

Healthy Kids Check



Hearing

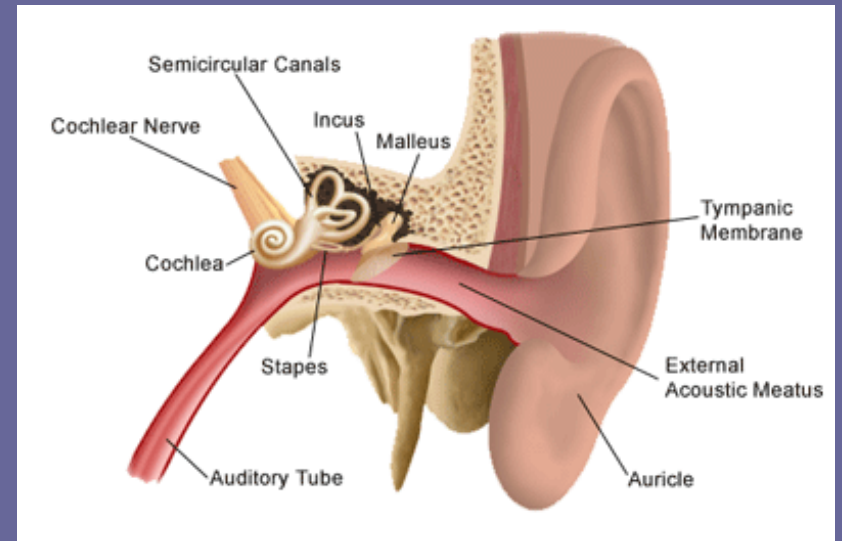
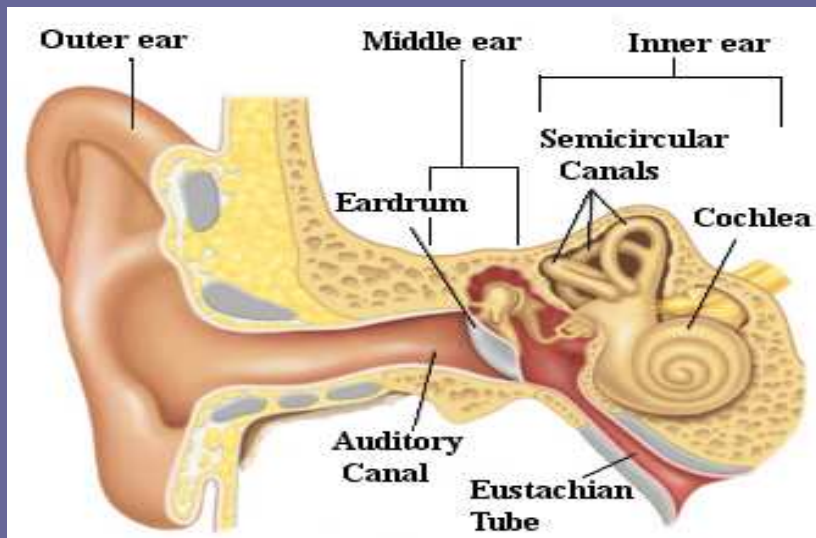
- Anatomy
- How we hear
- Common ear conditions in Childhood
- Surveillance of hearing

