

Respiratory System

Respiratory system terms

Rhin/o	Nose	Rhinitis, rhinorrhea (inflammation of and “runny” nose)
Laryng/o	Larynx, “voice box”*	Laryngotomy, Laryngectomy (cutting into, surgically removing the larynx)
Trache/o	Trachea, “windpipe”	Tracheotomy, tracheostomy (temporary and permanent openings)
Bronch/o	Lung air passageways	Bronchoscopy (looking into the bronchi)
Pne/u, -pnea	Breath, air, lung	Tachypnea, dyspnea, apnea (accelerated, difficult/painful, cessation of breathing)
Pulmo/o	Lung	Pulmonary artery
-ptysis	Spitting (coughing)	Hemoptysis (spitting or coughing up blood from lungs)
-plasty	Reconstruction	Rhinoplasty (surgical reconstruction of nose)

***Adam’s apple** – Everyone is familiar with the bulge in the front of the neck we call an ‘Adam’s apple.’ This structure, termed the **laryngeal prominence**, is a cartilage in the ‘voice box’ or larynx. Testosterone, the male hormone, enlarges the larynx in males which also lengthens the vocal cords lowering the voice at puberty. Folklore has it that the “forbidden fruit” offered by Eve got stuck in

Adam's throat. The fruit is not identified in Genesis. However, in art it is traditionally portrayed as an apple. Why? The forbidden fruit was from the tree of knowledge of good and evil. The Latin word for evil, malum, also means apple. The Latin root is found in such words as malady and malign

Respiratory System Diseases

Pneumoconiosis – literally, “an abnormal condition of dust in the lungs.” A generic name for conditions where toxic particles become trapped in the lungs and cause symptoms and disability such a “black lung” or “miner’s lung” disease. Terms specific to the particulate matter may be given such as asbestosis.



Epistaxis – want a fancier name for a “nosebleed?” You got it!

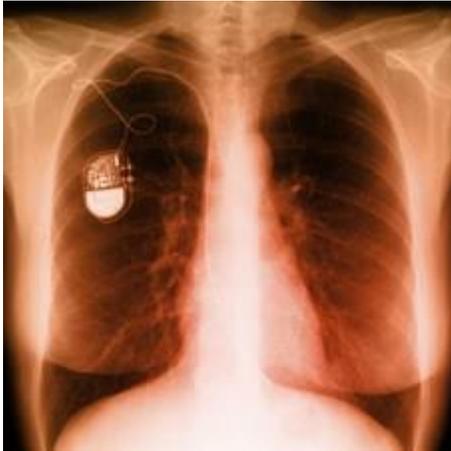
Cystic fibrosis – an inheritable disease that affects not only the lungs but other systems producing mucous such as the digestive system. Patients suffer frequent lung infections that are hard to treat because mucous is thick and sluggish and result in increased scarring (fibrosis) of the lungs. They also take multiple enzyme pills because of digestive abnormalities related to abnormal mucous production.

Emphysema (COPD) – Chronic Obstructive Pulmonary Disease, of which emphysema is one of, results in progressive destruction of the air sacs in the lungs and loss of respiratory membrane for oxygen exchange. The bane of long term smokers.

Atelectasis – a collapsed lung. Literally, “an imperfect expansion” in Greek.

Respiratory System Procedures

Pulmonologist – a physician specializing in diseases of the lungs. Patients needing surgery are referred to a general surgeon.



