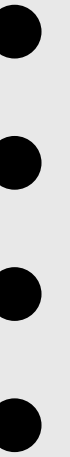


Introduction & Understanding the Structure  
of ENT for 4<sup>th</sup> year medical students



# introduction to ENT



# **your lecturer**

## Dr. Islam Alzayadneh



**MD University of Jordan- Amman 2012**

**Otolaryngology residency – Jordan University Hospital- Amman 2018**

**Jordanian Board of Otolaryngology – Jordanian medical council 2018**

**Royal college Membership and Diploma of ORL-HNS – UK - 2019**

**FRCSc (Facial plastic surgery) – University of Toronto – Toronto – Canada (2020-2023).**



# contents



×

**01**

Understanding delivery  
of basic ENT services  
as part of  
Comprehensive  
Primary Health Care

×

**02**

To know more about  
The Newborn  
Hearing Screening  
(NHS) program

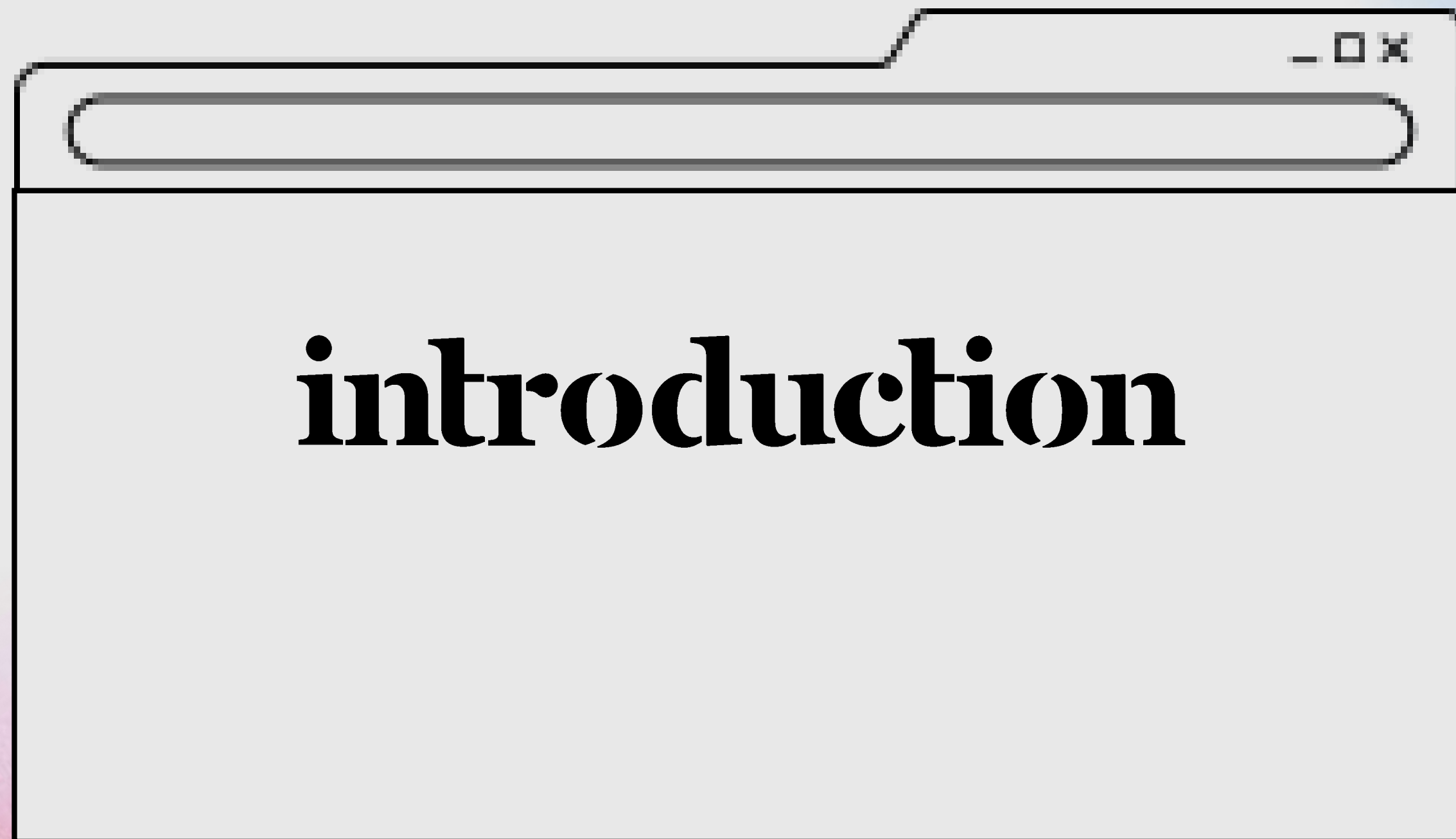
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**03**

To understand the  
basic structure of  
the ear, nose and  
its function



Introduction



01



# introduction



Problems related to Ear, Nose, and Throat(ENT) constitute the bulk of patients visiting the OPD.



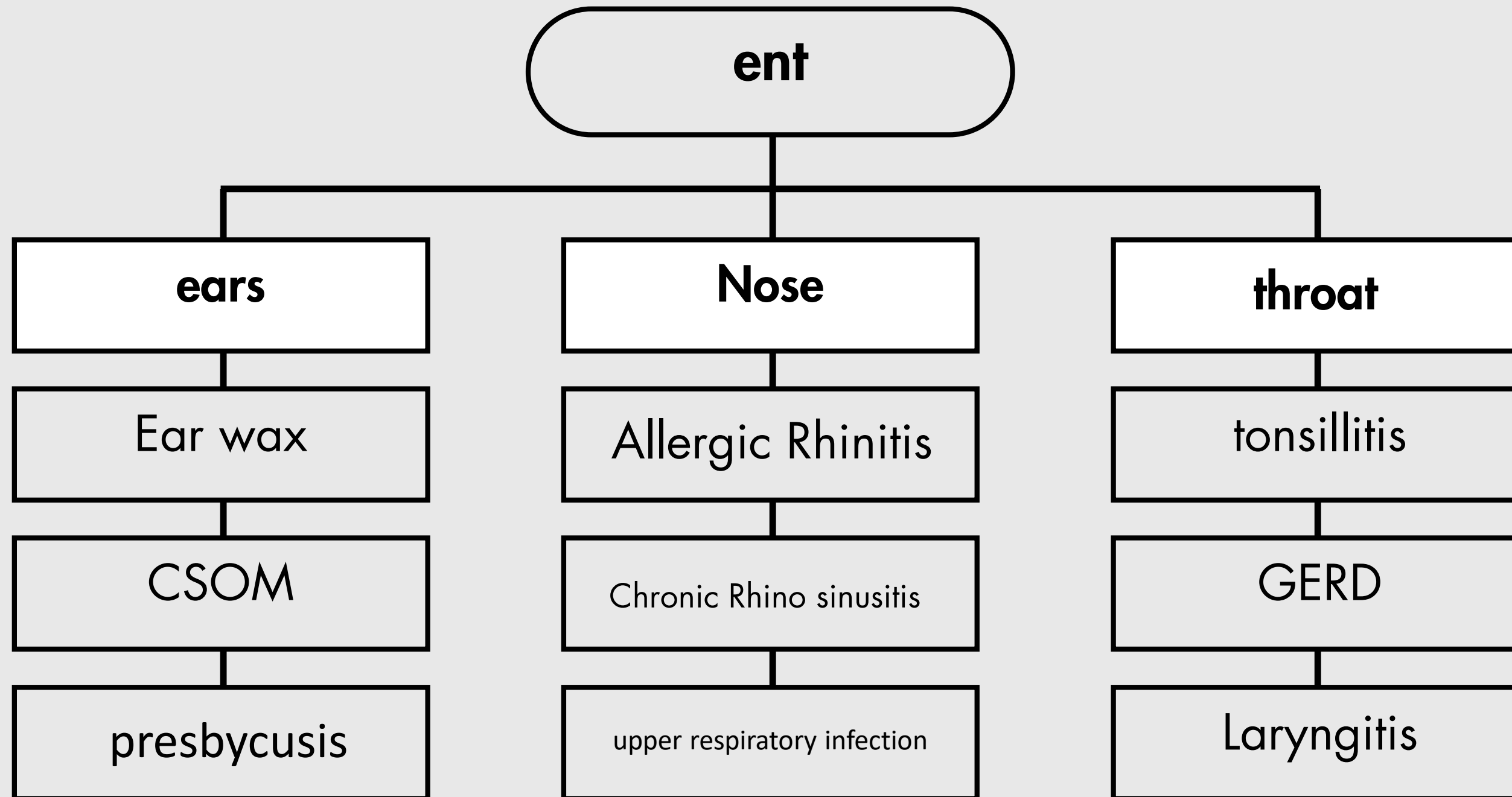
But due to the availability of a large number of home-based remedies and limited access to trained healthcare professionals, diagnosis and treatment is often delayed.

