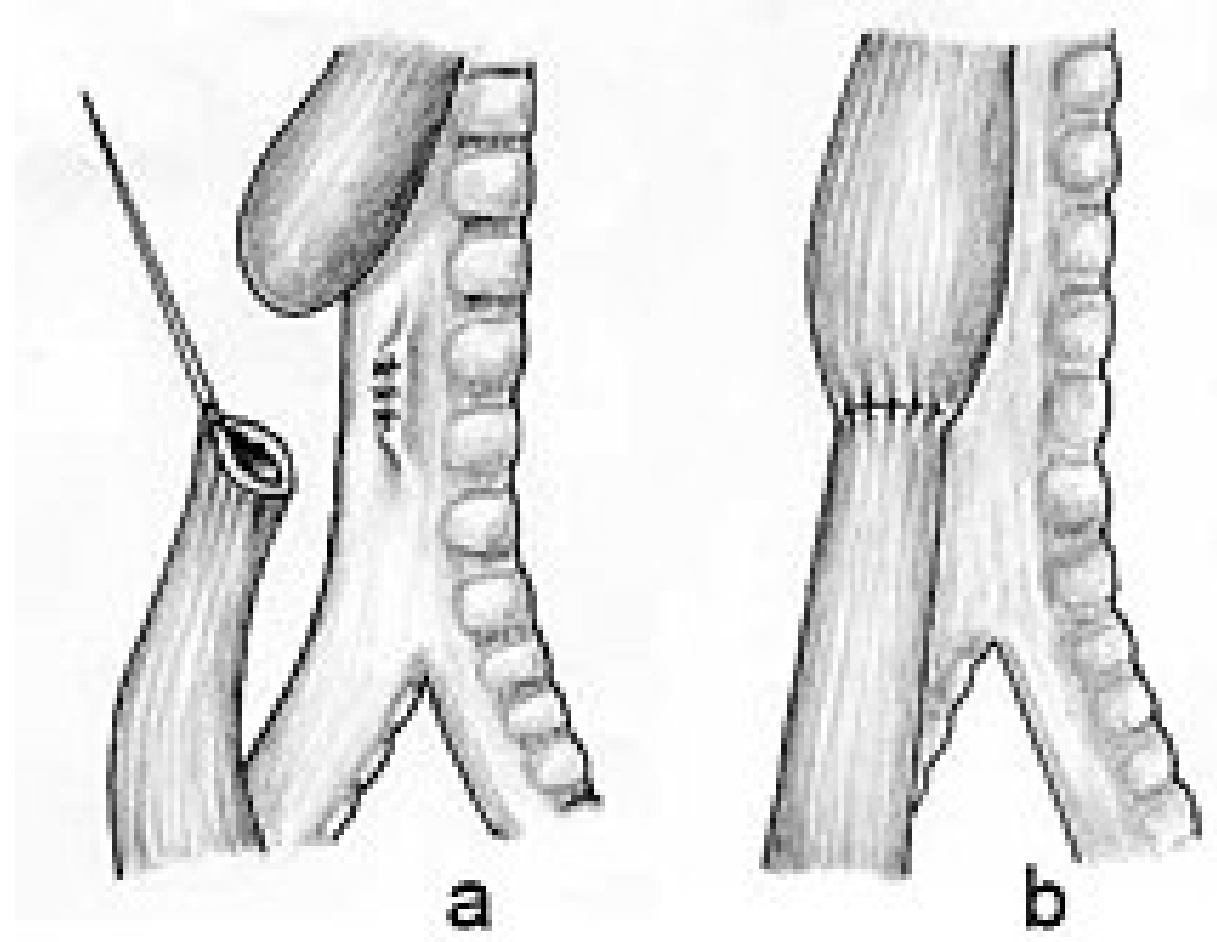
Term	Word Origin	Definition
barium swallow (BS) بيريوم سوارو	صبغة بدي ابلعها	Radiographic imaging done after oral ingestion of a barium sulfate suspension; used to detect abnormalities of the esophagus and stomach (Fig. 5-26). التصوير الاشعاعي الذي يتم بعد تناوله عن طريق الفم كبريتات الباريوم للكشف عن تشوهات المري والمعدة
esophagoesophagostomy اسفجيو اسفجيو استومي	<i>esophag/o</i> esophagus <i>esophag/o</i> esophagus <i>-stomy</i> making a new opening عمل فتحة جديدة	A rejoining of two ends of a cut esophagus, usually as a result of surgery to remove an esophageal defect. اعادة الانضمام الى طرفي قطع المري عادة نتيجة الجراحة لازالة عيب المري
esophagogastroduodenoscopy (EGD) اسفجيو جاسترو دودينوسكوبي	<i>esophag/o</i> esophagus <i>gastr/o</i> stomach <i>duoden/o</i> duodenum <i>-scopy</i> viewing	Viewing the esophagus, stomach, and first part of the duodenum to aid in the diagnosis of reasons for digestive bleeding, vomiting, and weight loss. مشاهدة المري والمعدة والجزء الاول من الاثنى عشر للمساعدة في تشخيص اسباب النزيف الهضمي والقيء وفقدان الوزن
frenotomy, frenulotomy فرينولوتومي فرينوتومي	<i>fren/o, frenul/o</i> frenulum <i>-tomy</i> cutting	Cutting a frenulum of the tongue to treat ankyloglossia. قطع حبل اللسان لعلاج الانكلجوسيا
fundoplication, فندبلكيشن gastroesophageal	<i>fund/o</i> fundus الجزء الي زي القبة بالمعدة <i>-plication</i> folding طي او تنني	Folding the fundus of the stomach around the distal end of the esophagus. Done to treat gastroesophageal reflux. طي قاع المعدة حول الطرف البعيد من المري لعلاج الارتجاع المعدي المريئي
gastroduodenostomy جاسترو دودينو استومي	<i>gastr/o</i> stomach <i>duoden/o</i> duodenum <i>-stomy</i> making a new opening	A new opening between the stomach and the duodenum (Fig. 5-27). The figure also demonstrates an anastomosis , a new connection between two (usually hollow) structures. فتحة جديدة بين المعدة والاثنى عشر

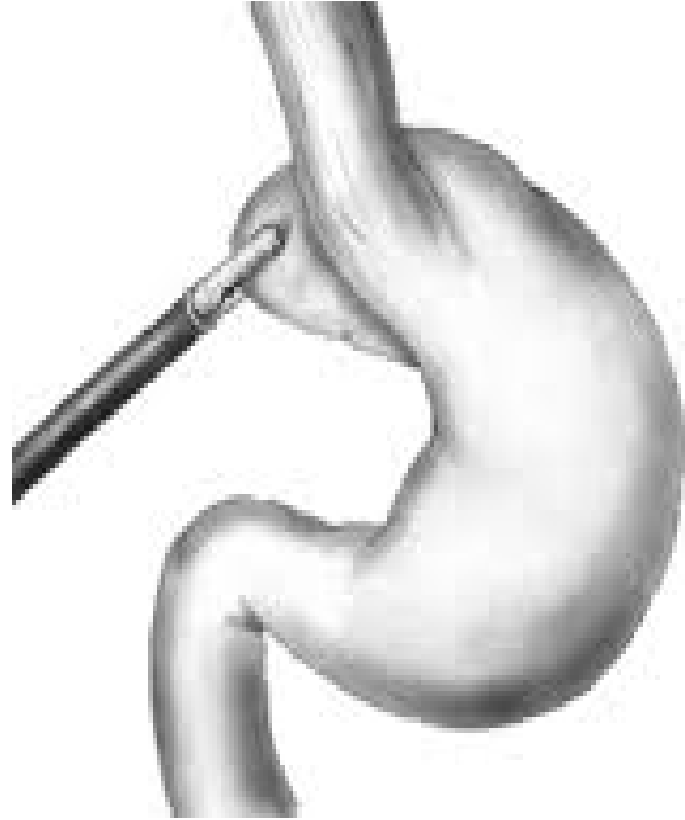
Barium Swallow - Esophagram

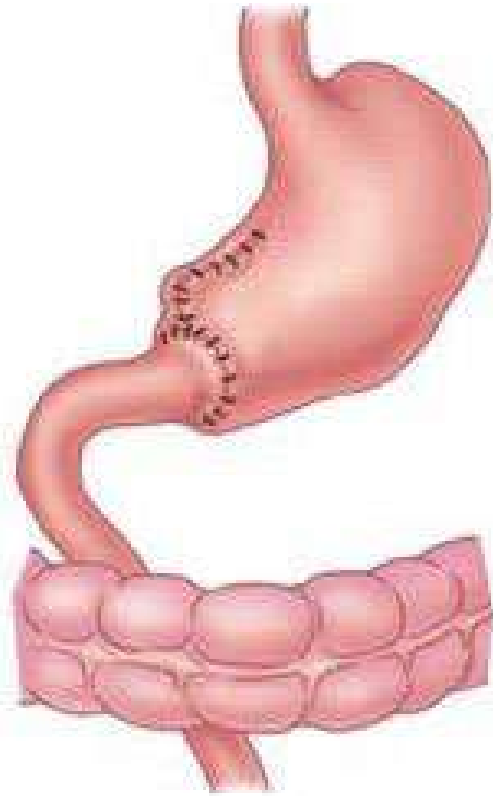


Healthy Esophagus

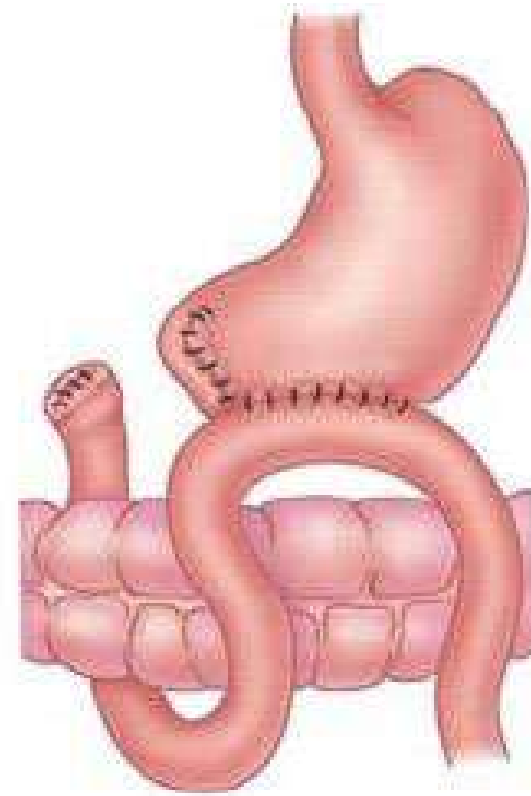
Esophagus With Tumor





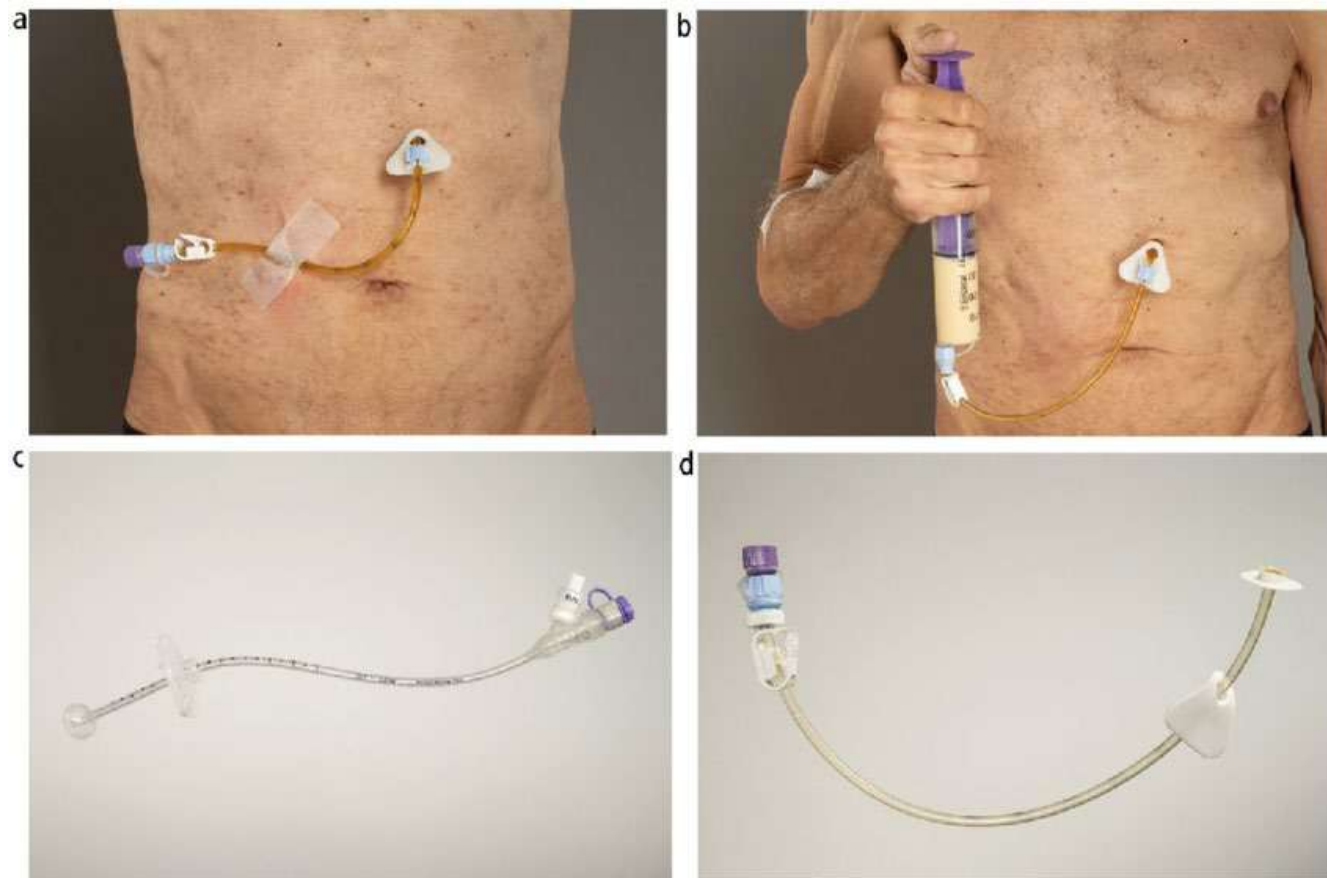
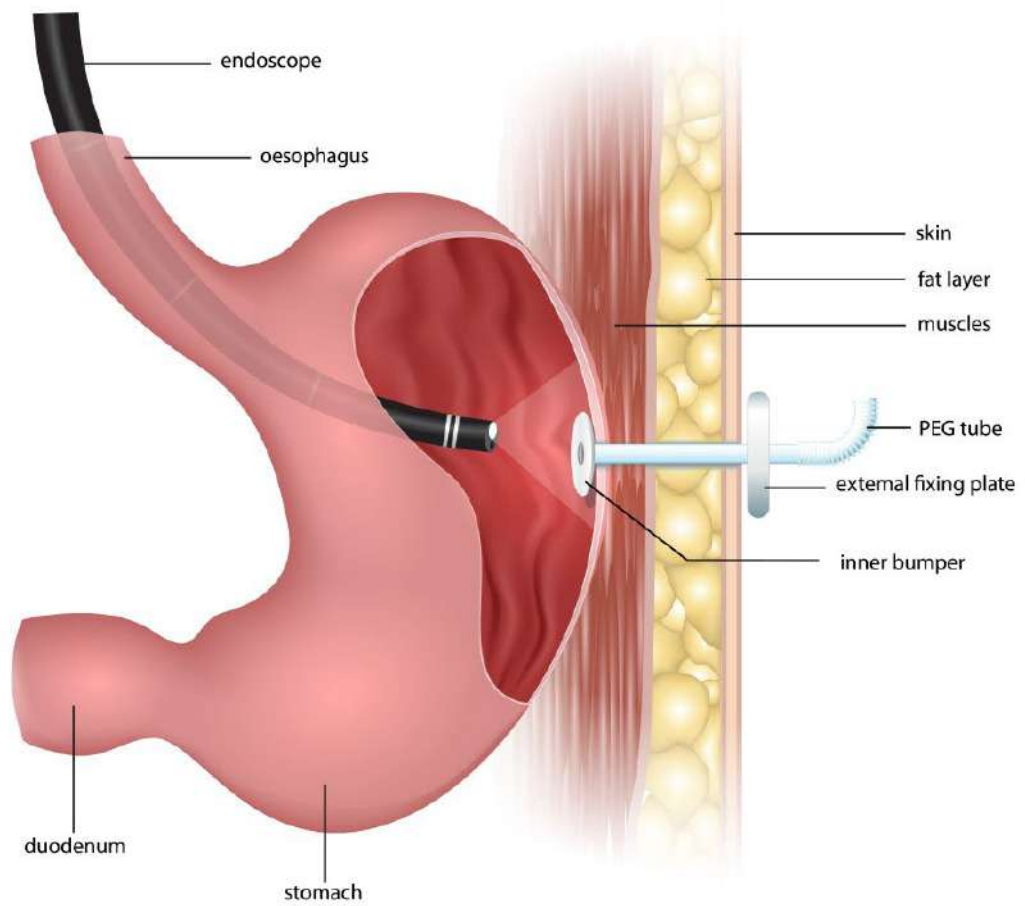


Billroth I

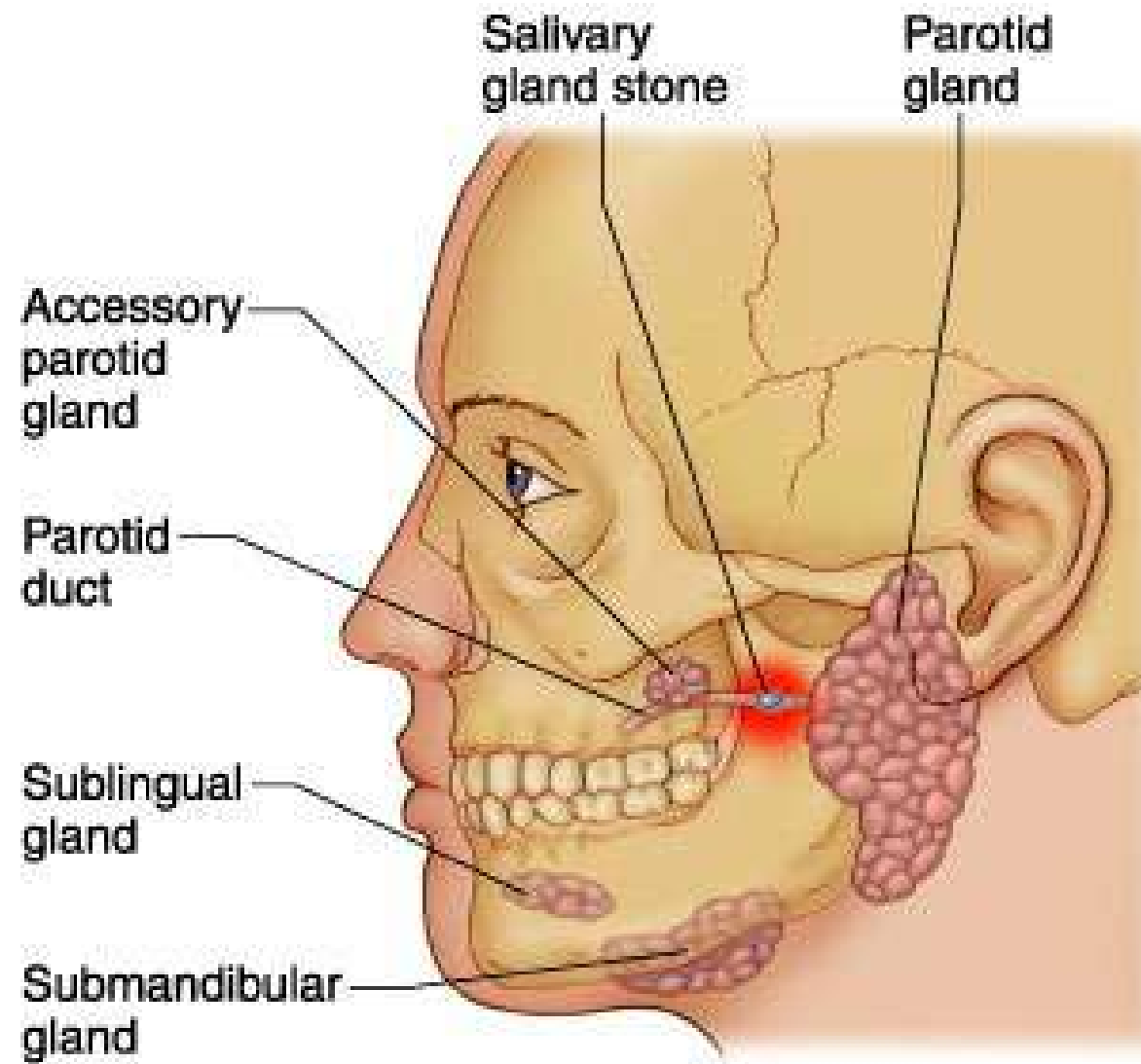


Billroth II

Term	Word Origin	Definition
gastroplasty جاسترو بلاستي	<i>gastr/o</i> stomach <i>-plasty</i> surgically forming تجميل	Surgically forming the stomach for the purpose of repair or reshaping. Usually performed as a type of bariatric (weight reduction) surgery. The stomach may be banded, stapled, or cut to reduce its size.
gastrostomy جاسترو استومي	<i>gastr/o</i> stomach <i>-stomy</i> making a new opening بما انو كلمة وحدة قبل الاستومي اي فتحة بين المعدة والجلد	تشكيل المعدة جراحيا لغرض الاصلاح او اعادة التشكيل مثلا تقليل الوزن تدببب المعدة يعني او ربط للمعدة او قطع جزء منها A new opening in the stomach. A percutaneous endoscopic gastrostomy (PEG) is an opening in the stomach for the purpose of placing a tube for enteral feeding. فتحة في المعدة فغر المعدة بالمنظار عن طريق الجلد لغرض وضع انبوبة للتغذية المعوية
gingivectomy جنجنفي اکتومي	<i>gingiv/o</i> gums <i>-ectomy</i> cutting out	Cutting out part or all of the gums, usually as part of a treatment for periodontal disease. قطع جزء او كل اللثة كجزء من امراض اللثة
glossorrhaphy جلوسورافي	<i>gloss/o</i> tongue <i>-rrhaphy</i> suturing سوتشرنج	Suturing the tongue, usually to repair a lesion or wound. خيطة اللسان لاصلاح الافة او الجرح
hyperalimentation هايبير المنتيشن	<i>hyper-</i> excessive <i>aliment/o</i> nutrition <i>-ation</i> process of	The therapeutic use of nutritional supplements that exceed recommended daily requirements. الاستخدام العلاجي للمكملات الغذائية التي تتجاوز المتطلبات اليومية الموصى بها
odontectomy اودنتو اکتومي	<i>odont/o</i> tooth <i>-ectomy</i> cutting out	Extraction of a tooth. خلع الاسنان
palatoplasty بالاتو بلاستي	<i>palat/o</i> palate <i>-plasty</i> surgically forming	Surgical correction of the roof of the mouth. May be done to correct a cleft palate or as part of a procedure to treat snoring. تصحيح جراحي لسقف الفم ويمكن القيام به لتصحيح الحنك المشقوق او جزء من اجراء لعلاج الشخير
pyloromyotomy بيلورواتومي	<i>pylor/o</i> pylorus <i>my/o</i> muscle <i>-tomy</i> cutting	An incision of the pyloric sphincter to correct an obstruction, such as pyloric stenosis. شق في العضلة العاصرة البوابية لتصحيح الانسداد مثل تضيق البواب



Term	Word Origin	Definition
sialoadenectomy سيالو ادو نكتومي	sialoaden/o salivary gland -ectomy cutting out	Removal of a salivary gland (usually the submandibular) due to inflammation of the gland, stones, or cancer. ازالة الغدة اللعابية ما تحت الفك بسبب التهاب الغدة أو الحصوات أو السرطان
sialodochoplasty سيالو دوكو بلاستي	sialodoch/o salivary duct -plasty surgically forming	Surgical correction of a salivary duct, often following the removal of a stone in a salivary gland. التصحيح الجراحي للقناة اللعابية وغالب بعد الزالة الحجر في اللعابية الكبيرة
stomatoplasty استوماتو بلاستي	stomat/o mouth -plasty surgically forming	Surgical reconstruction of the mouth to correct malformation due to trauma, disease, or congenital causes. اعادة البناء الجراحي للفق لتصحيح التشوه بسبب الصدمة أو المرض أو الاسباب الخلقية
uvulectomy يوفليكتومي	uvul/o uvula -ectomy cutting out	Removal of part or all of the uvula, usually to correct snoring. المنطقة باخر الحلق الي نازلة تحت لتصحيح الشخير



Terms Related to Lower GI Procedures

Term	Word Origin	Definition
appendectomy ابندت اكترومي	<i>append/o</i> appendix <i>-ectomy</i> cutting out	Cutting out the vermiform appendix. If termed an <i>incidental</i> appendectomy, the removal was secondary to another surgery. ازالة الملحق الدودي
barium enema (BE) باريم اينما		Introduction of a barium sulfate suspension through the rectum for imaging of the lower digestive tract to detect obstructions, tumors, and other abnormalities. ادخال كبريتات الباريوم من خلال المستقيم لتصوير الجهاز الهضمي السفلي للكشف عن العوائق والاورام
cecopexy سيكو بكسي	<i>cec/o</i> cecum <i>-pexy</i> suspension	Fixation of the cecum to prevent or correct volvulus of the cecum. تثبيت الاعور لمنع او تصحيح انفتاق
colonoscopy كولون سكوبي	<i>colon/o</i> colon, large intestine <i>-scopy</i> viewing	Viewing the lining of large intestine for screening for cancer, diverticulitis, or other abnormalities. منظار للقولون
colostomy كولو استومي	<i>col/o</i> colon, large intestine <i>-stomy</i> making a new opening	Surgical redirection of the bowel to a stoma, an artificial opening, on the abdominal wall (Fig. 5-28). فتحة بين القولون والجلد يمكن استئصال كل الاجزاء الاخيرة للقولون ف بعمل فتحة تخرج منها البراز
diverticulectomy دايفر تكيكتومي	<i>diverticul/o</i> pouch, diverticulum <i>-ectomy</i> cutting out	Cutting out a diverticulum.

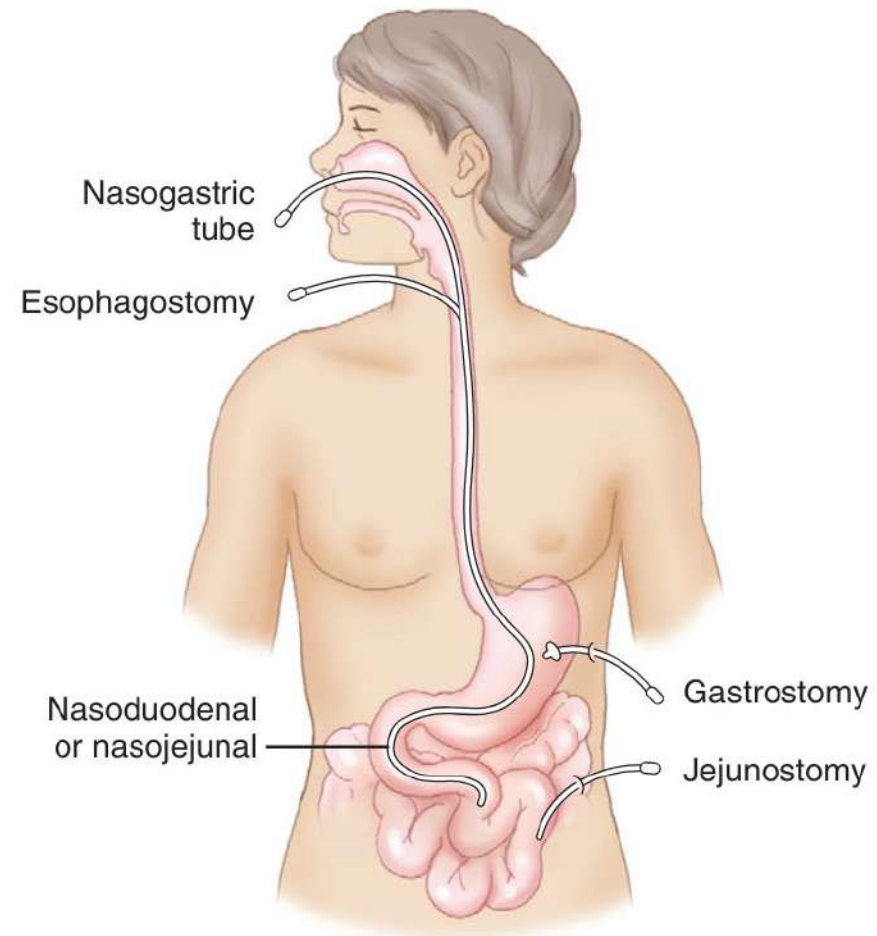


Fig. 5-29 Common placement locations for enteral feeding tubes.

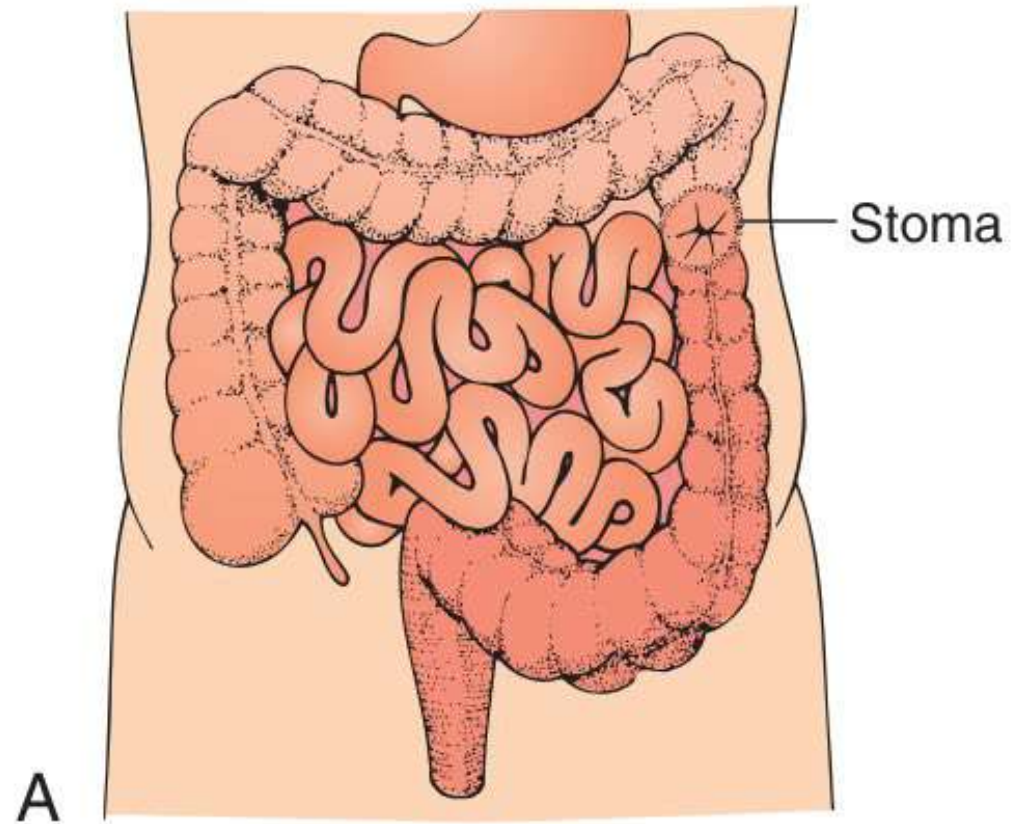


Fig. 5-28 **A**, Colostomy. **B**, Stoma.

Term	Word Origin	Definition
enteral nutrition انترل نيوترشن	<i>enter/o</i> small intestine <i>-al</i> pertaining to	Nutrition introduced through a digestive structure (Fig. 5-29). التغذية التي يتم ادخالها من خلال هيكل هضمي من خلال الامعاء
herniorrhaphy هيرنيو رافي	<i>herni/o</i> hernia افتاق <i>-rrhaphy</i> suturing	Suturing a hernia. Approaches may be through an open incision or laparoscopically and may be simply sutured or include a mesh. خياطة الفتق والافتاق عو بروز للمعاء بسبب ضعف جدار البطن فيرجع الامعاء وبخيطة وتدعيم بشبكة
ileoureterostomy إليو يورترو استومي	<i>ile/o</i> ileum <i>ureter/o</i> ureter <i>-stomy</i> making a new opening	New opening between (anastomosis) the ileum and the ureters in order to conduct urine into the third section of the small intestines when the bladder and urethra are not functional. فتحة بين الحالبين و اخر الامعاء لتوصيل البول للقسم الثالث من الامعاء الدقيقة عندما لا تعمل المثانة او الاحليل
jejunostomy جيجنو استومي	<i>jejun/o</i> jejunum <i>-stomy</i> making a new opening	New opening of the jejunum to the surface of the abdomen for the placement of a feeding tube. فتحة بين الجوجينم والجلد
omentectomy, omentumectomy اومنتكتومي اومنتيومكتومي	<i>oment/o</i> omentum <i>-ectomy</i> cutting out	Cutting out part or all of the omentum. Done as part of treatment for ovarian cancer to remove cancer cells that have spread there. قطع جزء من الثرب او او الغشاء السميك الي بالبطن وبدي اعملو قطع
peritoneocentesis بيرتينو ستيسيس	<i>peritone/o</i> peritoneum <i>-centesis</i> surgical puncture	Surgical puncture of the peritoneum to remove fluid. Often used to treat ascites. ادخال ابرة لسحب السوائل
polypectomy, GI بوليبكتومي	<i>polyp/o</i> polyp <i>-ectomy</i> cutting out	Cutting out sessile or pedunculated polyps from the gastrointestinal system. قطع الاورام الحميدة او المعزلة من الجهاز الهضمي

proctoscopy بروكتسومي	<i>proct/o</i> rectum and anus <i>-scopy</i> viewing	Process of viewing the rectum and anus. Used to view hemorrhoids or rectal polyps. عملية أو عرض المستقيم والشرج المستخدم لعرض البواسير أو الاورام الحميدة المستقيمة
sigmoidoscopy سيجميدو كسومي	<i>sigmoid/o</i> sigmoid colon <i>-scopy</i> viewing	Process of viewing the sigmoid colon. عرض القولون
total parenteral nutrition (TPN) توتال بيرنترال نيوترشن	<i>par-</i> near, beside <i>enter/o</i> small intestine <i>-al</i> pertaining to	Nutrition introduced through a structure outside of the alimentary canal, usually by IV because the GI tract is nonfunctional. Enteral nutrition provides sustenance through a feeding tube to the stomach or intestines.

ادخال التغذية من خلال هيكل خارج القناة الهضمية عن طريق الدم

Terms Related to Procedures of the Adnexa

Term	Word Origin	Definition
cholangiography كولانجو جرافي	<i>cholangi/o</i> bile vessel <i>-graphy</i> recording	Process of recording the bile vessels. Radiographic procedure that captures images of the common bile vessel through injection of a contrast medium into the bile duct, after which a series of images is taken. تصوير الاوعية الصفراوية من خلال ادخال صبغة
cholecystectomy كولوسيس تكتومي	<i>cholecyst/o</i> gallbladder <i>-ectomy</i> cutting out	Cutting out the gallbladder. If done laparoscopically, the gallbladder is removed through the use of small incisions in the abdomen (Fig. 5-30). قطع المرارة
choledochectomy كولودوكتومي	<i>choledoch/o</i> common bile duct <i>-ectomy</i> cutting out	Cutting out part or all of the common bile duct as part of a procedure to treat cancer in the proximal duodenum. قطع جزء او كل القناة الصفراوية
choledocholithotomy كولودوكو ليثوتومي	<i>choledoch/o</i> common bile duct <i>-lithotomy</i> cutting out a stone	Cutting out a stone from the common bile duct. May be done via an open or a laparoscopic approach. قطع حجر من القناة الصفراوية المشتركة

Terms Related to Procedures of the Adnexa—cont'd

Term	Word Origin	Definition
endoscopic retrograde cholangiopancreatography (ERCP) اندسكوبك ريتروجرييد كولانجيو بينكريتيك جرافي	<i>cholangi/o</i> bile vessel <i>pancreat/o</i> pancreas <i>-graphy</i> recording	Recording the bile vessels and pancreas (Fig. 5-31). An x-ray of the pancreas and bile ducts that is enhanced through the use of radio-opaque dyes; used to diagnose stones, strictures (narrowings), and neoplasms.
hepatectomy هيباتكتومي	<i>hepat/o</i> liver <i>-ectomy</i> cutting out	Cutting out part or all of the liver. A total hepatectomy is performed for the purpose of a liver transplant. A partial hepatectomy is done for treatment of neoplasms.

