



SNS COLLEGE OF ALLIED HEALTH SCIENCES
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DEPARTMENT OF PHYSICIAN ASSISTANT

COURSE NAME: PULMONOLOGY

TOPIC – UPPER AIRWAY DISEASES

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INTRODUCTION



- **Upper airway diseases** refer to a group of conditions that affect the structures that facilitate breathing and swallowing, such as the nasal cavity, pharynx, and larynx.
- These diseases can have a significant impact on an individual's respiratory and overall health, causing symptoms such as congestion, coughing, difficulty breathing, and discomfort.
- Understanding these diseases is crucial for early diagnosis, appropriate treatment, and prevention of complications.

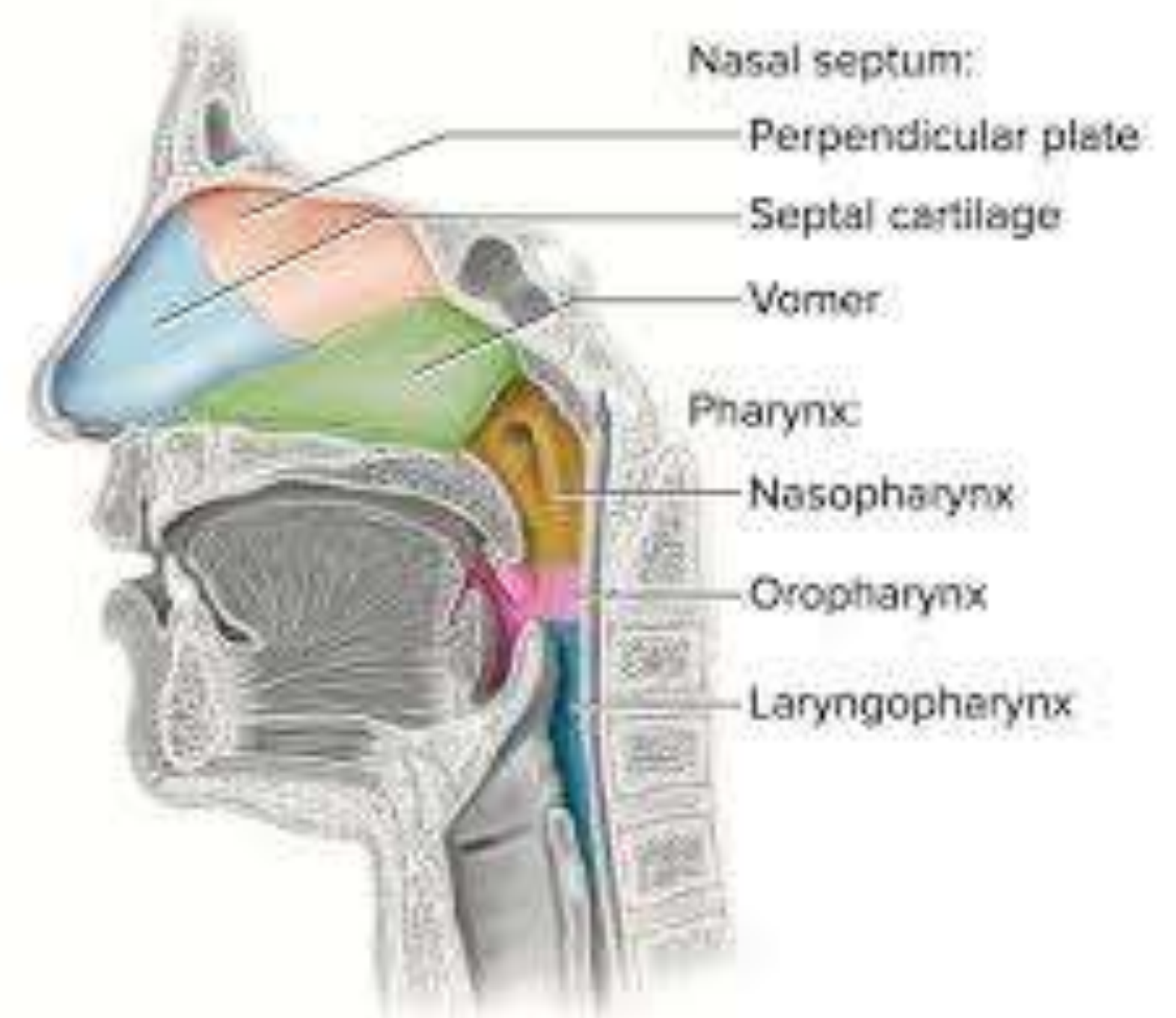


ANATOMY OF UPPER AIRWAY DISEASES



1. Nose: The nose is the entry point for air into the respiratory system. It is lined with tiny hairs and mucous membranes that filter out dust and other particles from the air. The nasal cavity also helps to warm and humidify the air before it enters the lungs.