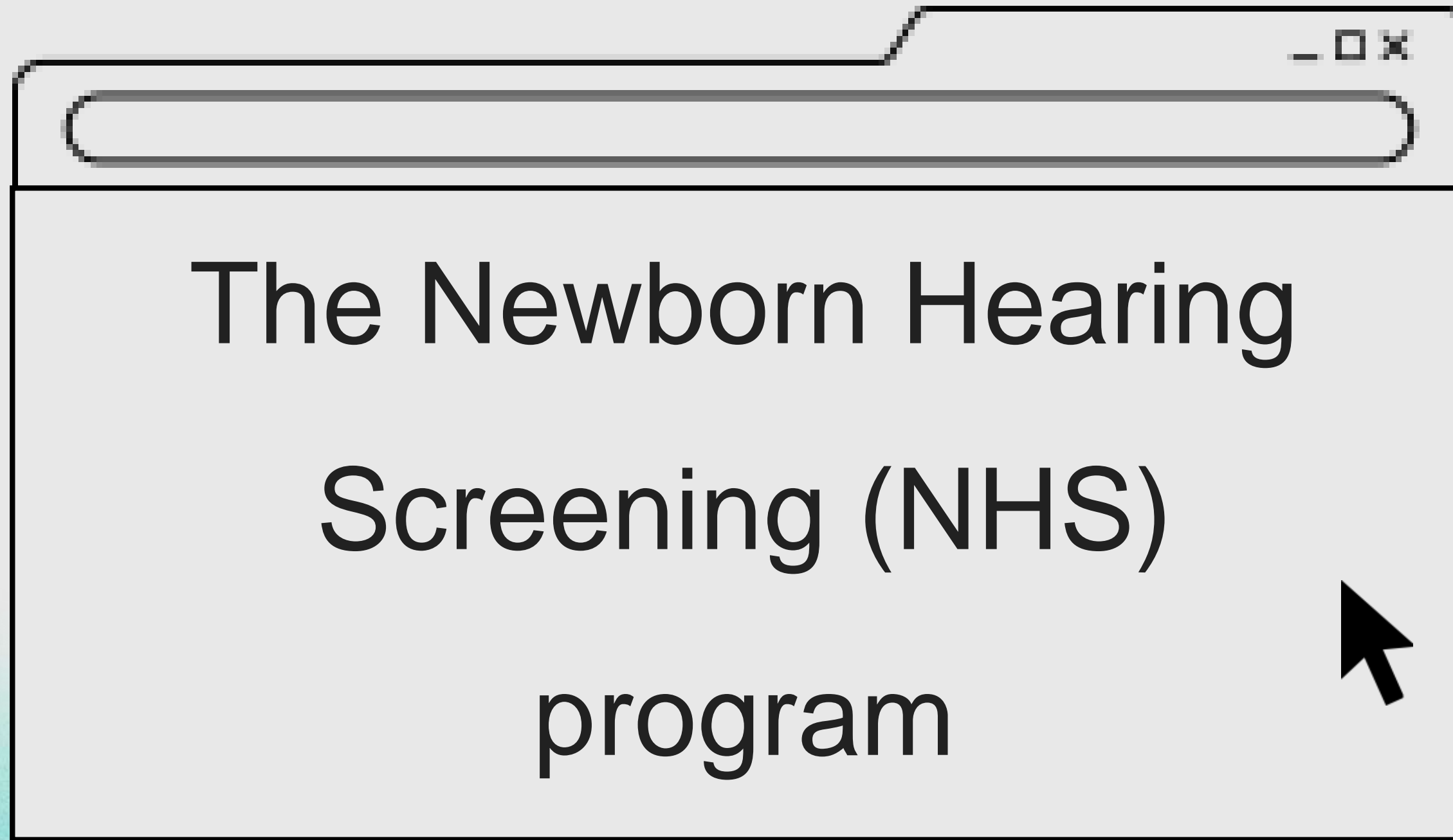
# BURDEN

- Diseases of (ENT) are universally a major public health concern [1–3].
- The Global Burden of Disease (GBD), including ENT conditions is proportional to resource deprivation [4, 5].
- Globally, disabling hearing loss affects about 466 million people [9,10].
- Head and neck cancer, the 9th most common malignancy, has high mortality rates in developing countries [11].
- In the majority of places, individuals with communication difficulties are not prioritized in health care systems as governments focus on saving lives as opposed to improving quality of life [12]



# the most common ent problems





The Newborn Hearing  
Screening (NHS)  
program

02





# JORDAN NHS

- The NHS has been globally adopted to identify all newborns who are at risk of hearing loss as early as possible. Globally, untreated hearing loss ranks as the third most significant contributor to years lived with disability .
- Early hearing detection and intervention activities have significantly benefited children who are deaf or hard of hearing and their families.
- Starting with a hearing test shortly after birth is crucial for early identification of hearing problems.
- In 2021, Jordan implemented the NHS program in public hospitals, aiming to identify hearing concerns shortly after birth, allowing for timely intervention and support

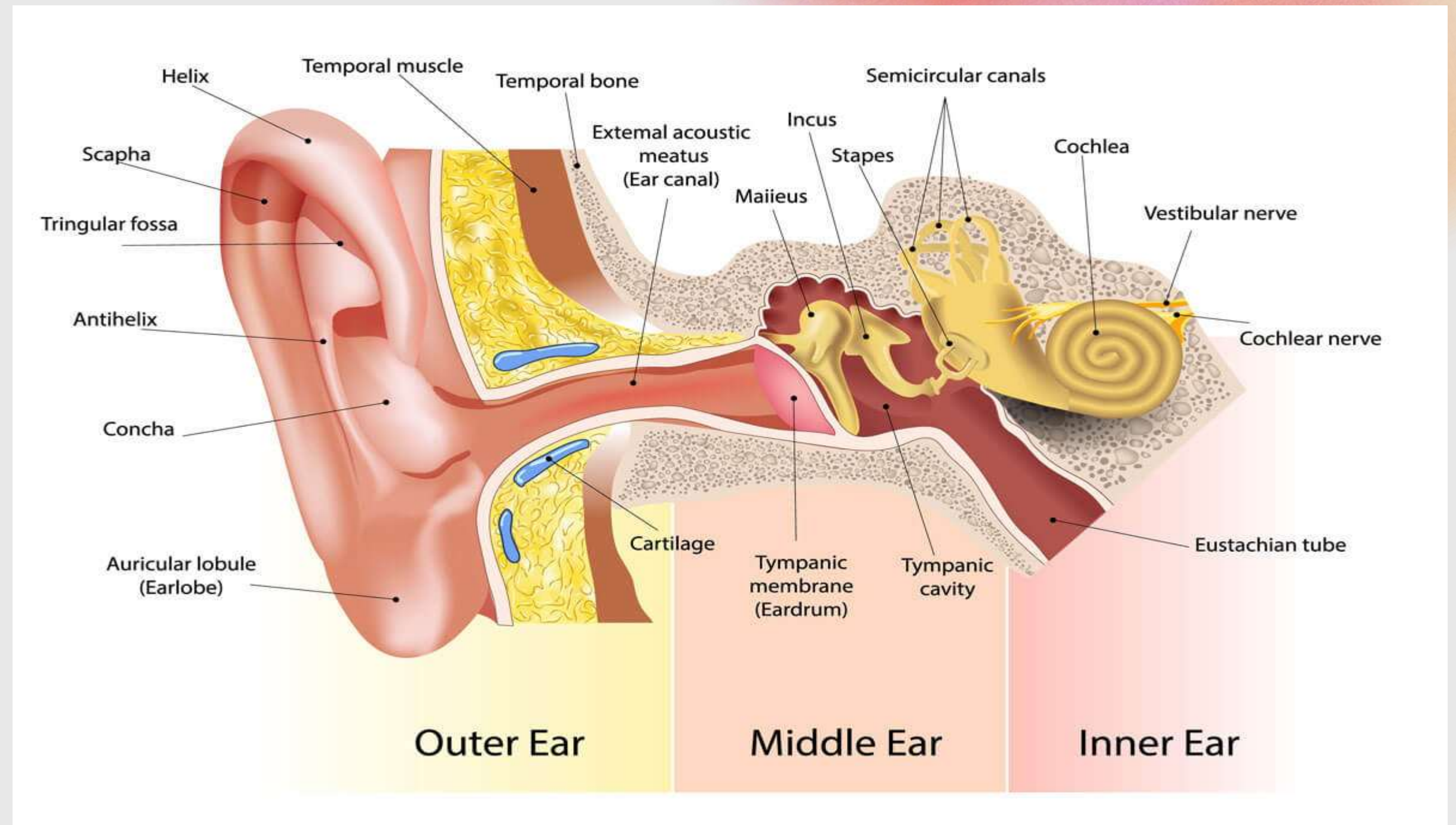


Obeidat, F. S., Alothman, N., Alkahtani, R., Al-Najjar, S., Obeidat, M., Ali, A. Y., Ahmad, E., & Alghwiri, A. A. (2024). Evaluation of newborn hearing screening program in Jordan. *Frontiers in pediatrics*, 12, 1420678. <https://doi.org/10.3389/fped.2024.1420678>