استخدام المنظار لادخال الصبغة وبعدين ارجع بالمنظار رجوع عشان اصور العصاورة الصفراوية والبنكرياس

قطع جزء من الكبد او كله

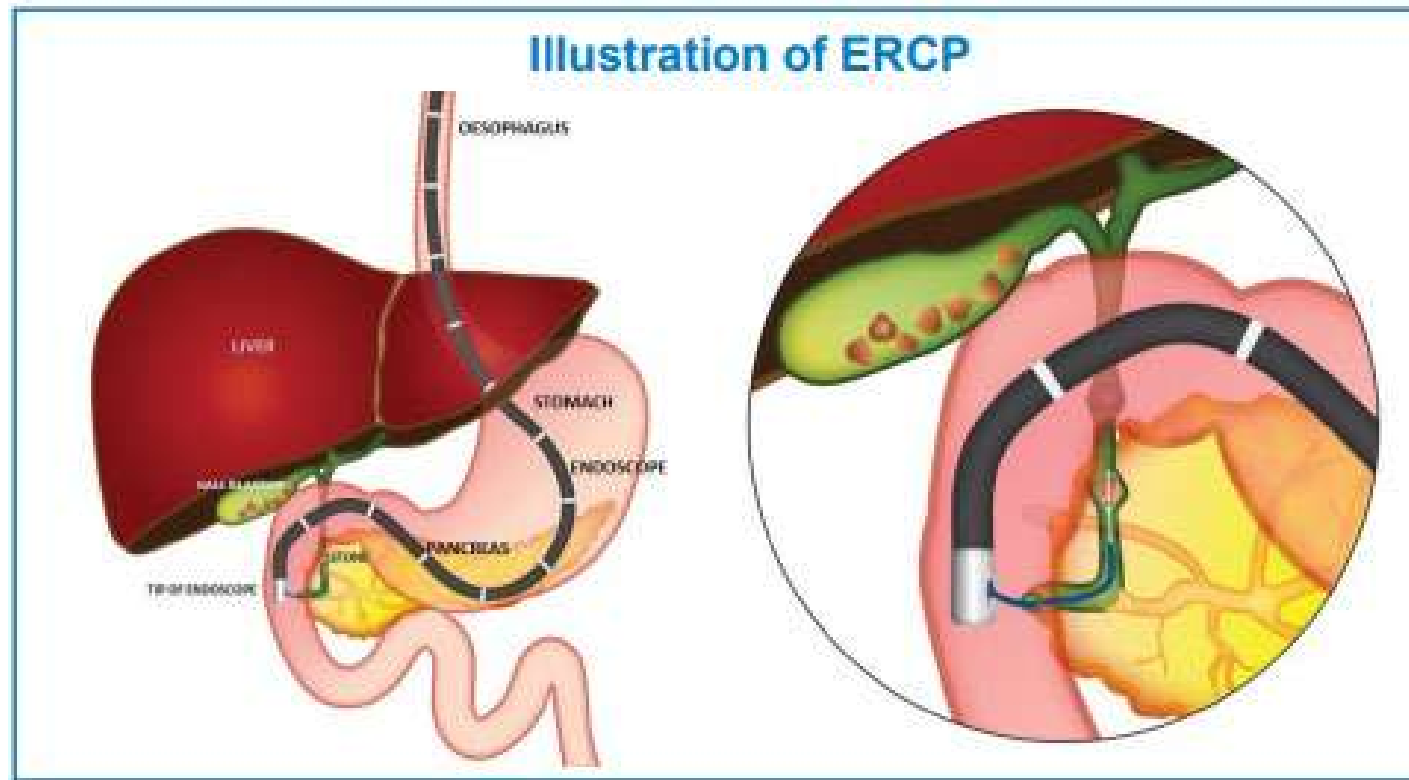
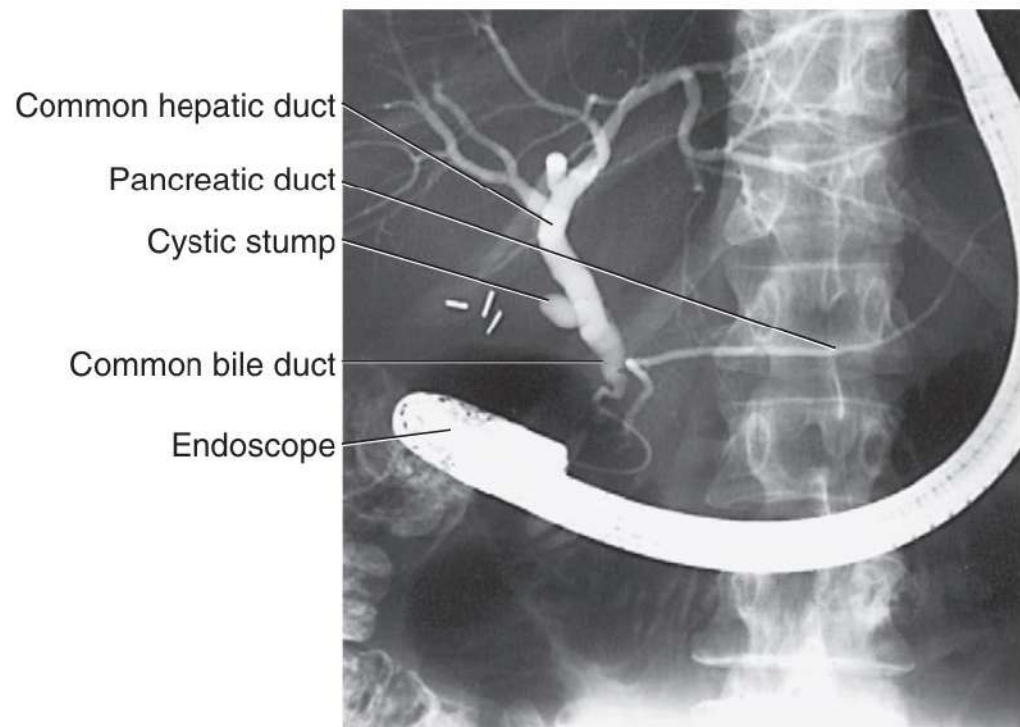


Fig. 5-31 Endoscopic retrograde cholangiopancreatography (ERCP).

WORD PART DEFINITIONS

Suffix	Definition
-emesis	1. _____discharge, flow
-iasis	2. _____viewing
-pepsia	3. _____condition of an opening
-phagia	4. _____making a new opening
-rrhaphy	5. _____suturing
-rrhea	6. _____vomiting
-scopy	7. _____presence of
-stalsis	8. _____condition of swallowing, eating
-stomy	9. _____contraction
-tresia	10. _____digestion condition

Combining Form	Definition
<i>an/o</i>	11. _____ tongue
<i>bil/i</i>	12. _____ gums
<i>bucc/o</i>	13. _____ fat, lipid
<i>cheil/o</i>	14. _____ bile
<i>cholangi/o</i>	15. _____ esophagus
<i>choledoch/o</i>	16. _____ saliva
<i>cholecyst/o</i>	17. _____ bile vessel
<i>col/o</i>	18. _____ common bile duct
<i>enter/o</i>	19. _____ mouth
<i>epiplo/o</i>	20. _____ omentum
<i>esophag/o</i>	21. _____ stomach
<i>gastr/o</i>	22. _____ rectum and anus
<i>gingiv/o</i>	23. _____ lips
<i>gloss/o</i>	24. _____ liver
<i>hepat/o</i>	25. _____ cheek
<i>lip/o</i>	26. _____ tooth
<i>lumin/o</i>	27. _____ anus
<i>odont/o</i>	28. _____ gallbladder
<i>pharyng/o</i>	29. _____ throat
<i>proct/o</i>	30. _____ lumen
<i>sial/o</i>	31. _____ large intestine
<i>stomat/o</i>	32. _____ small intestines

Definition

1. pertaining to the stomach and esophagus (3)
2. condition of without an opening (2)
3. pertaining to surrounding the teeth (3)
4. inflammation of the stomach (2)
5. making a new opening in the colon (2)
6. washing the rectum and anus (2)
7. viewing the esophagus, stomach, and duodenum (4)
8. cutting out the gallbladder (2)
9. making a new opening in the stomach (2)
10. condition of painful, difficult swallowing (2)
11. enlargement of the liver (2)
12. surgically forming the salivary duct (2)
13. suturing the tongue (2)
14. condition of stones in the common bile duct (3)
15. condition of without teeth (3)

Term

TERM SORTING

Anatomy and Physiology	Pathology	Procedures

achalasia
anorectal fistula
appendectomy
appendicitis
ascites
BE
cecopexy
cheilitis
chyme
cholangiography
cholelithiasis
cirrhosis
defecation
deglutition

duodenum
dyspepsia
enteral nutrition
ERCP
esophagus
femoral hernia
frenulum
gastroplasty
gastroschisis
glossorrhaphy
halitosis
herniorrhaphy
hyperalimentation
ileum

ileus
mastication
omentum
omphalocele
peristalsis
peritoneocentesis
philtrum
plicae
ptyalism
retroperitoneum
rugae
sialoadenectomy
stomatoplasty
total bilirubin

TRANSLATIONS

1. After having a **viewing of the large intestine**, the patient needed a **cutting out of a polyp**.
2. The patient was tested for **an inflammation of the liver** due to **yellowing of the skin and sclerae**.
3. The patient's **protrusion of a loop of the intestine into the inguinal canal** was corrected with a **suturing of the hernia**.
4. A **fecal exam to detect hidden blood** was used to determine if the patient had bleeding in his gastrointestinal tract.
5. The patient was diagnosed with **presence of stone in the gallbladder** and underwent a **cutting out of the gallbladder**.
6. Ross underwent a **surgical redirection of the bowel to a stoma** when his **inflammation of the ileum or the colon that is of idiopathic origin** became too severe.

7. The patient had **gas expelled through the anus** and **an abnormal discharge of watery, semisolid stools.**

8. Delay in treating the patient's **inflammation of the appendix** led to a nearly fatal case of **inflammation of the peritoneum.**

9. The dentist told Ava she had **inflammatory disease of the gums**, which could eventually lead to **pathologic condition of the tissue surrounding the teeth.**

10. The infant was born with **failure of the palate to close during embryonic development.** Her twin was born with **esophagus that ends in a blind pouch and lacks an opening into the stomach.**

11. The patient underwent **surgical puncture of the peritoneum to remove fluid** to treat his **excessive intraperitoneal fluid.**

12. Mr. Herrera was diagnosed with **return of stomach contents to the esophagus due to the inability of the LES to contract normally** and underwent **folding the fundus of the stomach around the distal end of the esophagus.**
13. The surgeon created a/an **new connection between two structures** when he performed a **new opening between the stomach and duodenum.**



Exercise 17: Lower GI Procedures

Match the procedures with their definitions.

- | | |
|--------------------------|--|
| ___ 1. cecopexy | A. introduction of a barium sulfate suspension through the rectum for imaging of the lower digestive tract |
| ___ 2. barium enema | B. nutrition introduced through a digestive structure |
| ___ 3. colonoscopy | C. making a new opening between the ileum and the ureters |
| ___ 4. ileoureterostomy | D. nutrition introduced through a structure outside of the alimentary canal |
| ___ 5. enteral nutrition | E. suspending the cecum |
| ___ 6. TPN | F. making a new opening of the jejunum to the surface of the abdomen |
| ___ 7. jejunostomy | G. viewing the large intestine |

Decode the terms.

8. appendectomy _____
9. colonoscopy _____
10. colostomy _____
11. peritoneocentesis _____
12. proctoclysis _____
13. herniorrhaphy _____

Respiratory System

Respiratory system

The respiratory system partners with the circulatory system to deliver oxygen to and remove carbon dioxide from the cells of the body.

يتعاون الجهاز التنفسي مع الجهاز الدوري لتوصيل الأكسجين إلى خلايا الجسم وإزالة ثاني أكسيد الكربون منها

Breathing is **respiration**

- Breathing in (**inspiration or inhalation**) pulls air containing oxygen into the lungs where it passes into the circulatory system

ان هليشن

يؤدي الاستنشاق (الشهيق أو الاستنشاق) إلى سحب الهواء المحتوي على الأكسجين إلى الرئتين حيث يمر إلى الجهاز الدوري

- Breathing out (**expiration or exhalation**) Carbon dioxide is released when air is pushed out of the lungs

اكس هاليشن

الزفير (الزفير أو الزفير) يتم إطلاق ثاني أكسيد الكربون عندما يتم دفع الهواء خارج الرئتين

The term "**ventilation**" is used to describe the movement of air into the lungs, whether it is a natural or an artificial activity.

فنتليشن

يستخدم مصطلح "التهوية" لوصف حركة الهواء إلى داخل الرئتين، سواء كان ذلك نشاطًا طبيعيًا أو اصطناعيًا



هايبر او هايپو ابنيا

هايبر ابنيا الي بياخذ نفس العميق وهايپو الي نفسو سريع

Hyperpnea / Hypopnea = increased / decreased depth of breathing

تاكي او برادي تعني معدل التنفس في الدقيقة اذا كان سريع تاكي ابنيا واذا كان بطئ برادي ابنيا والطبيعي 80/120 بير منت

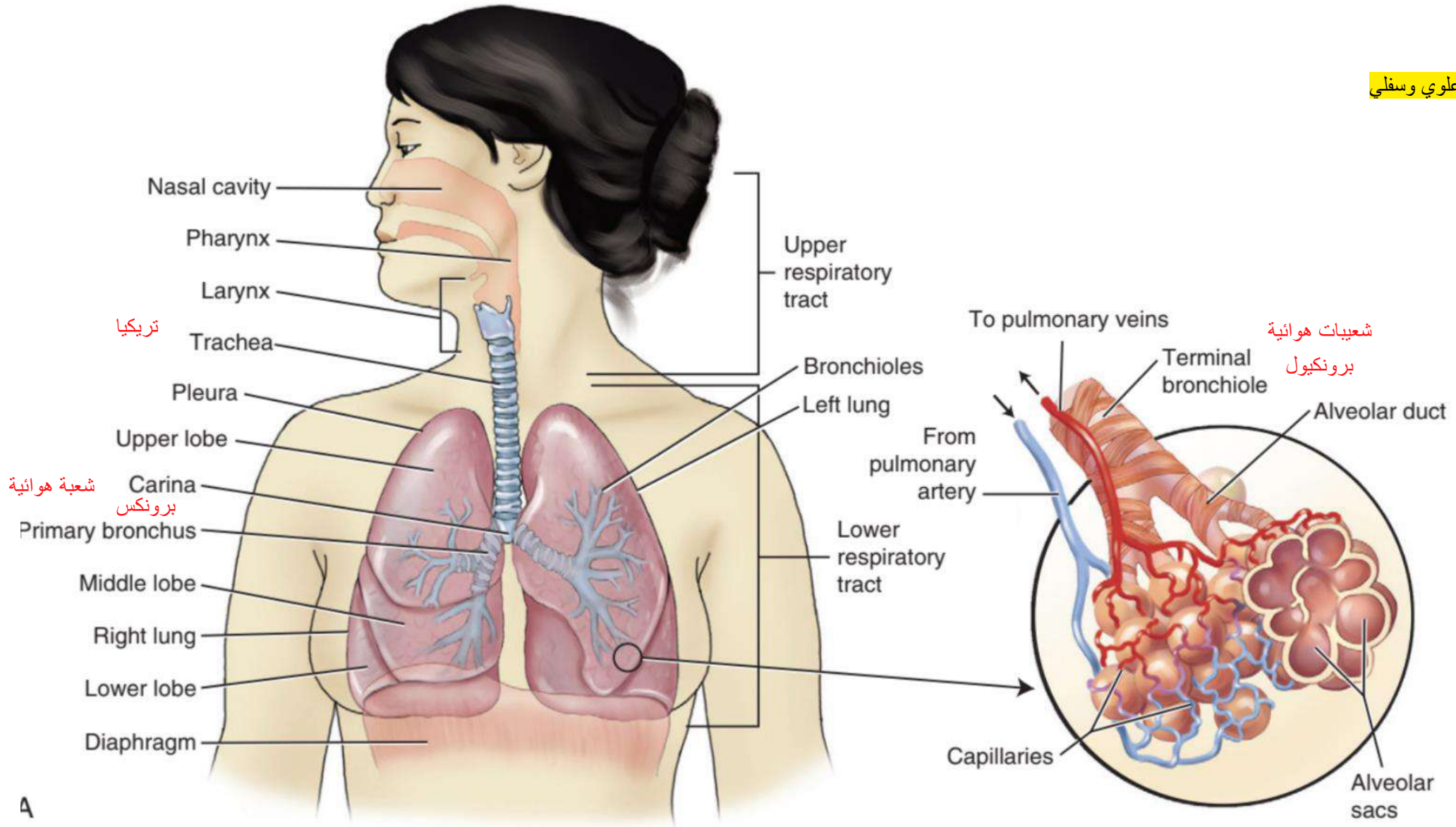
Tachypnea / Bradypnea = increased / decreased rate of breathing – 12 to 20 BPM in adult

Hyperventilation / Hypoventilation = increased / decreased air movement into the lungs

هايبر فنتليشن

هايپو فنتليشن

وضع التهوية في الرئتين



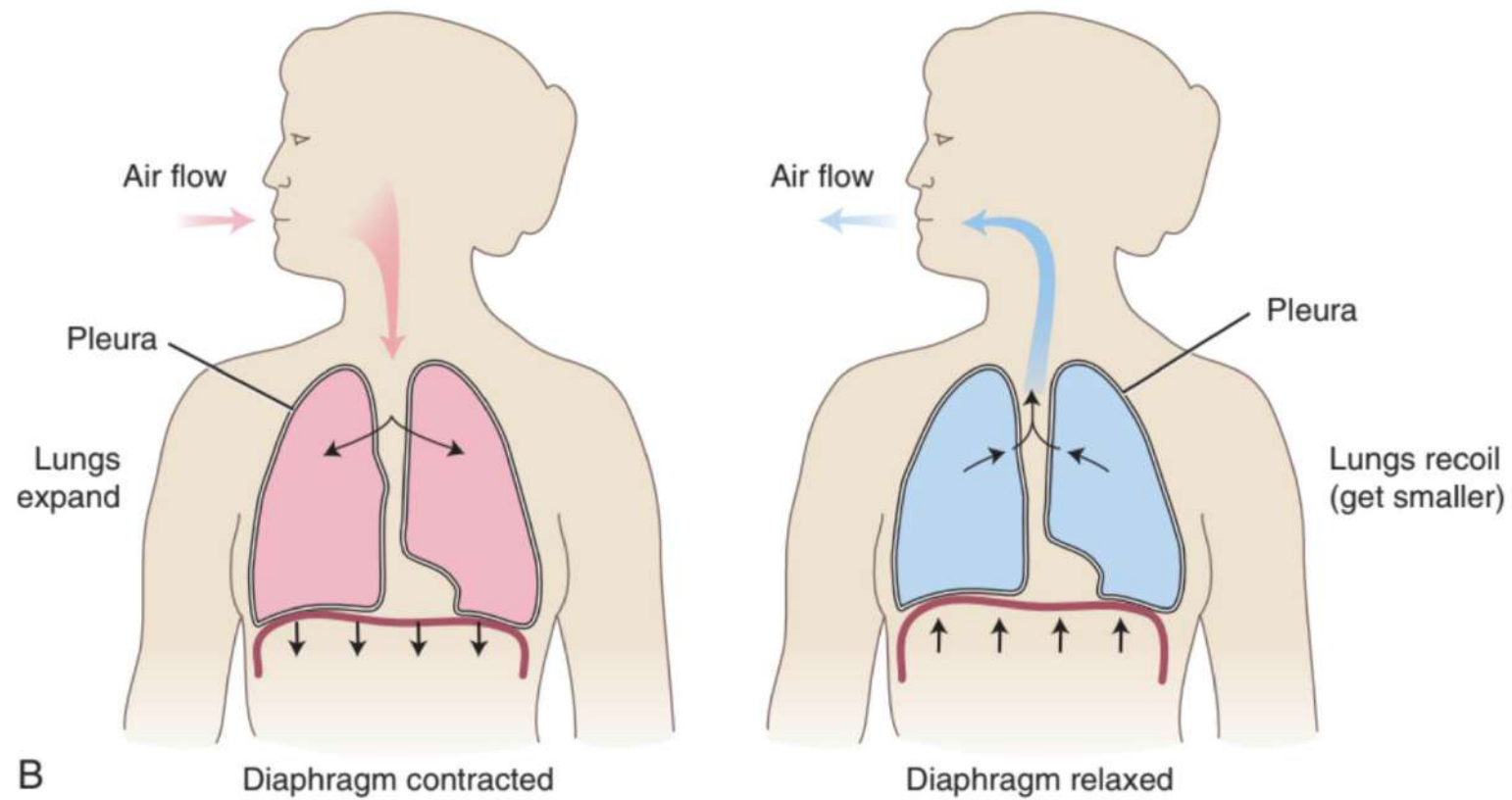


Fig. 10-1 **A**, The respiratory system showing a bronchial tree (*inset*). **B**, Inspiration and expiration.

الهواء نيمو ايرو
air = pneum/o, aer/o
سبايرو
spir/o = to breathe
ابنيا
-pnea = breathing
اوكسجين اوكسي اوكسو اوكسي
oxygen = ox/i, ox/o, oxy-
ثاني اكسيد الكربون كابتو
carbon dioxide = capn/o

Oxyhemoglobin oxy- = oxygen hem/o = blood -globin = protein substance

Deoxyhemoglobin De- = without oxy- = oxygen hem/o = blood -globin = protein substance

ANATOMY

The respiratory system is anatomically divided into :

ينقسم الجهاز التنفسي تشريحيًا إلى

- conduction passageways

The upper respiratory tract (the nose, pharynx, and larynx)

The lower respiratory tract (the trachea, bronchial tree, and lungs)

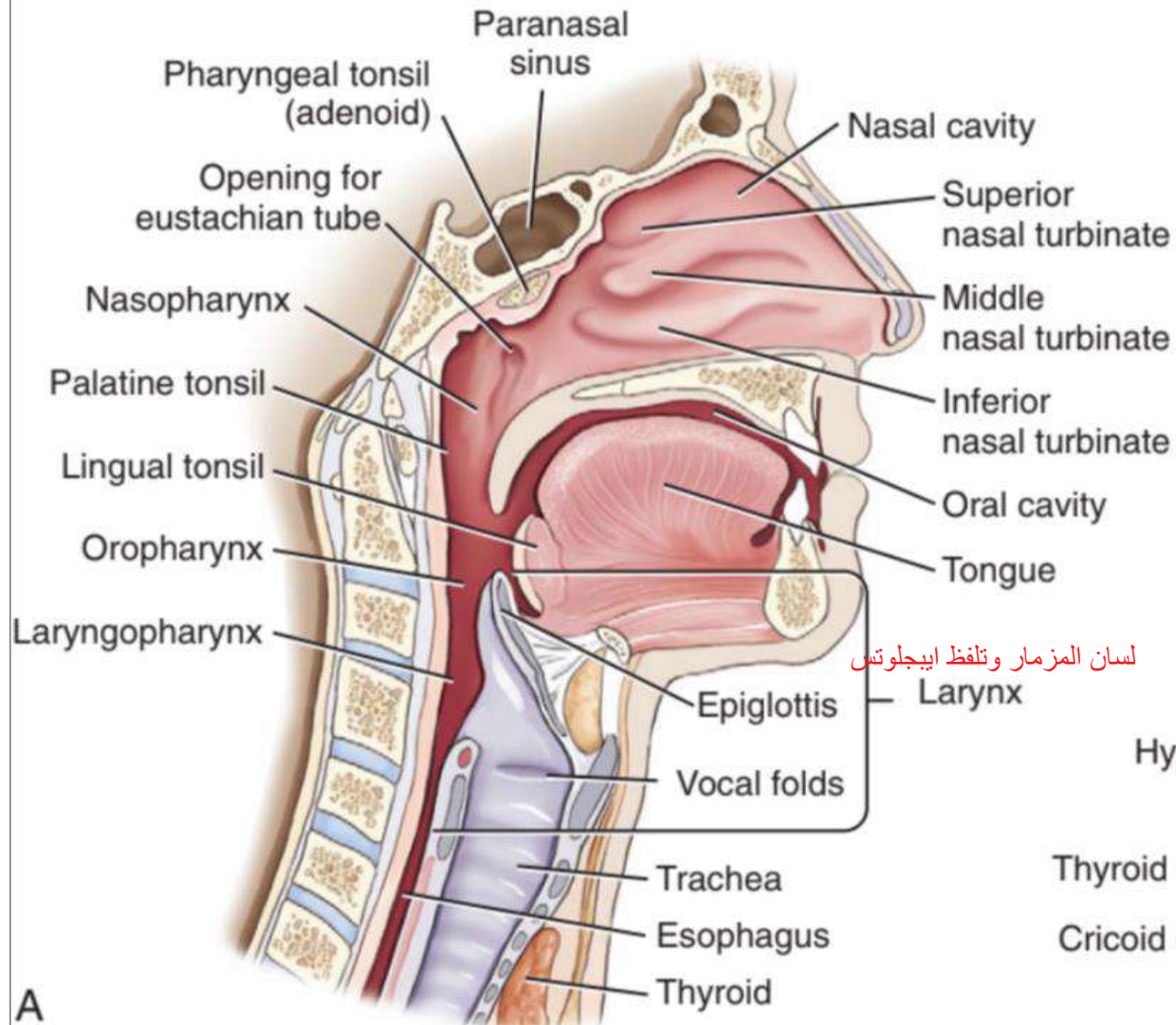
- gas exchange surfaces.

أسطح تبادل الغازات

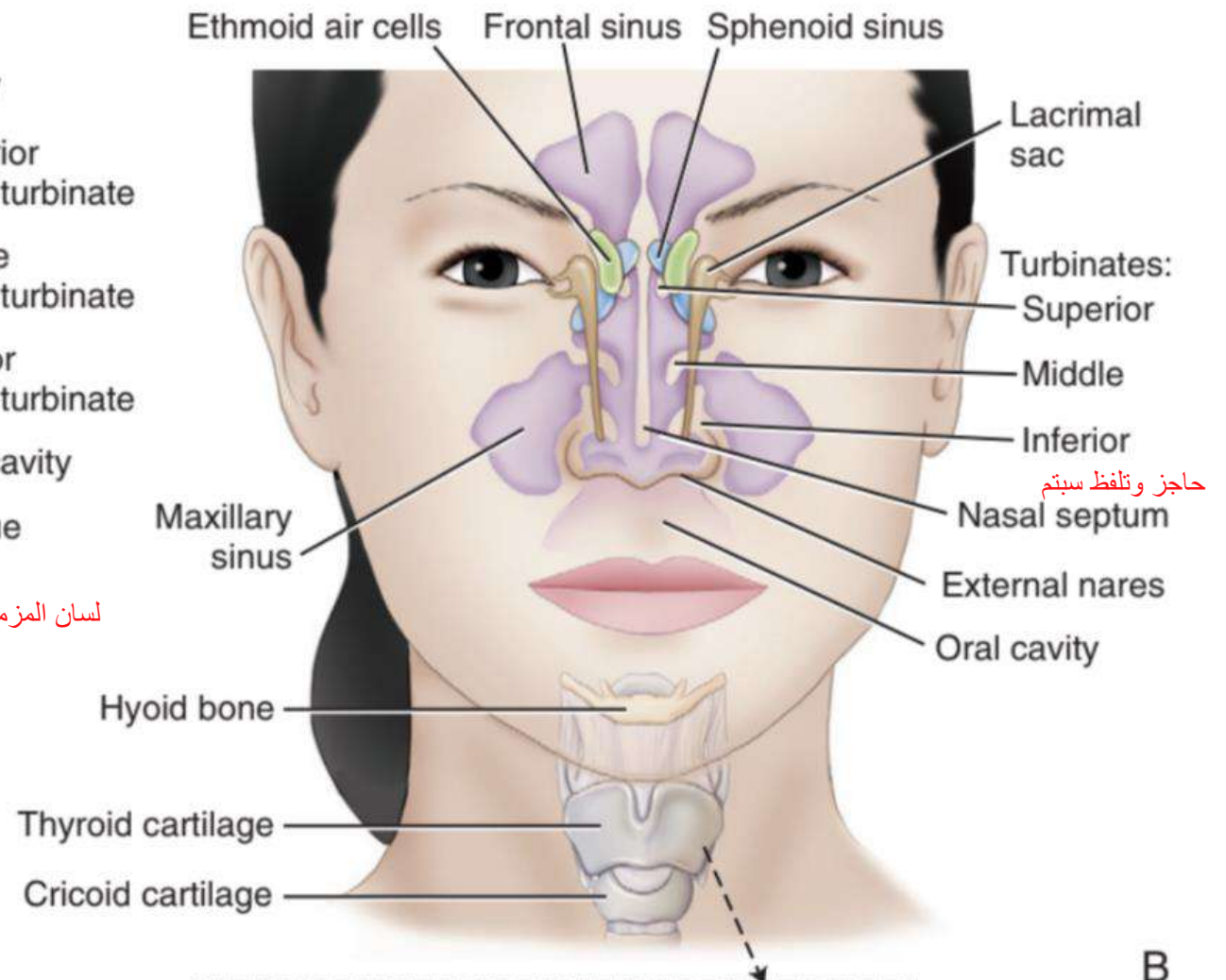
The gas exchange surfaces are the alveoli of the lungs and the cells of the body.

تعتبر أسطح تبادل الغازات هي الحويصلات الهوائية في الرئتين وخلايا الجسم

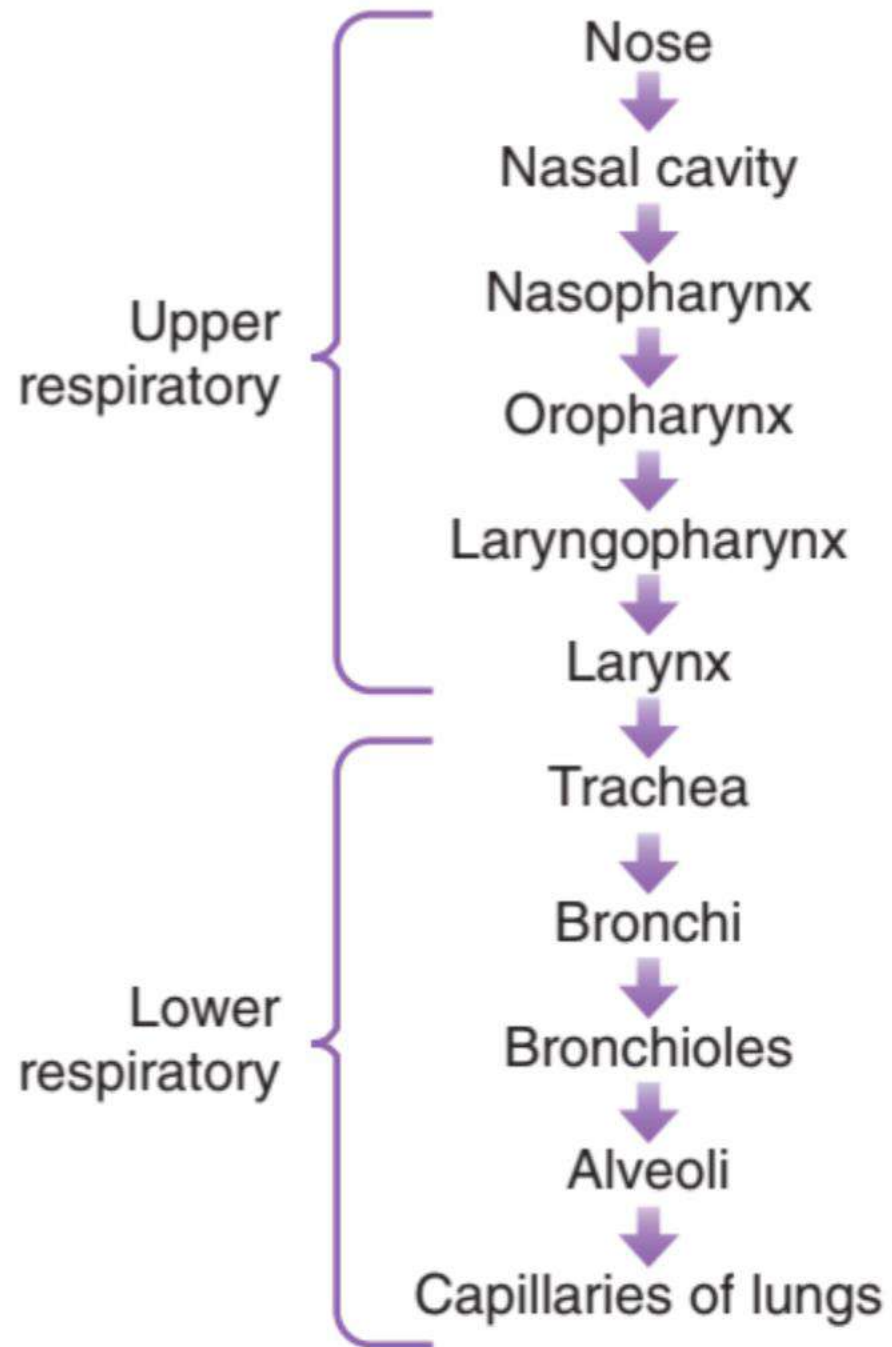
Upper Respiratory Tract - URT



A



B



Upper respiratory system roots

mouth = or/o, stomat/o

nose = nas/o, rhin/o

Septum ^{حاجز} sept/o = wall ^{سبتر} -um = structure

Paranasal para- = near nas/o = nose -al =
pertaining to

^{التجاويف وتلفظ ساينس} sinus = sinus/o, sin/o ^{او الجيوب الانفية}

Nasopharynx nas/o = nose pharyng/o =
throat, pharynx

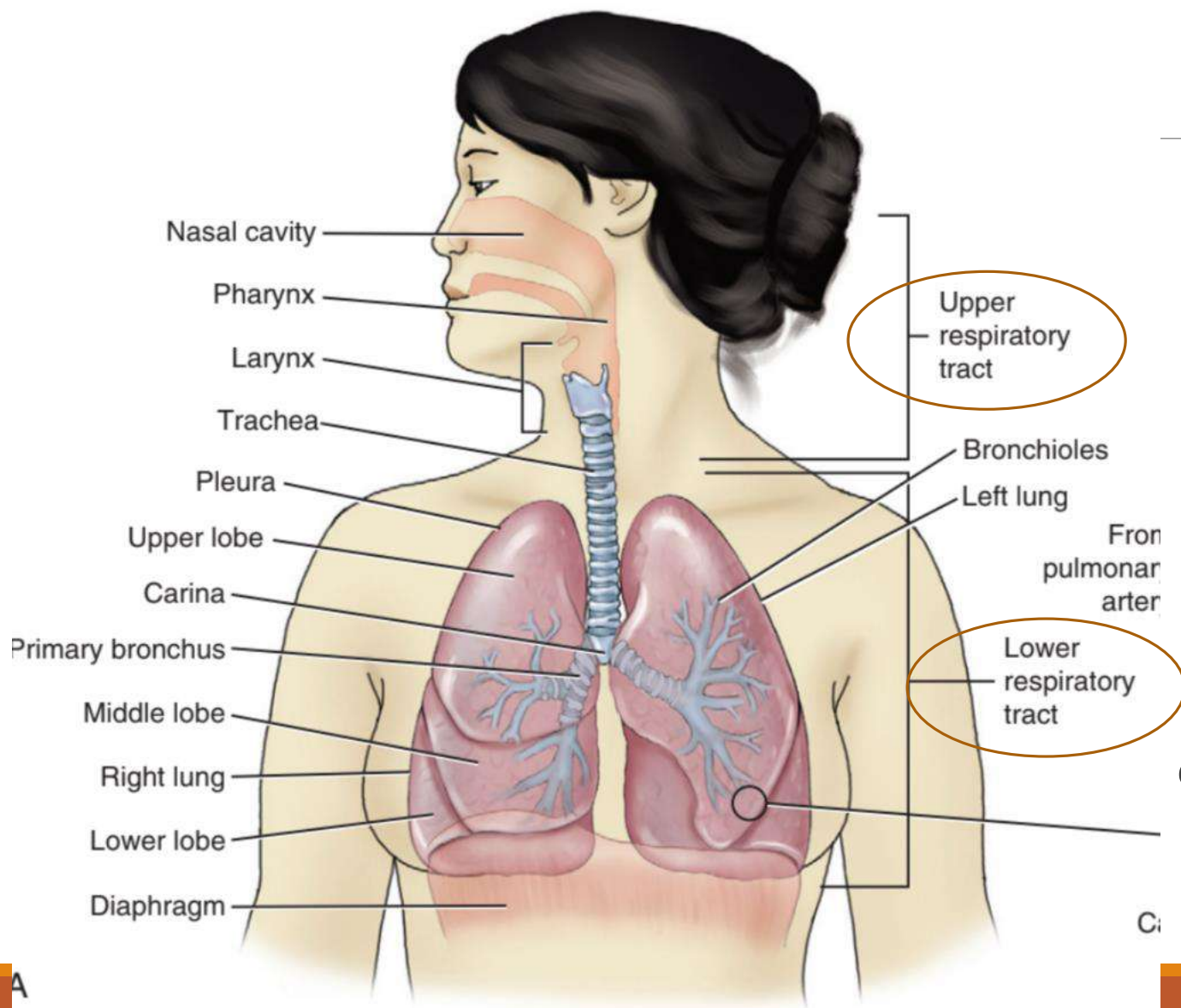
^{الحمية وتلفظ ادينويد} adenoid = adenoid/o ^{الحمية ممكن تتضخم وتعمل صعوبة بالتنفس او الشخير اثناء النوم حلها الازالة}

^{فرنجيو} Laryngopharynx laryng/o = larynx, voicebox ^{صندوق الصوت}
pharyng/o = pharynx ^{لارنجيو}

larynx = laryng/o

epiglottic = epiglott/o

Lower Respiratory Tract - URT



القصبه الهوائية وتلفظ ويند بايب

trachea, windpipe = trache/o

المكان الي بين الرئتين ويلفظ ميدياستاينم

mediastinum = mediastin/o

الشعب الهوائية برونكس وجمعها برونكاي

bronchus = bronch/o, bronchi/o

الرئتين وتلفظ بالمونو او نيمو او نيمونو

lung = pulmon/o, pneum/o, pneumon/o

الرئتين اليمنى مقسمة ل 3 فصوص واليسرى فصين وكل جزء يسمى لوب

lobe = lob/o, lobul/o

bronchiole = bronchiol/o

alveolus = alveol/o

حويصلة هوائية وتلفظ ألفيولاس وجمعها ألفيولا

الحجاب الحاجز وتلفظ دايا فراجم وهو يفصل بين التجويف الصدري والتجويف البطني

diaphragm = diaphragmat/o, diaphragm/o, ph

دايافراجماتو

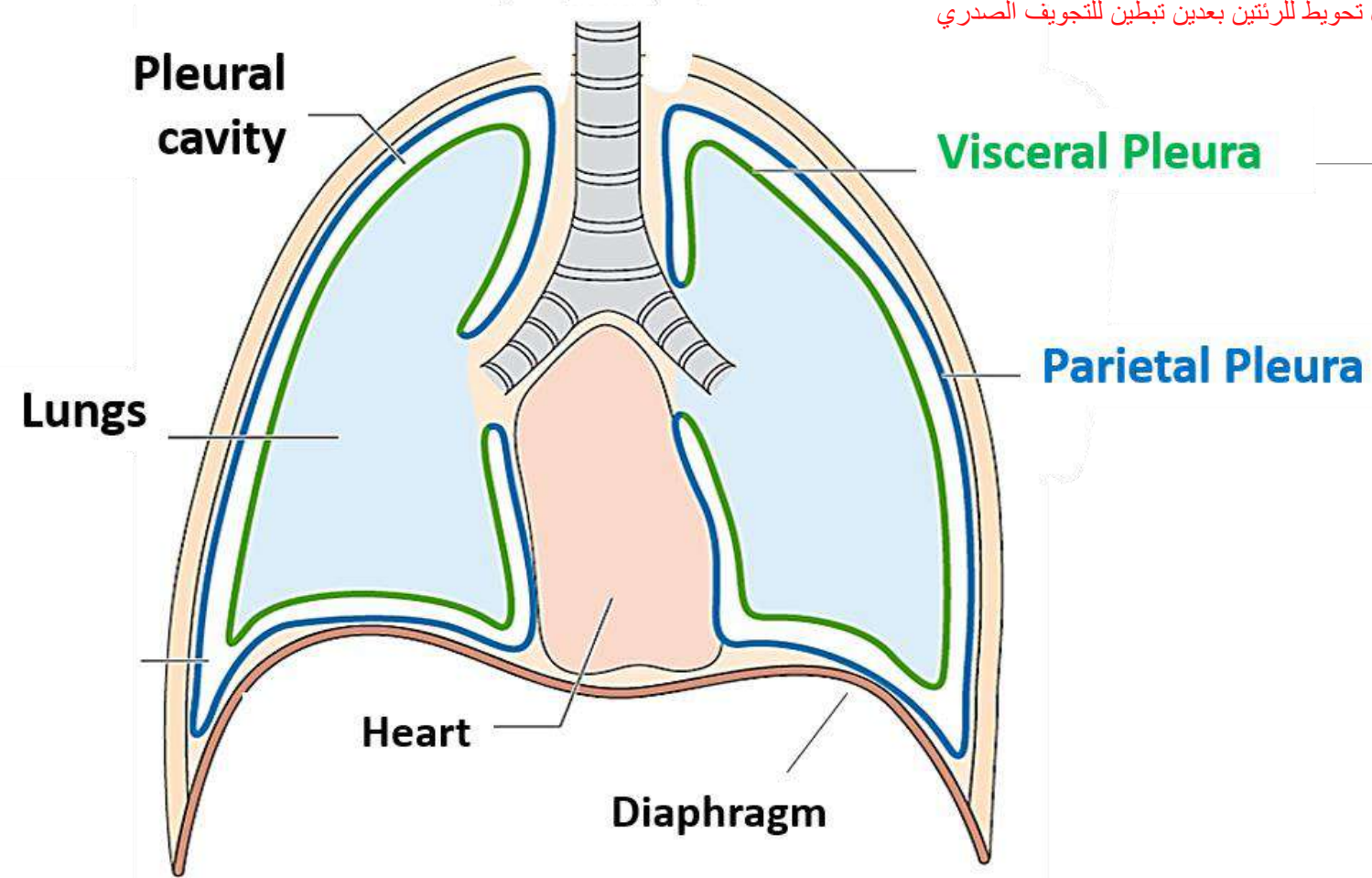
دايافراجمو

فرينو

Layers of Pleura

الغشاء البلوري

بتعمل تحويط للرئتين بعددين تبطين للتجويف الصدري



pleura = pleur/o

ادخال ابرة لسحب الماء وتسمى هذه العملية بلورو سنتيسيس

Pleurocentesis

Pleurocentesis removes excess fluid in between the two layers of the pleura.