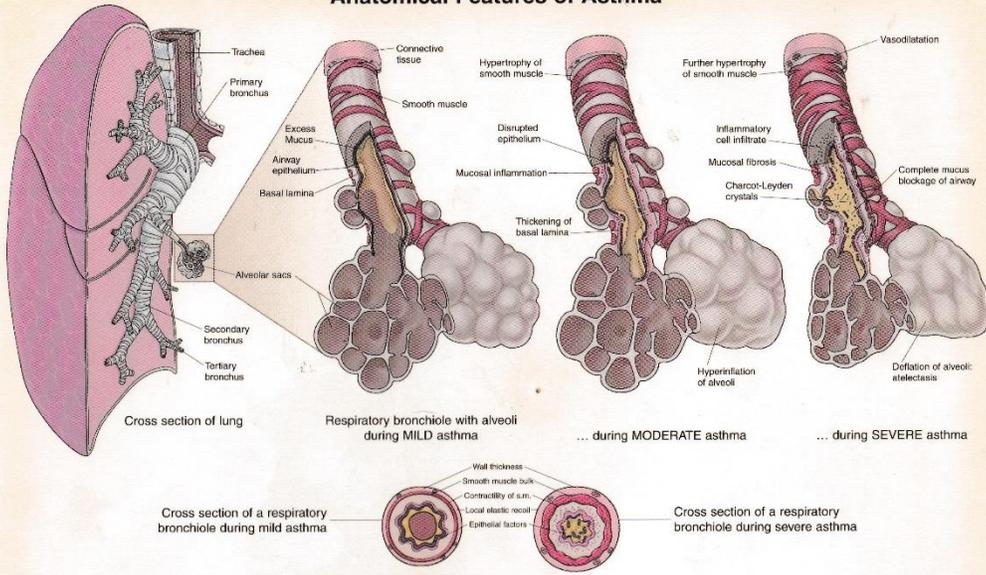
Respiratory Therapist – a specially trained technician who administers, among other treatments, inhalation therapy to patients with lung disease.

Pulmonary angiography – special X-rays of the vessels of the lungs.

Laryngoscopy – visual examination of the larynx.

Endotracheal intubation – passing a special air-tube into the trachea so oxygen can be reliably supplied directly to the lungs without risk of inhaling vomit from the stomach. Typically done for surgery or whenever general anesthesia is administered among other situations where the patient's airway must be secured

Anatomical Features of Asthma



Pulmicort ²⁰⁰ _{mcg}
Turbuhaler
(budesonide inhalation powder)

For adults and children with asthma 6 years of age and older.

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There may be anatomical differences between the lungs of infants/young children and adults that are not depicted in this model.

PULMICORT TURBUHALER and PULMICORT RESPULES are not bronchodilators and should NOT be used to treat asthma attacks.

CAUTION: Adrenal insufficiency may occur when transferring patients from systemic steroids (see WARNINGS in accompanying full Prescribing Information).

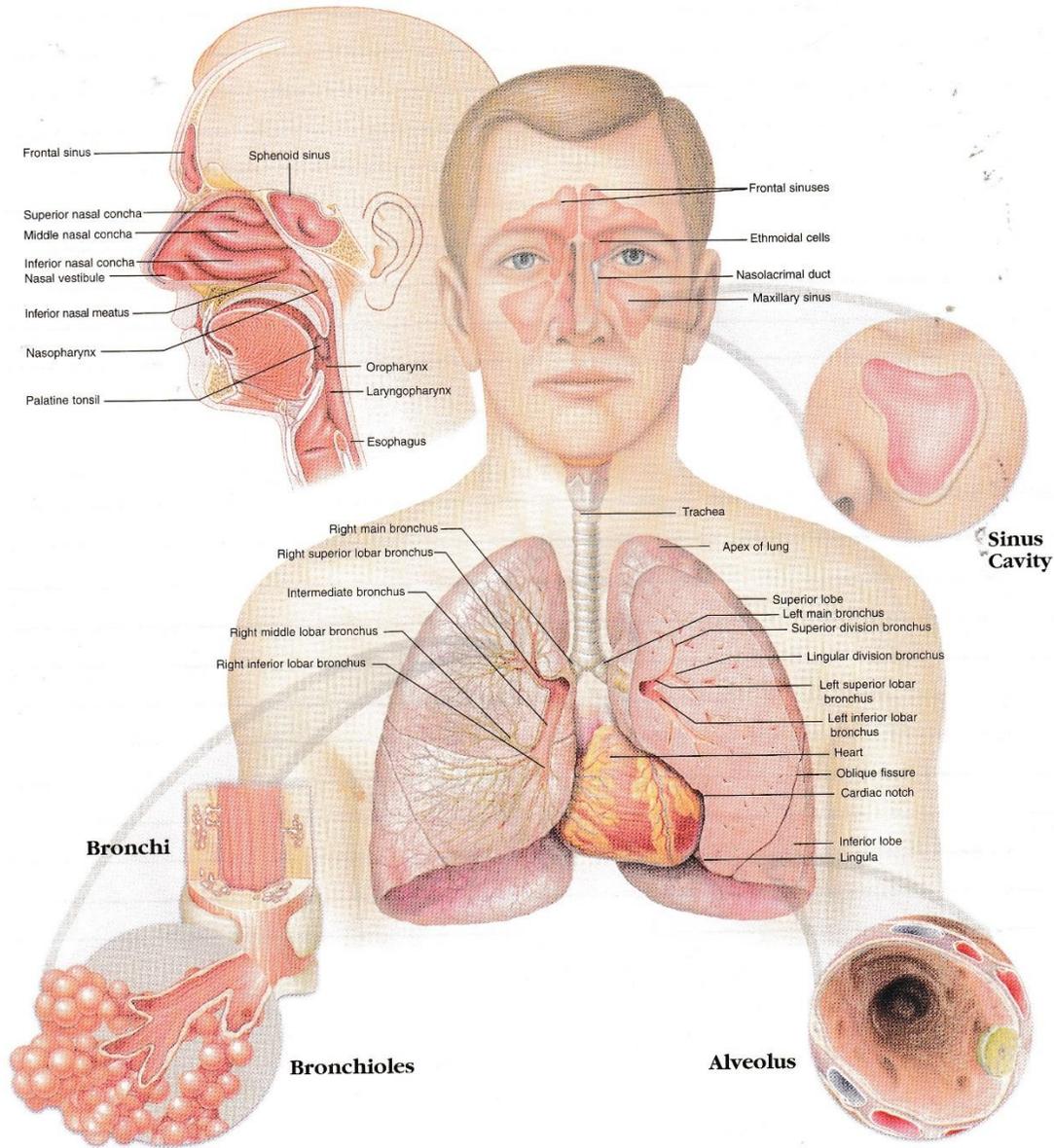
Pulmicort ^{0.25 mg}
RESPULES
(budesonide inhalation suspension)