# UNDERSTANDING THE EAR

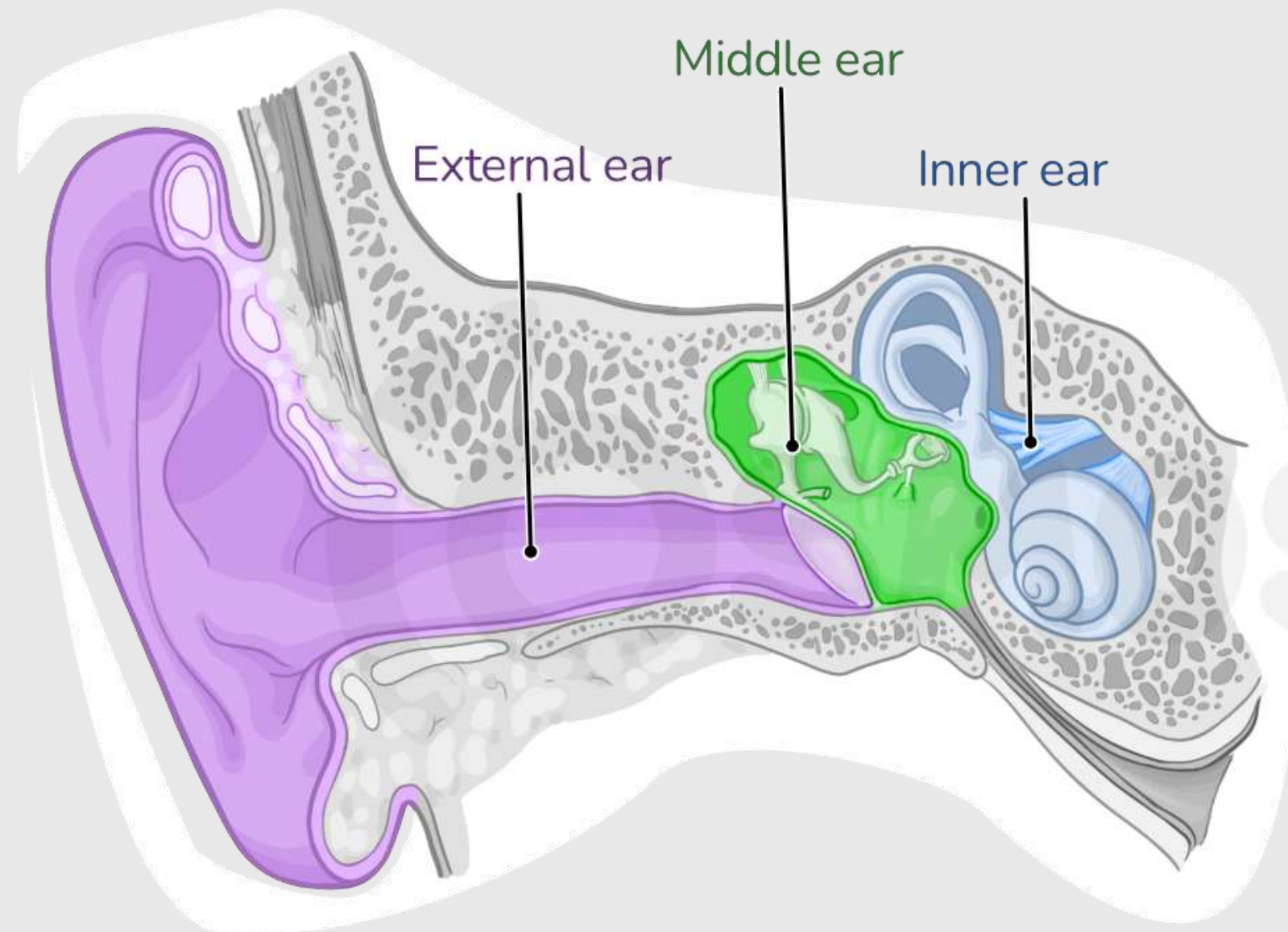
- Structure:
- The ear is made up of 3 parts:
  - Outer ear
  - Middle ear
  - Inner ear



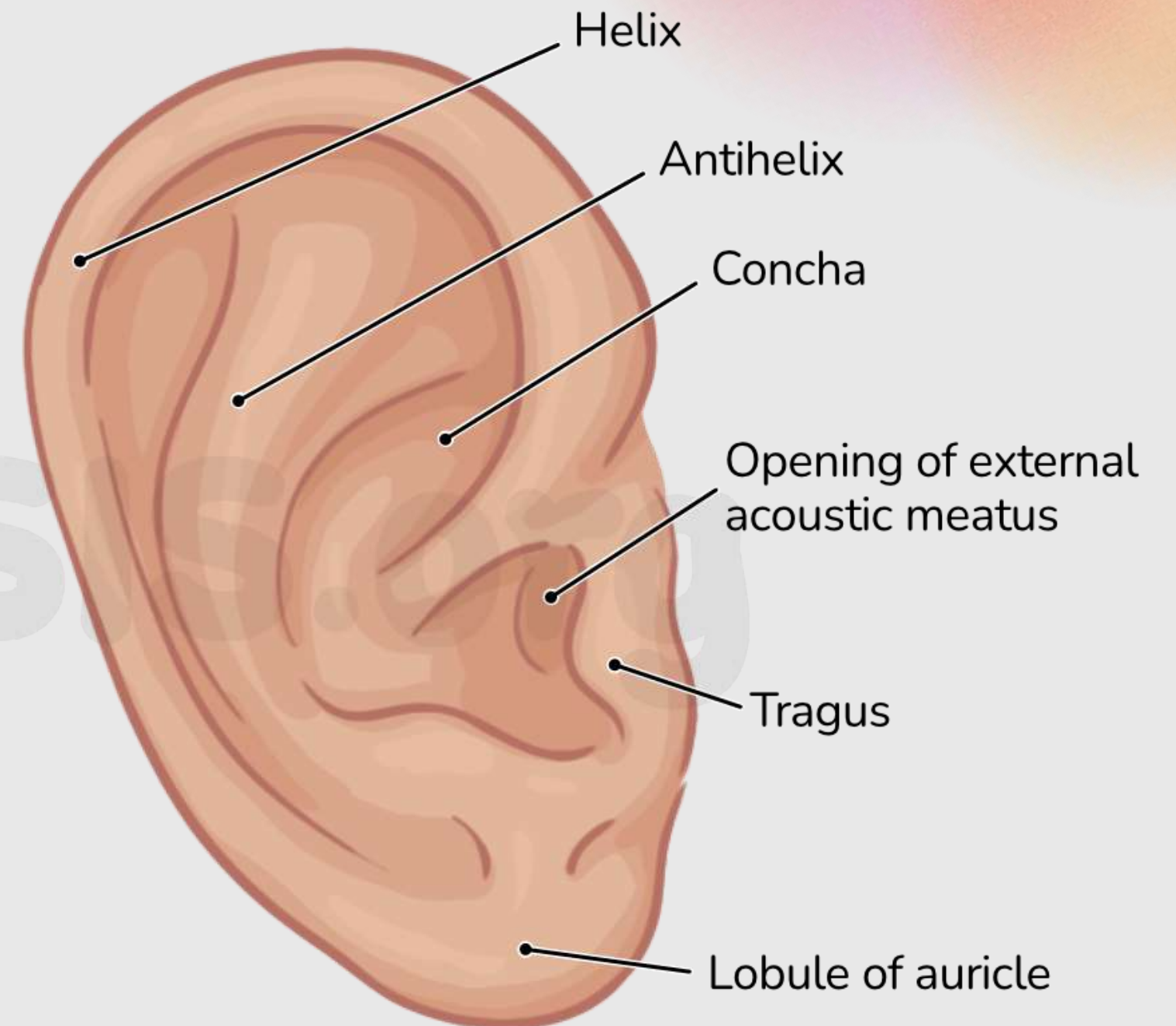


# THE OUTER EAR

A.