Pleura
(Lung Linings)

**Normal
Lung**



تجمع المياه حول الرئتين

بلورل افیوجن

Pleural Effusion

صدر

ثوراكو

ستيثو

بيكتورو

chest = thorac/o, steth/o, pector/o

نيمو ثوراكس

هواء في الغشاء البلوري

Pneumothorax = pnem/o –air thorax – chest

هيماتو ثوراكس

تجمع دم في الغشاء البلوري

Hemothorax = Hem/o – blood thorax – chest

Pleural effusion

نيمو ممكن بمعنى رنتين او هواء

Stethoscope ستيثو سكوب

Scope vs scopy سماع الاصوات الاجراء

Graph vs graphy تسجيل العملية الاجراء



Terms Related to Signs and Symptoms

Terms Related to Symptoms and Signs Involving the Respiratory System (R00-R99)

Term	Word Origin	Definition
aphonia أفونيا	<i>a-</i> no, not, without <i>phon/o</i> sound <i>-ia</i> condition	Loss of ability to produce sounds. Dysphonia is difficulty making sounds. فقدان القدرة على إنتاج الصوت اما دس فونيا وهي صعوبة في صنع الصوت مثلا خروج من عملية بالرقبة
apnea أبنيا	<i>a-</i> no, not, without <i>-pnea</i> breathing	Abnormal, periodic cessation of breathing. توقف غير طبيعي ودوري في التنفس
bradypnea برادي ابنيا	<i>brady-</i> slow <i>-pnea</i> breathing	Abnormally slow breathing. التنفس البطئ بشكل غير طبيعي

cyanosis سينوسيس	cyan/o blue -osis abnormal condition	Lack of oxygen in blood seen as bluish or grayish discoloration of the skin, nail beds, and/or lips. ينظر الى نقص الاكسجين في الدم على انه مزرق او رمادي الجلد واسرة الاظافر او الشفاه
dyspnea ديسنيا	dys- difficult -pnea breathing	Difficult and/or painful breathing. Eupnea is good, normal breathing. (Eu- means healthy, normal). صعوبة او تنفس مؤلم
epistaxis ابستاكسيس		Nosebleed. Also called rhinorrhagia . نزيف الانف وتسمى ريينو ريجيا
hemoptysis هيمو بتسيس	hem/o blood -ptysis spitting	Coughing up blood or blood-stained sputum. سعال الدم او البلغم الملطخ بالدم
hypercapnia هايپر كابنيا	hyper- excessive capn/o carbon dioxide -ia condition	Condition of excessive CO ₂ in the blood. حالة الافراط في ثاني اكسيد الكربون في الدم
hyperpnea هايپر ابنيا	hyper- excessive -pnea breathing	Excessively deep breathing. Hypopnea is extremely shallow breathing. التنفس العميق بشكل مفرط او نقص التنفس وهو التنفس الضحل للغاية
hyperventilation هايپر فنثليشن	hyper- excessive	Abnormally increased breathing. زيادة التنفس بشكل غير طبيعي
hypoxemia هايپو اكسيما	hypo- deficient ox/o oxygen -emia blood condition	Condition of deficient O ₂ in the blood. Hypoxia is the condition of deficient oxygen in the tissues. حالة نقص الدم او نقص الاكسجة وهو حالة نقص الاكسجين في الانسجة ويلفظ هايپو اكسيا
orthopnea اورثو ابنيا	orth/o straight -pnea breathing	Condition of difficult breathing unless in an upright position. حالة صعوبة التنفس ما لم تكن في وضع مستقيم

Colors

Leuko = white

Cirrho = yellow

سروو السنين بالكسرة

Xantho = yellow

اكرانثو

Melano = Black

Cyano = Blue

Erthro = red

- ptysis = spitting ابتنسیس

- emesis = vomiting امسیس

شخص بیکج دم هیمو ایتسیس

شخص بستفرغ دم هیما تمسیس

pleurodynia بلورو دينيا	<i>pleur/o</i> pleura <i>-dynia</i> pain	Pain in the chest caused by inflammation of the intercostal muscles. الم في الصدر ناتج عن التهاب في العضلات الوربية
pyrexia بيركسيا	<i>pyr/o</i> fire <i>-exia</i> condition	Fever. حمى
shortness of breath (SOB) شورتنس اوف بريث		Breathlessness; air hunger.
sputum, abnormal سبيوتم		Mucus coughed up from the lungs and expectorated through the mouth. If abnormal, may be described as to its amount, color, or odor. يسعل البلغم او المخاط من الرئتين ويخرج من الفم اذا كان غير طبيعي يمكن وصفه بكميته او لونه او رائحته
tachypnea تاكي انبيا	<i>tachy-</i> fast <i>-pnea</i> breathing	Rapid, shallow breathing. التنفس السريع
thoracodynia ثوراكو دينيا	<i>thorac/o</i> chest <i>-dynia</i> pain	Chest pain.

Match the term to its definition.

- ___ 1. apnea
- ___ 2. Cheyne-Stokes respiration
- ___ 3. SOB
- ___ 4. cyanosis
- ___ 5. hemoptysis
- ___ 6. bradypnea
- ___ 7. orthopnea
- ___ 8. pleurodynia
- ___ 9. pyrexia
- ___ 10. hyperventilation
- ___ 11. tachypnea
- ___ 12. thoracodynia
- ___ 13. rales
- ___ 14. rhonchi
- ___ 15. stridor
- ___ 16. wheezing
- ___ 17. sputum
- ___ 18. clubbing
- ___ 19. epistaxis
- ___ 20. dyspnea

- A. coughing up blood or blood-stained sputum
- B. crackles
- C. high-pitched whistling sound made during breathing
- D. lack of oxygen in blood seen as bluish discoloration of skin, nails, and/or lips
- E. pain in the chest caused by inflammation of intercostal muscles
- F. abnormally slow breathing
- G. fever
- H. abnormal rumbling sound heard on auscultation
- I. chest pain
- J. deep, rapid breathing followed by a period of apnea
- K. abnormal, periodic cessation of breathing
- L. nosebleed
- M. rapid, shallow breathing
- N. high-pitched inspiratory sound from the larynx
- O. air hunger
- P. mucus coughed up from the lungs
- Q. difficult and/or painful breathing
- R. abnormal enlargement of the distal phalanges as a result of decreased oxygen in the blood
- S. abnormally increased breathing
- T. condition of difficult breathing unless upright

Build the term.

21. condition of excessive carbon dioxide _____

22. blood condition of deficient oxygen _____

23. condition of without sound _____

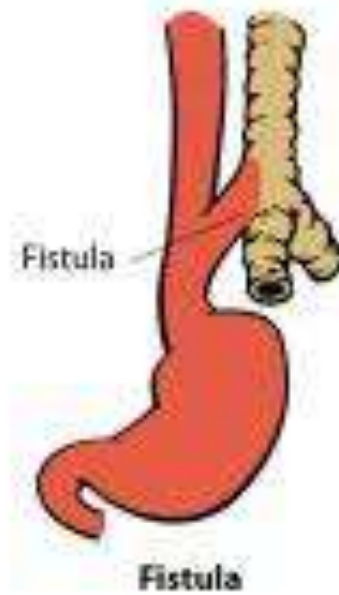
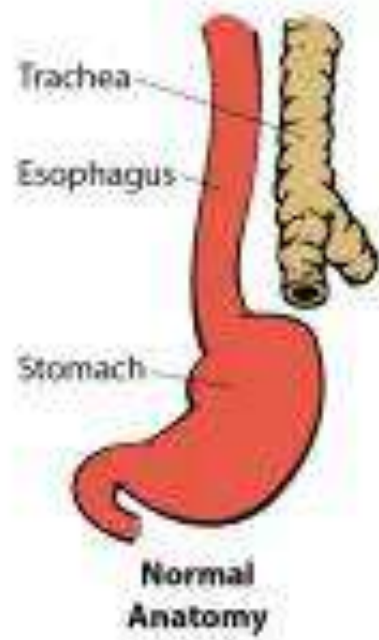
24. chest pain _____

25. fast breathing _____

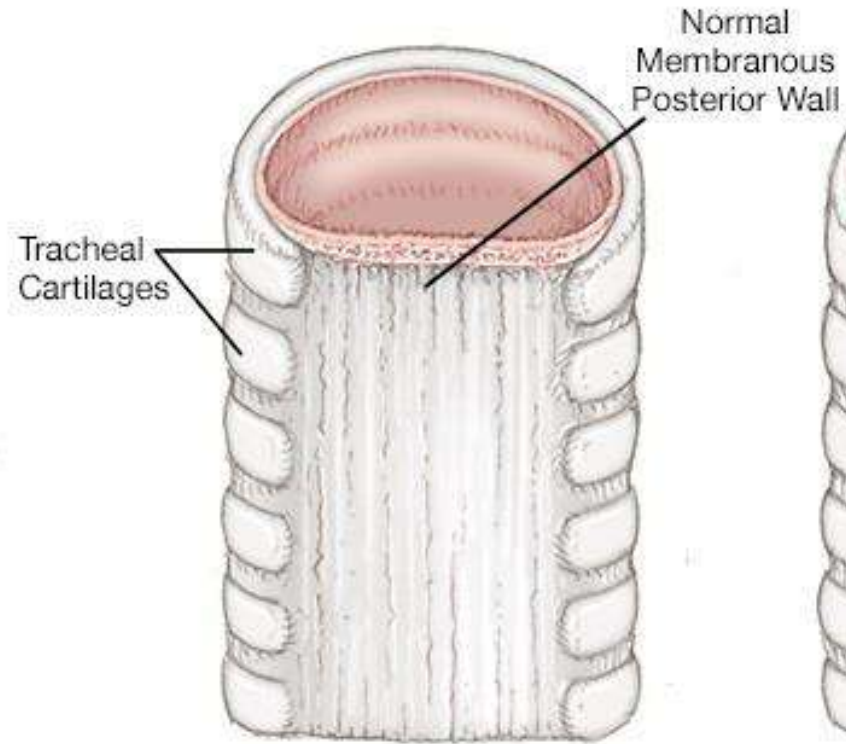
Respiratory System 2

Terms Related to Congenital Disorders (Q00-Q99)

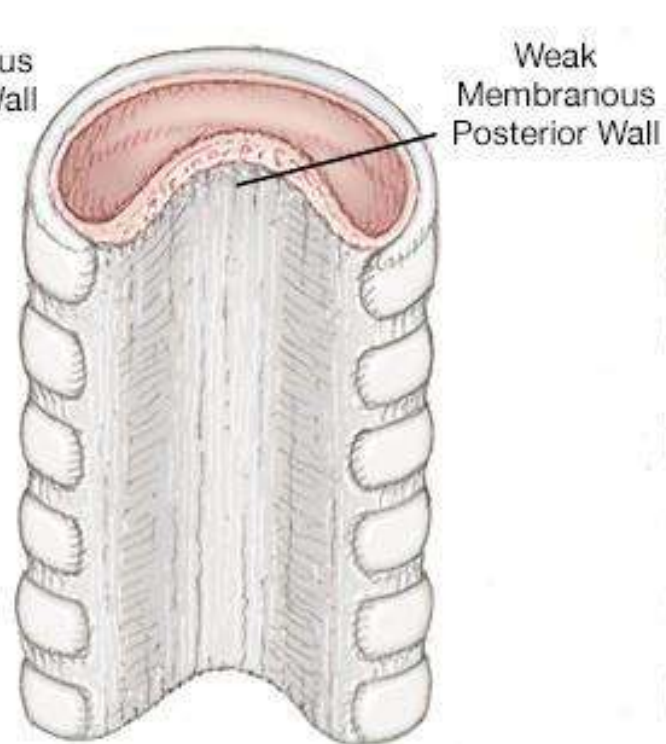
Term	Word Origin	Definition
tracheoesophageal fistula تريكيو افوسجىال فستيو لا	<i>trache/o</i> trachea, windpipe <i>esophag/o</i> esophagus <i>-eal</i> pertaining to	A congenital abnormal opening between the trachea and the esophagus. Can be acquired. فتحة غير طبيعية خلقية بين القصبة الهوائية والمرئ يمكن الحصول عليها
tracheomalacia تريكيو مليجيا	<i>trache/o</i> trachea, windpipe <i>-malacia</i> softening المفروض صلب ولكن بيصير مشكلة فبتصير ليونة	Congenital softening of the tissues of the trachea. Can also result from chronic ventilator use. التلين الخلقي لانسجة القصبة الهوائية يمكن ان ينتج ايضا عن استخدام جهاز التنفس الصماعي المزمن
tracheostenosis تريكيو ستنوزس	<i>trache/o</i> trachea, windpipe <i>-stenosis</i> narrowing	Congenital narrowing of the windpipe. Can be acquired. تضييق خلقي للقصبة الهوائية



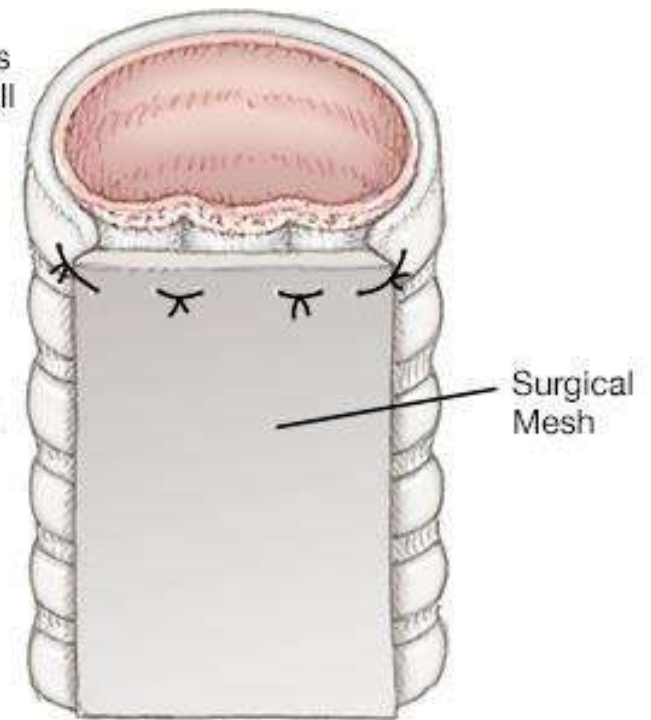
Normal Trachea

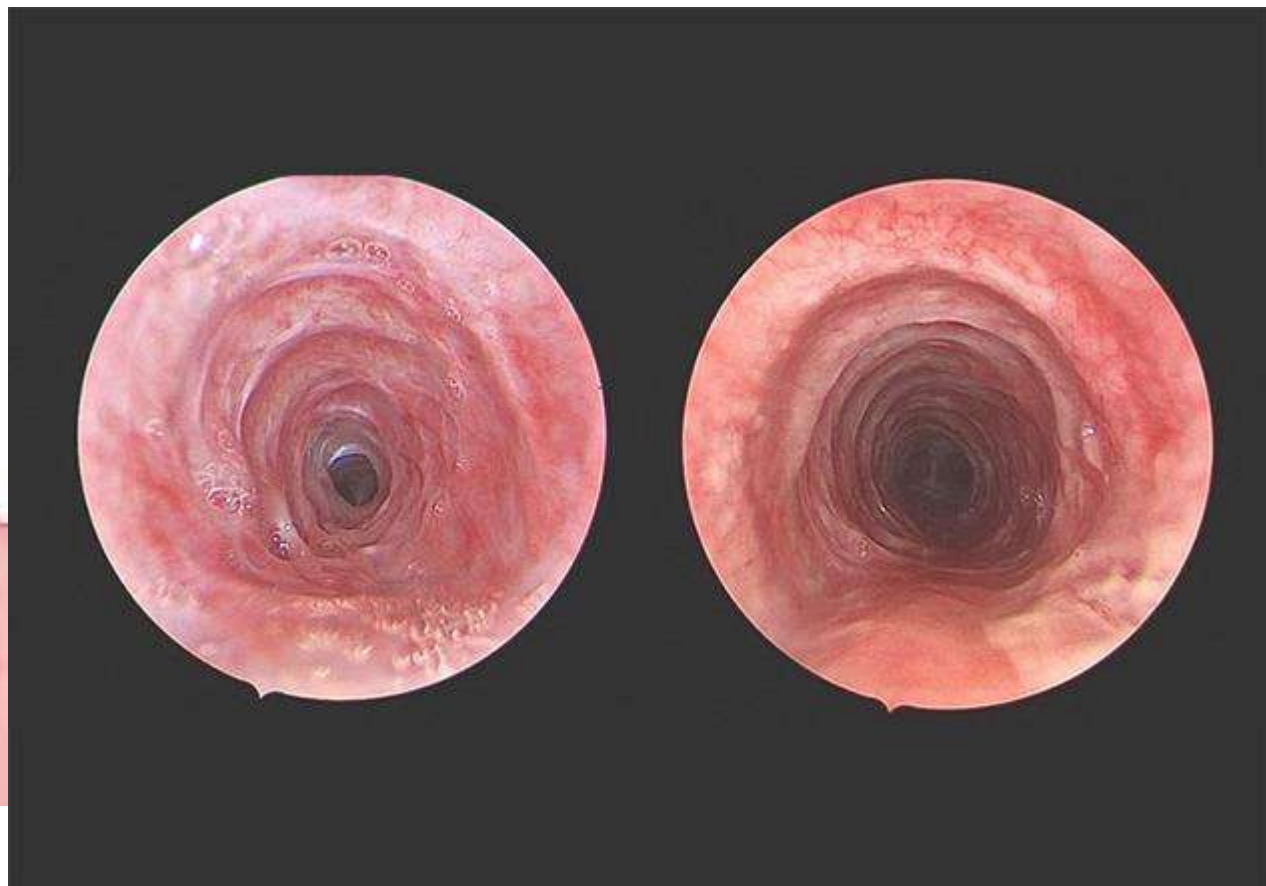
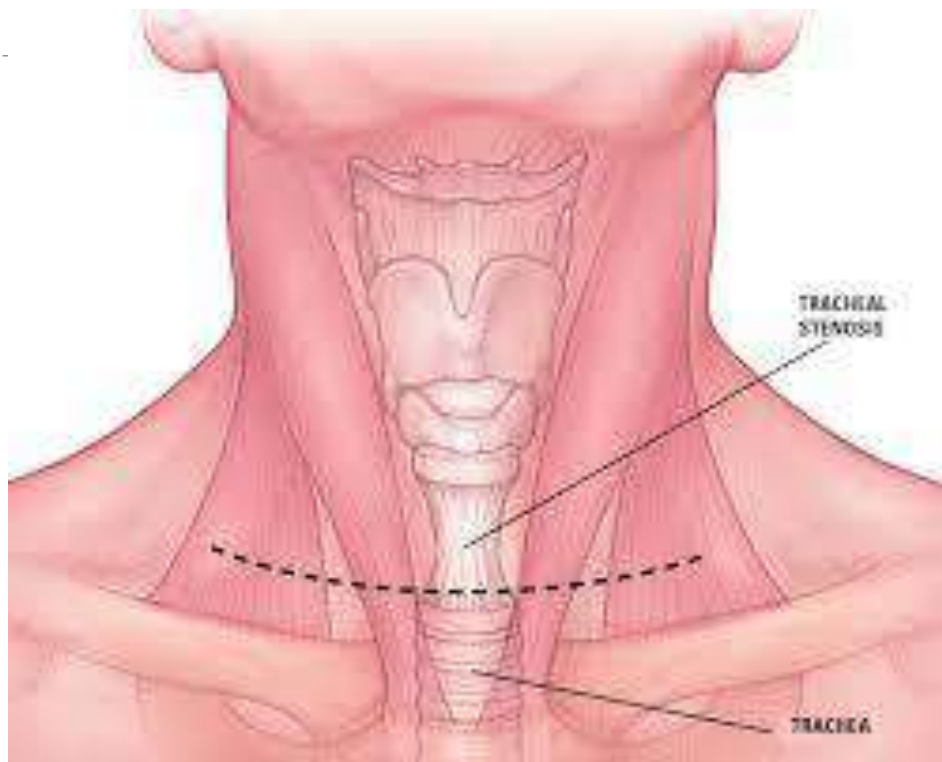


Tracheomalacia



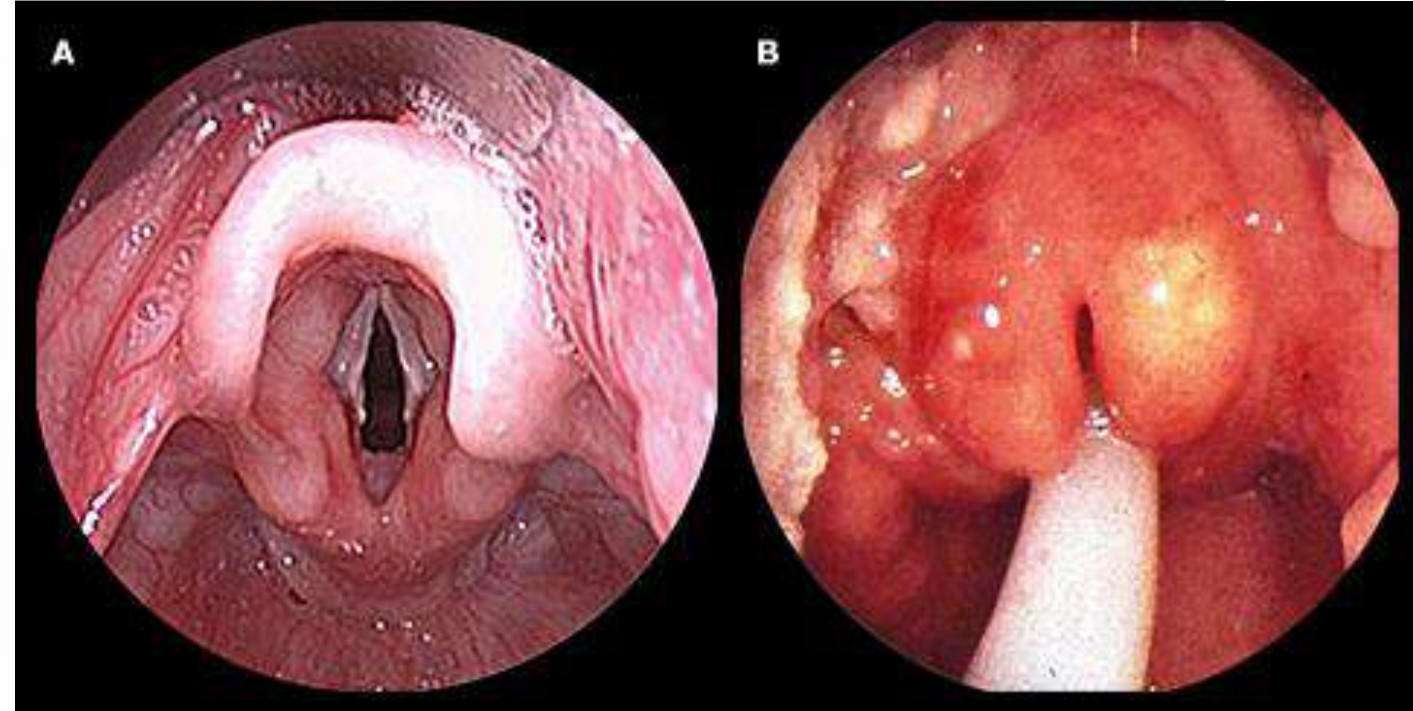
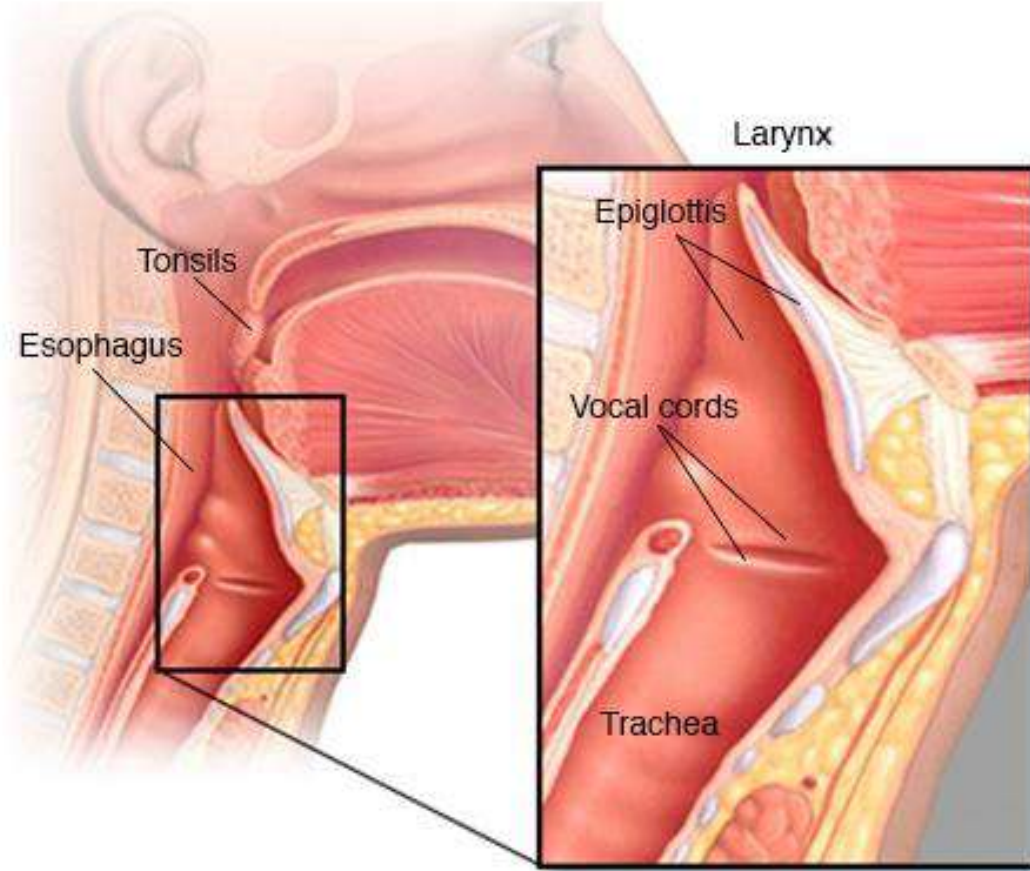
Surgical Repair - Tracheoplasty





Terms Related to Acute Upper Respiratory Infections (J00-J06)

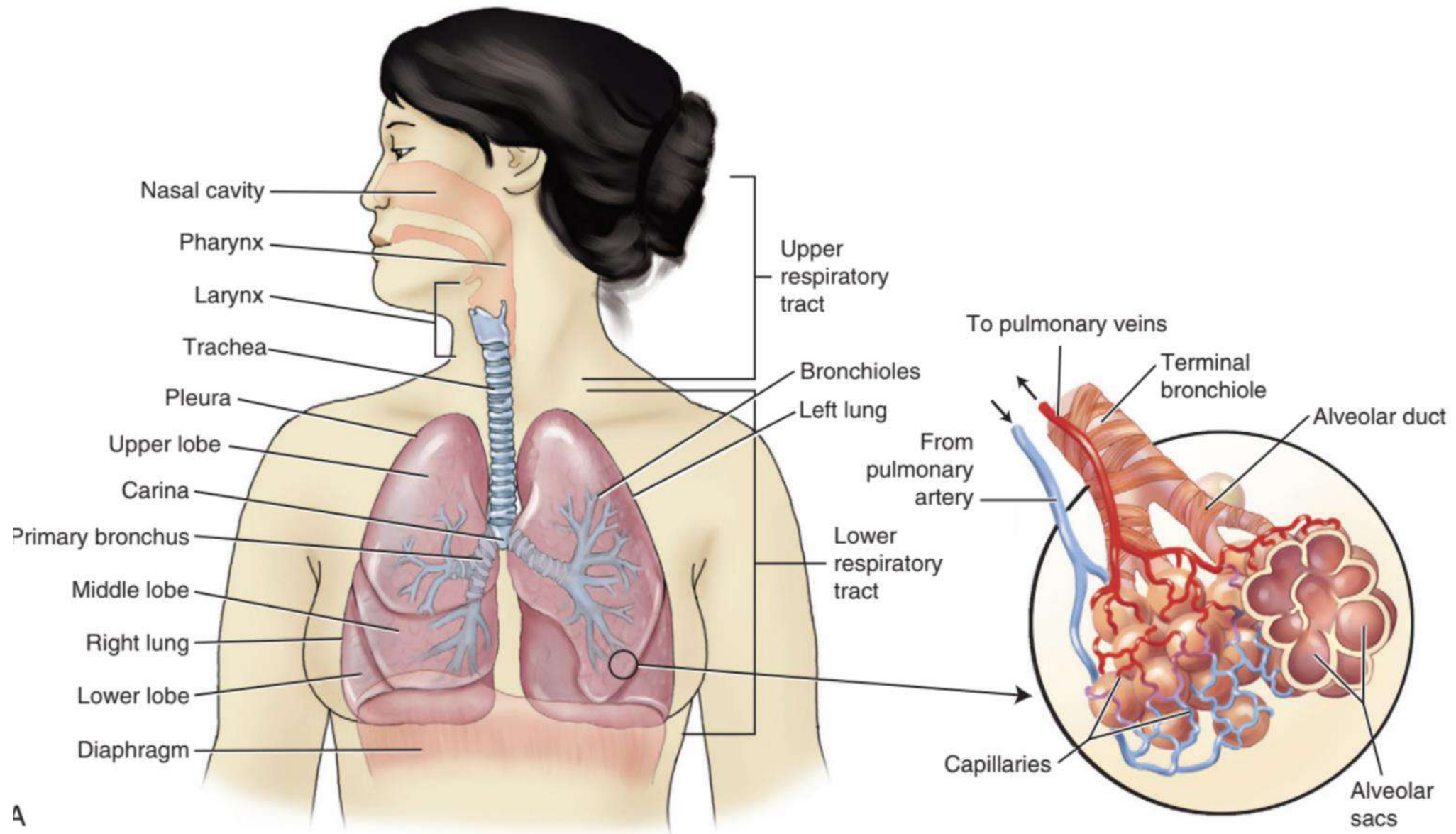
Term	Word Origin	Definition
epiglottitis ايبجلوتايتس	<i>epiglott/o</i> epiglottis <i>-itis</i> inflammation	Inflammation of the epiglottis (Fig. 10-6). Supraglottitis is an inflammation of the area immediately above the glottis that includes the epiglottis. التهاب لسان المزمار
laryngitis لارنج ايتس	<i>laryng/o</i> larynx, voicebox <i>-itis</i> inflammation	Inflammation of the voicebox. التهاب الحنجرة
nasopharyngitis نيزو فرنج ايتس	<i>nas/o</i> nose <i>pharyng/o</i> pharynx, throat <i>-itis</i> inflammation	The common cold. Also referred to as coryza . التهاب في الانف الزور اي البرد الي بيصير معك
obstructive laryngitis اوبستكرتف لارنج ايتس		Acute viral infection of early childhood, marked by stridor caused by spasms of the larynx, trachea, and bronchi. Also called croup . عدوى فيروسية في مرحلة الطفولة المبكرة وتتميز بحكة او نباح ناتج عن تشنجات في الحنجرة والقصبه الهوائية والشعب الهوائية وتسمى كروب
pharyngitis فرنج ايتس	<i>pharyng/o</i> pharynx, throat <i>-itis</i> inflammation	Inflammation or infection of the pharynx, usually causing symptoms of a sore throat. التهاب او عدوى البلعوم وعادة ما تسبب اعراض التهاب الحلق او بنحكي عنها لوزي نازلة
sinusitis سينايتس	<i>sinus/o</i> sinus <i>-itis</i> inflammation	Inflammation of one or more of the paranasal sinuses. Pansinusitis refers to an inflammation of all of the sinuses (pan- means all). التهاب واحد او اكثر من الجيوب الانفية و بان سينايتس اي التهاب كل الجيوب الانفية
tracheitis تريكايتس	<i>trache/o</i> trachea, windpipe <i>-itis</i> inflammation	Inflammation of the windpipe.



rhinomycosis رينو مايكوسيس	<i>rhin/o</i> nose <i>myc/o</i> fungus - <i>osis</i> abnormal condition	Abnormal condition of fungus in the nose. حالة غير طبيعية من الفطريات في الانف
pneumonia نيمونيا	<i>pneumon/o</i> lung - <i>ia</i> condition	Inflammation of the lungs caused by a variety of pathogens. If infectious, it is termed pneumonia; if noninfectious, pneumonitis . The name(s) of the lobes are used to describe the extent of the disease (e.g., RML pneumonia is pneumonia of the right middle lobe). If both lungs are affected, it is termed double pneumonia . التهاب الرئتين الناجم عن مجموعة متنوعة من مسببات الامراض اذا كانت معدية يطلق عليها الالتهاب الرئوي واذا كانت غير معدية التهاب الرئة

Terms Related to Other Acute Lower Respiratory Infections (J20-J22)

Term	Word Origin	Definition
bronchiolitis برنكيولايتس	<i>bronchiol/o</i> bronchiole - <i>itis</i> inflammation	Viral inflammation of the bronchioles; more common in children younger than 18 months. الالتهاب الفيروسي للشعب الهوائية وهي اكثر شيوعا عند الاطفال الذين تقل اعمارهم 18 شهرا
bronchitis برونكايتس	<i>bronch/o</i> bronchus - <i>itis</i> inflammation	Inflammation of the bronchi. May be acute or chronic. التهاب القصبات الهوائية وقد تكون حادة او مزمنة



Match the term to its definition.