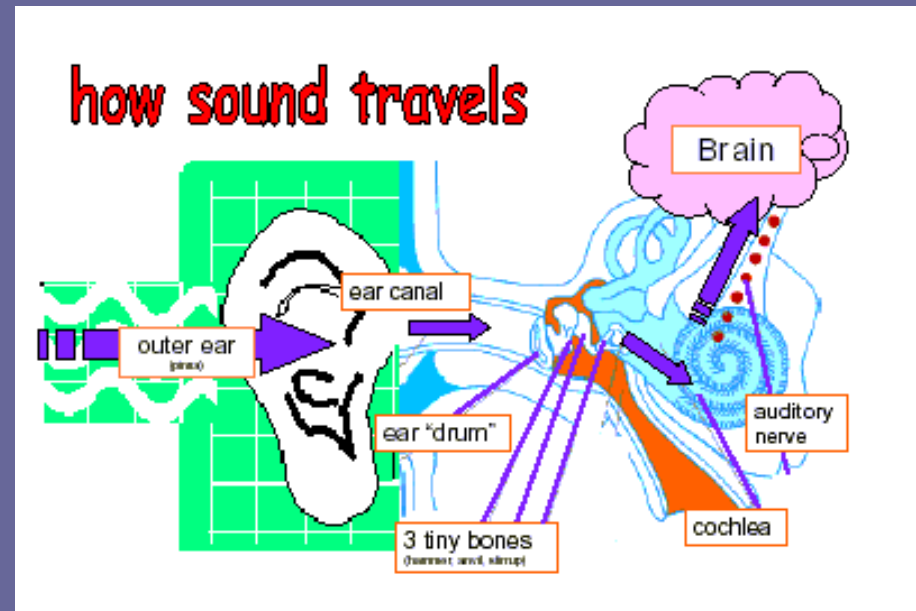
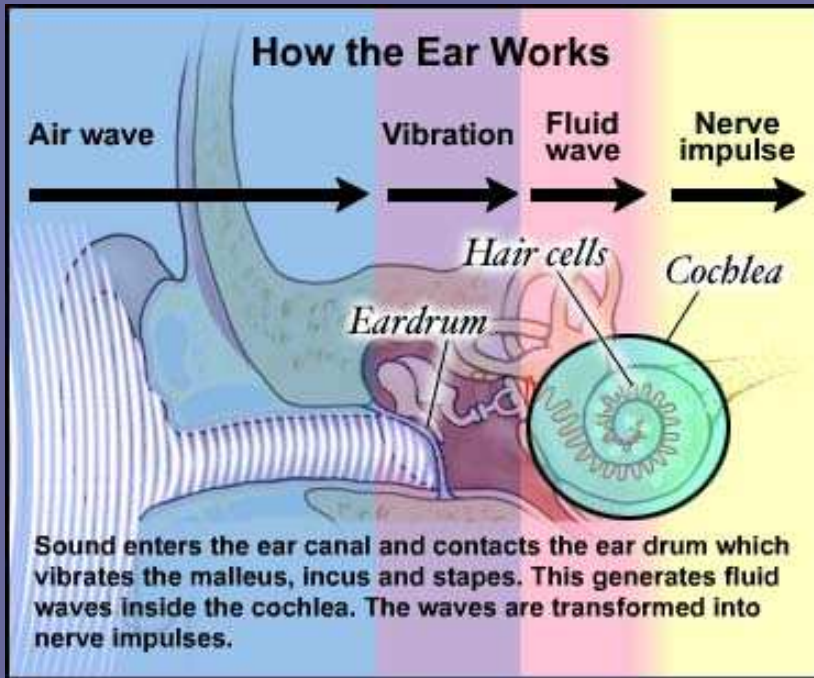
Objectives

- Enhance skills in identifying hearing risk factors for a child
- Conduct an assessment of the ear and hearing in accordance with the Healthy Kids Check requirements
- Identify common childhood ear conditions
- Enhance knowledge of anatomy and physiology of the ear and hearing