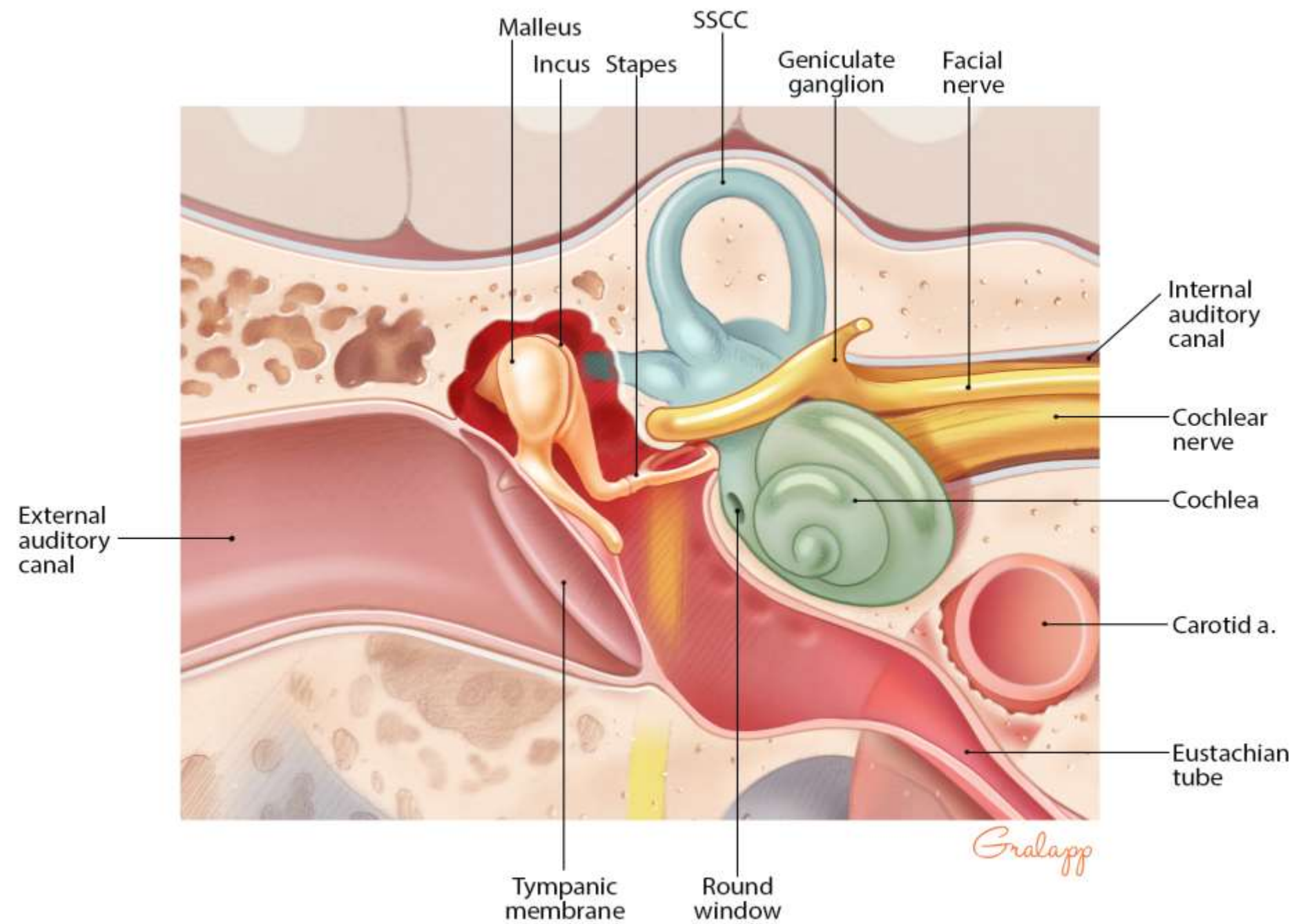
B.





# MIDDLE EAR

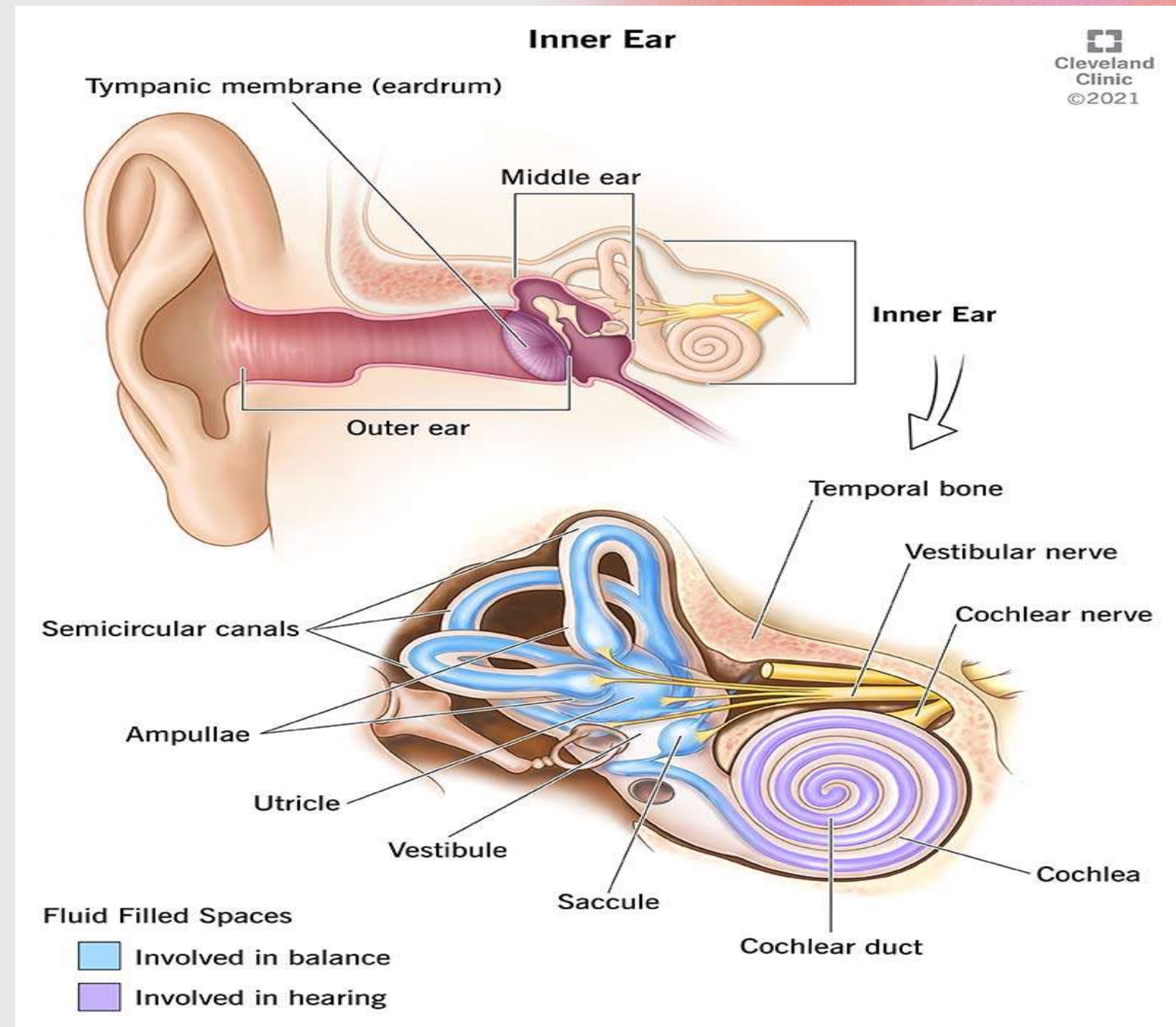
- It is a closed box like structure.
- It starts from the ear drum.
- Contains 3 small bones attached to each other.