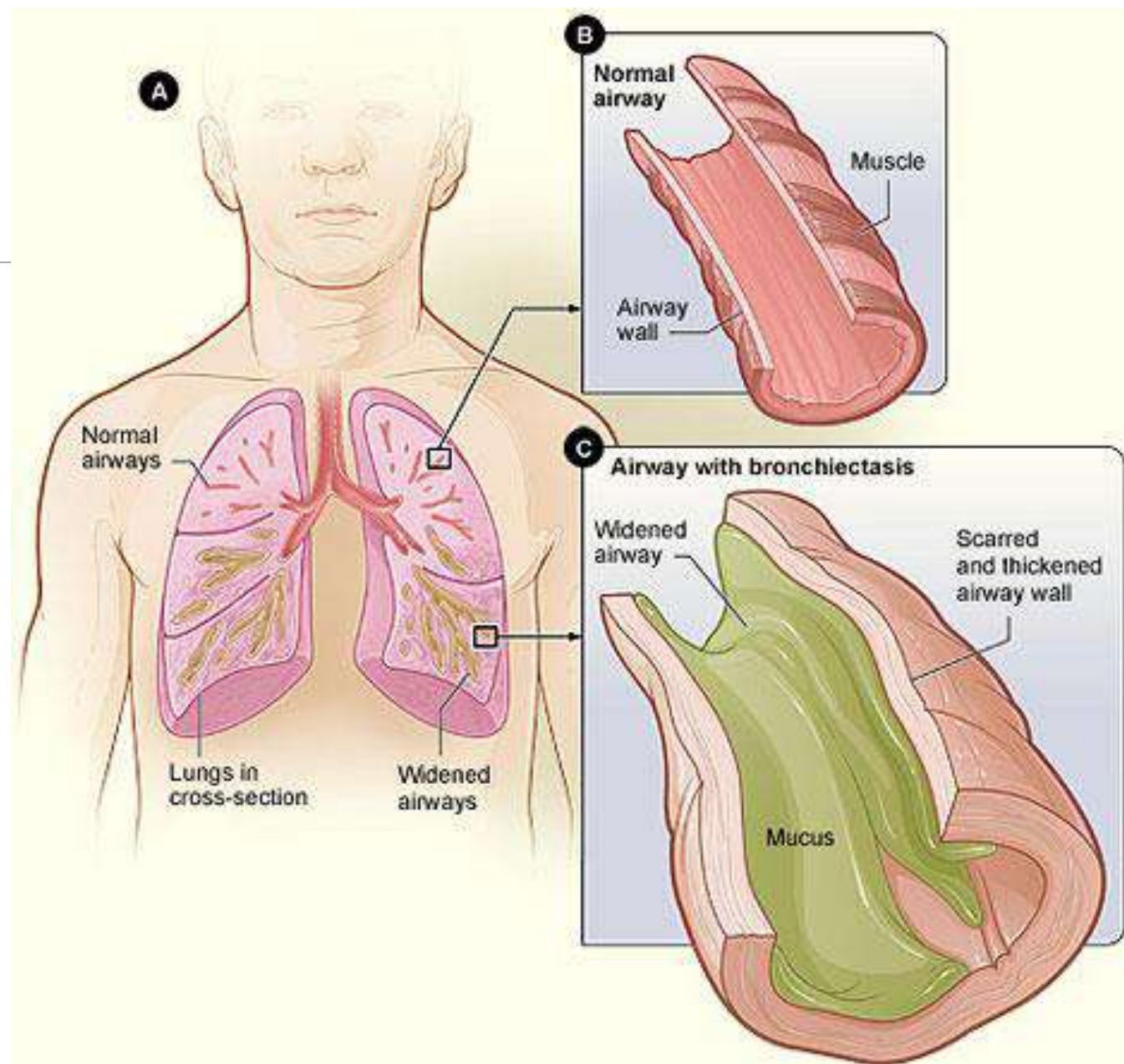
- _____ 1. sinusitis
- _____ 2. pharyngitis
- _____ 3. obstructive laryngitis
- _____ 4. epiglottitis
- _____ 5. tracheoesophageal fistula
- _____ 6. tracheostenosis
- _____ 7. influenza
- _____ 8. pneumonia

- A. inflammation of the epiglottis
- B. inflammation or infection of the throat
- C. inflammation of the lungs caused by a variety of pathogens
- D. an abnormal opening between the trachea and esophagus
- E. inflammation of one or more sinuses
- F. narrowing of the windpipe
- G. acute infectious disease of the respiratory tract caused by a virus
- H. croup

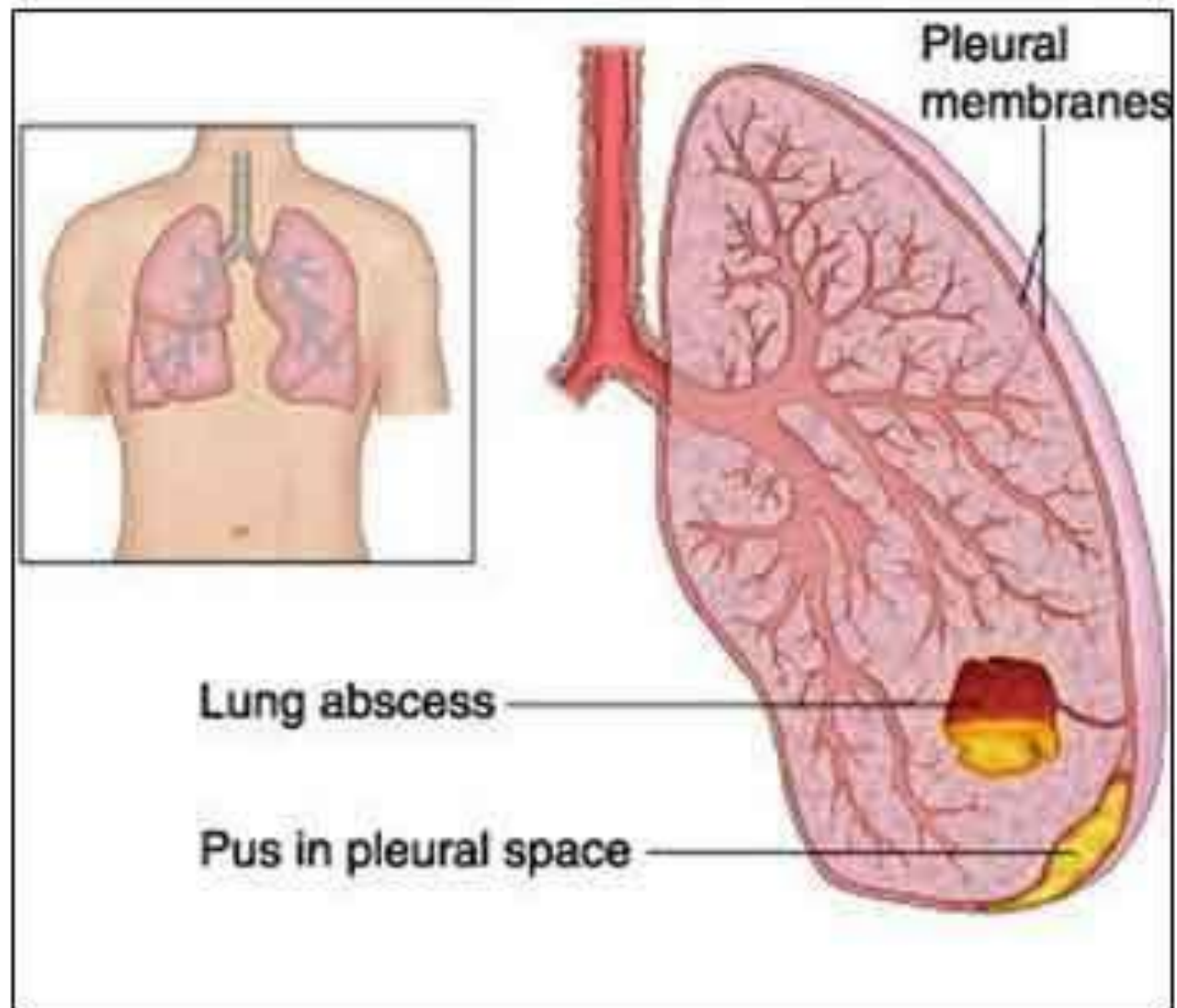
Terms Related to Chronic Lower Respiratory Diseases (J40-J47)

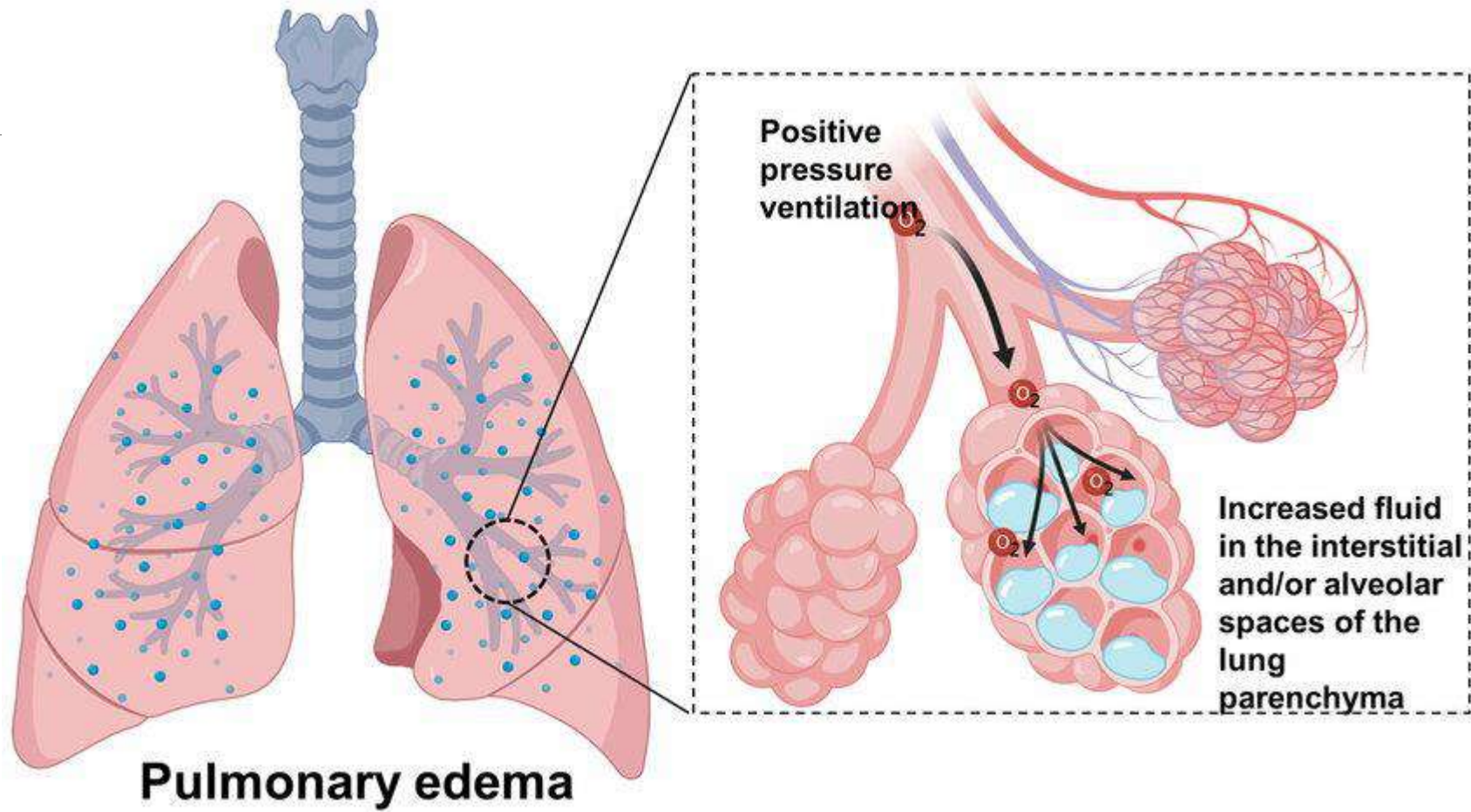
امراض مزمنة للجهاز التنفسي

Term	Word Origin	Definition
asthma ازما او الربو		Respiratory disorder characterized by recurring episodes of paroxysmal (sudden, episodic) dyspnea . Patients exhibit coughing, wheezing, and shortness of breath. If the attack becomes continuous (termed status asthmaticus), it may be fatal (Fig. 10-8). If described as extrinsic , the cause is from an allergic reaction to an inhaled substance. If intrinsic , the cause is unknown (idiopathic). Intermittent asthma is less than 2x a week, while persistent asthma is more than 2x per week.
اضطراب الجهاز التنفسي الذي يتميز بنوبات متكررة من ضيق التنفس الانتبائي المفاجئ العرضي ويظهر المرضى السعال والصفير وضيق التنفس وإذا أصبح الهجوم مستمرا فقد يكون قاتلا / إذا وصف أنه خارجي فإن السبب هو رد فعل تحسسي لمادة مستنشقة		
bronchiectasis	<i>bronchi/o</i> bronchus <i>-ectasis</i> dilation	Chronic dilation of the bronchi. Symptoms include dyspnea, expectoration of foul-smelling sputum, and coughing.
chronic obstructive pulmonary disease (COPD) كرونك اوبستراكتف بالموناري ديزرز	<i>pulmon/o</i> lung <i>-ary</i> pertaining to	Respiratory disorder characterized by a progressive and irreversible diminishment in inspiratory and expiratory capacity of the lungs. Patient experiences dyspnea on exertion (DOE) , difficulty inhaling or exhaling, and a chronic cough.
emphysema (including panlobular) امفاسيما		Abnormal condition of the pulmonary system characterized by distension and destructive changes of the alveoli. The most common cause is tobacco smoking, but exposure to environmental particulate matter may also cause the disease.

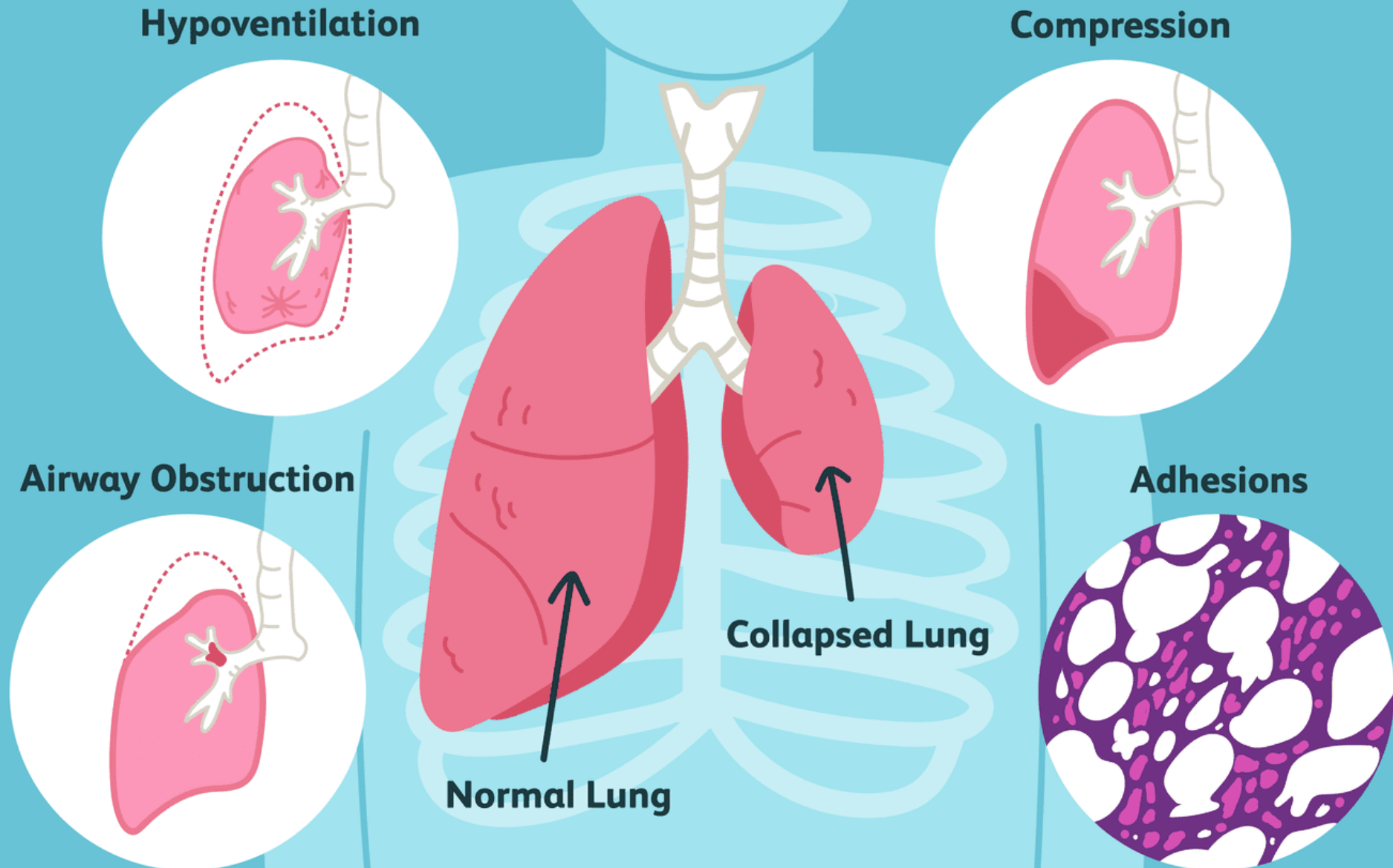


Term	Word Origin	Definition
abscess of lung ابسس اوف لنج		Localized accumulation of pus in the lung. تراكم موضعي للقيح في الرئة
pulmonary edema بالموناري إديما	<i>pulmon/o</i> lung <i>-ary</i> pertaining to	Accumulation of fluid in the lung tissue. Often present in congestive heart failure, it is caused by the inability of the heart to pump blood. تراكم السوائل في أنسجة الرئة غالبا ما يكون موجودا في قصور القلب الاحتقاني وهو ناتج عن عدم قدرة القلب على ضخ الدم
pulmonary fibrosis بالموناري فايبروسس	<i>fibr/o</i> fiber <i>-osis</i> abnormal condition	A stiffening of the lungs as a result of the formation of fibrous tissue. Idiopathic in origin. تصلب الرئتين نتيجة تكوين الأنسجة الليفية مجهول السبب في الاصل
atelectasis اتيلكتاسيس	<i>a-</i> not <i>tel/e</i> complete <i>-ectasis</i> dilation	Collapse of lung tissue or an entire lung. انهيار أنسجة الرئة أو الرئة بأكملها
bronchospasm برونكوسبام	<i>bronch/o</i> bronchus <i>-spasm</i> sudden, involuntary contraction	A sudden involuntary contraction of the bronchi, as in an asthma attack. تقلص مفاجئ لا ارادي للشعب الهوائية كما هو الحال في نوبة الربو





Common Causes of Atelectasis



Terms Related to Other Diseases of the Pleura (J90-J94)		
Term	Word Origin	Definition
hemothorax هيمو ثوراكس	<i>hem/o</i> blood <i>-thorax</i> chest (pleural cavity)	Blood in the pleural cavity (Fig. 10-10).
hydrothorax هيدرو ثوراكس	<i>hydr/o</i> water <i>-thorax</i> chest (pleural cavity)	An accumulation of serous fluid in the pleural cavity. تراكم السائل المصلي في التجويف الجنبى
pleural effusion بلورل فيوجن	<i>pleur/o</i> pleura <i>-al</i> pertaining to	Abnormal accumulation of fluid in the intrapleural space. تراكم غير طبيعي للسوائل في الفضاء داخل الجنبية
pneumothorax نيموثوراكس	<i>pneum/o</i> air <i>-thorax</i> chest (pleural cavity)	Air or gas in the pleural space causing the lung to collapse (Fig. 10-11). الهواء أو الغاز في الفضاء الجنبى مما يؤدي الى انهيار الرئة
pyothorax بيو ثوراكس	<i>py/o</i> pus <i>-thorax</i> chest (pleural cavity)	Pus in the pleural cavity. Also called empyema. صديد في التجويف الجنبى

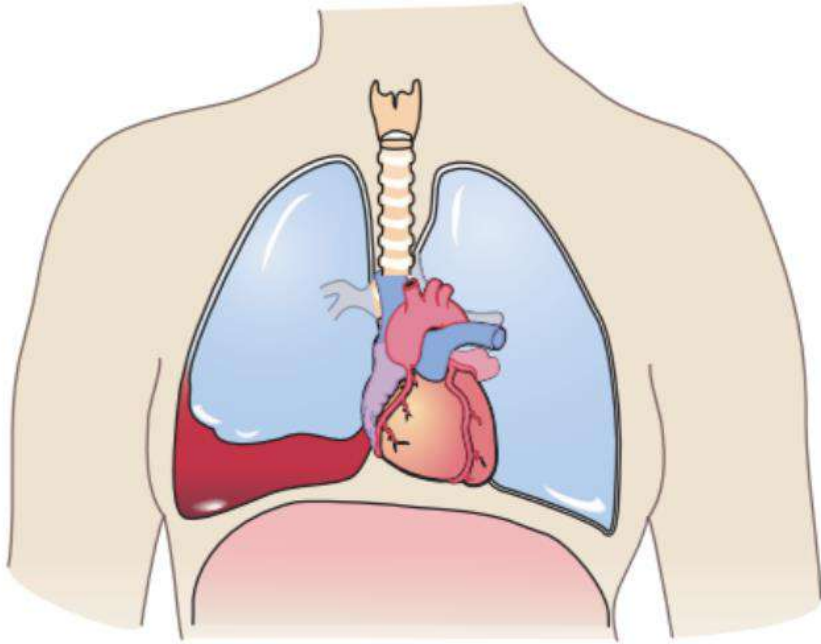


Fig. 10-10 Hemothorax. Blood below the left lung causes the lung to collapse.

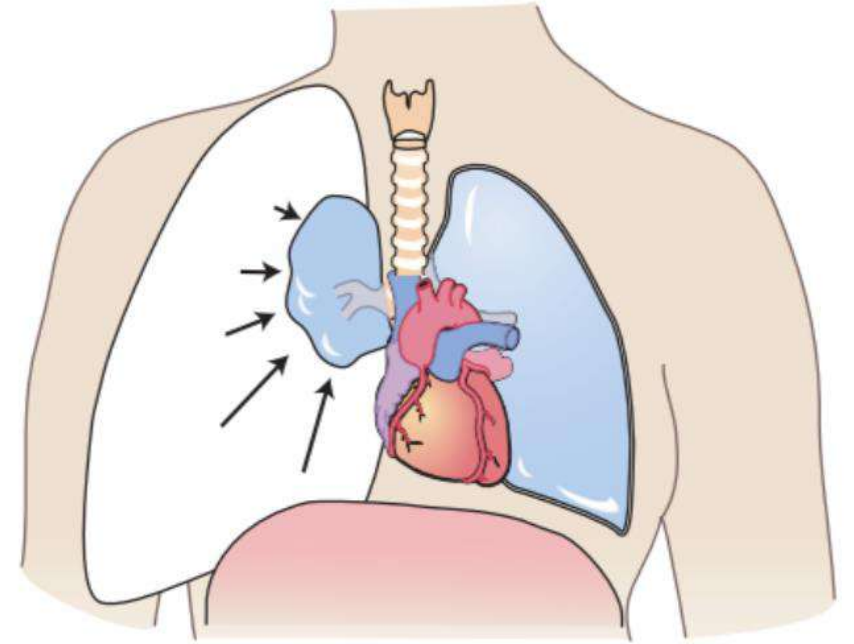
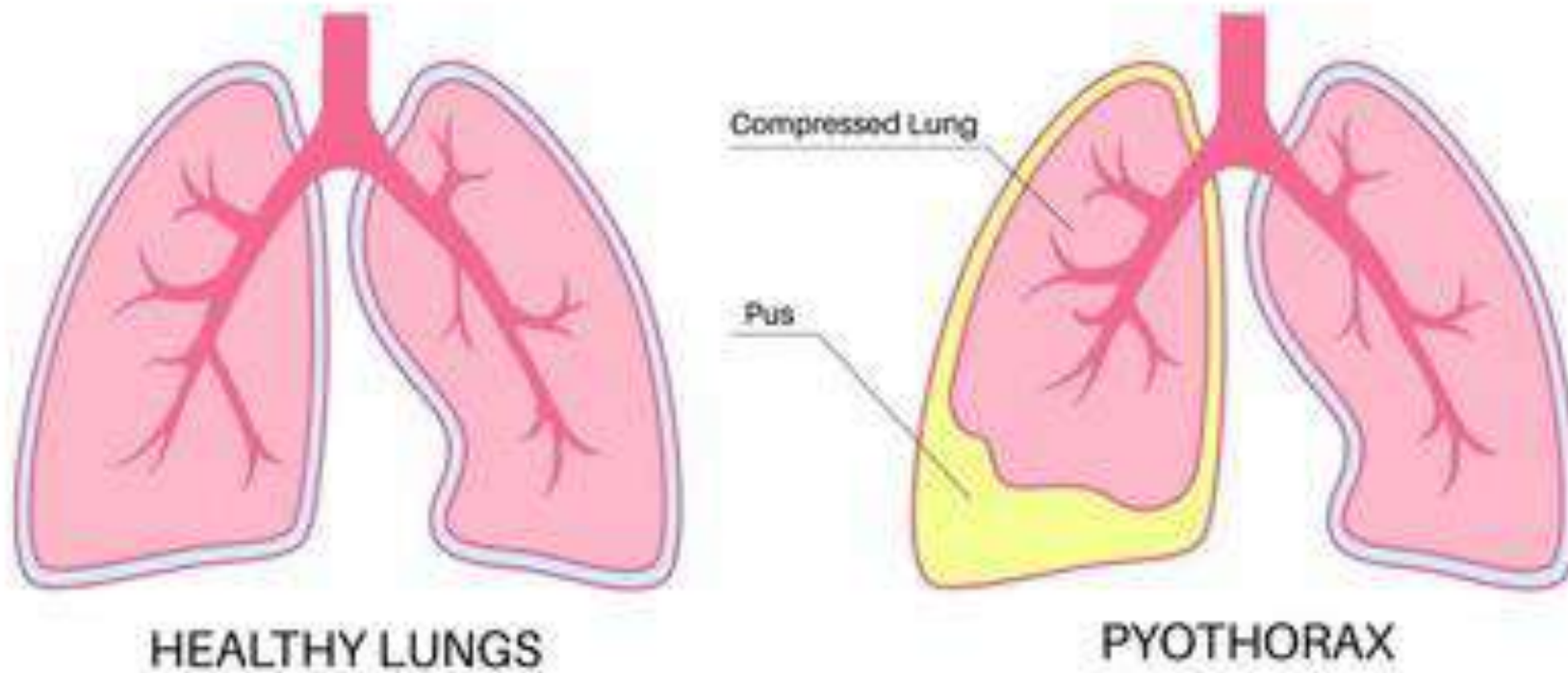


Fig. 10-11 Pneumothorax. The lung collapses as air gathers in the pleural space.

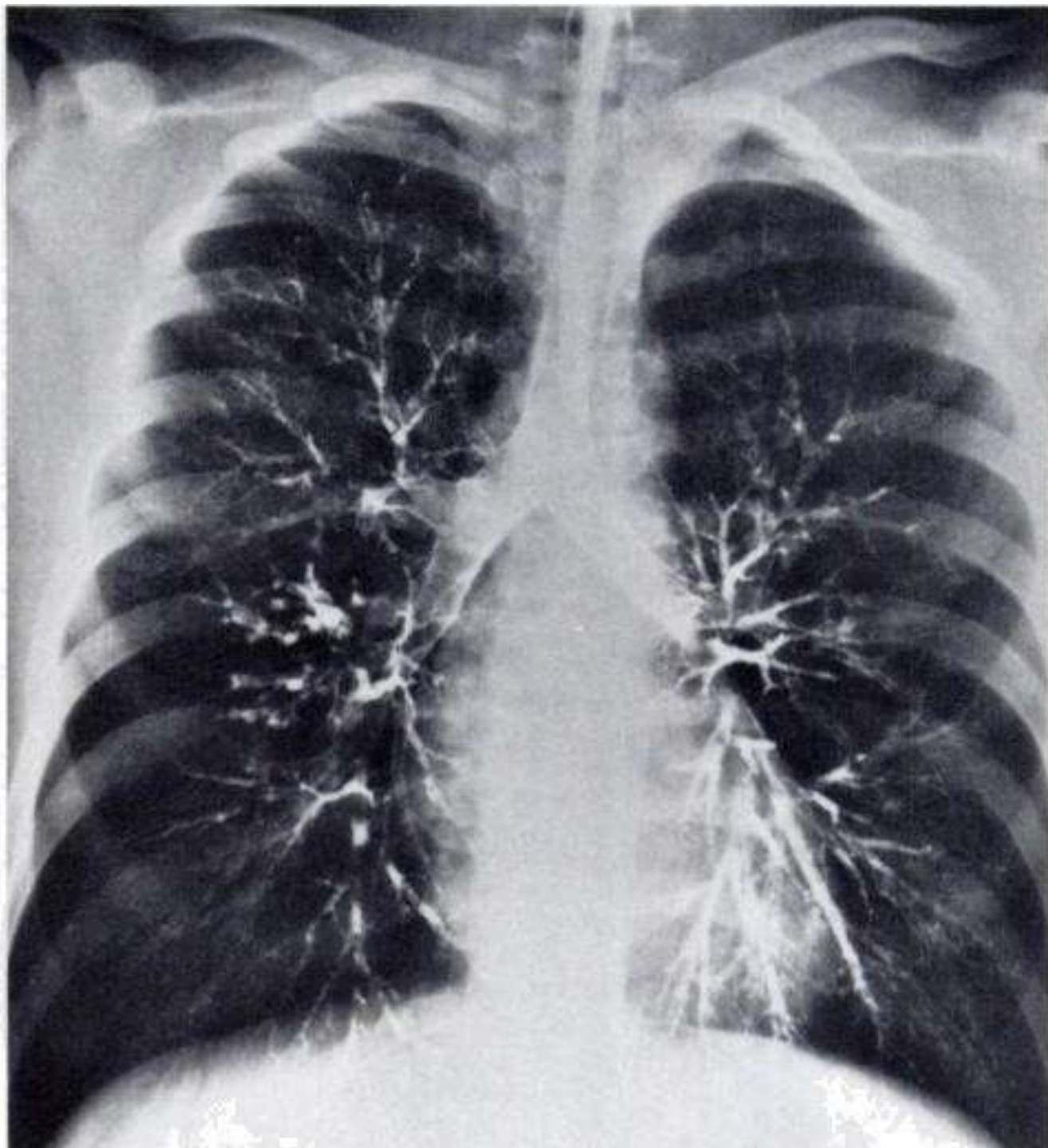
PLEURAL EMPYEMA



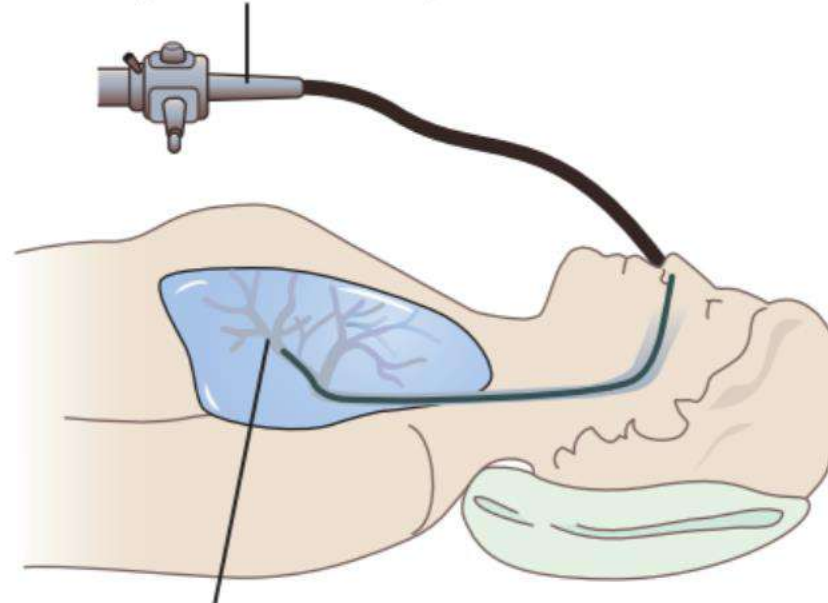
Procedures

Terms Related to Procedures

Term	Word Origin	Definition
adenoidectomy ادينوايد اکتومي	<i>adenoid/o</i> adenoid <i>-ectomy</i> cutting out	Removal of the adenoids. Also called the pharyngeal tonsils . استئصال اللوزتين
antrotomy مش مطلوبة	<i>antr/o</i> antrum <i>-tomy</i> cutting	Cutting one of the sinuses for the purpose of drainage. Also called sinusotomy .
bronchography برونكو جرافي	<i>bronch/o</i> bronchus <i>-graphy</i> recording	Recording the bronchi through imaging techniques using a contrast medium. تسجيل القصبات من خلال تقنيات التصوير باستخدام وسيط التباين نظام صورة
bronchoscopy برونكو سكوبي	<i>bronch/o</i> bronchus <i>-scopy</i> viewing	Viewing a bronchus using an instrument (Fig. 10-15). عرض القصبة الهوائية باستخدام اداة
endotracheal airway اندو تريكيل اير وي	<i>endo-</i> within <i>trache/o</i> trachea, windpipe <i>-al</i> pertaining to	A device that is positioned in the trachea for the purposes of establishing an airway. الجهاز الذي يتم وضعه في القصبة الهوائية لاجراض انشاء مجرى الهواء
ethmoidectomy اثموايد اکتومي	<i>ethmoid/o</i> ethmoid <i>-ectomy</i> cutting out	Cutting out part or all of the ethmoid bone. Usually done to treat a chronic sinus infection. الجمجمة قطع جزء او كل العظم الغربالي عادة لعلاج التهاب الجيوب الانفية المزمن
laryngoplasty لارنجو بلاستي	<i>laryng/o</i> larynx, voicebox <i>-plasty</i> surgically forming	Surgically forming the larynx for the purpose of improving the voice for patients with hoarseness. اجراء جراحي لتشكيل الحنجرة بغرض تحسين الصوت للمرضى الذين يعانون من بحة في الصوت

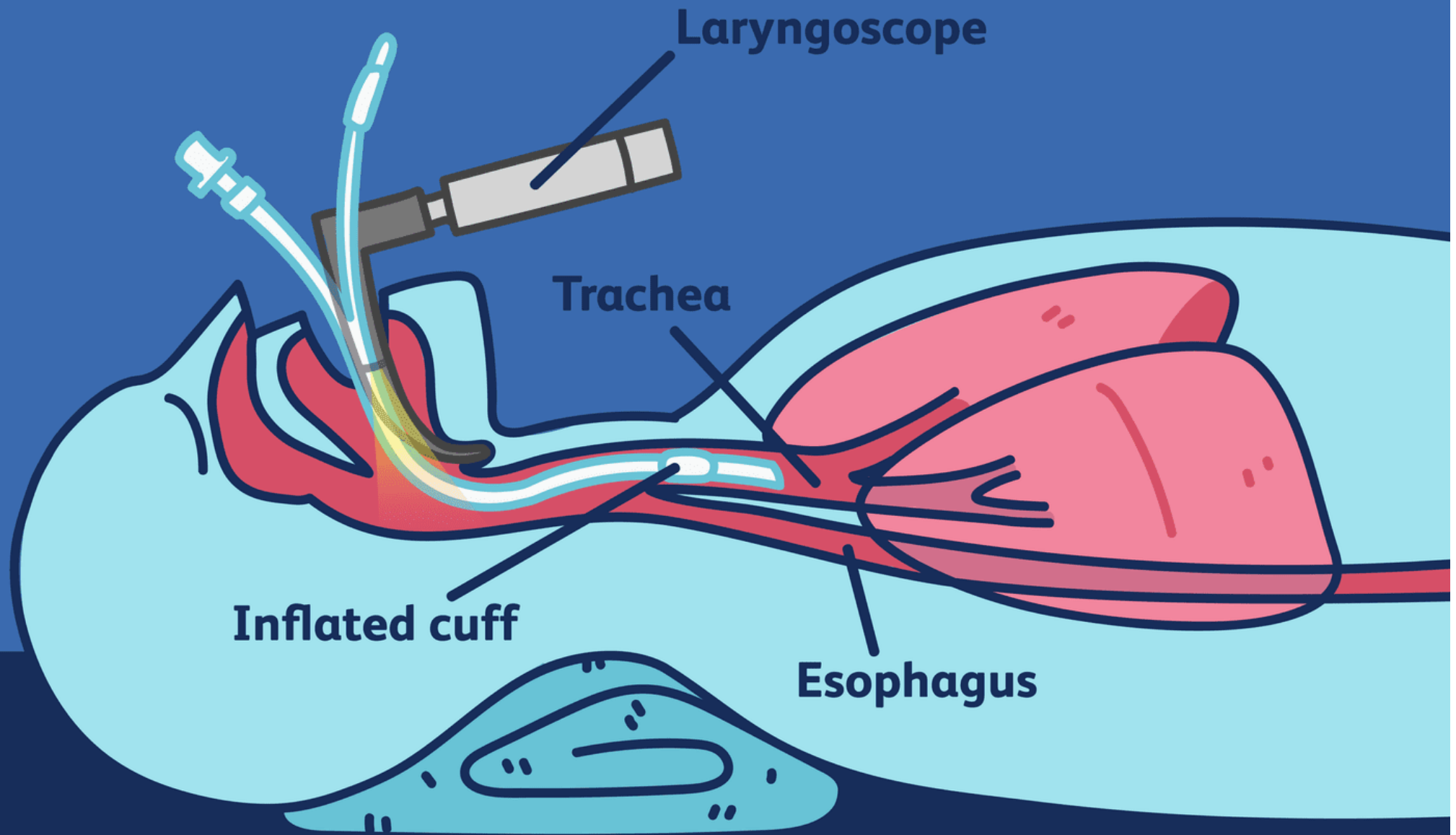


Fiberoptic bronchoscope



Smaller bronchus

Fig. 10-15 Bronchoscopy.