For children with asthma 12 months to 6 years of age.

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Understanding The Respiratory Tract



FAQs

(frequently asked questions)

about "Surgical Site Infections"

What is a Surgical Site Infection (SSI)?

A surgical site infection is an infection that occurs after surgery in the part of the body where the surgery took place. Most patients who have surgery do not develop an infection. However, infections develop in about 1 to 3 out of every 100 patients who have surgery.

Some of the common symptoms of a surgical site infection are:

- Expanding redness and increasing warmth and pain around the area where you had surgery
- Drainage of cloudy fluid from your surgical wound
- Fever

Can SSIs be treated?

Yes. Most surgical site infections can be treated with antibiotics. The antibiotic given to you depends on the bacteria (germs) causing the infection. Sometimes patients with SSIs also need another surgery to treat the infection.

What are some of the things that hospitals are doing to prevent SSIs?

To prevent SSIs, doctors, nurses, and other healthcare providers:

- Clean their hands and arms up to their elbows with an antiseptic agent just before the surgery.
- Clean their hands with soap and water or an alcohol-based hand rub before and after caring for each patient.
- May remove some of your hair immediately before your surgery using electric clippers if the hair is in the same area where the procedure will occur. They should not shave you with a razor.
- Wear special hair covers, masks, gowns, and gloves during surgery to keep the surgery area clean.
- Give you antibiotics before your surgery starts if needed. In most cases, you should get antibiotics within 60 minutes before the surgery starts and the antibiotics should be stopped within 24 hours after surgery.
- Clean the skin at the site of your surgery with a special soap that kills germs.

What can I do to help prevent SSIs?

Before your surgery:

- Tell your doctor about other medical and dental problems you may have. Health problems such as allergies, diabetes, and obesity could affect your surgery and your treatment.

- Quit smoking 2 - 3 weeks before surgery. Patients who smoke get more infections. Talk to your doctor about how you can quit before your surgery.
- Do not shave near where you will have surgery. Shaving with a razor can irritate your skin and make it easier to develop an infection.

At the time of your surgery:

- Speak up if someone tries to shave you with a razor before surgery. Ask why you need to be shaved and talk with your surgeon if you have any concerns.
- Ask if you will get antibiotics before surgery.

After your surgery:

- Make sure that your healthcare providers clean their hands before examining you, either with soap and water or an alcohol-based hand rub.