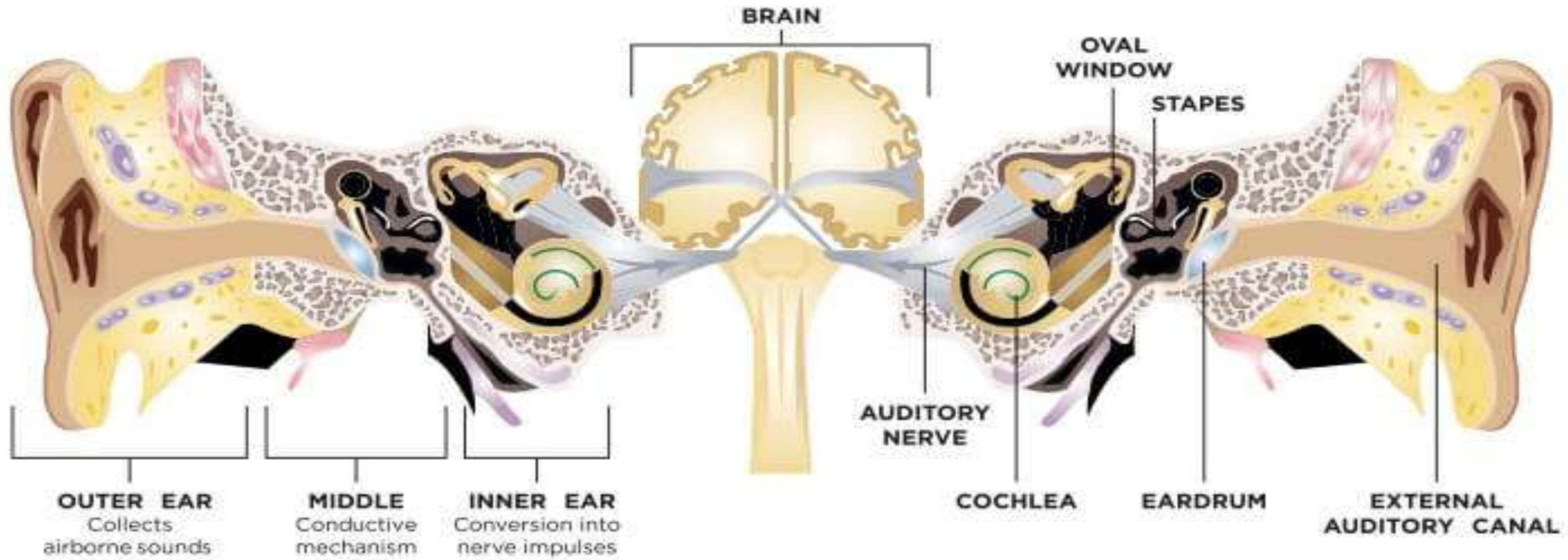
# INNER EAR

- • The inside most part of the
- ear has the hearing center
- called the cochlea and the
- balance canals called the
- semi-circular canals





# HOW DOES THE EAR FUNCTION?





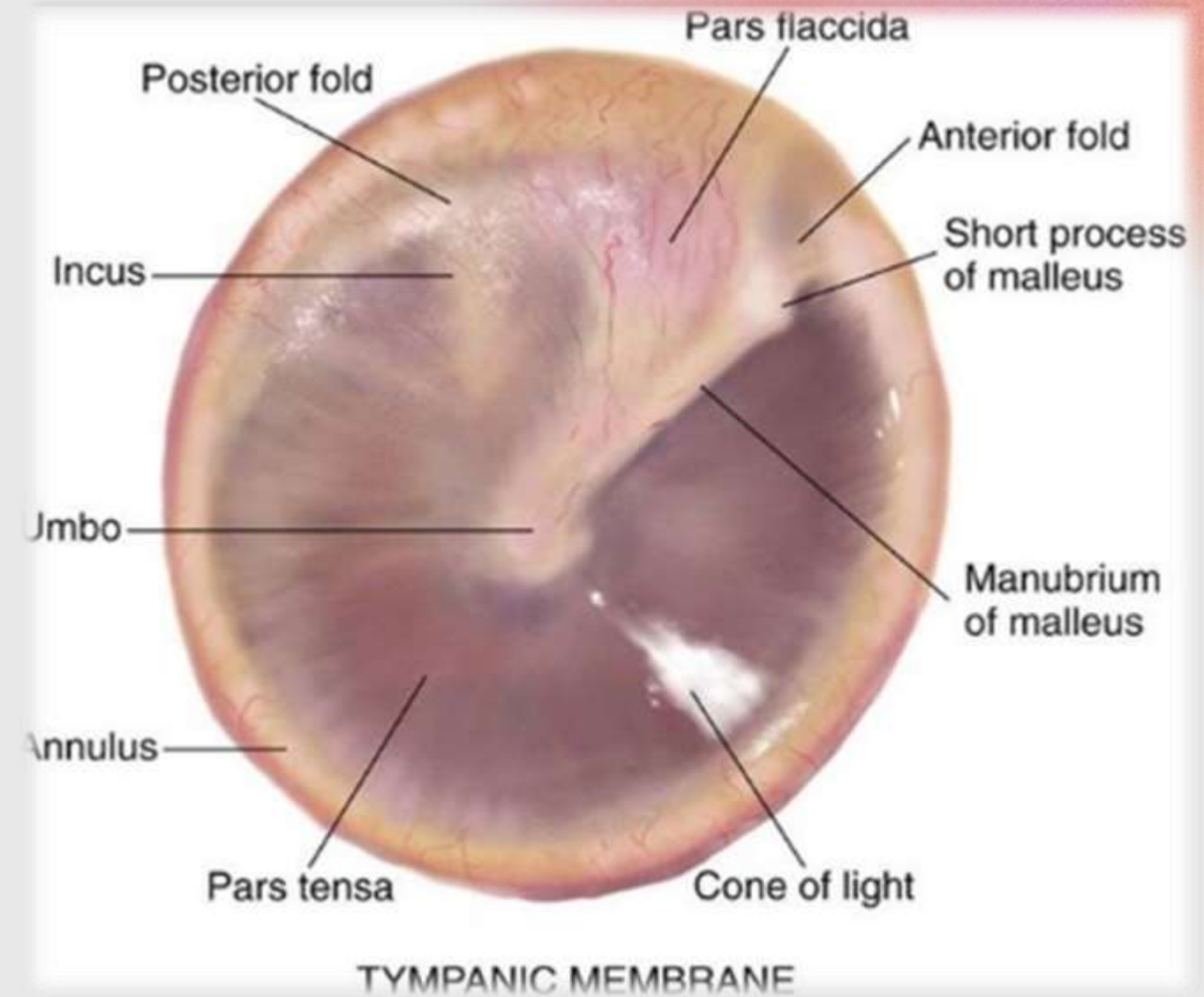
# ENT TREATMENT UNIT





# ENT EXAM

## Tool: Otoscope





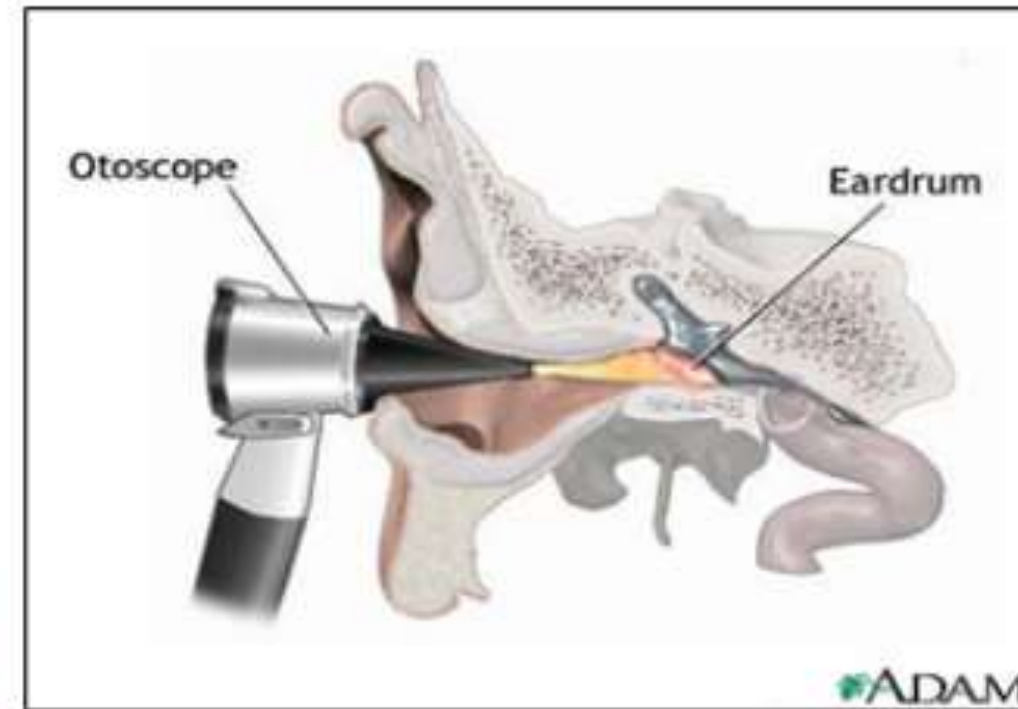
## Step 1: Have the patient sit down



Getty Images

- Have the patient sit down (May be best for the patient to sit on the desk so the ear is in a convenient position for the doctor)
- Have the patient slightly tilt his head away from the doctor
- Start with the “good” ear – one without problems or infections (if any)