Terms Related to Procedures—cont'd

Term	Word Origin	Definition
pleurolysis بلورو لايسس	<i>pleur/o</i> pleura <i>-lysis</i> breaking down	The surgical separation of pleural adhesions through the use of an endoscope and electrical cauterization. The adhesions are often caused by scarring from repeated pleural inflammation. الفصل الجراحي للاتصاقات الجنبية من خلال استخدام المنظار الداخلي والكي الكهربائي غالبا ما تحدث الالتصاقات بسبب الندبات الناتجة عن الالتهاب الجنبى المتكرر
pleurocentesis بلوروسنتيسيس	<i>pleur/o</i> pleura <i>-centesis</i> surgical puncture	Surgical puncture to remove fluid or air from the pleural cavity. ثقب جراحي لازالة السوائل او الهواء من التجويف الجنبى
pleurodesis بلوروديسس	<i>pleur/o</i> pleura <i>-desis</i> fixation	The mechanical fixation of the two pleural membranes in order to prevent pleural effusions. If the fixation is done chemically, it is called pleurosclerosis . التثبيت الميكانيكي للغشاء الجنبى لمنع الانصباب الجنبى اذا تم التثبيت كيميائيا تسمى بلورو سكلوليس لمنع تجميع السوائل
pulmonary resections and excisions بالمنورى ريسكشن و اكسجن		Excision of a segment or a lobe of the lung or the entire lung. Called a lobectomy when an entire lobe is resected and a pneumonectomy when the entire lung is resected (Fig. 10-19). استئصال جزء او فص من الرئة او الرئة كلها ويسمى استئصال الفص لوب اکتومي ويسمى استئصالها كلها نيموكتومي
pulse oximetry بلسو اوكسيمترى	<i>ox/i</i> oxygen <i>-metry</i> measuring	Measuring the oxygen level of the blood using a pulse oximeter. A noninvasive, cliplike device is attached to either the ear lobe or fingertip (Fig. 10-20). قياس مستوى الاكسجين في الدم باستخدام مقياس التأكسج النبضي يتم توصيل جهاز غير جراحي يشبه المشبك بشحمة الاذن او طرف الاصبع



Fig. 10-20 Pulse oximetry.

Terms Related to Procedures—cont'd

Term	Word Origin	Definition
rhinoplasty رينو بلاستي	<i>rhin/o</i> nose <i>-plasty</i> surgically forming	Surgically forming by correcting, altering, supplementing, or replacing the nose. التشكيل الجراحي عن طريق تصحيح الانف او تغييره او استكماله او استبداله
septoplasty سبتو بلاستي	<i>sept/o</i> septum, wall <i>-plasty</i> surgically forming	Surgically straightening the wall between the nares to correct a deviation. استقامة الجدار جراحيا بين الفتحات لتصحيح الانحراف
spirometry سبايرو متري	<i>spir/o</i> to breathe <i>-metry</i> measuring	Test to measure the air capacity of the lungs. اختبار لقياس سعة الهواء للرئتين
tracheostomy تريكيو استومي	<i>trache/o</i> trachea, windpipe <i>-stomy</i> making a new opening	New opening of the trachea. A tracheostomy device is an instrument used to facilitate the maintenance of an opening in the trachea (Fig. 10-21). افتتاح جديد للقصبة الهوائية جهاز فغر القصبة الهوائية وهو اداة تستخدم لتسهيل صيانة فتحة في القصبة الهوائية
tracheotomy تريكيو اوتومي	<i>trache/o</i> trachea <i>-tomy</i> cutting	Cutting the trachea to establish an airway. قطع القصبة الهوائية لاعادة انشاء مجرى هوائي

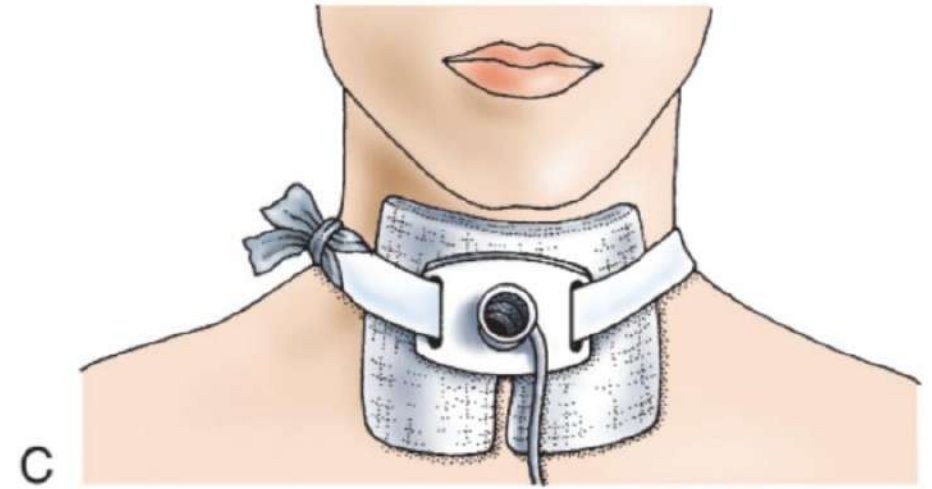
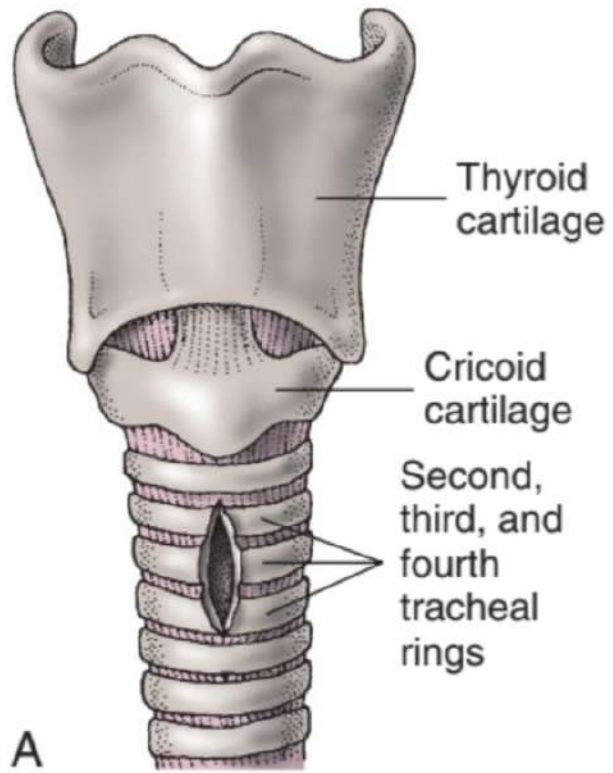


Fig. 10-21 **A**, Vertical tracheal incision for a tracheostomy. **B**, Tracheostomy tube. **C**, Placement of gauze and tie around a tracheostomy tube.

Suffixes and Root Operations for the Respiratory System

Suffix

Root Operation

-centesis

Drainage

-ectomy

Excision, resection

-lysis

Release

-plasty

Alteration, reposition, repair, replacement, supplement

-rrhaphy

Repair

-tomy

Drainage

WORD PART DEFINITIONS

Prefix/Suffix

brady-

dys-

-ectasis

hyper-

hypo-

-ismus

-pnea

-ptysis

tachy-

-thorax

Definition

1. _____ fast
2. _____ excessive
3. _____ deficient
4. _____ slow
5. _____ breathing
6. _____ spitting
7. _____ chest (pleural cavity)
8. _____ difficult
9. _____ spasm condition
10. _____ dilation

Combining Form	Definition
<i>apic/o</i>	11. _____ carbon dioxide
<i>capn/o</i>	12. _____ lung
<i>coni/o</i>	13. _____ chest
<i>cost/o</i>	14. _____ to breathe
<i>laryng/o</i>	15. _____ apex
<i>muc/o</i>	16. _____ pleura
<i>myc/o</i>	17. _____ nose
<i>nas/o</i>	18. _____ septum, wall
<i>ox/i</i>	19. _____ dust
<i>pector/o</i>	20. _____ fungus
<i>pharyng/o</i>	21. _____ throat
<i>phren/o</i>	22. _____ mucus
<i>pleur/o</i>	23. _____ oxygen
<i>pneum/o</i>	24. _____ diaphragm
<i>py/o</i>	25. _____ windpipe
<i>rhin/o</i>	26. _____ pus
<i>salping/o</i>	27. _____ rib
<i>sept/o</i>	28. _____ sinus
<i>sin/o</i>	29. _____ tonsil
<i>spir/o</i>	30. _____ eustachian tube
<i>tonsill/o</i>	31. _____ voicebox
<i>trache/o</i>	32. _____ nose

Prefixes	Combining Forms	Suffixes
<i>dys-</i>	<i>bronch/o</i>	<i>-al</i>
<i>endo-</i>	<i>capn/o</i>	<i>-ation</i>
<i>ex-</i>	<i>coni/o</i>	<i>-desis</i>
<i>hyper-</i>	<i>cost/o</i>	<i>-dynia</i>
<i>inter-</i>	<i>esophag/o</i>	<i>-eal</i>
<i>tachy-</i>	<i>hal/o</i>	<i>-ia</i>
	<i>myc/o</i>	<i>-itis</i>
	<i>nas/o</i>	<i>-metry</i>
	<i>ox/i</i>	<i>-osis</i>
	<i>pharyng/o</i>	<i>-plasty</i>
	<i>pleur/o</i>	<i>-pnea</i>
	<i>pneum/o</i>	<i>-scopy</i>
	<i>py/o</i>	<i>-stenosis</i>
	<i>rhin/o</i>	<i>-stomy</i>
	<i>sept/o</i>	<i>-thorax</i>
	<i>trache/o</i>	<i>-tomy</i>

TRANSLATIONS

1. **Difficult breathing** and **air hunger** were signs that Sari had asthma.
2. The patient's **difficulty making sounds** and **inflammation of the voice box** were associated with an upper respiratory infection.
3. The baby had **a continuous, high-pitched inspiratory sound from the larynx**, which was a sign of **inflammation of the epiglottis**.
4. Dr. Hollander told Ryan's mother that her son's fever and **chest pain** were symptoms of **abnormal accumulation of fluid in the intrapleural space**.
5. The patient underwent a **CXR** to see if she had **an infectious inflammation of the lungs**.
6. After 3 days of severe **inflammation or infection of the pharynx**, Abby also developed **inflammation of the voicebox**.
7. **A noninvasive test to measure the oxygen level of the blood** and **a test to measure the air capacity of the lungs** were performed on the patient.

8. Marketta's **deflection of the nasal septum** was treated with **a surgical straightening of the wall between the nares.**

9. **Surgical puncture to remove fluid or air from the pleural cavity** was necessary to treat the patient's **blood in the pleural cavity.**

10. The pulmonologist diagnosed Mr. Borasky with chronic **dilation of the bronchi** and **respiratory disorder characterized by a progressive and irreversible diminishment in capacity of the lungs.**

11. After the patient's treatment for **pertaining to the larynx** cancer, she had a temporary **new opening of the trachea.**

URINARY SYSTEM

Urinary system

تتمثل المهمة الأساسية للجسم في الحفاظ على توازن صحي مستمر بين كمية ومحتوى السوائل خارج الخلايا داخل الجسم. ويستخدم علماء الأحياء مصطلح التوازن الداخلي لوصف هذه العملية المهمة. تعمل عملية التمثيل الغذائي على تحويل الطعام والسوائل (بما تحتويه من دهون وكربوهيدرات وبروتينات) إلى لبنات بناء ومصادر للطاقة ومنتجات نفايات

The major function of the urinary system

الوظيفة الرئيسية للجهاز البولي

is to continually maintain a healthy balance of the amount and content of extracellular fluids within the body. Biologists use the term **homeostasis** to describe this important process. The process of metabolism changes food and liquid (with its requisite fats, carbohydrates, and proteins) into building blocks, energy sources, and waste products. 

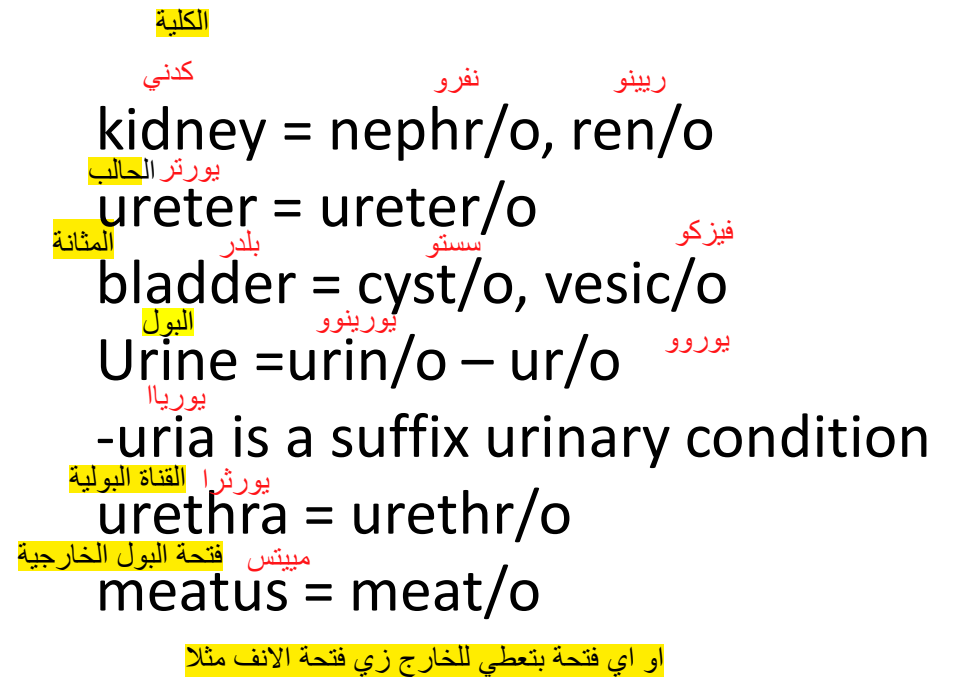
To operate efficiently, the body needs to constantly monitor and rebalance the amounts of these substances in the bloodstream. للعمل بكفاءة، يحتاج الجسم إلى مراقبة كميات هذه المواد في مجرى الدم وإعادة توازنها باستمرار

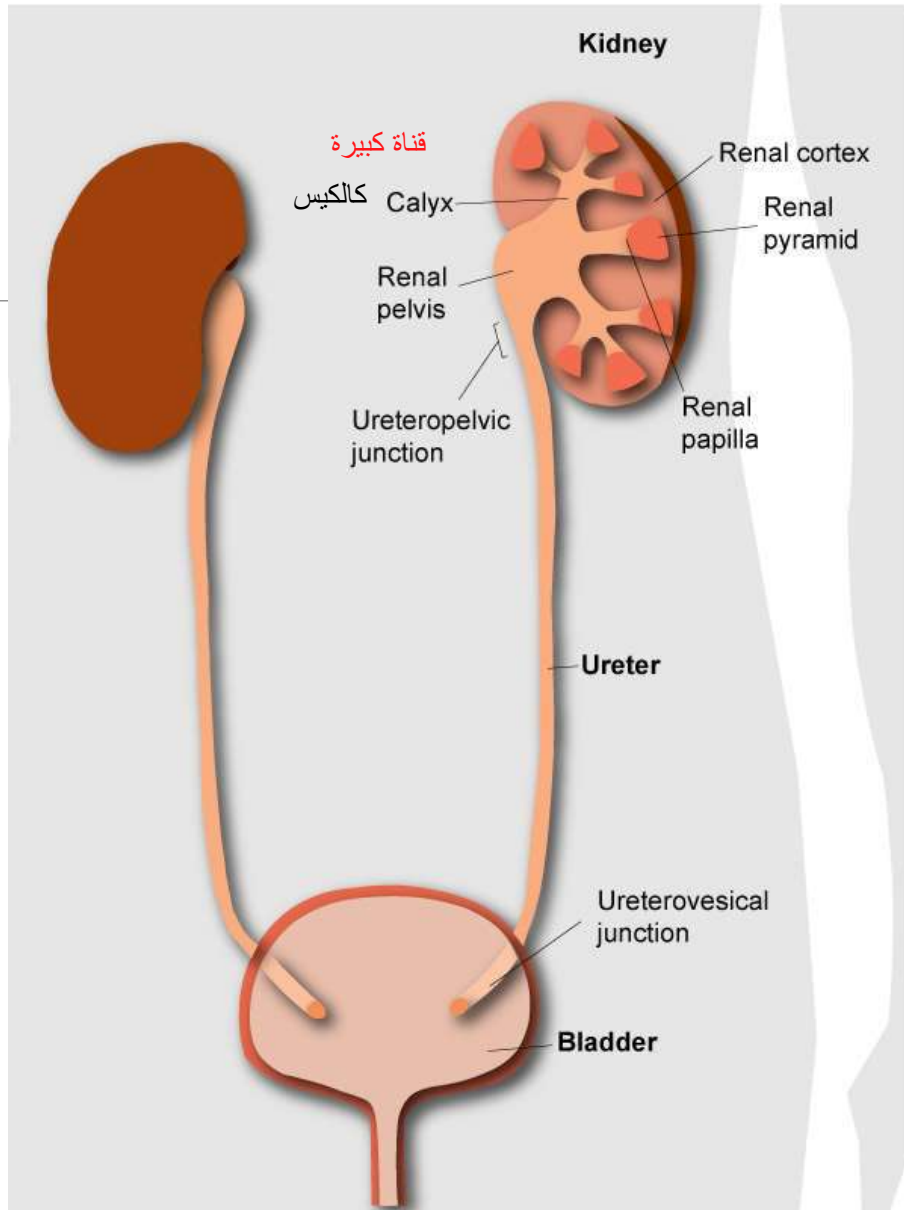
The breakdown of proteins and amino acids in the liver leaves chemical wastes, such as urea, creatinine, and uric acid, in the bloodstream. These wastes are toxic, nitrogenous substances that must be excreted in the urine. يؤدي تحلل البروتينات والأحماض الأمينية في الكبد إلى ترك نفايات كيميائية، مثل اليوريا والكرياتينين وحمض البوليك، في مجرى الدم. هذه النفايات عبارة عن مواد نيتروجينية سامة يجب إخراجها في البول

تسمى عملية إخراج البول بالتبول أو التفريغ أو التبول

يونيترشن أو فويننج أو ميكتروبيشن

The act of releasing urine is called urination, voiding, or micturition.





البول يتكون من فلترة الدم فقط فلترة سوائل

حوض الكلى

بييلو

رينال بلفيس

renal pelvis = pyel/o

renal calyx = calic/o, cali/o, calyc/o

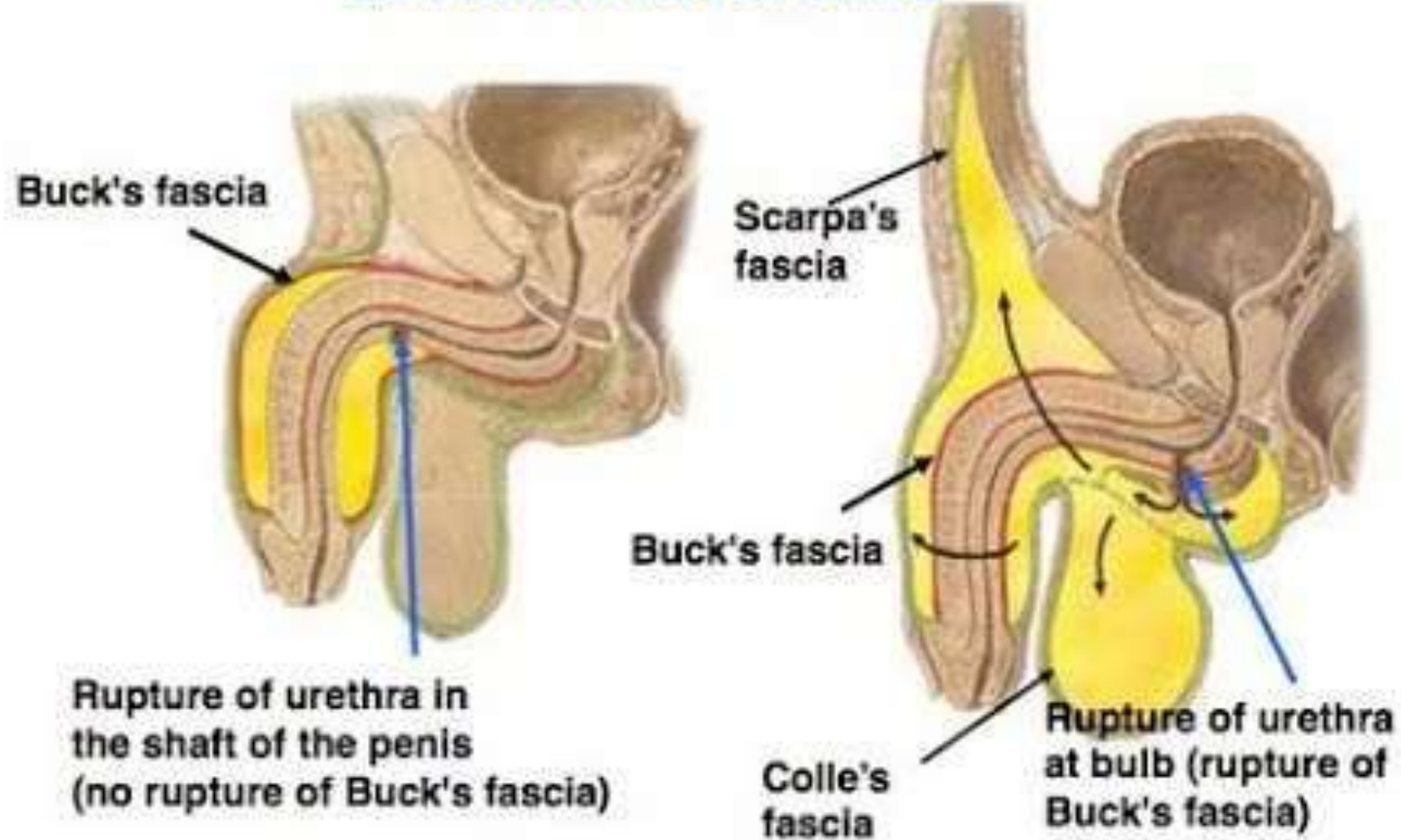
جمعها كالييسيز

Terms Related to Symptoms and Signs Involving the Genitourinary System (R30-R39)

Term	Word Origin	Definition
anuria ان يوريا	<i>an-</i> without <i>-uria</i> urinary condition	Condition of no urine. حالة عدم اخراج البول
dysuria دس يوريا	<i>dys-</i> painful, abnormal <i>-uria</i> urinary condition	Condition of painful urination. حالة النبول المؤلم
enuresis ان يورييسز	<i>en-</i> in <i>ur/o</i> urine <i>-esis</i> state of	Also commonly known as "bed-wetting," enuresis can be nocturnal (at night) or diurnal (during the day). التبول في الفراش ويمكن ان يكون سلس البول ليلا في الليل او خلال النهار او التبول اللااردي
extrarenal uremia اكسترا رينال يوريميا	<i>extra-</i> outside <i>ren/o</i> kidney <i>-al</i> pertaining to <i>ur/o</i> urine <i>-emia</i> blood condition	Excessive urea in blood (uremia) due to kidney failure caused by disease outside of the kidney, e.g., congestive heart failure. اليوريا المفرطة في الدم بسبب الفشل الكلوي الناجم عن مرض خارج الكلى مثل قصور القلب الاحتقاني

extravasation of urine اكسترا فازييشن اوف يورن	<i>extra-</i> outside <i>vas/o</i> vessel <i>-ation</i> process of	Condition of urine leaking outside of the bladder and into surrounding tissues. May be due to trauma or a stone. حالة تسرب البول خارج المثانة الى الانسجة المحيطة قد يكون بسبب صدمة او حجر
hematuria هيماتورييا	<i>hemat/o</i> blood <i>-uria</i> urinary condition	Blood in the urine. دم في البول
incontinence, urinary ان كونتينانس يورانري		Inability to hold urine. عدم القدرة على الامساك بالبول
nocturia نوكت يوريا	<i>noct/i</i> night <i>-uria</i> urinary condition	Condition of excessive urination at night. زي مرضى السكر حالة التبول المفرط في الليل
oliguria اولج يوريا	<i>olig/o</i> scanty, few <i>-uria</i> urinary condition	Condition of scanty urination. حالة التبول الضئيل
polyuria بولي يوريا	<i>poly-</i> excessive, frequent <i>-uria</i> urinary condition	Condition of excessive urination. حالة التبول المفرط
retention, urinary ريتشن		Inability to release urine. حصار البول عدم القدرة على افراز البول
vesical tenesmus فيزكال تنزمس	<i>vesic/o</i> bladder <i>-al</i> pertaining to	Bladder spasms. تشنجات المثانة

EXTRAVASATION OF URINE



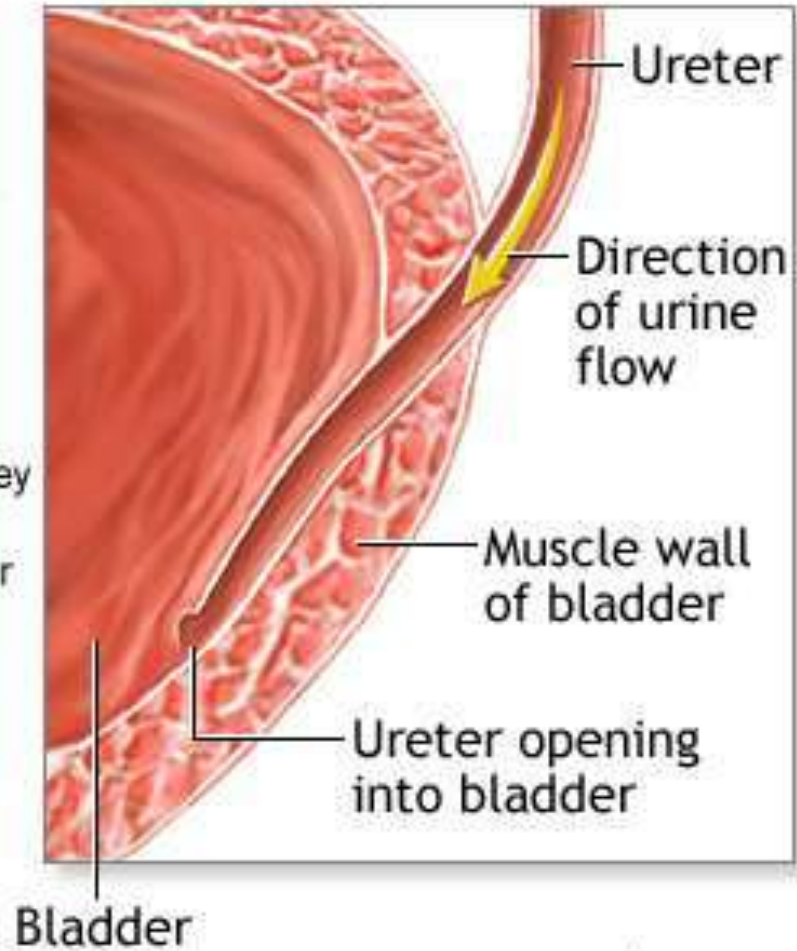
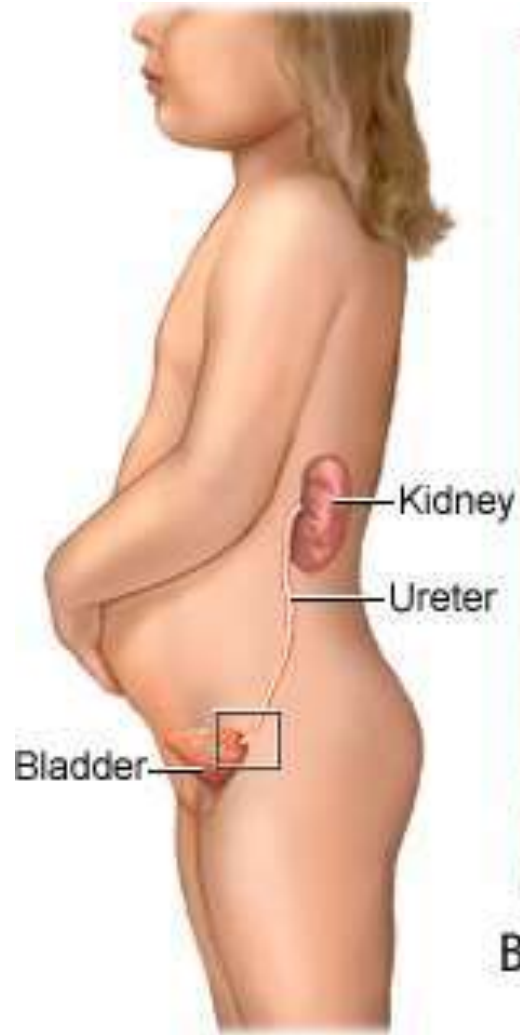
Terms Related to Glomerular Diseases (N00-N08)

حاد

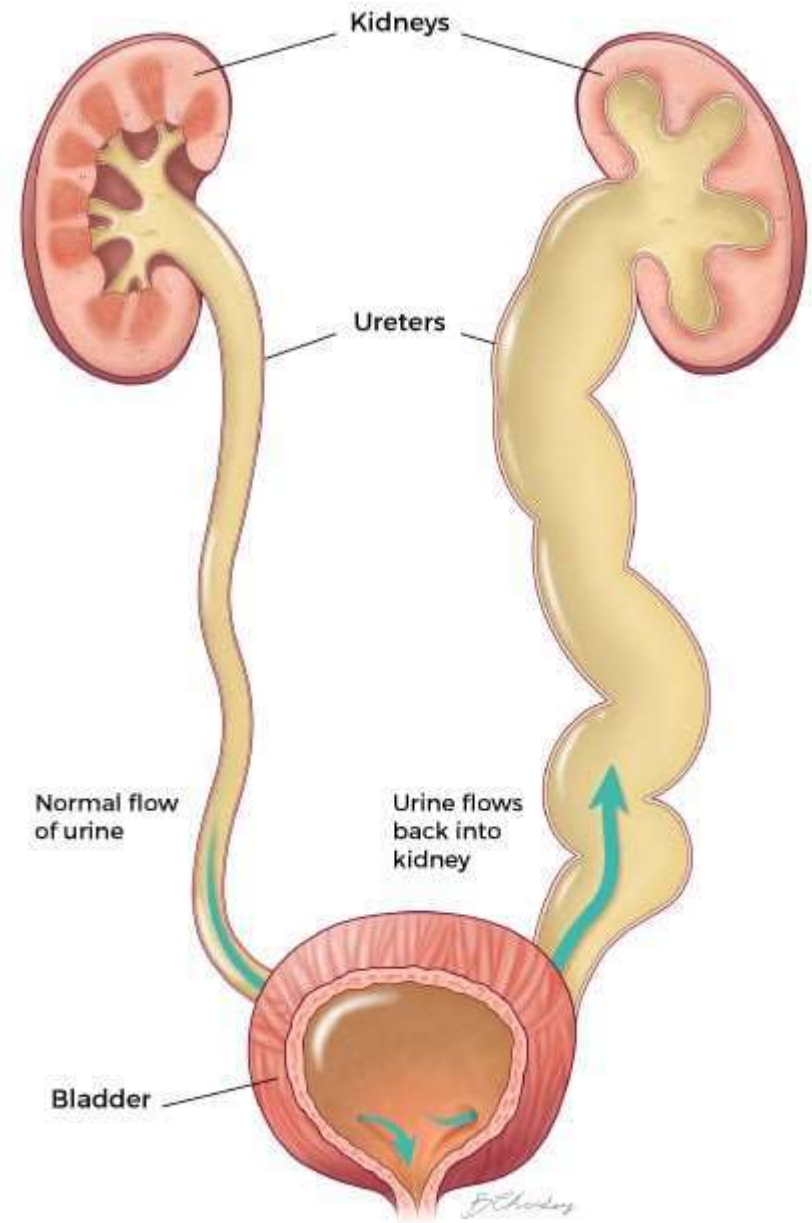
Term	Word Origins	Definition
acute nephritic syndrome اكيوت نيفروتك سندروم	<i>nephro</i> kidney <i>-itic</i> pertaining to	Hypertension, hematuria, and proteinuria (protein in the urine) resulting from damage to the glomeruli. متلازمة من ارتفاع ضغط الدم والبول يكون فيه دم و الكلية تسرب بروتينات
nephrotic syndrome نيفروتك سندروم	<i>nephro</i> kidney <i>-tic</i> pertaining to	Abnormal group of signs in the kidney, characterized by proteinuria, hypoalbuminemia (abnormally low levels of albumin in the blood), and edema; may occur in glomerular disease and as a complication of many systemic diseases (e.g., diabetes mellitus). Also called nephrosis . اهم اشئ في هادي المتلازمة تسريب كميات كبيرة من البروتين والجسم ينتفخ من كثر تجمع السوائل
hydronephrosis هيدرو نفروزس	<i>hydr/o</i> water <i>nephro</i> kidney <i>-osis</i> abnormal condition	Dilation of the renal pelvis and calices of one or both kidneys resulting from obstruction of the flow of urine. عندي مية كتير بالكلى نتيجة انسداد تدفق البول
pyonephrosis بيو نفروزس	<i>py/o</i> pus <i>nephro</i> kidney <i>-osis</i> abnormal condition	Pyogenic (pus-producing) infection of the kidney. عدوى القيح او الصديد في الكلى
vesicoureteral reflux فيزكو يورترال ريفلكس	<i>vesic/o</i> urinary bladder <i>ureter/o</i> ureter <i>-al</i> pertaining to <i>re-</i> back <i>-flux</i> flow	Abnormal backflow of urine from the bladder to the ureter. ارتجاع غير طبيعي للبول من المثانة الى الحالب

HYDRONEPHROSIS





ADAM.



Terms Related to Acute Kidney Failure and Chronic Kidney Failure (N17-N19)		
Term	Word Origin	Definition
renal failure رينال فلير	<i>ren/o</i> kidney <i>-al</i> pertaining to	Inability of the kidneys to excrete wastes, concentrate urine, and conserve electrolytes. May be acute or chronic. عدم قدرة الكلى على افراز الفضلات وتركيز البول عالي والحفاظ على الالكتروللايت اي المعادن البسيطة الموجودة بالجسم وقد تكون حادة او مزمنة
acute renal failure (ARF) اكيوت رينال فلير		Sudden inability of the kidneys to excrete wastes, resulting from hemorrhage, trauma, burns, toxic injury to the kidney, pyelonephritis or glomerulonephritis, or lower urinary tract obstruction. Characterized by oliguria and rapid azotemia. عدم القدرة المفاجئة للكلى على افراز الفضلات الناتجة عن النزف او الصدمة او الحروق او اصابة سامية في التهاب الكلية او التهاب كبيبات الكلى او انسداد المسالك البولية السفلية وتتميز بقلة البول والأزوتيميا السريعة
chronic kidney disease (CKD) (formerly chronic renal failure)		CKD is measured in stages of increasing severity, from 1 (mild damage with a normal glomerular filtration rate) to 5 (complete kidney failure requiring either dialysis or a renal transplant). Stage 5 is also called end-stage renal disease (ESRD) and is the most extreme form of CKD.



Exercise 2: Signs and Symptoms; Glomerular Diseases, Tubulo-Interstitial Diseases; Acute Kidney Failure; and Chronic Kidney Failure

- | | |
|----------------------------------|--|
| ___ 1. vesical tenesmus | A. inability to hold urine |
| ___ 2. extravasation of urine | B. blood in the urine |
| ___ 3. extrarenal uremia | C. condition of scanty urination |
| ___ 4. hematuria | D. abnormal group of signs in the kidney, characterized by proteinuria, hypoalbuminemia, and edema |
| ___ 5. enuresis | E. abnormal backflow of urine from the bladder to the ureter |
| ___ 6. urinary incontinence | F. inability to release urine |
| ___ 7. urinary retention | G. excessive urea in blood due to kidney failure caused by some disease outside the kidney |
| ___ 8. anuria | H. sudden inability of the kidneys to excrete wastes |
| ___ 9. oliguria | I. hypertension, hematuria, and proteinuria resulting from damage to the glomeruli |
| ___ 10. nocturia | J. pus-producing infection of the kidney |
| ___ 11. acute nephritic syndrome | K. spasms of the bladder |
| ___ 12. nephrotic syndrome | L. condition of excessive urination at night |
| ___ 13. pyonephrosis | M. bed-wetting |
| ___ 14. vesicoureteral reflux | N. condition of no urine |
| ___ 15. ARF | O. condition of urine leaking out of the bladder and into surrounding tissues |
| ___ 16. ESRD | P. stage 5 CKD |

Build the terms.