Anatomy of the ear





Types of hearing loss

Disorders of hearing are categorised by their location within the ear

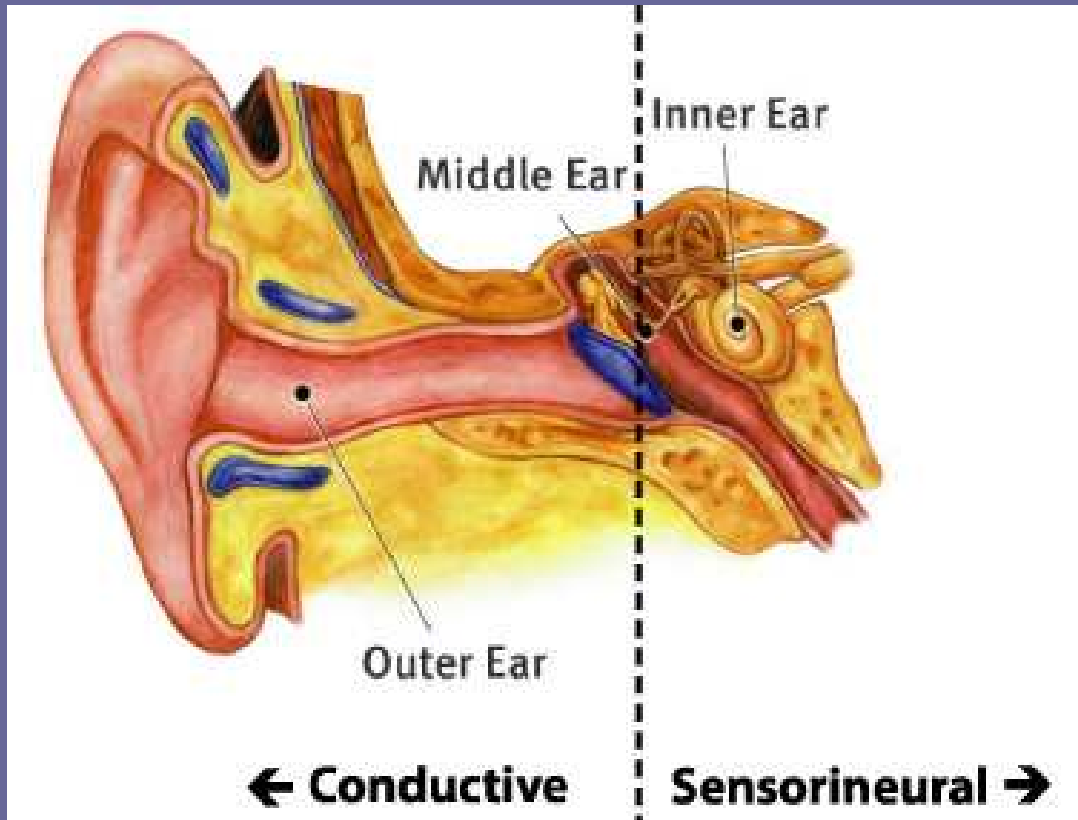
Conductive Hearing Loss

- Interference in sound waves reaching the inner ear.
 - Obstruction in the canal
 - Infection (otitis media)
 - Damage to the tympanic membrane
- Generally children recover from this hearing loss or treatment is responded to e.g hearing aids, medication, removal of obstruction

Sensorineural Hearing loss

- The inner ear or nerve is affected
- Sound transmission to the cerebral cortex is affected
- Causes
 - Congenital
 - Infection during pregnancy
 - Inherited
 - Prematurity
 - Drug therapy
 - Birth trauma
 - Acquired (noise, injury, tumors)
- Limited response to treatment e.g cochlear implants





Concern an increase of acquired hearing loss in children due to ipods;MP3 players etc



SWISH

- NSW Statewide Infant Screening- Hearing
- Universal Screening of all newborns born in NSW
- About 2 in every 1000 babies born have a significant hearing loss
- Technology used is the Automated Auditory Brainstem Response (AABR)
- If there are identified risk factors, this is clearly marked in the “Newborn” section of the PHR