2. Pharynx: The pharynx, also known as the throat, is a muscular tube that connects the nose and mouth to the esophagus and larynx. It serves as a passageway for both air and food. During swallowing, the pharynx contracts to push food towards the esophagus while preventing food from entering the airway.



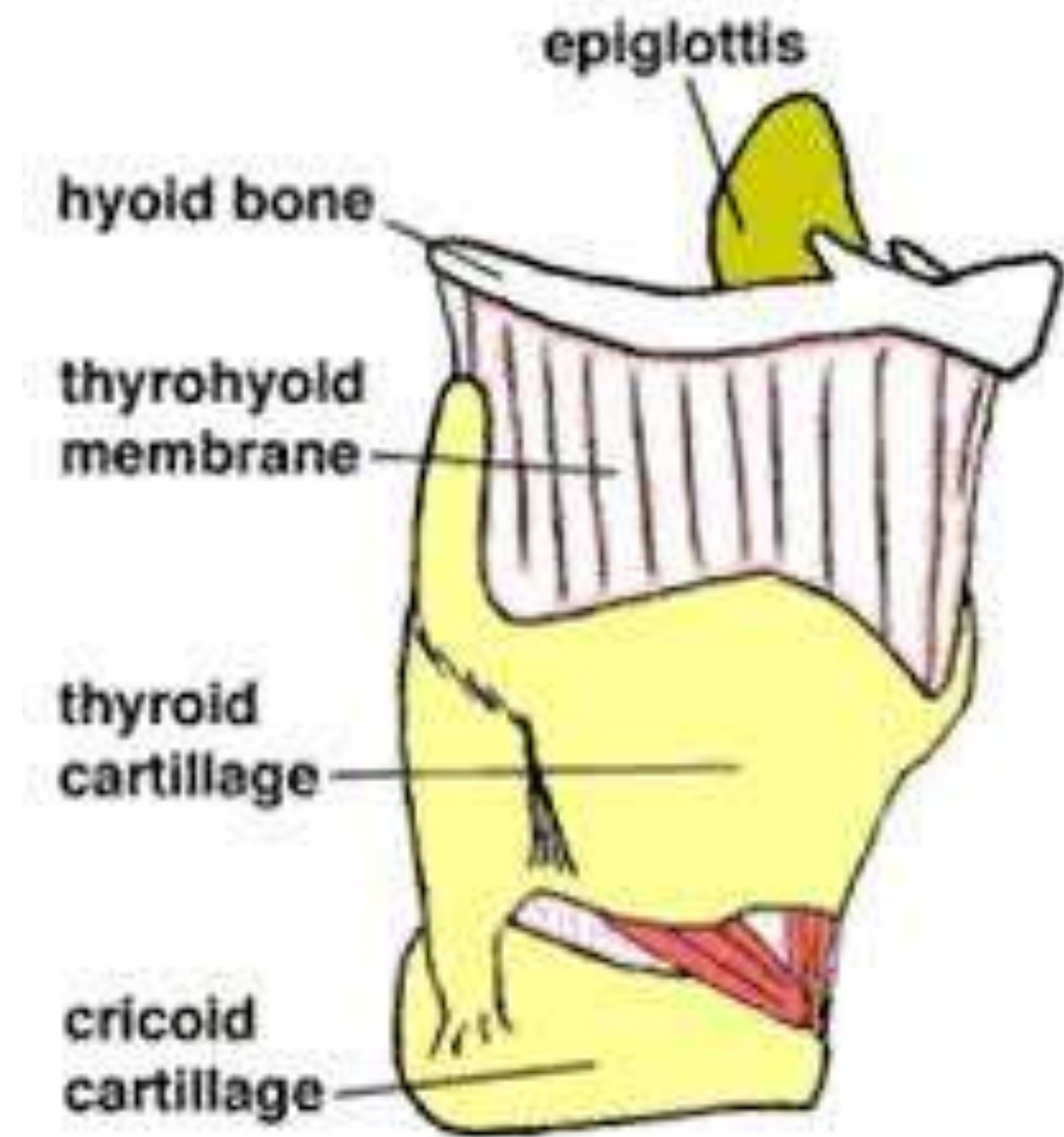


ANATOMY OF UPPER AIRWAY DISEASES



3. Larynx: The larynx, also known as the voice box, is located at the top of the trachea (windpipe). It contains the vocal cords, which vibrate to produce sound during speech. The larynx also contains cartilages that help to protect the airway during swallowing and prevent food from entering it.

4. Epiglottis: The epiglottis is a flap of cartilage located at the back of the tongue that covers the larynx during swallowing to prevent food from entering the airway. It also helps to prevent inhalation of liquids or foreign objects into the lungs.