## Step 2: Holding the otoscope

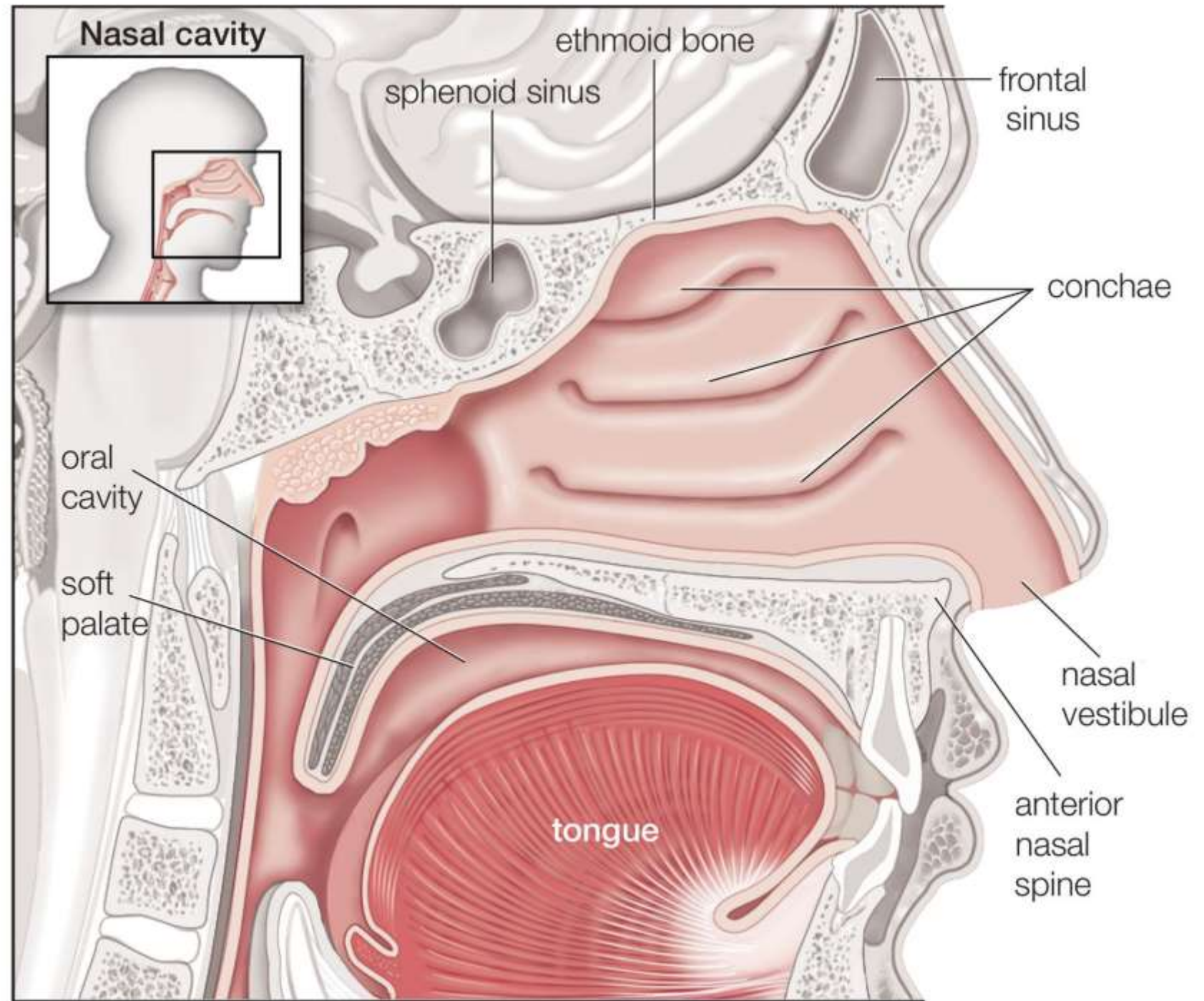


- Hold the otoscope in one hand and turn on the light
- Gently insert the speculum into the ear
- With the other free hand, gently pull up, out, and/or forward on patient's ear to straighten out the ear canal for easy viewing



## STRUCTURE OF THE NOSE AND PHARYNX

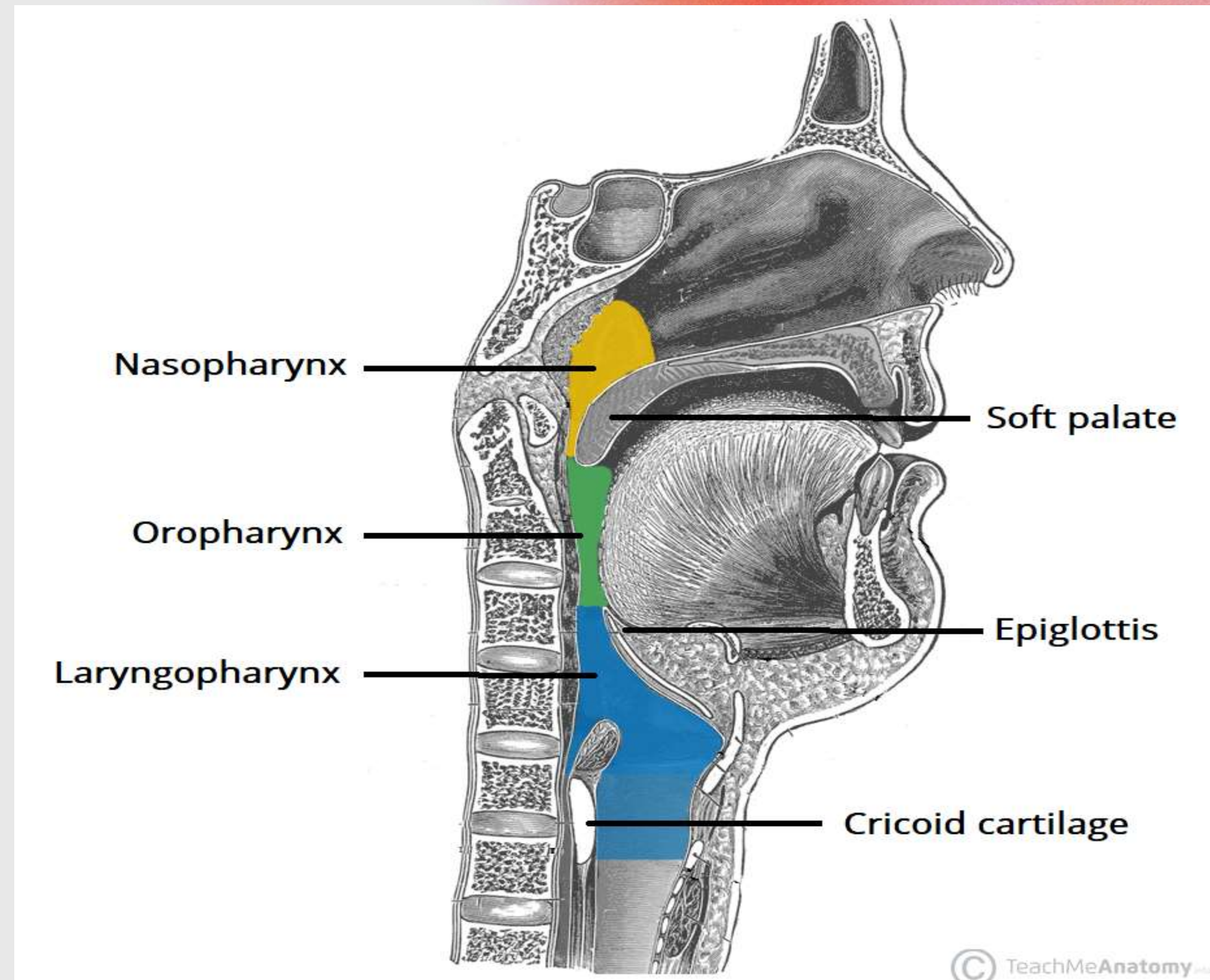
- External nose – It is a triangular projection made up of nasal bone and cartilage
- • Nasal cavity – There are two nasal cavities/passages separated by a nasal septum.