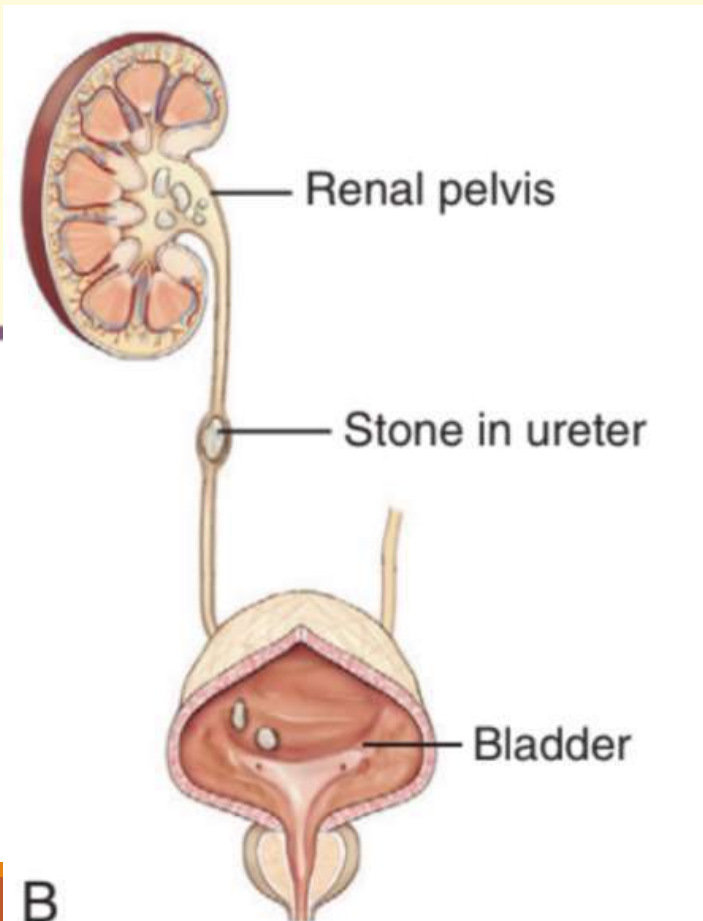
17. painful urinary condition _____

18. excessive (frequent) urinary condition _____

19. abnormal condition of water in the kidney _____

Terms Related to Urolithiasis (N20-N23)

Term	Word Origin	Definition
urolithiasis يورولوئيسيز	<i>ur/o</i> urine, urinary system <i>lith/o</i> stone <i>-iasis</i> condition, presence of حالة وجود حصوة	Stones (calculi) anywhere in the urinary tract, but usually in the renal pelvis or urinary bladder. Depending on where the stone is located, the term is nephrolithiasis (kidney), ureterolithiasis (ureter), cystolithiasis (urinary bladder), or urethrolithiasis (urethra). Usually formed in patients with an excess of the mineral calcium. Also called urinary calculi (Fig. 6-5).



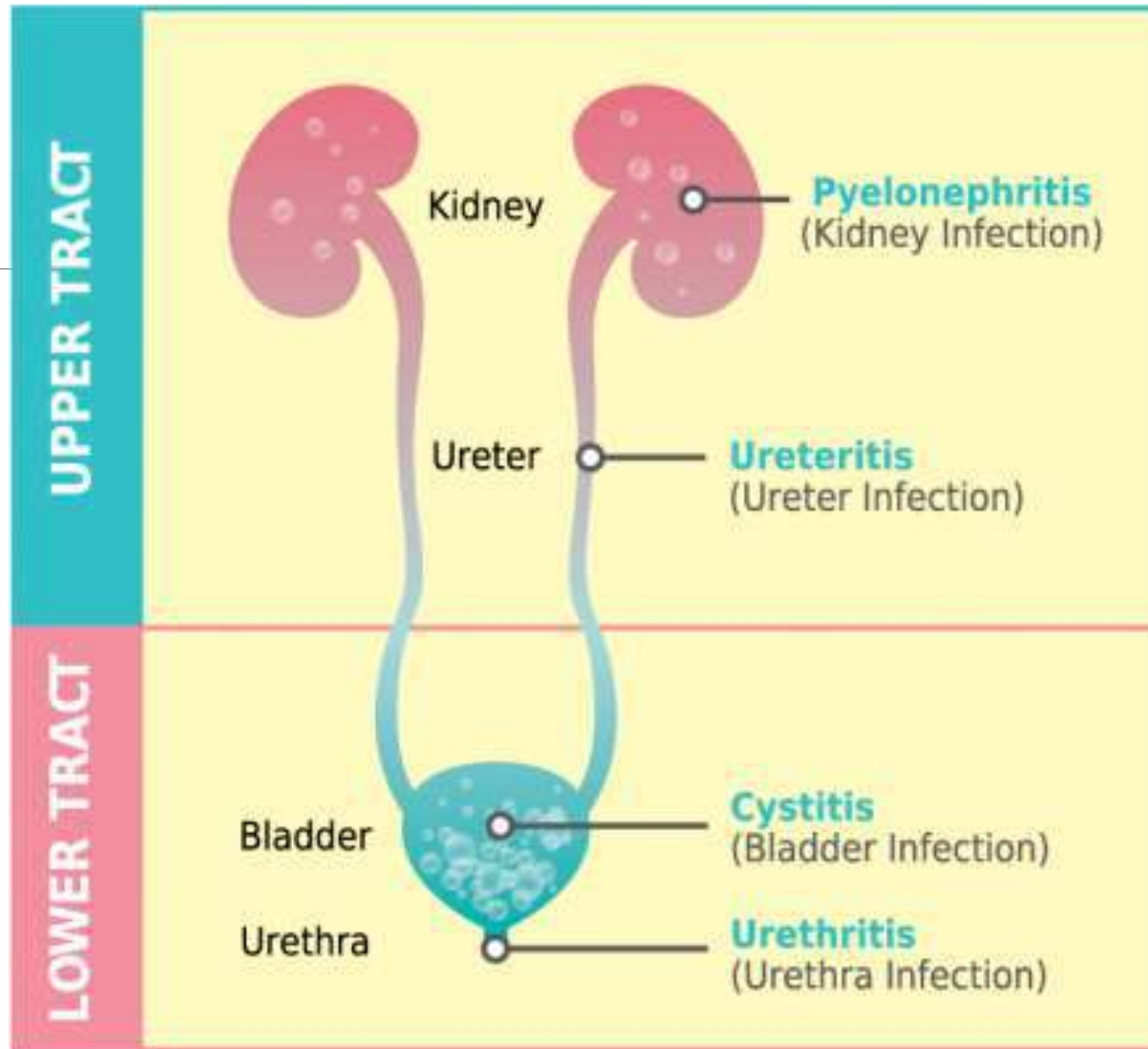
وجود حصى في اي مكان في المسالك البولية ولكن عادة في الحوض الكلوي او المثانة البولية اعتمادا على مكان وجود الحجر

Terms Related to Other Diseases of the Urinary System (N30-N39)

Term	Word Origin	Definition
cystitis	<i>cyst/o</i> bladder <i>-itis</i> inflammation	Inflammation of the urinary bladder.
urethritis	<i>urethr/o</i> urethra <i>-itis</i> inflammation	Inflammation of the urethra.
urinary tract infection (UTI)	<i>urin/o</i> urine, urinary system	Infection anywhere in the urinary system, caused most commonly by bacteria, but also by parasites, yeast, and protozoa (<i>sing. protozoon</i>). Most frequently occurring disorder in the urinary system.
urethral stricture ستركتشر	<i>urethr/o</i> urethra <i>-al</i> pertaining to	Narrowing of the urethra. Also called urethral stenosis . تضييق بالحالب بسبب تورما مثلا

Pyelonephritis

pyel/o renal pelvis
nephr/o kidney
-itis inflammation



Urinary Tract Infection

Terms Related to Benign Neoplasms (D30 and D41)

Term	Word Origin	Definition
renal adenoma سرطان حميد	<i>ren/o</i> kidney <i>-al</i> pertaining to <i>aden/o</i> gland <i>-oma</i> tumor اشئ تكئل ونفخ ولس سرطان	Small, slow-growing, glandular noncancerous tumors of the kidney, usually found at autopsy.
renal oncocytoma	<i>onc/o</i> tumor <i>cyt/o</i> cell <i>-oma</i> tumor	The most common benign solid renal tumor.
transitional cell papilloma	<i>papill/o</i> nipple <i>-oma</i> tumor	Also referred to as bladder papilloma . Although this type of tumor is benign when found, recurrences are occasionally malignant.
renal cell carcinoma كارسینوما سرطان خبيث	<i>ren/o</i> kidney <i>-al</i> pertaining to <i>carcinoma</i> cancerous tumor of epithelial origin	Also referred to as hypernephroma or adenocarcinoma of the kidney , this is one of the most common cancers. Although the cause is unknown, risk factors include smoking and obesity.
transitional cell carcinoma (TCC) of the bladder	<i>carcinoma</i> cancerous tumor of epithelial origin	These malignant tumors account for approximately 90% of all bladder cancers and arise from the cells lining the bladder (Fig. 6-6, B).

Matching.

- _____ 1. nephrolithiasis
- _____ 2. nephrogenic diabetes insipidus
- _____ 3. nephropathy
- _____ 4. interstitial cystitis
- _____ 5. trigonitis
- _____ 6. urethritis
- _____ 7. urethral stricture
- _____ 8. UTI
- _____ 9. renal adenoma
- _____ 10. renal oncocytoma
- _____ 11. transitional cell papilloma
- _____ 12. renal cell carcinoma
- _____ 13. TCC

- A. bladder inflammation located between the inlet of the ureters and outlet of the urethra
- B. diabetes insipidus caused by a defect in the renal tubules
- C. urethral stenosis
- D. most common benign, solid renal tumor
- E. kidney disease
- F. bladder papilloma
- G. infection anywhere in the urinary system
- H. kidney stones
- I. inflammation of the urethra
- J. hypernephroma
- K. small, slow-growing, noncancerous tumor of the kidney
- L. painful inflammation of the bladder wall
- M. tumor that arises from the cells lining the bladder

Terms Related to Procedures

Term	Word Origin	Definition
cystectomy سسكتومي	<i>cyst/o</i> bladder <i>-ectomy</i> cutting out	Cutting out part or all of the urinary bladder. مقالش توتل فيمكن قطع بعض من المثانة
cystolithotomy سسئو لئيثوتومي	<i>cyst/o</i> bladder <i>-lithotomy</i> cutting out a stone	Incision to cut a stone out of the urinary bladder.
cystoscopy سسئو لئيثوتومي	<i>cyst/o</i> bladder <i>-scopy</i> viewing	Visual examination of the urinary bladder using a cystoscope (Fig. 6-7). منظار للمثانة
lithotripsy لئيثو تريسي	<i>lith/o</i> stone <i>-tripsy</i> crushing طحن	Process of crushing stones either to prevent or clear an obstruction in the urinary system; crushing may be done manually, by high-energy shock waves, or by pulsed dye laser. In each case, the fragments may be expelled naturally or washed out (Fig. 6-8). Use of shock waves is termed extracorporeal shock wave lithotripsy (ESWL) .
meatotomy مئيتوتومي	<i>meat/o</i> meatus <i>-tomy</i> cutting	Incision of the urinary meatus to widen the opening.

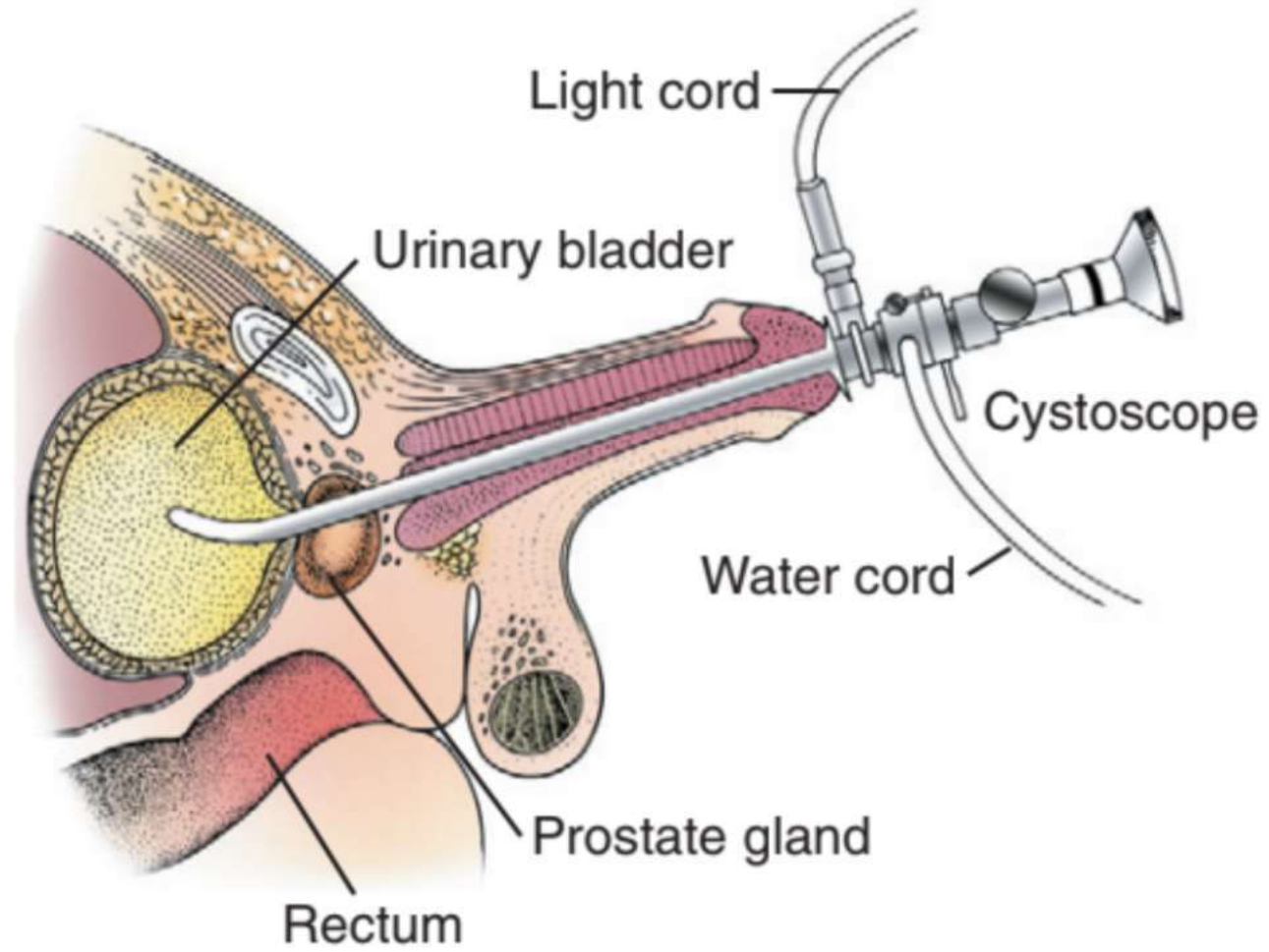
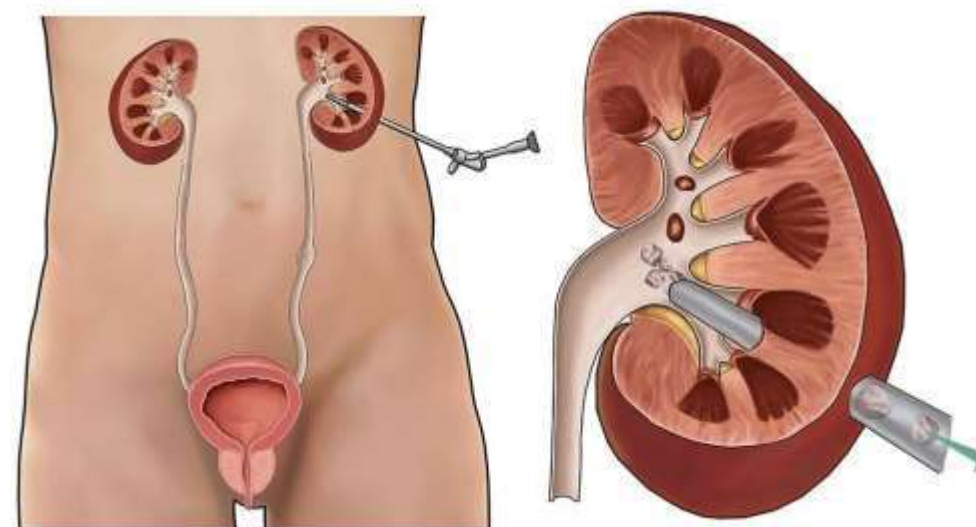
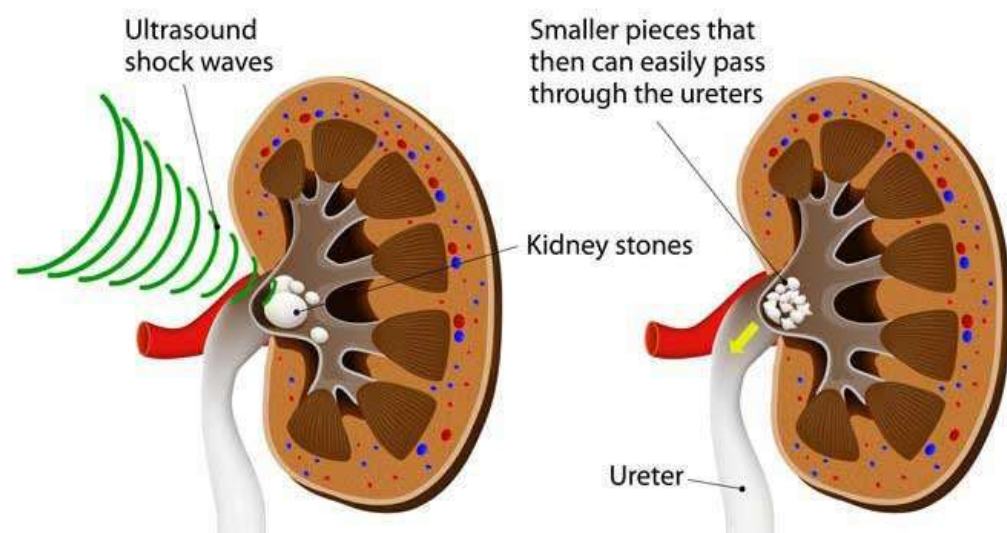


Fig. 6-7 Cystoscopy.



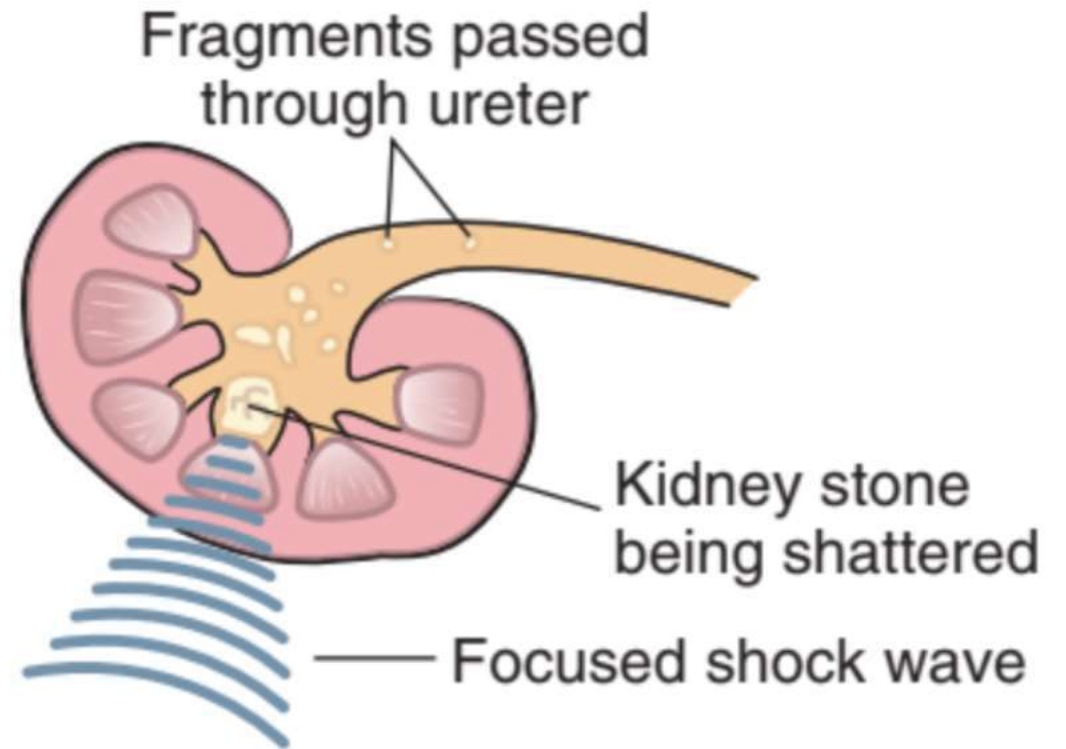


Fig. 6-8 Lithotripsy performed with a lithotripter.

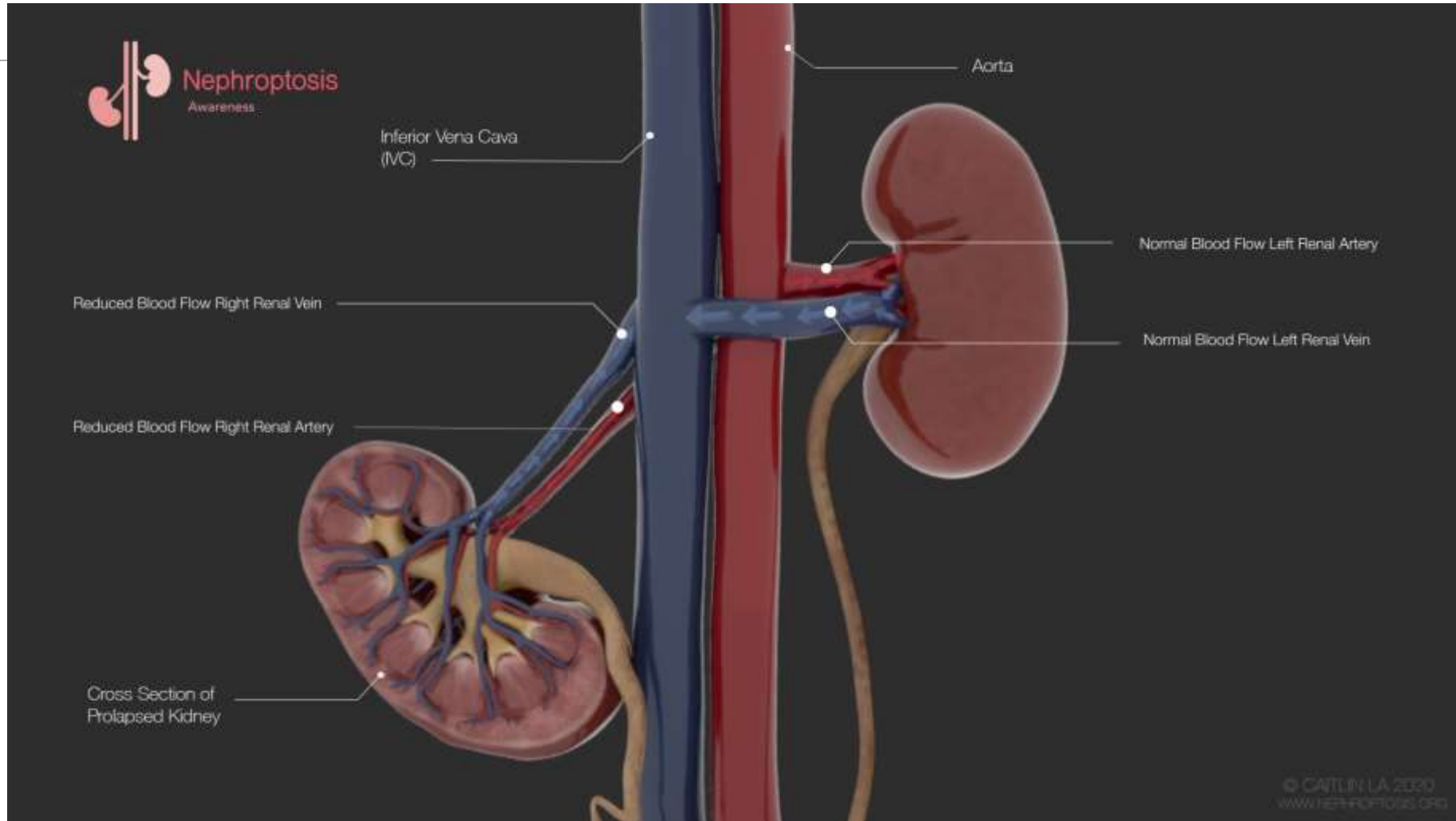
nephrectomy	<i>nephr/o</i> kidney <i>-ectomy</i> cutting out	Resection of the kidney. قطع ل جزء او كل الكلية
nephrolithotomy	<i>nephr/o</i> kidney <i>-lithotomy</i> cutting out a stone	Incision of the kidney for removal of a kidney stone.
nephropexy	<i>nephr/o</i> kidney <i>-pexy</i> suspension	Suspension or fixation of the kidney. تثبيت الكلية بمكانها
nephrostomy	<i>nephr/o</i> kidney <i>-stomy</i> making a new opening	Opening made in the kidney so that a catheter can be inserted.
nephrotomy	<i>nephr/o</i> kidney <i>-tomy</i> cutting	Incision of the kidney.
renal dialysis دياليزس غسيل الكلى	<i>ren/o</i> kidney <i>-al</i> pertaining to <i>dia-</i> through, complete <i>-lysis</i> breaking down	Process of diffusing blood across a semipermeable membrane to remove substances that a healthy kidney would eliminate, including poisons, drugs, urea, uric acid, and creatinine.
continuous ambulatory peritoneal dialysis (CAPD)	<i>peritone/o</i> peritoneum <i>-al</i> pertaining to <i>dia-</i> through, complete <i>-lysis</i> breaking down	Type of renal dialysis in which an indwelling catheter in the abdomen permits fluid to drain into and out of the peritoneal cavity to cleanse the blood (Fig. 6-9).

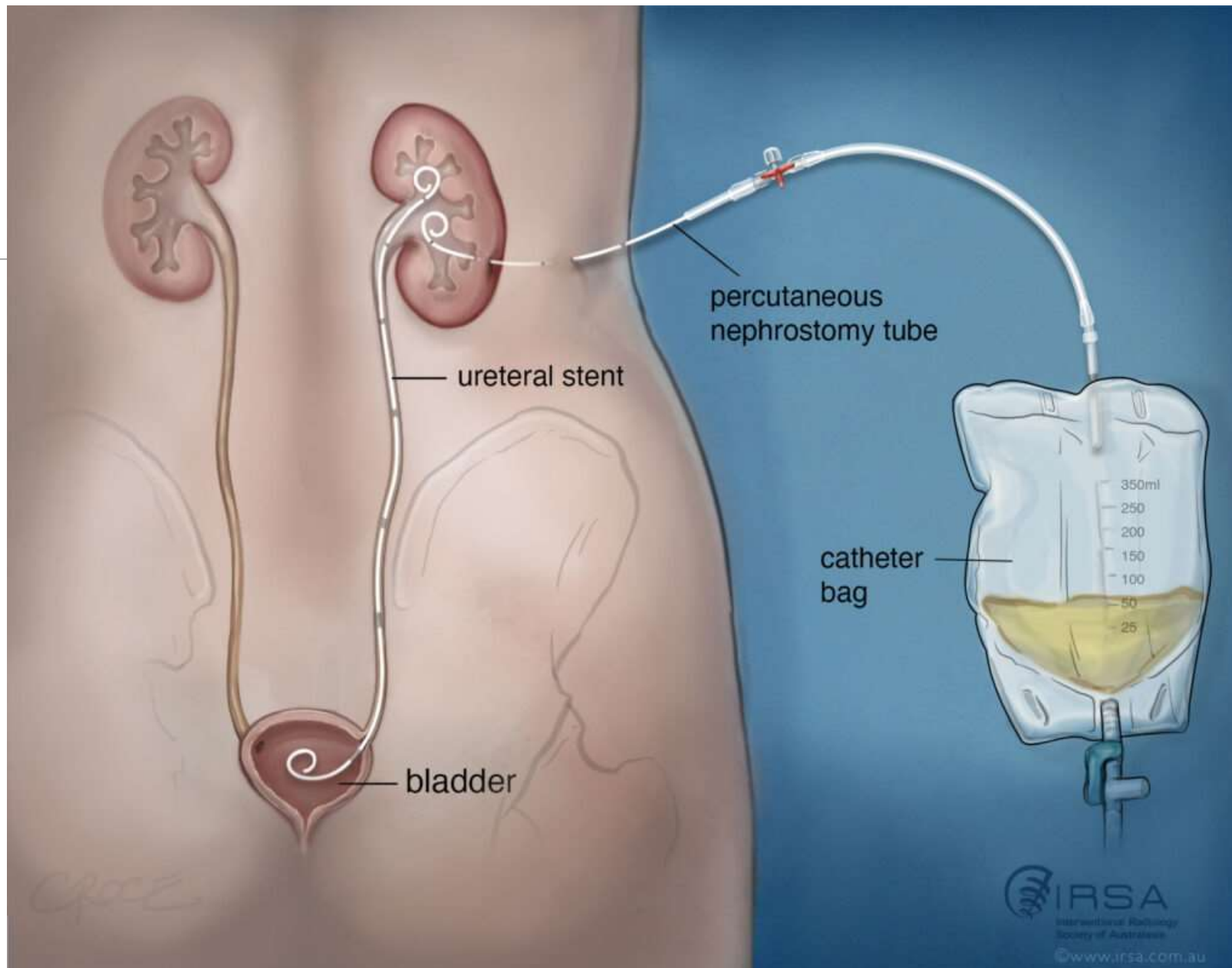
nephroptosis

nephr/o kidney
-ptosis drooping, sagging

Prolapse or sagging of the kidney.

بتسقط من مكانها الاصلي





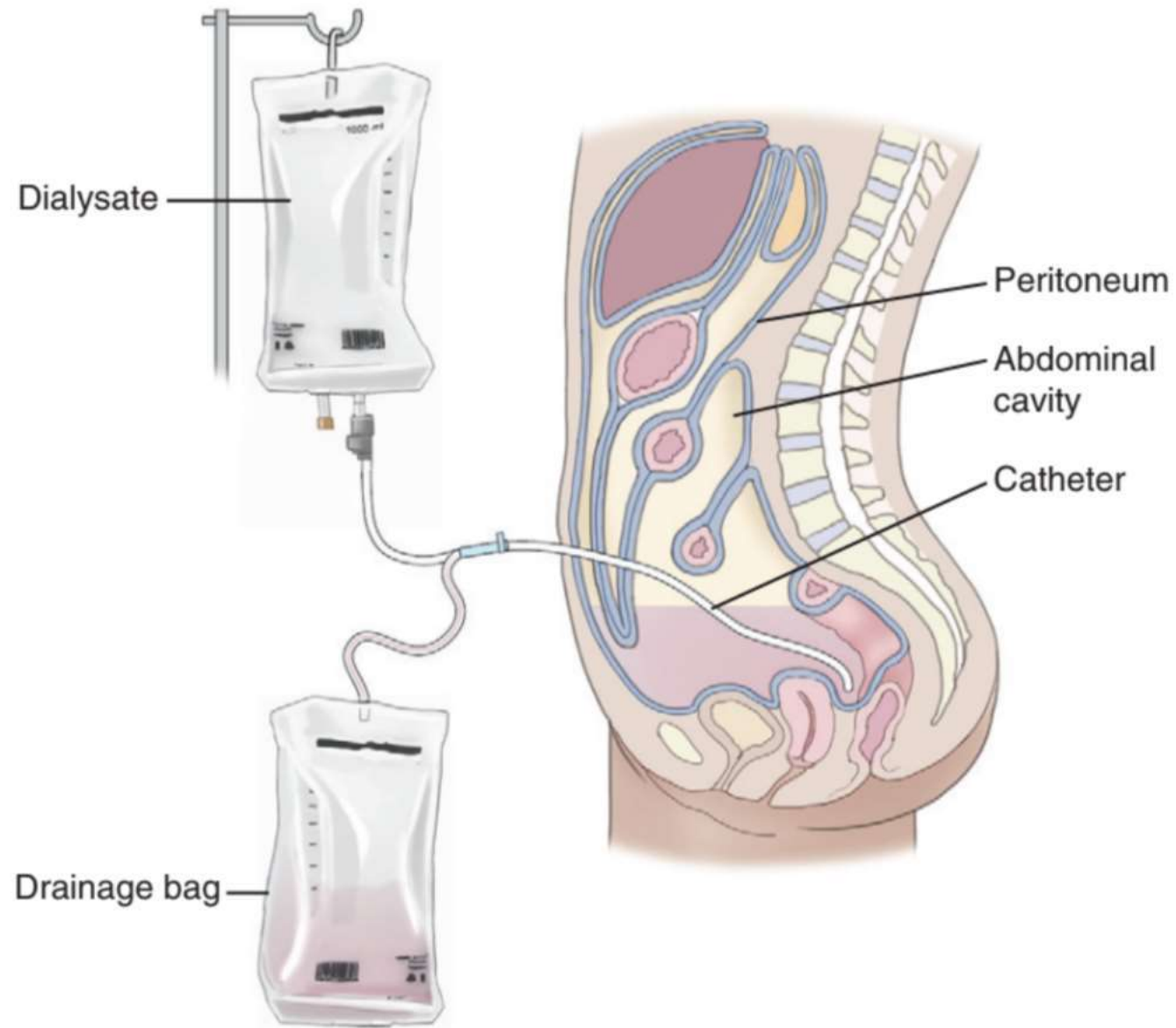


Fig. 6-9 Continuous ambulatory peritoneal dialysis (CAPD).

Term	Word Origin	Definition
hemodialysis (HD)	<i>hem/o</i> blood <i>dia-</i> through, complete <i>-lysis</i> breaking down	Type of renal dialysis that cleanses the blood by shunting it from the body through a machine for diffusion and ultrafiltration and then returning it to the patient's circulation (Fig. 6-10).
renal transplant	<i>ren/o</i> kidney <i>-al</i> pertaining to <i>trans-</i> across	Surgical transfer of a complete kidney from a donor to a recipient (Fig. 6-11).
urethrolisis	<i>urethr/o</i> urethra <i>-lysis</i> breaking down	Destruction of adhesions of the urethra.
urinalysis تحليل بول	<i>urin/o</i> urinary system, urine <i>-lysis</i> breaking down	The physical, chemical and/or microscopic examination of urine.

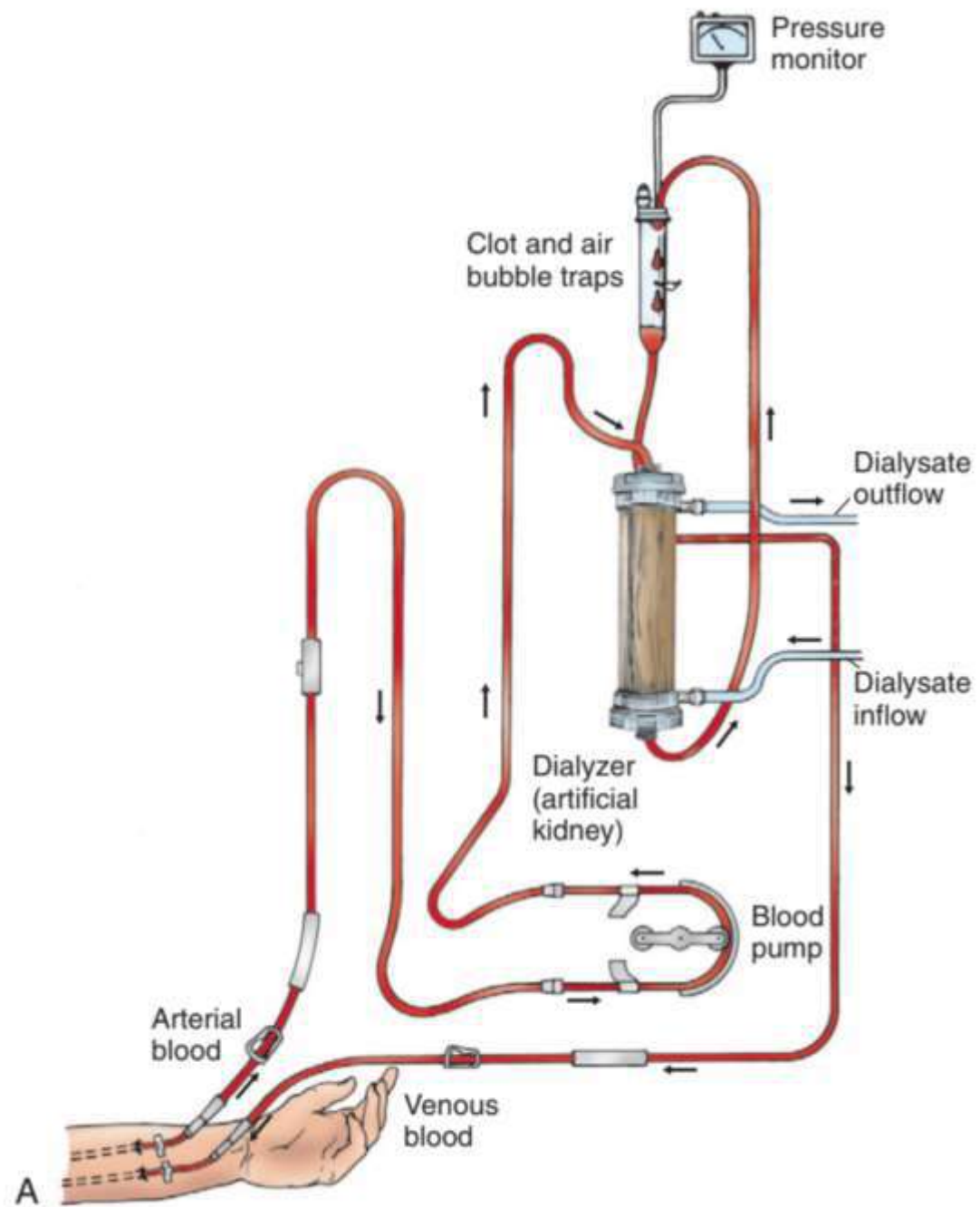


Fig. 6-10 A, Hemodialysis circuit. B, Hemodialysis machine.

MALE REPRODUCTIVE SYSTEM

FUNCTIONS OF THE MALE REPRODUCTIVE SYSTEM

they make, store, and ejaculate sperm, which fertilizes eggs produced by the female reproductive system in order to begin a pregnancy.