RHINITIS



Rhinitis: Inflammation of the nasal mucosa

Causes:

- - Allergic: Triggered by allergens such as pollen, dust mites, or pet dander
- - Non-allergic (vasomotor): Not caused by allergies but may be triggered by factors such as irritants, changes in temperature or humidity, or hormonal changes

Symptoms:

- - Runny nose
- - Congestion
- - Sneezing
- - Postnasal drip
- - Itching and irritation in the nose



RHINITIS



Treatment options:

- - Antihistamines: Reduce allergy symptoms by blocking histamine, a chemical released during an allergic reaction that causes inflammation and other symptoms
- - Nasal steroids: Reduce inflammation and swelling in the nasal passages, which can help relieve congestion and other symptoms
- - Decongestants: Help to shrink swollen nasal passages, which can help relieve congestion and improve breathing
- - Saline nasal rinses: Help to clear out mucus and irritants from the nose, which can help relieve symptoms and prevent infection
- - Allergy shots (immunotherapy): May be recommended for people with severe allergies to help build up immunity over time.



SINUSITIS



Sinusitis-

Inflammation or infection of the sinuses, which are air-filled spaces located in the bones around the nose.

Causes:

Viruses, bacteria, or fungi can cause sinusitis. Common viruses that cause sinusitis include the common cold virus, flu virus, and rhinovirus. Bacterial infections, such as *Streptococcus pneumoniae* or *Haemophilus influenzae*, can also cause sinusitis. Fungal infections are less common but can occur in people with weakened immune systems.



SINUSITIS



Symptoms:

Facial pain or pressure, nasal congestion or discharge (which may be thick, yellow, or green), postnasal drip, reduced sense of smell, and cough.

Treatment:

Antibiotics may be prescribed for bacterial infections. Nasal saline irrigation can help clear mucus and relieve symptoms. Decongestants may be recommended to relieve nasal congestion. In severe cases, surgery may be necessary to remove blockages or drain infected sinuses. It's important to consult a healthcare provider for proper diagnosis and treatment of sinusitis.



TONSILLITIS



Definition: Inflammation of the tonsils, which are lymphoid tissue located in the back of the throat

Causes:

Viral or bacterial infections, such as streptococcus pyogenes (strep throat) or Epstein-Barr virus (EBV)

Symptoms:

Sore throat, difficulty swallowing, fever, swollen lymph nodes in the neck, and bad breath

Treatment:

Antibiotics for bacterial infections (such as penicillin or amoxicillin), pain relievers, and rest to allow the tonsils to heal



ADENOIDITIS



Definition:

Inflammation of the adenoids, which are lymphoid tissue located behind the nasal cavity and above the soft palate

Causes:

Viral or bacterial infections, such as adenovirus or strep bacteria

Symptoms:

Chronic nasal congestion, snoring, mouth breathing, ear infections, and sleep apnea (in severe cases)

Treatment:

Antibiotics for bacterial infections (such as amoxicillin), nasal irrigation to clear mucus, and surgical removal of the adenoids (adenoidectomy) for chronic or recurrent cases that cause significant symptoms or complications.



Laryngitis



Definition: Inflammation of the larynx (voice box) that causes hoarseness or loss of voice

Causes:

- Viral infections (e.g., cold, flu)
- Bacterial infections (e.g., strep throat)
- Vocal cord dysfunction (e.g., overuse, strain)

Symptoms:

- Hoarseness or loss of voice
- Rough or scratchy voice
- Pain or discomfort in the throat or neck



Laryngitis



Treatment:

- Voice rest and hydration for viral cases to allow the vocal cords to heal
- Antibiotics for bacterial infections, such as strep throat
- Speech therapy for vocal cord dysfunction cases to learn techniques to prevent overuse and strain on the vocal cords



Epiglottitis (Acute Supraglottitis)



DEFINITION:

Epiglottitis, also known as acute supraglottitis, is a medical emergency characterized by sudden onset of severe sore throat, difficulty breathing or swallowing, and drooling due to airway obstruction by swollen epiglottis or foreign body aspiration material.

CAUSES:

Bacterial infection with *Haemophilus influenzae* type b (Hib) or other bacteria (in rare cases) or foreign body aspiration (in children) can cause epiglottitis/acute supraglottitis.



Epiglottitis (Acute Supraglottitis)



SYMPTOMS:

- Sudden onset of severe sore throat, difficulty breathing or swallowing, and drooling due to airway obstruction by swollen epiglottis or foreign body aspiration material.
- Fever, chills, and malaise may also be present.

TREATMENT:

- Emergency treatment options include intubation or tracheostomy for airway management due to severe airway obstruction or risk of respiratory failure.
- Antibiotics may also be administered for bacterial infection cases.
- Close monitoring and supportive care are essential in managing patients with epiglottitis/acute supraglottitis.



THANK YOU