## STRUCTURE OF THE NOSE AND PHARYNX

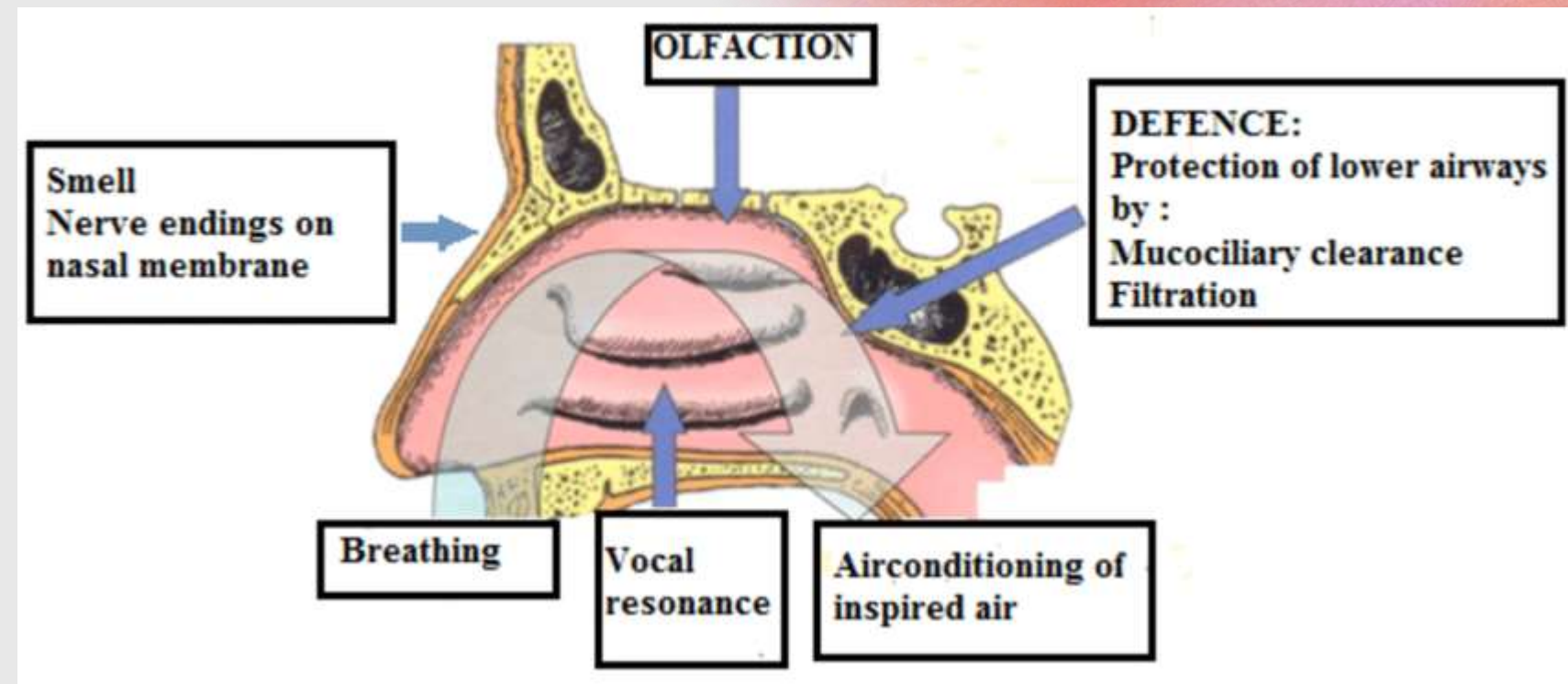
- The pharynx is a muscular tube that connects the oral and nasal cavity to the larynx and oesophagus.
- It begins at the base of the skull and ends at the inferior border of the cricoid cartilage (C6). The pharynx is comprised of three parts (superior to inferior):
  - Nasopharynx
  - Oropharynx
  - Laryngopharynx