صنع وتخزين وقذف الحيوانات المنوية التي تخصب البويضات التي تنتجها الجهاز التناسلي الانثوي من اجل بدء الحمل

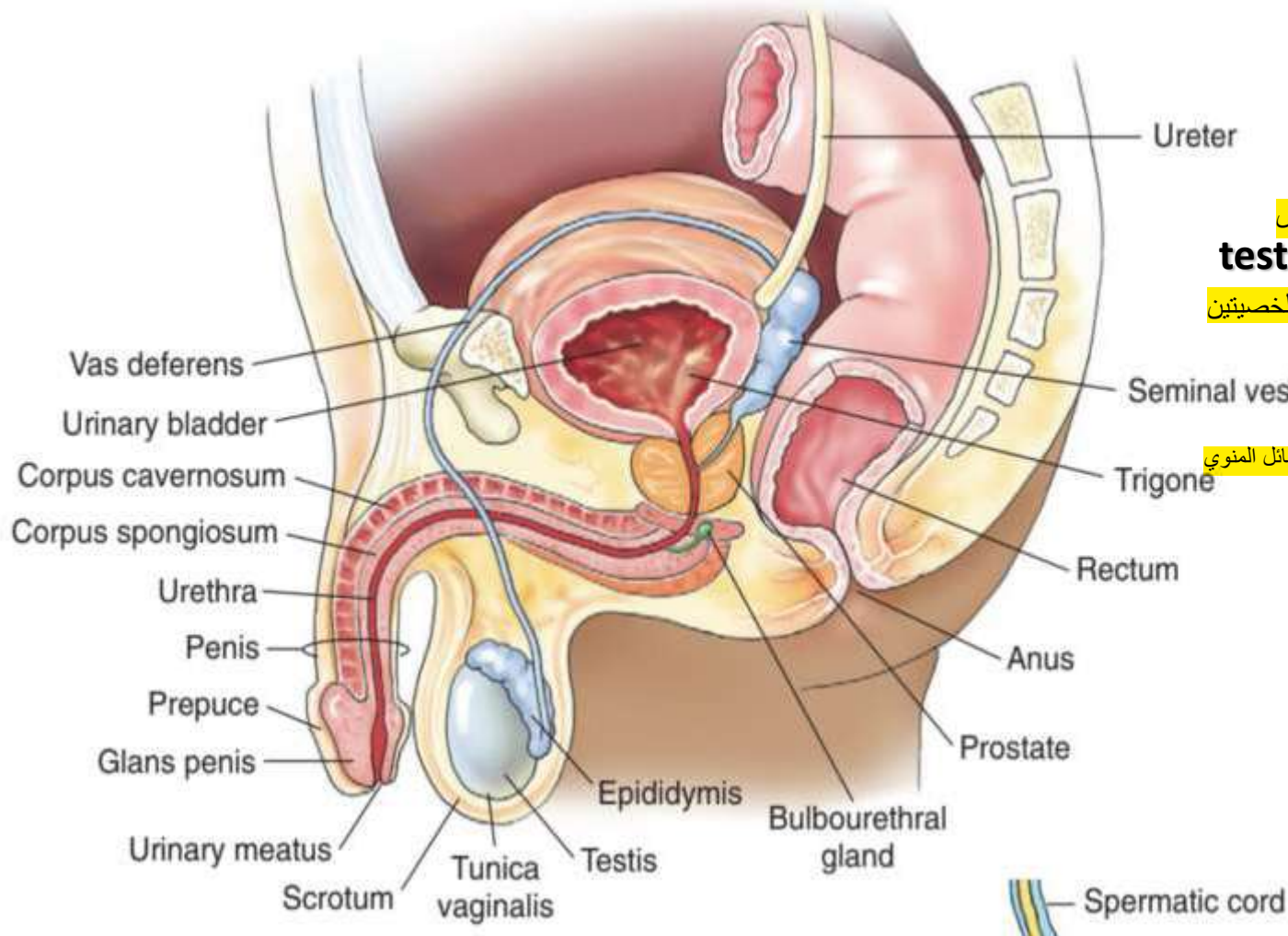
The organs that produce the sex cells in both sexes are called gonads.

تسمى الاعضاء التي تنتج الخلايا الجنسية في كلا الجنسين جونداس

Both male and female anatomy can be divided into two parts:

❖ **Primary sexual organs**

❖ **Secondary sexual organs**



الخصية
 تستس
 تستكل
 تستو
 تستكيلو
 اوركيو
 اوركيديو
testis, testicle = test/o, testicul/o, orchi/o, orchid/o, orch/o
 الكيس الي يحمل الخصيتين
 سكروتم
scrotum = scrot/o
 سكرودو
 ابددمس
 الديرخ
epididymis = epididym/o
 وعاء ناقل
 فاز ديفرنس
vas deferens, ductus deferens = vas/o
 فازو
 سيمينل فيزكال
 حويصلات بتحوش السائل المنوي
seminal vesicle = vesicul/o
 فيزيكلو
 بروسات
prostate = prostat/o
 يورثرا
 القناة البولية
urethra = urethr/o
 بينس
 راس القضيب
penis = pen/i, phall/o
 فالو
 التبع تبع راس القضيب
glans penis = balan/o
 بلانو

يتكون ملفوفة حول القناة البولية
 بروساتو
 تتحكم بخروج السائل المنوي او البول

semen = semin/i

Spermatogenesis اسبيرماتوجينيسيس

spermat/o = spermatozoon -genesis = production

Testosterone

هرمون الذكورة

من الهرمونات الدهنية

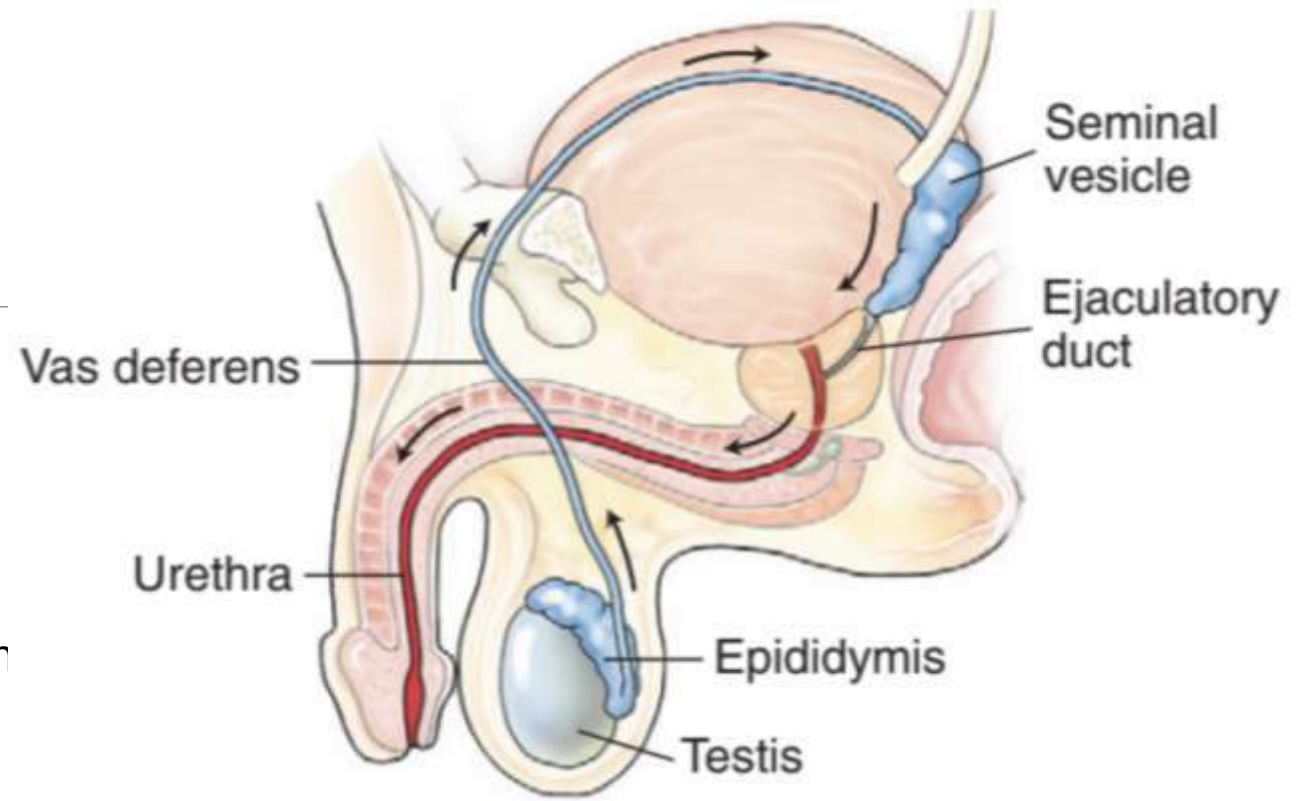
Test/o = testis -ster/o = steroid -one = substance that forms

اسبيرماتوزون

spermatozoon = sperm/o, spermat/o

Plural - spermatozoa

gonad = gonad/o



Exercise 6: Anatomy of the Male Reproductive System

Match the word parts with their meanings.

- | | | | |
|------------------------|------------------------|-----------------------|--------------|
| ___ 1. penis | ___ 7. urethra | A. vesicul/o | G. scrot/o |
| ___ 2. prostate | ___ 8. glans penis | B. preputi/o, posth/o | H. vas/o |
| ___ 3. seminal vesicle | ___ 9. ductus deferens | C. orchid/o | I. semin/i |
| ___ 4. scrotum | ___ 10. spermatozoon | D. phall/o | J. urethr/o |
| ___ 5. prepuce | ___ 11. epididymis | E. epididym/o | K. prostat/o |
| ___ 6. semen | ___ 12. testis | F. spermat/o | L. balan/o |

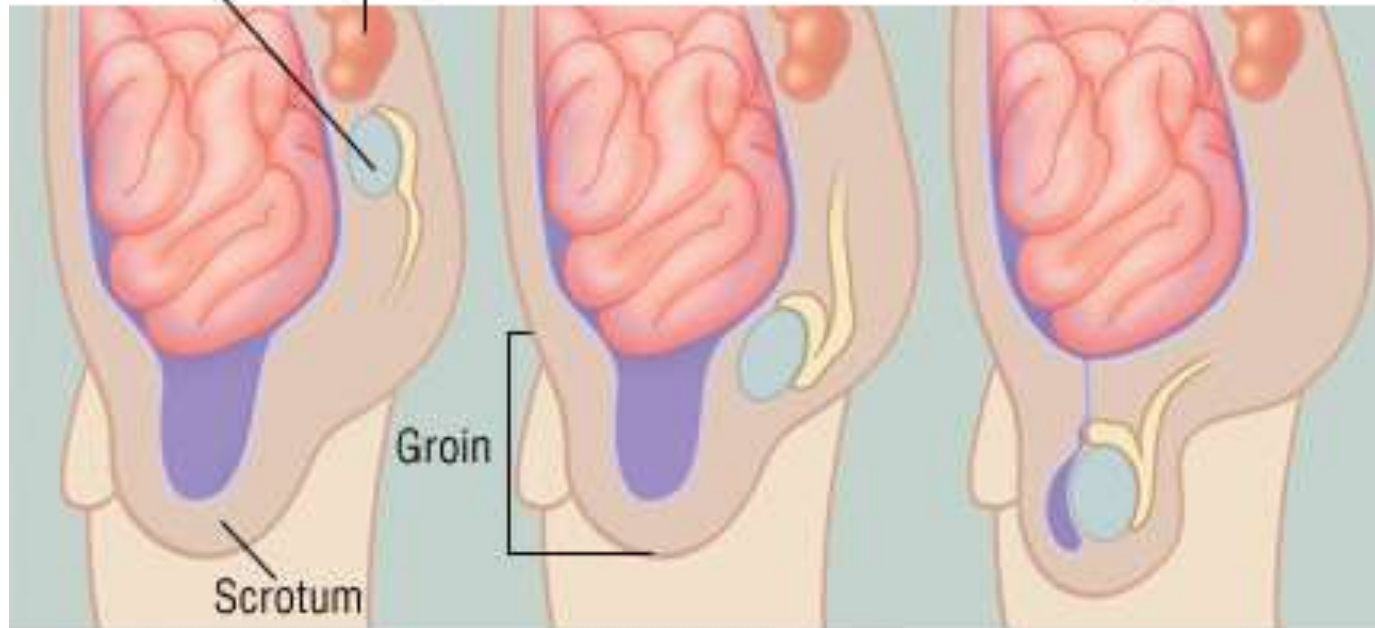
Terms Related to Congenital Disorders (Q00-Q99)

Term	Word Origin	Definition
anorchism ان اوركزم	<i>an-</i> no, not, without <i>orch/o</i> testis <i>-ism</i> condition	Condition of being born without a testicle. May also be an acquired condition due to trauma or disease. Also termed monorchism . حالة الولادة بدون خصية وقد تكون مكتسبة بسبب الصدمة أو المرض ويطلق عليها مونوركيزم في حال فقد خصية واحدة
cryptorchidism كربتوركديزم	<i>crypt-</i> hidden <i>orchid/o</i> testis <i>-ism</i> condition	Condition in which the testicles fail to descend into the scrotum before birth. Also called cryptorchism (Fig. 6-14). الحالة التي تفشل فيها الخصيتان في النزول الى كيس الصفن قبل الولادة
epispadias ابيي سبيديس	<i>epi-</i> above <i>-spadias</i> a rent or tear	Urethral opening on the dorsum (top) of the penis rather than on the tip. Also called hyperspadias . الحالب المفروض يكون فاتح في الثب تبع البينيس ولكن هان بكون الحالب فاتح لفوق
hypospadias هيبو سبيديس	<i>hypo-</i> below <i>-spadias</i> a rent or tear	Urethral opening on the ventral surface (underside) of the penis instead of on the tip (Fig. 6-15). May be acquired as a result of a disease process. الحالب المفروض يكون فاتح في الثب تبع البينيس ولكن هان بكون الحالب فاتح لتحت

Testicle

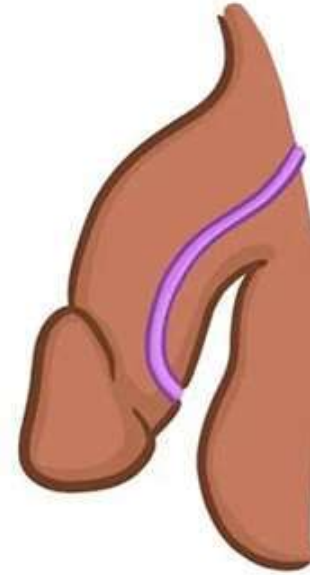
Kidney

How testicles normally descend



Understanding the
Difference Between
Hypospadias
and
Epispadias:
A Comprehensive Guide

HYPOSPADIAS

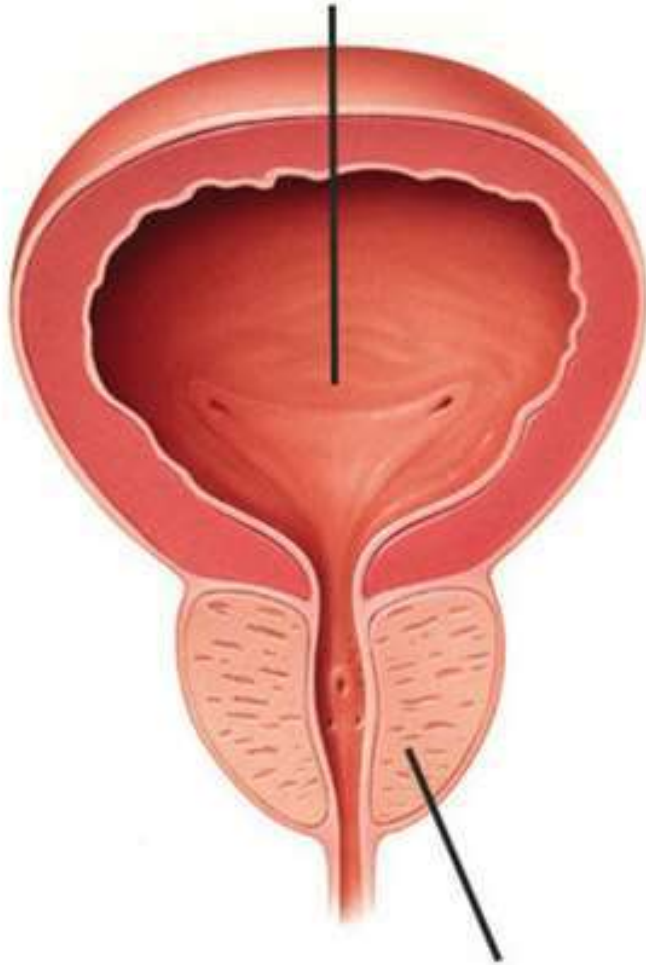


EPISPADIAS



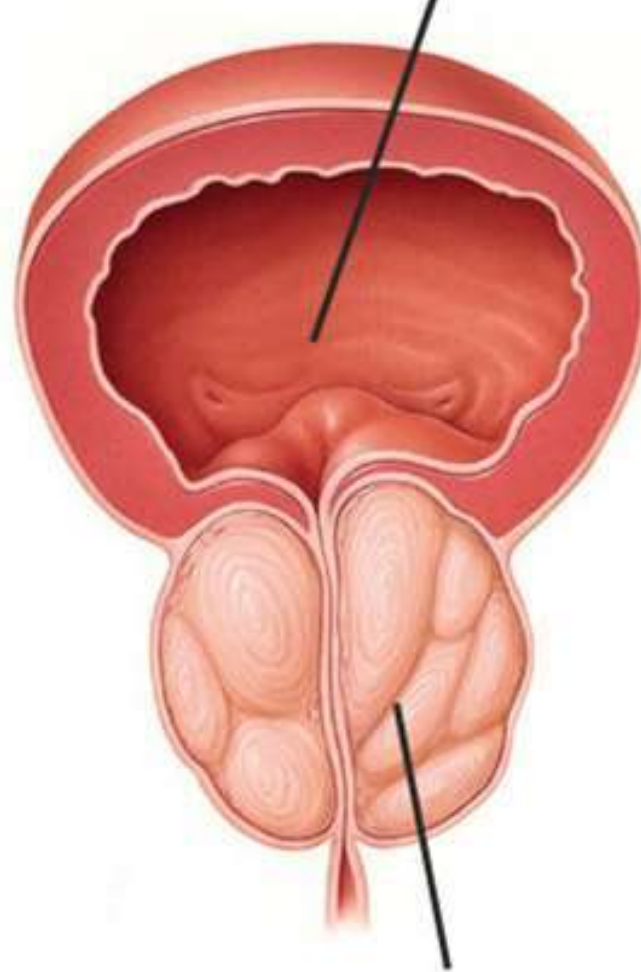
Term	Word Origin	Definition
azoospermia الازو سبيرميا	<i>a-</i> no, not, without <i>zo/o</i> animal <i>sperm/o</i> sperm <i>-ia</i> condition	Condition of no living sperm in the semen. This may be a desired condition, as when it follows a vasectomy. حالة عدم وجود حيوانات منوية في السائل المنوي
balanitis بالانائتس	<i>balan/o</i> glans penis <i>-itis</i> inflammation	Inflammation of the glans penis. التهاب بمنطقة القُب تَبَعَت القضيب
benign prostatic hyperplasia (BPH) بينايين بروساتايك هايبر بليزيا	<i>prostat/o</i> prostate <i>-ic</i> pertaining to <i>hyper-</i> excessive <i>-plasia</i> formation	Abnormal enlargement of the prostate gland surrounding the urethra, leading to difficulty with urination (Fig. 6-16). Also known as benign prostatic hypertrophy and enlarged prostate . PSA (prostate-specific antigen) is a blood test used to diagnose BPH. Very high levels may indicate prostate cancer. تضخم غير طبيعي في غدة البروستاتا ويتكون موجودة حول القناة البولية ممكن تعمل حصر للبول عند التضخم وبصير صعوبة في التبول
epididymitis ابدديمايتس	<i>epididym/o</i> epididymis <i>-itis</i> inflammation	Inflammation of the epididymis, usually as a result of an ascending infection through the genitourinary tract. الانتصاب
erectile dysfunction (ED) اركتايل دسفنجيل		Inability to achieve or sustain a penile erection for sexual intercourse. Also known as impotence . امبوتانتس عدم القدرة على تحقيق او الحفاظ على انتصاب القضيب للجماع الجنسي المعروفة بالعجز الجنسي
hydrocele هيدروسيل	<i>hydr/o</i> water, fluid <i>-cele</i> herniation, protrusion	Accumulation of fluid in the tunica vaginalis testis (Fig. 6-17). تراكم السوائل في الخصية

Bladder



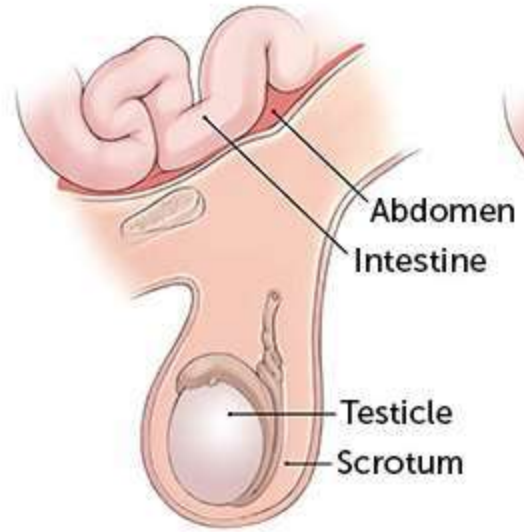
Normal Prostate

Bladder



Enlarged Prostate

Normal



Non-Communicating
Hydrocele



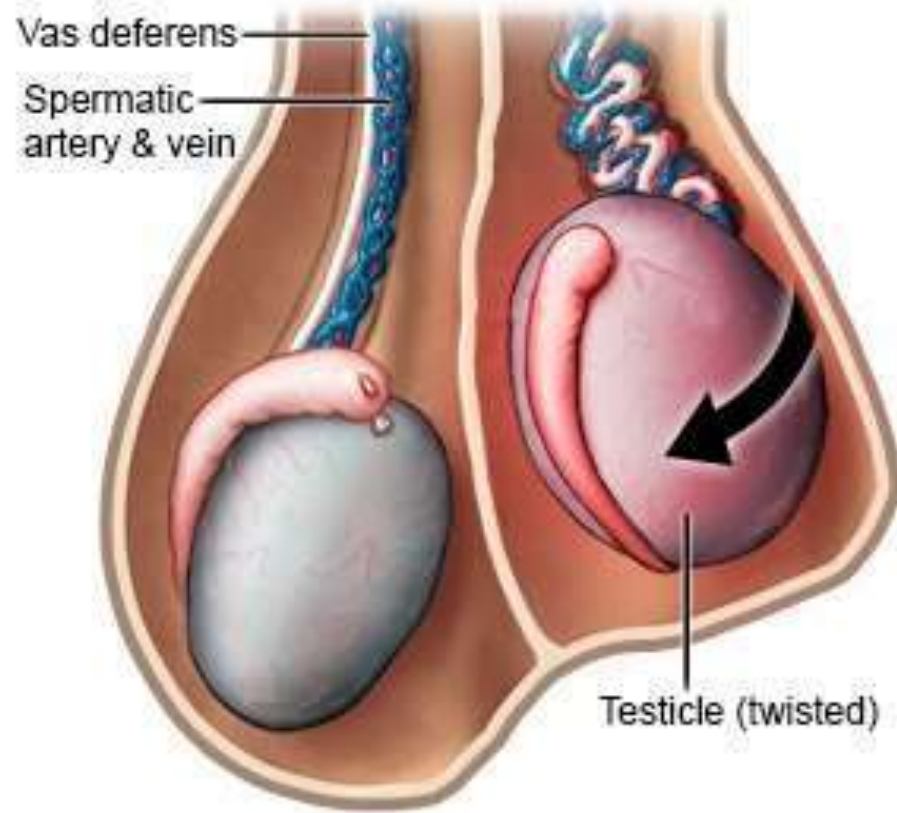
Communicating
Hydrocele





transillumination test +ve

oligospermia اوليجو سبيرميا	<i>olig/o</i> scanty, few <i>sperm/o</i> sperm <i>-ia</i> condition	Condition of temporary or permanent deficiency of sperm in the seminal fluid; related to azoospermia. حالة النقص المؤقت أو الدائم للحيوانات المنوية في السائل المنوي
orchitis اوركايتس	<i>orch/o</i> testis <i>-itis</i> inflammation	Inflammation of the testicles; may or may not be associated with the mumps virus. Also known as testitis . التهاب الخصيتين
testicular torsion تستيكلر تورشن	<i>testicul/o</i> testicle <i>-ar</i> pertaining to	Twisting of a testicle on its spermatic cord, usually caused by trauma. May lead to ischemia of the testicle. Also called torsion of testis . التواء الخصية على الحب المنوي وعادة بسبب الصدمة قد يؤدي الى نقص تروية الخصية
vesiculitis فيزكيولايتس	<i>vesicul/o</i> seminal vesicle <i>-itis</i> inflammation	Inflammation of a seminal vesicle, usually associated with prostatitis. التهاب الحجاب المنوي والذي يرتبط بالتهاب البروستاتا
prostatitis	<i>prostat/o</i> prostate <i>-itis</i> inflammation	Inflammation of the prostate gland.



Testicular Torsion

Terms Related to Procedures

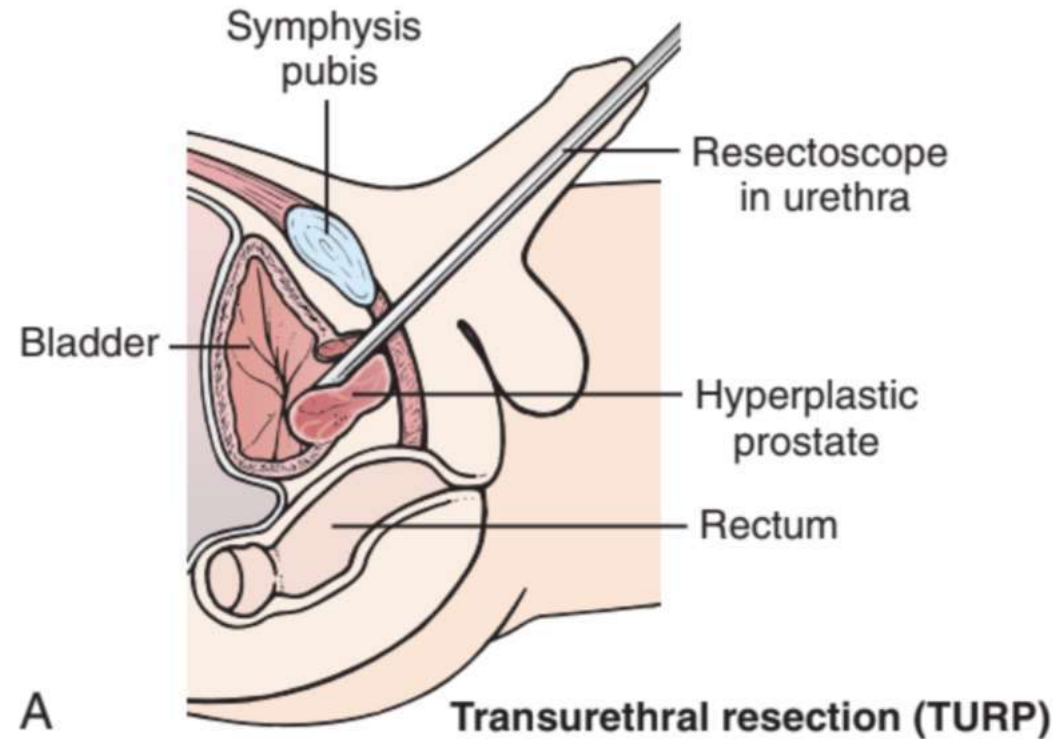
Term	Word Origin	Definition
balanoplasty بلانو بلاستي	<i>balan/o</i> glans penis <i>-plasty</i> surgically forming	Surgically correcting a defect of the glans penis. تصحيح خلل في الحشفة جراحيا
circumcision سيركم سيشن	<i>circum-</i> around <i>-cision</i> cutting	Surgical procedure in which the prepuce of the penis (or that of the clitoris of the female) is excised. الاجراء الجراحي الذي يتم فيه استئصال قلفة القضيب اي الطهور
epididymotomy ابددموتومي	<i>epididym/o</i> epididymis <i>-tomy</i> cutting	Incision of the epididymis to drain a cyst. شق البربخ لتصريف الكيس
epididymo-vesiculography ابددمو فيزيكيولو جرافي	<i>epididym/o</i> epididymis <i>vesicul/o</i> seminal vesicle <i>-graphy</i> recording	Imaging of the epididymis and seminal vesicle using a contrast medium. تصوير البربخ والحويلة المنوية باستخدام وسيط تباين
orchidectomy اوركيد اكتومي	<i>orchid/o</i> testis <i>-ectomy</i> cutting out	Cutting out part or all of one or both testicles, usually for removal of a tumor or cyst. Also called orchectomy and orchiectomy . قطع جزء او كل الخصيتين او كليهما عادة لازالة الورم او الكيس
orchiopexy اوركو بكسي	<i>orchi/o</i> testis <i>-pexy</i> suspension	Surgical procedure to mobilize an undescended testicle, attaching it to the scrotum. الاجراء الجراحي لتعبئة الخصية المعلقة وربطها بالكيسة
phalloplasty فالو بلاستي	<i>phall/o</i> penis <i>-plasty</i> surgically forming	Surgically correcting a defect of the penis.
prostatectomy بروتستكتومي	<i>prostat/o</i> prostate <i>-ectomy</i> cutting out	Removal of the prostate gland. In a radical prostatectomy , the seminal vesicles and area of vas ampullae of the vas deferens are also removed. ازالة غدة البروستاتا

transurethral
resection of the
prostate (TUR,
TURP)

trans- through
urethr/o urethra
-al pertaining to

Cutting out the prostate in sections through a urethral approach (Fig. 6-22). This procedure is the most common type of prostatectomy. The approach may be through the urethra (**transurethral**), above the pubic bone (**suprapubic**), or through the perineum (**perineal**).

قطع البروستاتا في اقسام من خلال نهج مجرى البول



vasovasostomy فازو فازو استومي	<i>vas/o</i> vas deferens <i>vas/o</i> vas deferens <i>-stomy</i> making a new opening	Anastomosis of the ends of the vas deferens as a means of reconnecting them to reverse the sterilization procedure. بدني اوصلهم ببعض
vasectomy فازو اکتومي	<i>vas/o</i> vas deferens <i>-ectomy</i> cutting out	Incision, ligation, and cauterization of both of the vas deferens for the purpose of male sterilization (Fig. 6-23). بدني اعمل استئصال هادي العملية لجعل الرجل عقيم بدوش يخلف



FEMALE REPRODUCTIVE SYSTEM

FUNCTIONS OF THE MALE REPRODUCTIVE SYSTEM

- Produces the female egg cells ينتج خلايا البويضة الانثوية
- Transports the eggs to the site of fertilization فيرتيليزيشن ينقل البويضات الى موقع الاخصاب
- the fertilization of an egg by a sperm, occurs in the fallopian tubes يحدث اخصاب البويضة بواسطة الحيوانات المنوية في قناتي فالوب
- After fertilization, provides a place for a baby to develop بعد الاخصاب يوفر مكانا للطفل للتطور
- if fertilization does not take place, the system is designed to menstruate اذا لم يحدث الاخصاب فقد تم تصميم النظام للدورة الشهرية

Both male and female anatomy can be divided into two parts:

يمكن تقسيم كل من تشريح الذكور والاناث الى قسمين

❖ Primary sexual organs

❖ Secondary sexual organs

مينارش Menarche men/o = menstruation -arche = beginning أول مرة اجت البيريود عند الفيميل على عمر كم

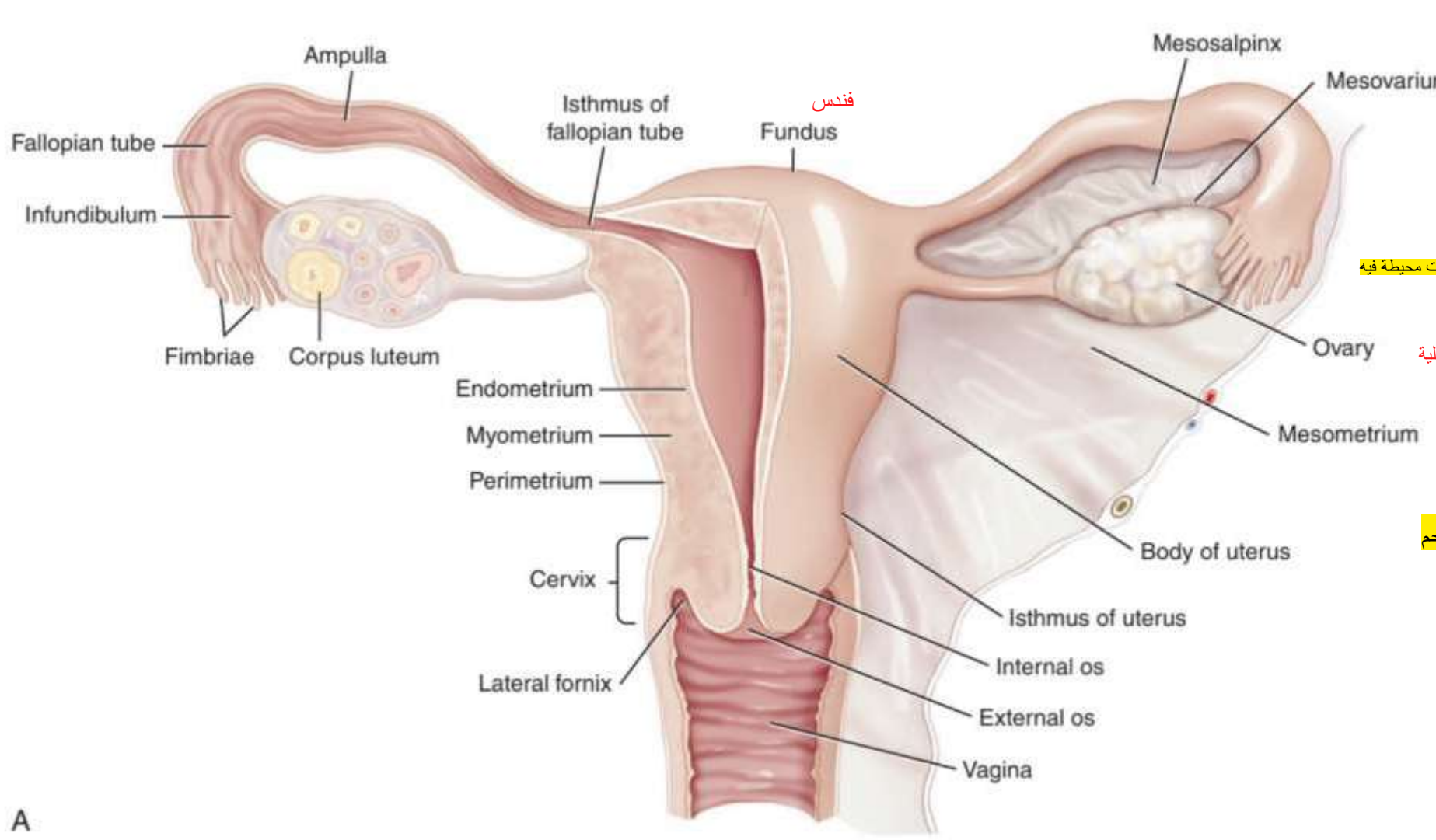
منيونيبوز Menopause men/o = menstruation -pause = stop, cease ايش العمر الي وقفت فيه الدورة

منستريشن Menstruation
the process in a woman of discharging blood from the lining of the uterus at intervals of about one month from puberty until the menopause

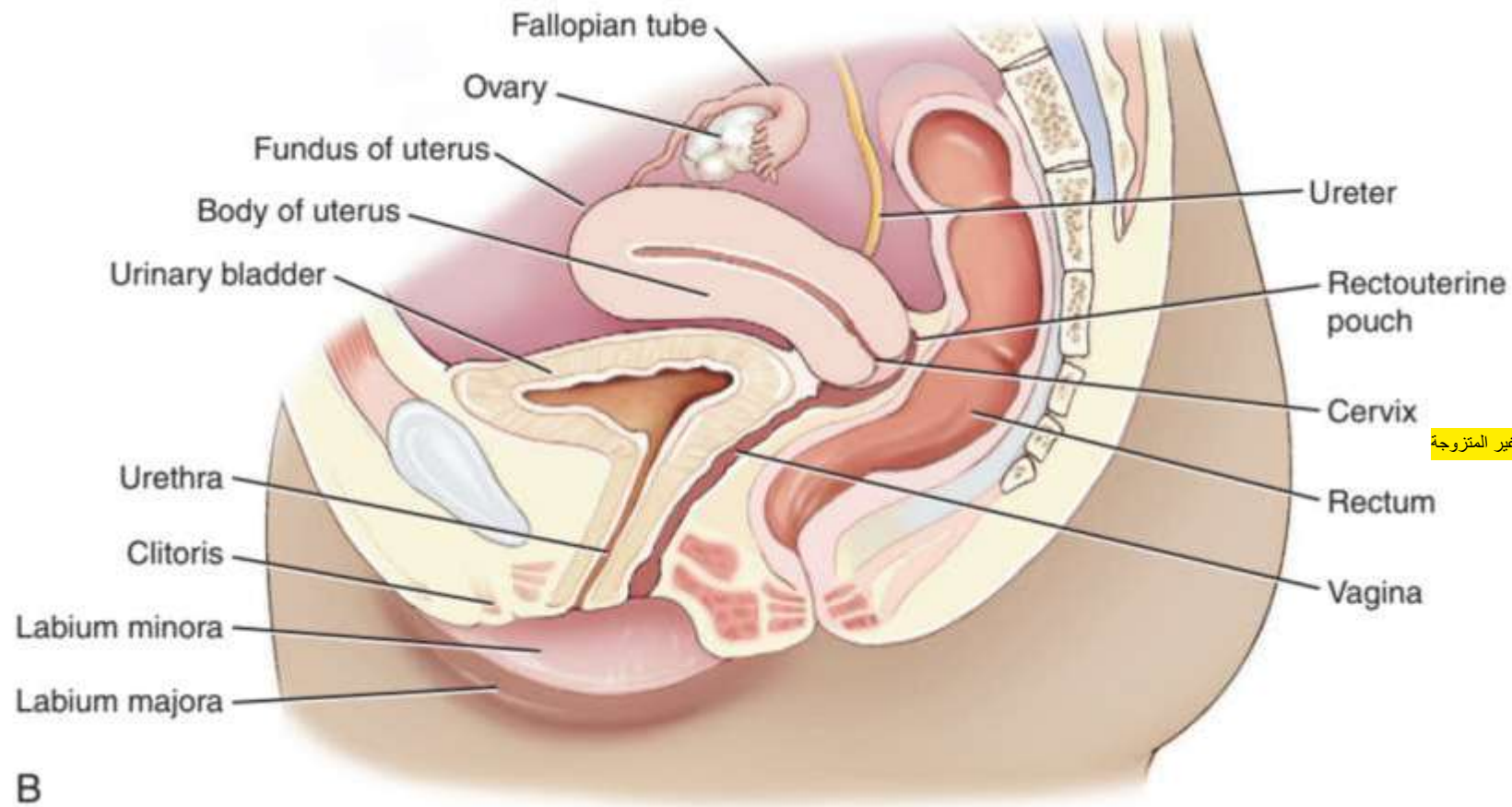
اوفيوليشن Ovulation ovul/o = egg -ation = process of عملية تفريغ الدم من بطانة الرحم على فترات من حوالي شهر من سن البلوغ حتى سن الياس