If you do not see your providers clean their hands, please ask them to do so.

- Wearing gloves provides another measure of protection
- Family and friends who visit you should not touch the surgical wound or dressings.
- Family and friends should clean their hands with soap and water or an alcohol-based hand rub before and after visiting you. If you do not see them clean their hands, ask them to clean their hands.

What do I need to do when I go home from the hospital?

- Before you go home, your doctor or nurse should explain everything you need to know about taking care of your wound. Make sure you understand how to care for your wound before you leave the hospital.
- Always clean your hands before and after caring for your wound.
- Before you go home, make sure you know who to contact if you have questions or problems after you get home.
- If you have any symptoms of an infection, such as expanding redness and increasing warmth and pain at the surgery site, drainage, or fever, call your doctor immediately.

If you have additional questions, please ask your doctor or nurse.



Digestive System

Digestive system terms

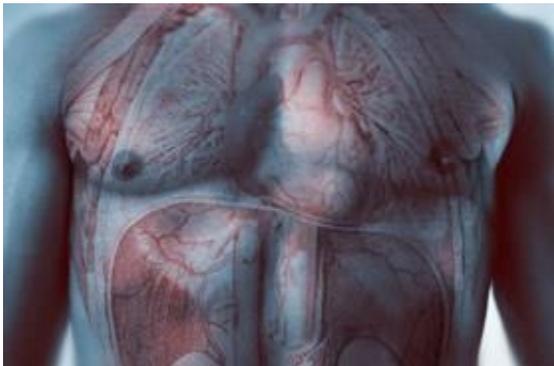
Gastr/o	Stomach	Gastritis, Gastrectomy
Hepat/o	Liver	Hepatitis (inflammation of), hepatoma (tumor of)
Chol/e	Gall, bile	Cholecystitis, cholecystectomy (inflammation of, removal of gallbladder)
Cyst/o	Bladder, sac	(see above)
Emes/o	Vomit	Emesis (vomiting), emetic (stimulating vomiting), antiemetic (stopping vomiting)
Lith/o	Stone	Cholelithotomy (removal of gall stones)
Lapar/o	Abdominal wall	Laparotomy (cutting into the abdomen)
-centesis	To puncture	Abdominocentesis (puncturing and draining)
-tripsy	To crush	Cholelithotripsy (smashing gall stones with sound waves)
-rrhea	Flow, discharge	Diarrhea

-iasis
(-osis)

Abnormal
condition

Cholelithiasis (presence of gall stones causing symptoms)

Digestive System Diseases



Gastroesophageal Reflux Disease (GERD) –

Severe “heartburn” in laymen’s language. Weakness of the valve between the esophagus and stomach may allow stomach acid to reflux (regurgitate, backup) into the esophagus and irritate and inflame the lining. This results in chest pain which can mimic that of angina (pain of cardiac ischemia or an MI).

Jaundice – **Literally means “yellow” in French. Yellowing of the skin and whites of** the eyes from a backup of bile metabolic by-products from the blood into body tissues. May result from blockage of the ducts draining bile from the liver into the intestines or excessive breakdown of red blood cells. Hemoglobin from destroyed RBCs is broken down, and in part, ends up in bile secretions.

Diverticulosis/diverticulitis – Small pouches may form along the walls of the large intestine called diverticuli which if symptomatic, causing discomfort to the patient, is called diverticulosis. These abnormal outpocketings may collect and not be able to empty fecal material which can lead to inflammation, diverticulitis.

Cirrhosis – **Literally, “orange-yellow” in Greek. A degenerative disease of the** liver that often develops in chronic alcoholics, but can have other causes. The name refers to the gross appearance of the organ.

Portal hypertension – A potential complication of chronic alcoholism resulting in liver damage and obstruction of venous blood flow through the liver. The rising blood pressure in the veins between the gastrointestinal tract and liver causes engorgement of veins around the umbilicus (navel). The characteristic radiating **pattern of veins is called a “caput medusae” (head of Medusa). Medusa was the “snake-haired lady” in Greek mythology.**

Esophageal varices – bulging, engorged veins in the walls of the esophagus are often a complication of chronic alcoholism (see portal hypertension). The thin-walled, swollen veins are at risk of tearing resulting in severe, possibly fatal, bleeding.