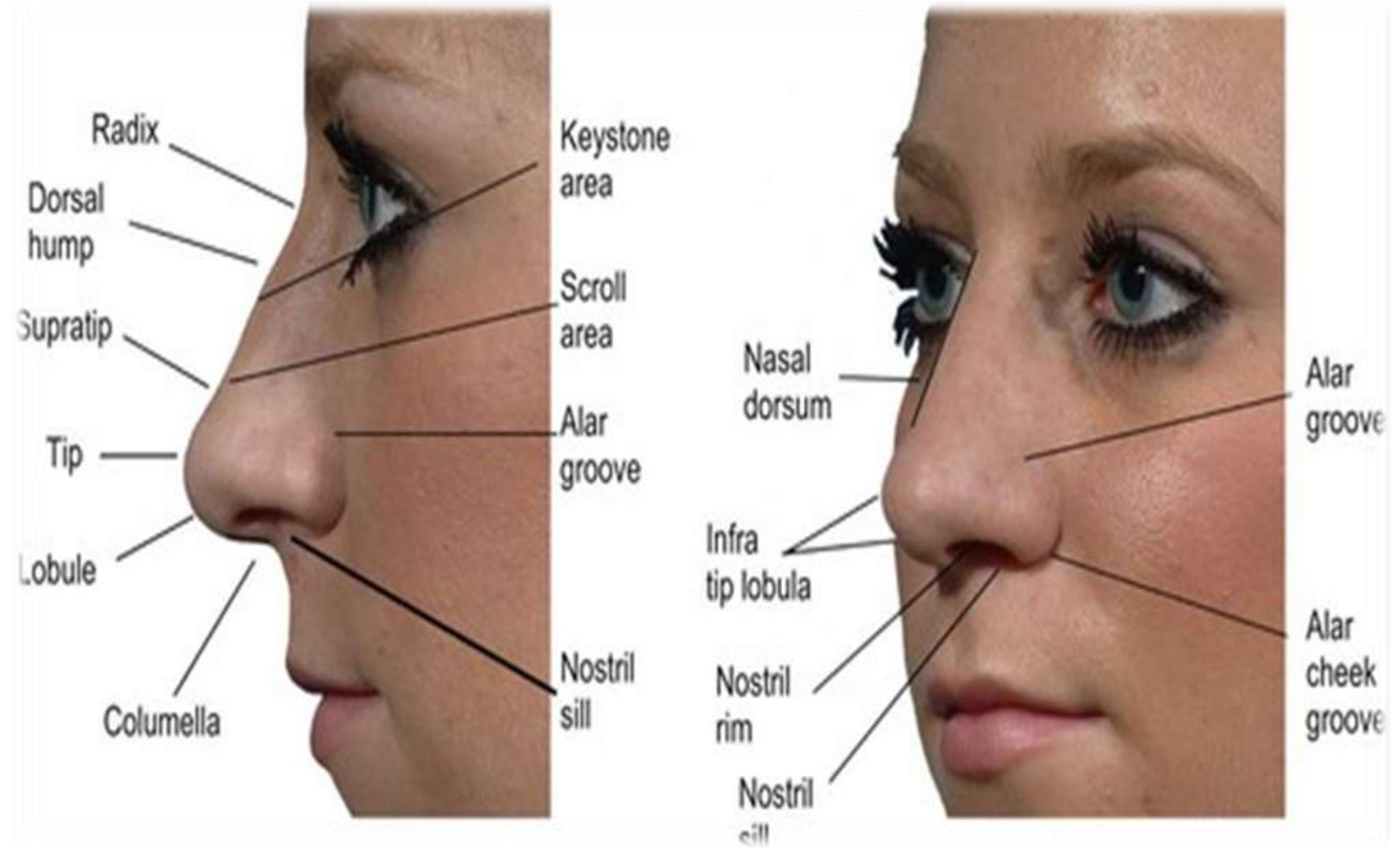


## HOW DOES THE NOSE FUNCTION?

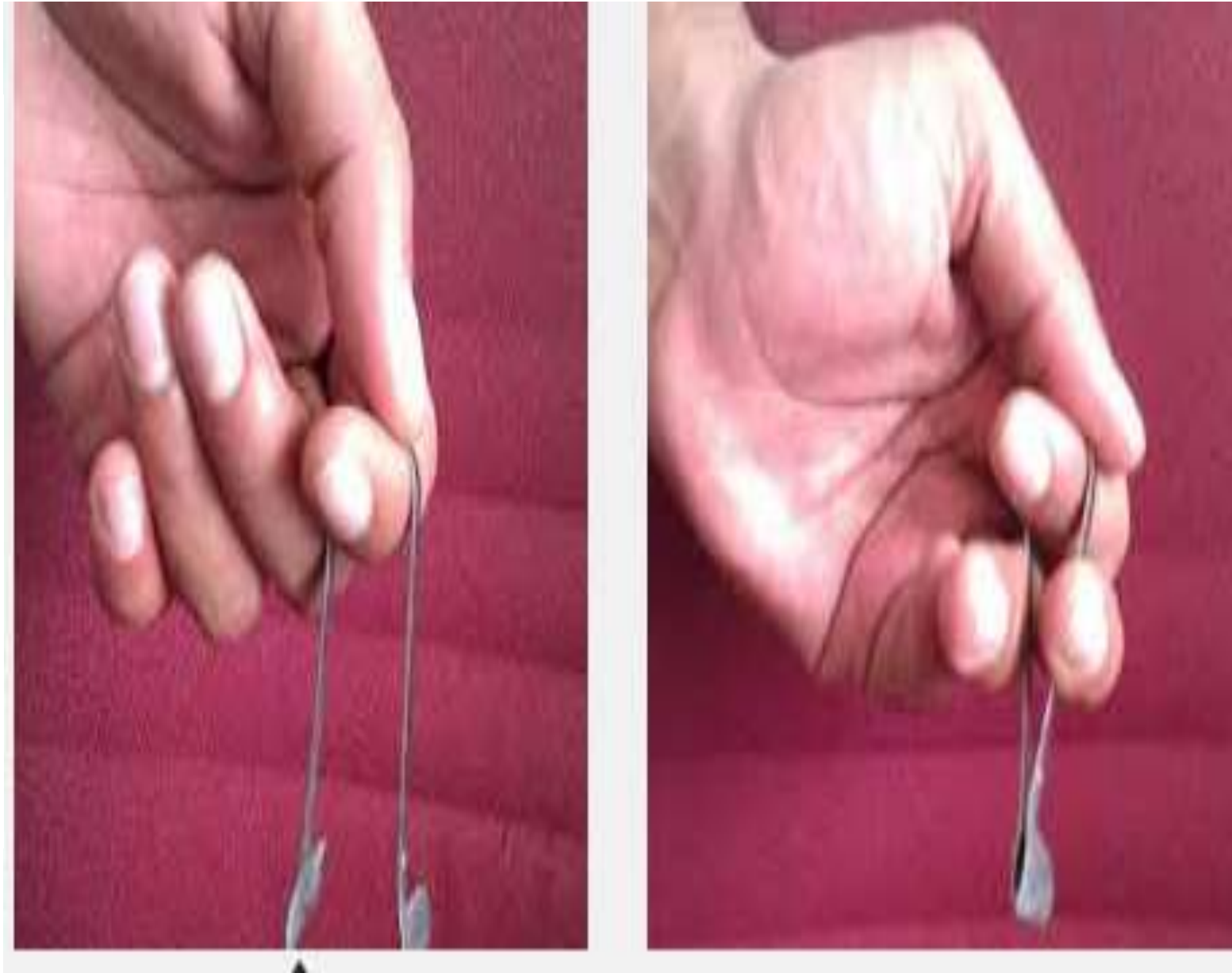
- The nose helps in the sense of smell as well as filtering dust particles from entering the airway.
  - There are nerve endings in the roof of the nose called the olfactory bulb which carry the smell signals to the brain and smell.



- Inspection
- Nasal patency test



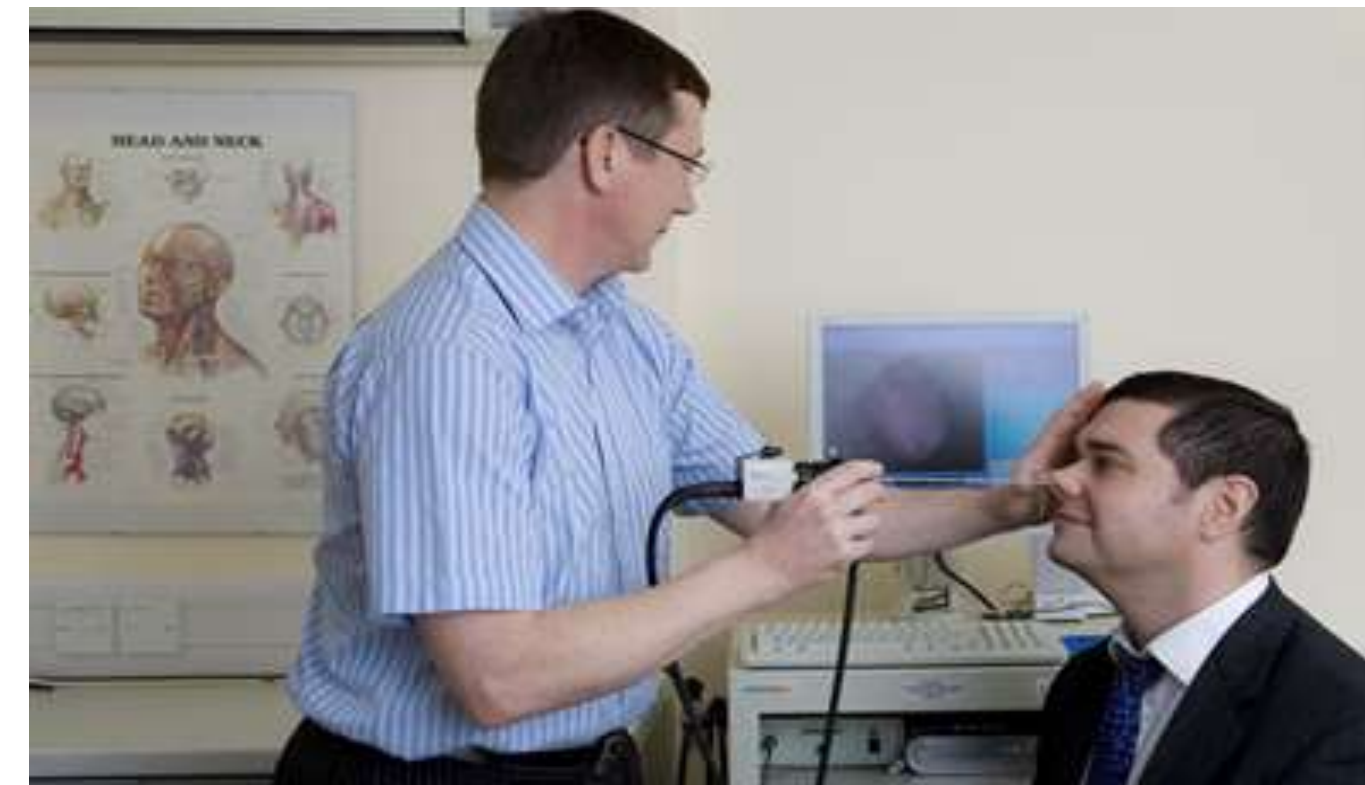
# Nose examination ( Anterior Rhinoscopy )



- Anterior rhinoscopy using a headlamp and nasal speculum allows assessment of the nasal septum and inferior turbinates.
- The speculum should be directed laterally to avoid touching the sensitive septum with the metal edges.

# Nose examination ( Nasal Endoscopy )

- **Rigid endoscopes** : allows thorough examination of even the most posterior portions of the nasal cavity but carries a risk of laceration in an uncooperative patient.
- **Flexible fiber optic scopes** : can also be used and are safer in young children and other unpredictable patients, but these often provide inferior optics and are less able to be directed into the lateral and superior aspects of the nasal cavity.







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