التبويض

ومعناها البويضة الي جوا طلعت من الاوفري وصارت حرة ودخلت في الفالوب تيوب



أوفيري أو أوفيرو الأوفوروو أوفري المبيض
 ovary = oophor/o, ovari/o
 يوترس هستيرو الرحم
 uterus = hyster/o,
 metri/o, metr/o, uter/o
 سفكس سالبنكس
 الفالوب تيوب
 fallopian tube =
 salping/o, -salpinx
 بري متريام ثلاث طبقات محيطة فيه
 perimetrium =
 perimetri/o
 مابومتريام طبقة عضلية
 myometrium =
 myometri/o
 بيسير الها تقشر كل بيريوو
 اندومتريام
 endometrium =
 endometri/o
 سبير فكوو
 عنق الرحم
 cervix = cervic/o,
 فجاينا كليوو
 مهبيل
 فجاينوو
 vagina = colp/o, vagin/o



الاعضاء التناسلية الخارجية

فالفو ابيزيو فالفو

vulva = vulv/o, episi/o

هائمنا هائمنا هائمنا

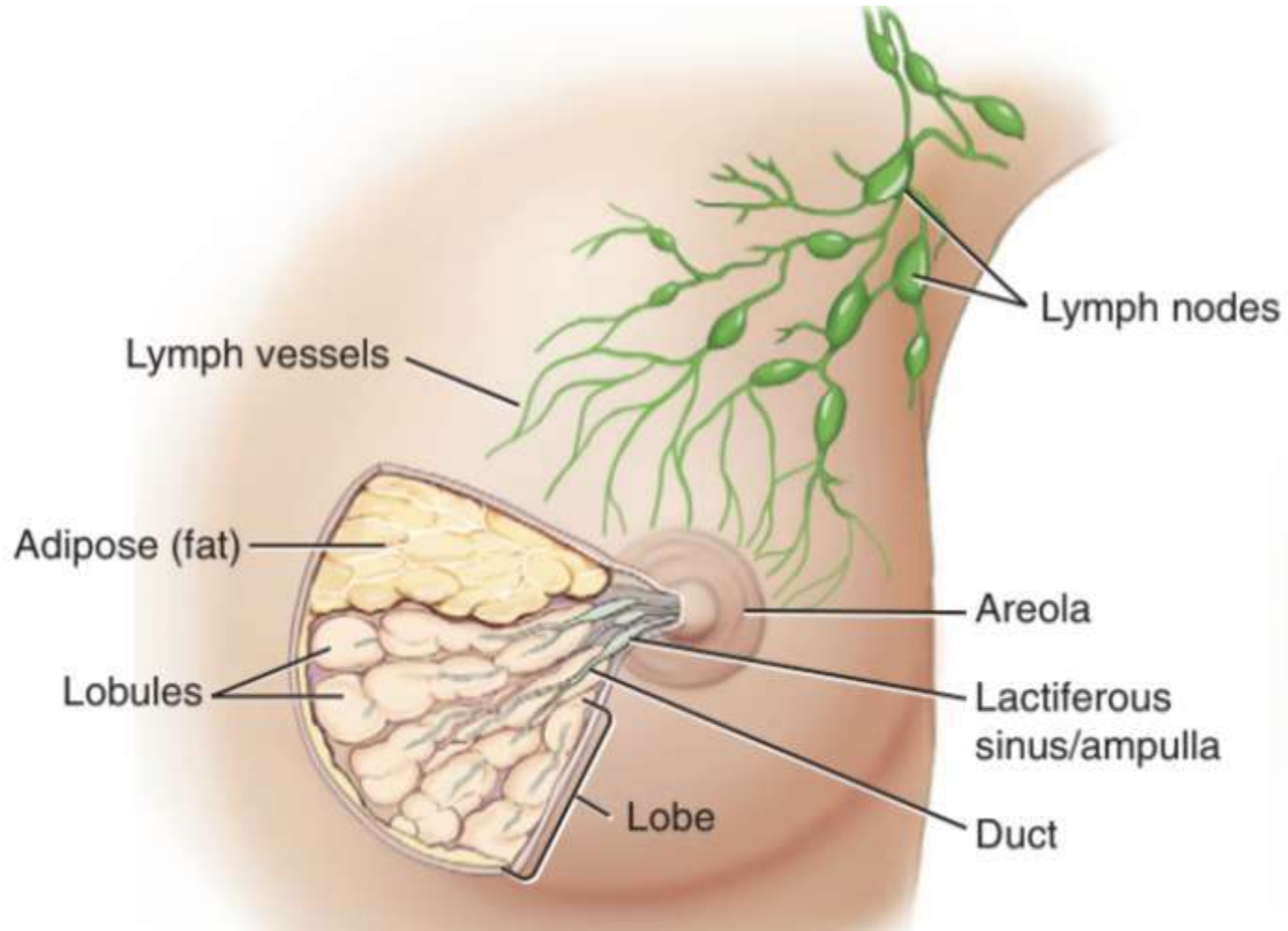
hymen = hymen/o

ليبيا ليبيا ليبيا

labia = labi/o

الغشاء الذي يغطي المهبل للفتاة غير المتزوجة

The external female genitalia collectively are called the vulva



الثدي ماستو بريست
 breast = mast/o, mamm/o
 ثيلو ثيلو
 nipple = papill/o, thel/e
 حليب لاکتو جلاکتو
 milk = lact/o, galact/o

لاکتو جينيسيس
 (lactogenesis); عملية تكوين الحليب
 اخراج حليب بشكل تلقائي
 جلاکتو ریا
 galactorrhea

امراض الها علاقة بالثدي

Terms Related to Disorders of Breast (N60-N65)		
Term	Word Origin	Definition
galactorrhea جلاكتور رياا	<i>galact/o</i> milk <i>-rrhea</i> flow, discharge	An abnormal discharge of milk from the breasts. افراز غير طبيعي للحليب من الثدي
gynecomastia جينيكو ماستيا	<i>gynec/o</i> female <i>mast/o</i> breast <i>-ia</i> condition	Enlargement of either unilateral or bilateral breast tissue in the male. The <i>gynec/o</i> is a reference to the appearance of the breast, not to a female. حالة مرضية عند الذكور وهو حدوث تنثدي
mastodynia ماستو دينيا	<i>mast/o</i> breast <i>-dynia</i> pain	Breast pain. الم بالثدي

Terms Related to Noninflammatory Disorders of Female Genital Tract (N80-N98)

Term	Word Origin	Definition
amenorrhea ا مينو رياا	<i>a-</i> without <i>men/o</i> menses <i>-rrhea</i> discharge, flow	Lack of menstrual flow. This is a normal, expected condition before puberty, after menopause, and during pregnancy. قلة تدفق الدورة الشهرية وهذه حالة طبيعية متوقعة قبل سن البلوغ وبعد انقطاع الطمث واثناء الحمل
cervical intraepithelial neoplasia (CIN) I and II سرفاكيل انتر ابثيليال نيو بليزيا	<i>cervic/o</i> cervix <i>-al</i> pertaining to <i>intra-</i> within <i>epitheli/o</i> epithelium <i>-al</i> pertaining to <i>neo-</i> new <i>-plasia</i> formation	Precancerous changes in the tissue lining the cervix. Measured in grades to indicate the degree of change away from normal formation. تغييرات سرطانية في الانسجة المبطنة لعنق الرحم وتقاس بالدرجات للاشارة الى درجة التغيير بعيدا عن التكوين الطبيعي
cystocele سستو سيل	<i>cyst/o</i> urinary bladder <i>-cele</i> herniation	Herniation of the urinary bladder into the vagina (Fig. 6-28). فتق المثانة البولية في المهبل
dysfunctional uterine bleeding (DUB) دس فانجشيناال يوتراين بليدينج		Abnormal uterine bleeding not caused by a tumor, inflammation, or pregnancy. نزيف الرحم غير الطبيعي الناجم عن ورم او التهاب او حمل
dysmenorrhea دس مينو رياا	<i>dys-</i> painful <i>men/o</i> menses <i>-rrhea</i> discharge, flow	Painful menstrual flow, cramps. الام الدورة الشهرية المؤلمة / تشجنات

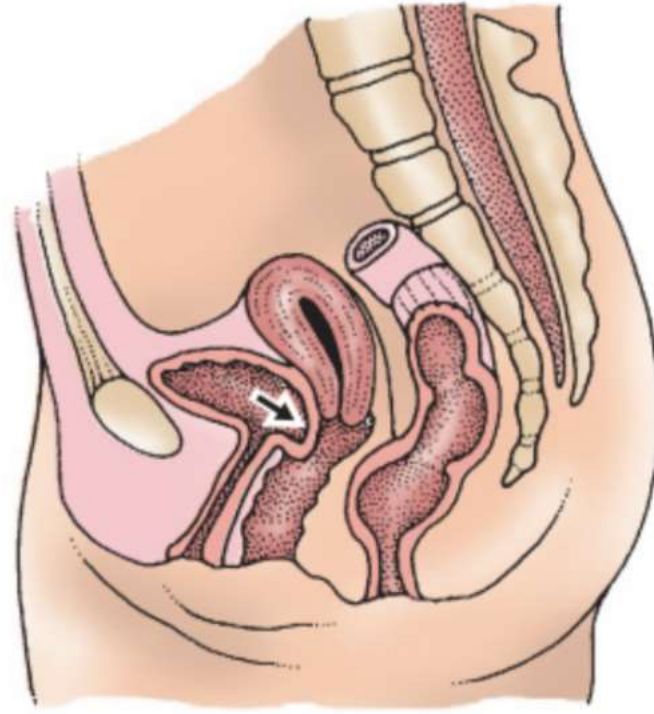
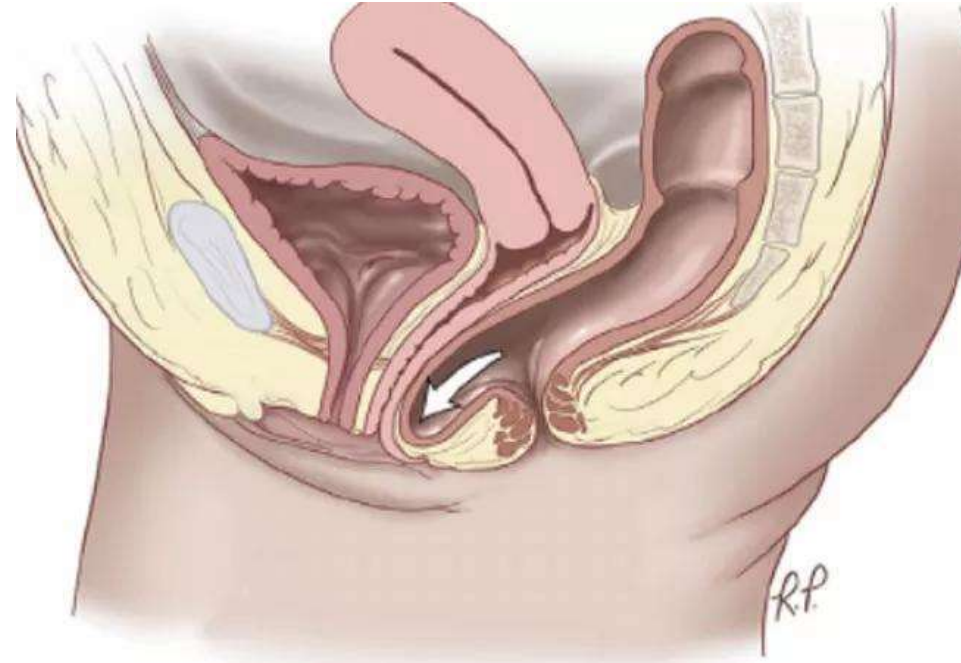


Fig. 6-28 Cystocele.

Term	Word Origin	Definition
dyspareunia دس باريونيا	<i>dys-</i> painful, abnormal <i>-pareunia</i> intercourse	Painful intercourse. الم اثناء العلاقة الحميمة
endometrial hyperplasia اندو متريال هايپر بليزيا	<i>endometri/o</i> endometrium <i>-al</i> pertaining to <i>hyper-</i> excessive <i>-plasia</i> formation, development	An excessive development of cells in the lining of the uterus; this condition is benign but can become malignant. تطور مفرط للخلايا في بطانة الرحم تكون حميدة وقد تصبح خبيثة
endometriosis اندو مترويسيس	<i>endometri/o</i> endometrium <i>-osis</i> abnormal condition	Condition in which the tissue that makes up the lining of the uterus, the endometrium, is found ectopically (outside the uterus); causes are unknown (Fig. 6-29). حالة يتم فيها العثور على الانسجة التي تتكون منها بطانة الرحم خارج الرحم
hematosalpinx هيماتو سالبينكس	<i>hemat/o</i> blood <i>-salpinx</i> fallopian tubes	Condition of blood in the fallopian tubes. حالة الدم في فالوب تيوب
hysteroptosis هيسترو بتوسيس	<i>hyster/o</i> uterus <i>-ptosis</i> drooping, sagging	Falling or sliding of the uterus from its normal location in the body. Also called uterine prolapse (Fig. 6-30). سقوط الرحم من موقعه الطبيعي في الجسم

menorrhagia مينو ريجيا	<i>men/o</i> menses <i>-rrhagia</i> bursting forth	Abnormally heavy or prolonged menstrual period; may be an indication of fibroids. الدورة الشهرية الثقيلة بشكل غيبي طبيعي او لفترات طويلة وقد يكون مؤشرا على الاورام الليفية
metrorrhagia مترو ريجيا	<i>metr/o</i> uterus <i>-rrhagia</i> bursting forth	Uterine bleeding other than that caused by menstruation. May be caused by uterine lesions. نزيف الرحم بخلاف ذلك الناجم عن الحيض وقد يكون سببها افات الرحم
mittelschmerz مثل شميرز		Pain during ovulation; midcycle pain. الم اثناء الاباضة في منتصف الدورة
oligomenorrhea اوليجو مينو ريا	<i>olig/o</i> scanty, few <i>men/o</i> menses <i>-rrhea</i> discharge, flow	Abnormally light or infrequent menstrual flow; menorrhea refers to the normal discharge of blood and tissue from the uterus. كميات الدم الي بتنزل في البيريود قليلة او انها كل 3 شهور تحدث مرة مثلا
ovarian cyst اوفيرين سيست	<i>ovari/o</i> ovary <i>-an</i> pertaining to	Benign, fluid-filled sac. Can be either a follicular cyst, which occurs when a follicle does not rupture at ovulation, or a cyst of the corpus luteum, caused when it does not continue its transformation (Fig. 6-31). كيس موجود بالمبيض
polymenorrhea بولي مينو ريا	<i>poly-</i> many <i>men/o</i> menses <i>-rrhea</i> discharge, flow	Abnormally frequent menstrual flow. تدفق الدورة الشهرية بشكل غير طبيعي
postmenopausal bleeding (PMB) بوست مونوبوزال بليدينج		Dysfunctional uterine bleeding (DUB) after menopause. May be due to fibroids or cancer. نزيف الرحم المختل بعد انقطاع الطمث وقد يكون بسبب الاورام الليفية او السرطان

Term	Word Origin	Definition
premenstrual syndrome (PMS) بري مينستروال سندروم	<i>pre-</i> before <i>menstru/o</i> menses <i>-al</i> pertaining to <i>syn-</i> together <i>-drome</i> run مجموعة امراض غير مفهومة جيدا التي تحدث لدى بعض النساء على اساس دوري الام الثدي والتهيج واحتباس السوائل الصداع	Poorly understood group of symptoms that occur in some women on a cyclic basis: Breast pain, irritability, fluid retention, headache, and lack of coordination are some of the symptoms.
rectocele ريكتو سيل	<i>rect/o</i> rectum <i>-cele</i> herniation, protrusion نتوء المستقيم في المهبل	A protrusion of the rectum into the vagina.

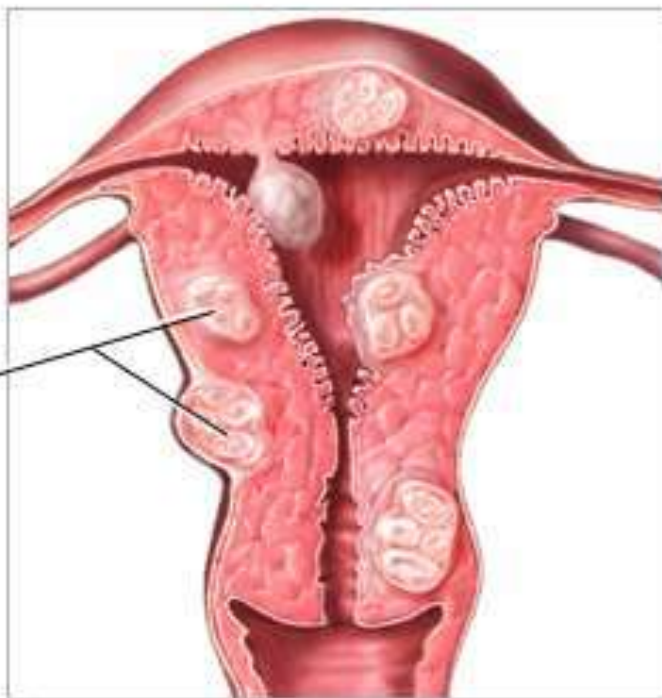


Terms Related to Benign Neoplasms (D06, D24, D25)

Term	Word Origin	Definition
cervical intraepithelial neoplasia (CIN) III	<i>cervic/o</i> cervix <i>-al</i> pertaining to <i>neo-</i> new <i>-plasia</i> formation, development	Also termed "cervical dysplasia," this abnormal cell growth may or may not develop into cancer. Grade III is the most severe.
fibroadenoma of the breast فيبرو ادينوما اوف ذا بريست	<i>fibr/o</i> fiber <i>aden/o</i> gland <i>-oma</i> tumor	Noncancerous breast tumors composed of fibrous and glandular tissue (Fig. 6-32). اورام الثدي غير السرطانية المكونة من الانسجة الليفية والغدية
leiomyoma of the uterus ليو ميوما اوف ذا يوتراس	<i>leiomy/o</i> smooth muscle <i>-oma</i> tumor	Also termed fibroids , these smooth muscle tumors of the uterus are usually nonpainful growths, which may be removed surgically (Fig. 6-33).

تسمى الاورام الليفية وعادة تكون اورام العضلات الملساء هذه نموا غير مؤلم والتي يمكن ازلتها جراحيا

Fibroid tumors
may occur in
various regions
of the uterus



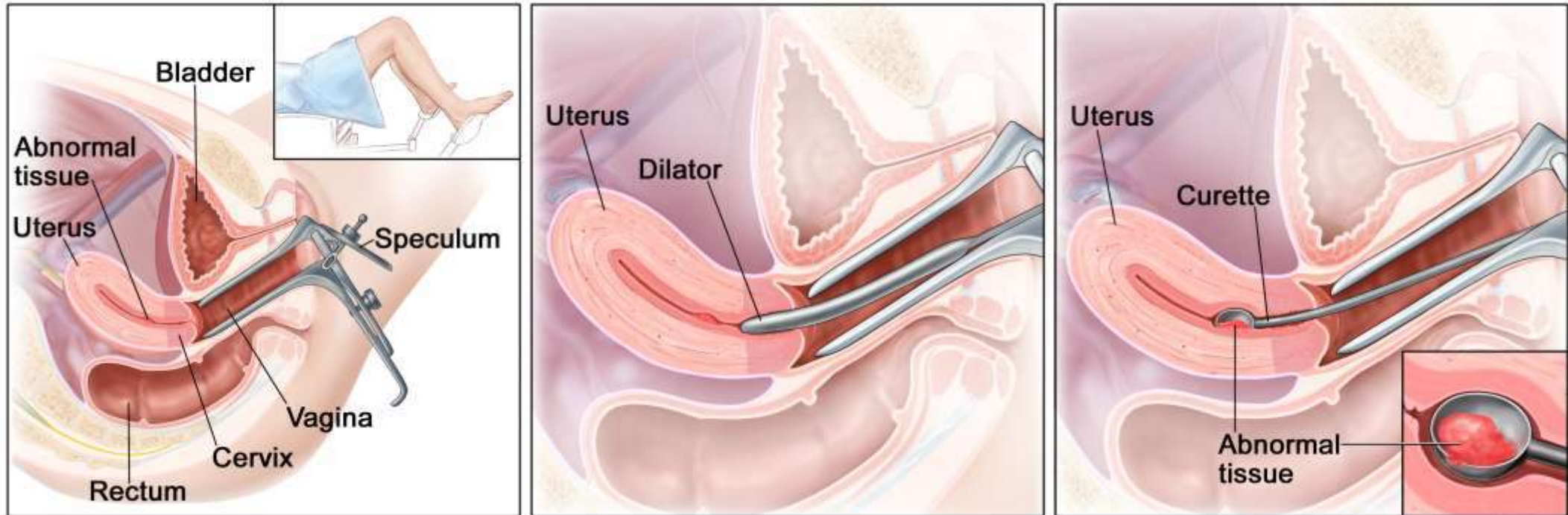
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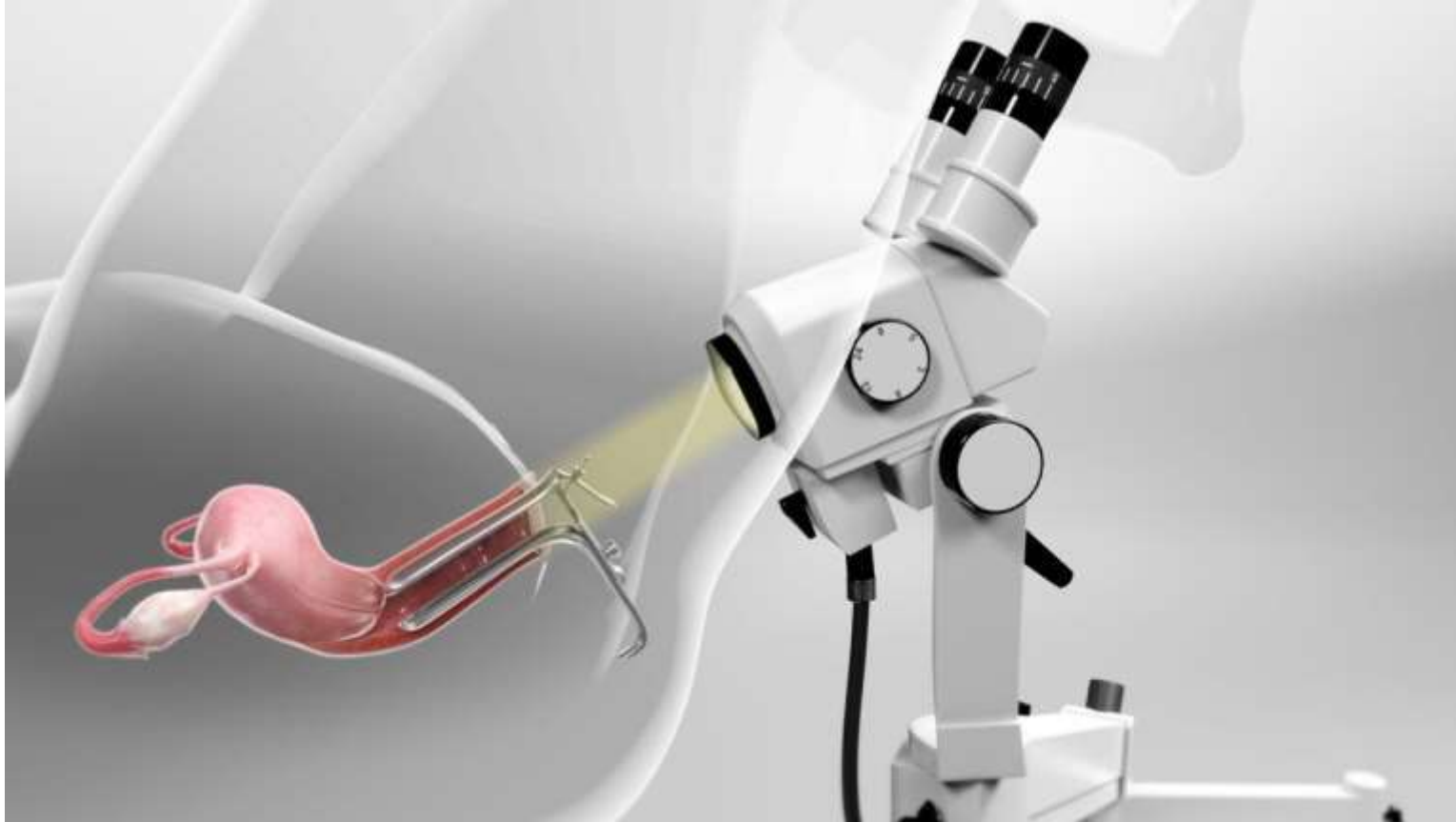
Fig. 6-33 Leiomyoma of the uterus.

Term	Word Origin	Definition
colposcopy كولوبسكوبي	<i>colp/o</i> vagina <i>-scopy</i> viewing	Endoscopic procedure used for a cervical/vaginal biopsy. The instrument used is called a colposcope (Fig. 6-35). اجراء بالمنظار يستخدم لممشاهدة المهبل
dilation and curettage (D & C) ديلتيشن و كوريتاج		Procedure involving widening (dilation) of the cervix until a curette, a sharp scraping tool, can be inserted to remove the lining of the uterus (curettage). Used to treat and diagnose conditions such as heavy menstrual bleeding, or to empty the uterus of the products of conception. الاجراء الذي تطوي علة توسيع او تمدد عنق الرحم حتى يمكن ادخال اداة لازالة داخل الرحم يستخدم لعلاج او تشخيص حالات مثل تضخم الدورة الشهرية الثقيلة او لافراغ رحم لانتاج الحمل
hymenotomy هاي مينوتومي	<i>hymen/o</i> hymen <i>-tomy</i> cutting	Incision of the hymen to enlarge the vaginal opening. بدي اعمل قطع لغشاء البكارة لانه مسكر بشكل مصمت
hysterectomy هيسترو اکتومي	<i>hyster/o</i> uterus <i>-ectomy</i> cutting out	Resection (removal) of the uterus; may be partial, pan- (all), or include other organs as well (e.g., total abdominal hysterectomy with a bilateral salpingo-oophorectomy [TAH-BSO]). The surgical approach is usually stated: whether it is laparoscopic, vaginal, or abdominal. ازالة الرحم

Dilatation and Curettage

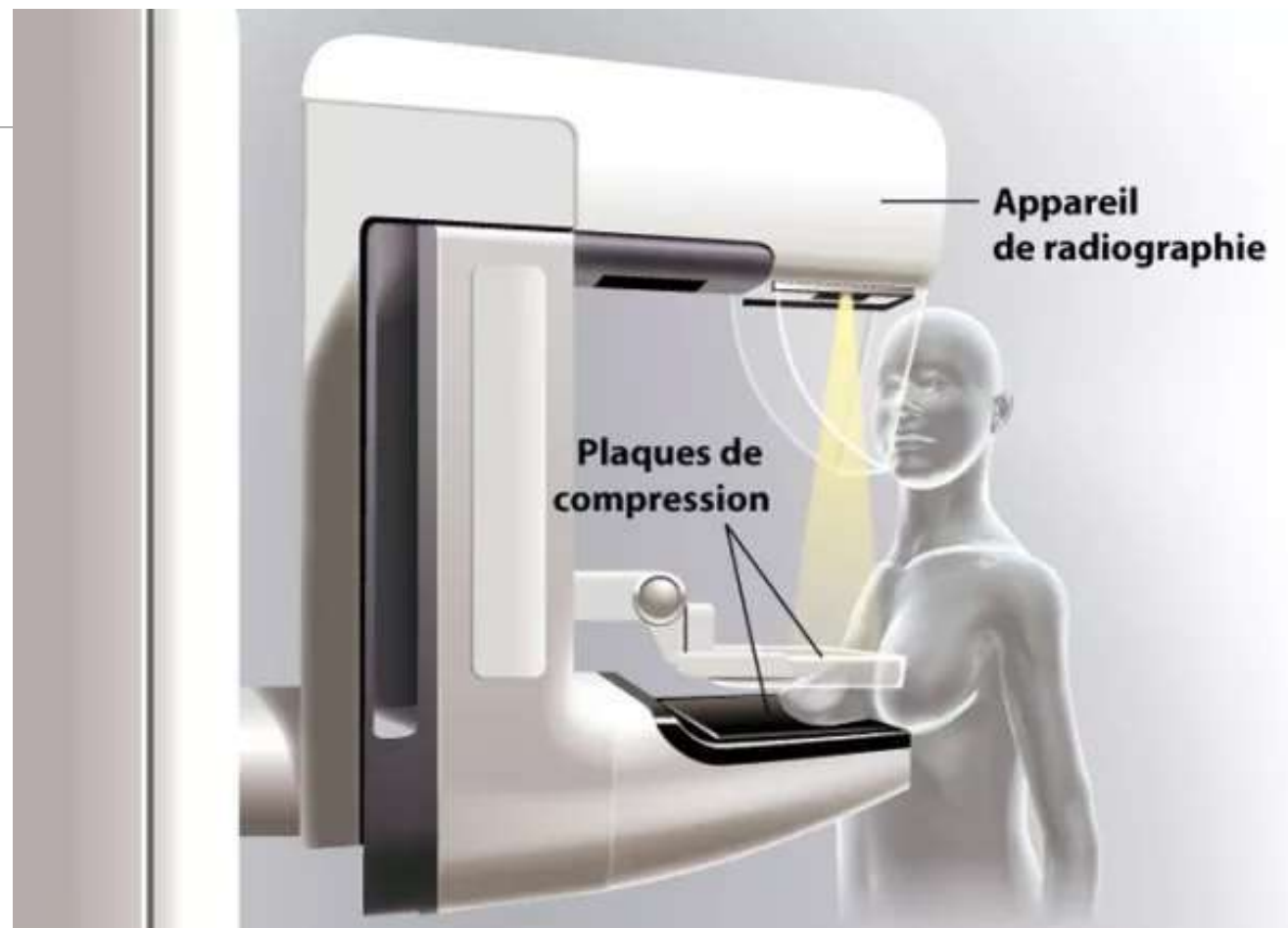


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hysteropexy هيسٽرو بڪسي	<i>hyster/o</i> uterus <i>-pexy</i> suspension	Suspension and fixation of a prolapsed uterus. تشبيٽ للرحم
hysterosalpingography (HSG) هيسٽرو سالبنجو جرافي	<i>hyster/o</i> uterus <i>salping/o</i> fallopian tube <i>-graphy</i> recording	X-ray procedure in which contrast medium is used to image the uterus and fallopian tubes (Fig. 6-36). تصوير للرحم والفالوب تيوب
mammography مامو جرافي	<i>mamm/o</i> breast <i>-graphy</i> recording	Imaging technique (radiography) for the early detection of breast cancer. The record produced is called a mammogram (see Fig. 6-32). تصوير للثدي
mammoplasty مامو بلاستي	<i>mamm/o</i> breast <i>-plasty</i> surgically forming	Surgical or cosmetic repair of the breast. Options may include augmentation, to increase the size of the breasts, or reduction, to reduce the size of the breasts. عملية تجميل للثدي
mastectomy ماستو اڪتومي	<i>mast/o</i> breast <i>-ectomy</i> cutting out	Removal of the breast; may be unilateral or bilateral. قطع كل او جزء من الثدي
mastopexy ماستو بڪسي	<i>mast/o</i> breast <i>-pexy</i> suspension	Reconstructive procedure to lift and fixate the breasts. تشبيٽ الثدي





Term	Word Origin	Definition
oophorectomy أوفور ريكتومي	<i>oophor/o</i> ovary <i>-ectomy</i> cutting out	Removal of an ovary; may be unilateral or bilateral.
vaginotomy فجائيناتومي	<i>vagin/o</i> vagina <i>-tomy</i> cutting	An incision of the vagina. May be incidental (unintentional) during a cesarean section. Also call a colpotomy .
salpingolysis سالبنجو لايسس	<i>salping/o</i> fallopian tubes <i>-lysis</i> breaking down	Removal of the adhesions in the fallopian tubes to reestablish patency, with the goal of fertility.
tubal ligation تيوبل لايجيشن	<i>tub/o</i> tube <i>-al</i> pertaining to <i>ligation</i> tying	Sterilization procedure in which the fallopian tubes are cut, ligated (tied), and cauterized to prevent released ova from being fertilized by spermatozoa (Fig. 6-38).

في حالة الفيميل بدهاش تولد

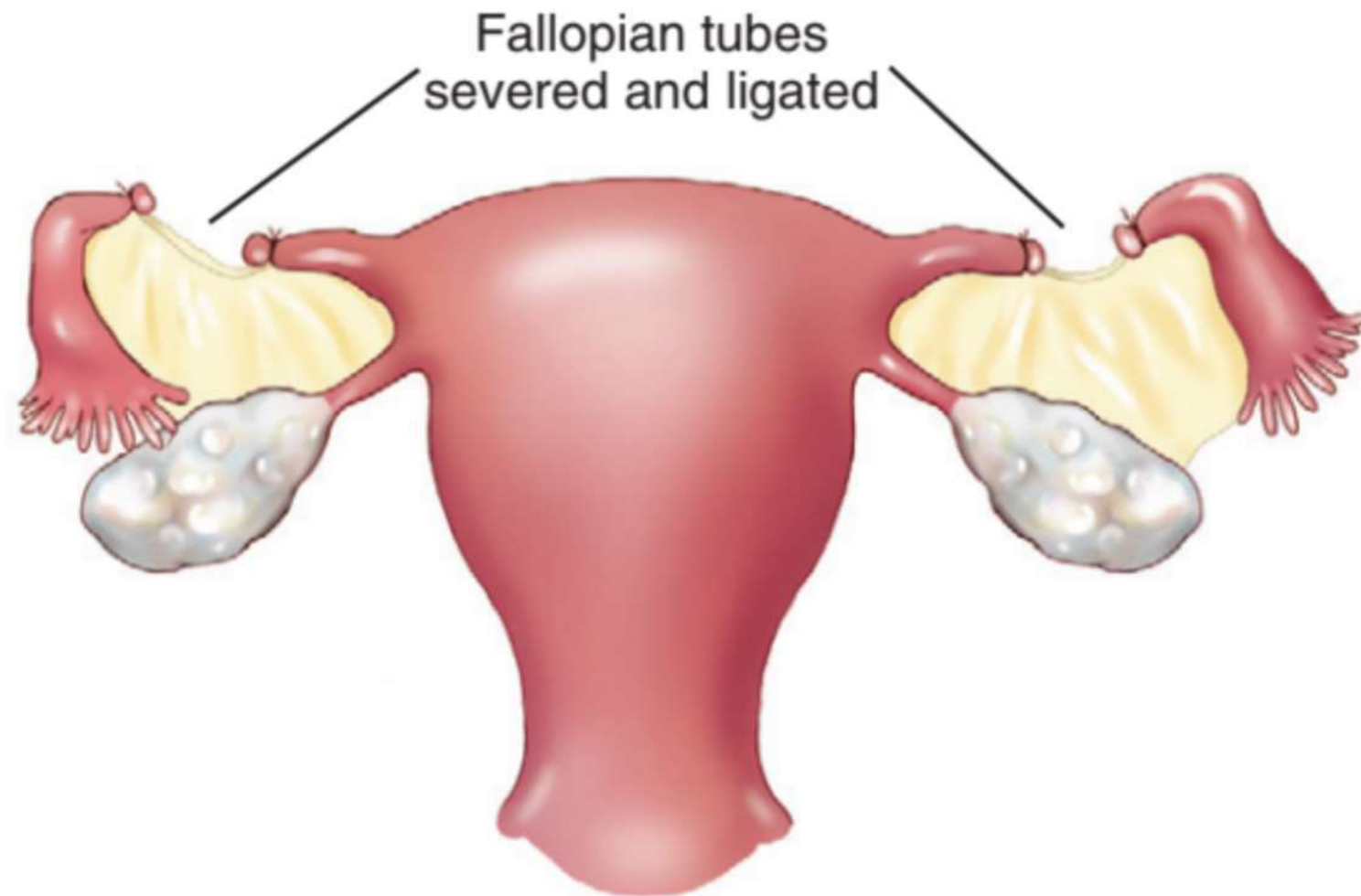


Fig. 6-38 Tubal ligation.