Dysphagia – Difficulty swallowing. May be related to GERD (see above), esophageal tumor or other causes.

Crohn's Disease – a chronic inflammatory disease primarily of the bowel. Typical symptoms are abdominal pain, weight loss, diarrhea. There may also be rectal bleeding that can lead to anemia. Special X-rays and tests are needed to **differentiate Crohn's from other diseases with similar symptoms.**

Peritonitis – Inflammation of the lining of the abdominal cavity. Before antibiotics, people would die from peritonitis if an inflamed appendix burst. Indications of **peritonitis are called “peritoneal signs”:** tender abdomen, rebound pain (pain when manual pressure released from examining abdomen), board-like rigidity of abdominal muscles, no bowel sounds (gurgles). The peritoneal membrane is very sensitive to exposure to foreign substances. Contact with blood, bile, urine, pus will cause peritoneal sign

Digestive System

Procedures/specialists

Gastroenterologist – a physician specializing in diseases of the digestive system including esophagus, stomach and intestines. These specialists do not do surgery. Patients needing surgery are referred to a general surgeon.

Proctologist – a physician specializing in diseases of the rectum and anus. Proctology is a surgical subspecialty.

Guaiac test (Hemoccult, Fecult) – a special chemical test to identify blood in the stool (feces). Blood in the stool may have many causes including cancer and hemorrhoids.



Upper GI series – a series of X-rays of the esophagus and stomach and small intestines having the **patient swallow a “milkshake” of barium**. The element barium is opaque, i.e. blocks , X-rays. This procedure may be used to identify problems with swallowing, stomach ulcers, twisting of the small intestines.

Lower GI series – a series of X-rays using a barium enema to show the large intestine and rectum. This procedure can be used to identify problems such as diverticulitis/diverticulosis, and tumors.

Endoscopy – use of a flexible fiberoptic instrument attached to a video camera that can be used to directly visualize the esophagus, stomach and large bowel. Special names may be used for each area explored such as colonoscopy.

Ultrasonography (ultrasound) – a procedure using high frequency sound waves to visualize internal organs. Primarily used to visualize abdominal and pelvic organs, such as the pregnant uterus.

Digestive System Medical Record

You should be getting pretty good at making sense of medical terminology. But, nothing beats practical application! Following is an abstract of a simulated **patient’s** medical record. Note words in italics. Take them apart. Look for the “**root**” meaning. **Read the record and answer the questions that follow to yourself. If you can’t think of the meaning, hover your cursor over the word for a tip.**

A 48 year old male complains of abdominal discomfort after meals, especially, high fat meals. At those times he also has aching in his right shoulder and back. An *ultrasound* of the upper abdomen revealed *cholelithiasis*. A consult with a *gastroenterologist* determined that *cholelithotripsy* was considered but it was

decided that a [laparoscopic cholecystectomy](#) would be the first procedure attempted. If complications were encountered then an [open cholecystectomy](#) would be performed.

Significant medical history: patient had a [coronary angiography](#) performed at age 46 following suspected [myocardial infarct](#).

- **What is the diagnosis (the patient's current medical problem)?**
- Did the procedure performed to aid in the diagnosis involve use of X-rays?
- Was a specialist appropriate to the diagnosis consulted?
- What treatments were considered?
- **What significant event was in the patient's medical history?**
- What procedure was performed in **the patient's medical history?**

In plain English

A 48-year-old male complains of abdominal discomfort after meals, especially, high fat meals. At those times he also has aching in his right shoulder and back. A procedure using high frequency sound waves to image the upper abdomen revealed stones in the gallbladder. A consult with a specialist in diseases of the digestive tract determined that crushing the gallbladder stones with sound waves was considered but it was decided that a removal of the gallbladder using a scope and instruments inserted into the abdominal wall would be the first procedure attempted. If complications were encountered then opening up the abdomen and removing the gallbladder would be performed.

Significant medical history: The patient **had a heart attack**. **The patient's heart** arteries were imaged by injecting a dye opaque to X-rays into an artery to show area of blockage of blood flow to heart muscle.

Surprised at how much you understood? I'm not!

Before taking the quiz, you may want to **check back to "Basics" and review the** word stems for mouth, tongue, gums, stomach, small and large intestines and liver.