Common ear conditions in children

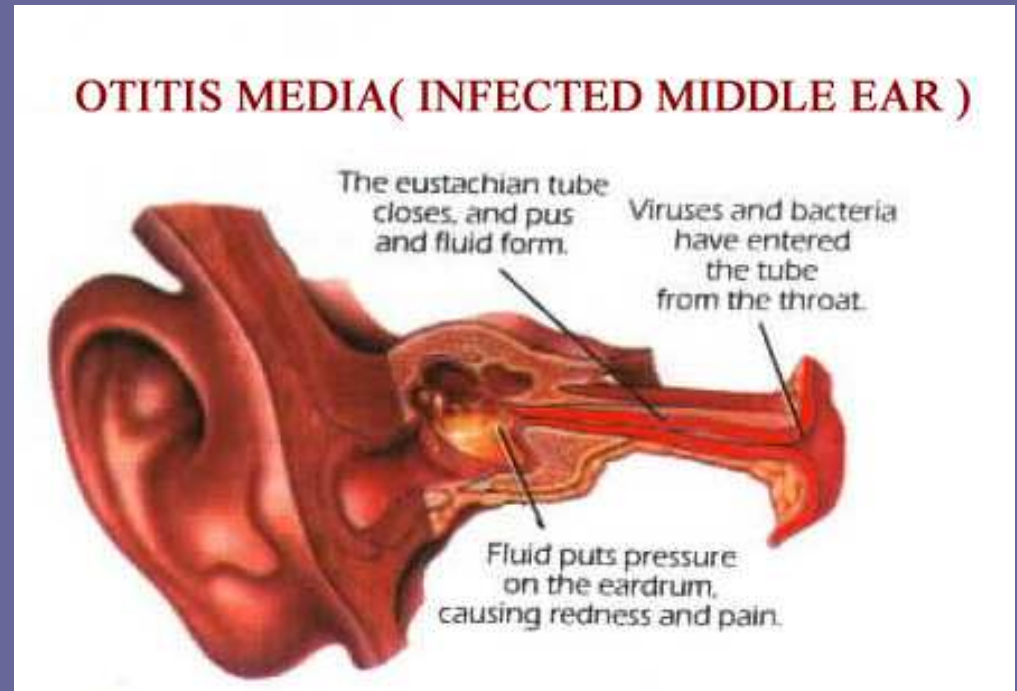
Impacted Cerumen (Wax)

- Wax cleanses the external ear
- Discourage parents from removing wax with cotton tips
- Avoid cleanses or do so only under health professionals supervision
- Can create a constant moist environment and may lead to external otitis



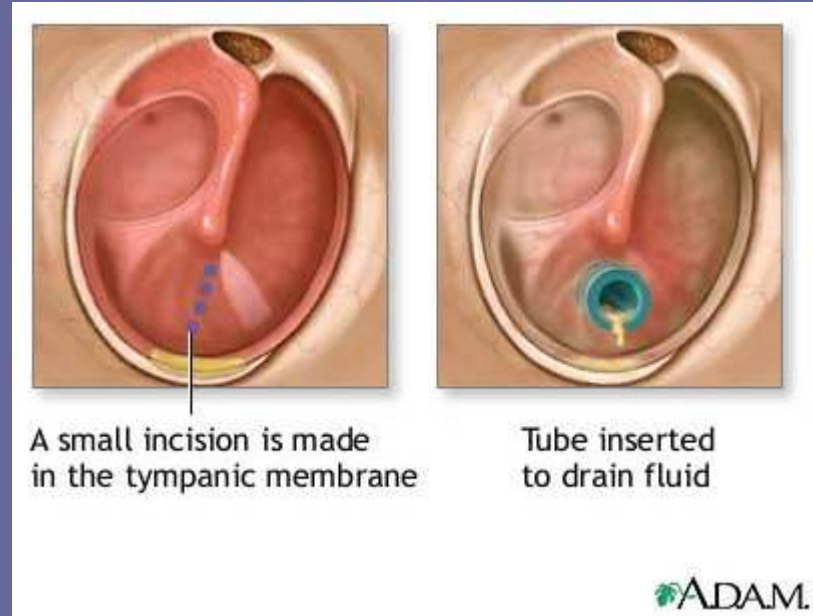
Otitis Media

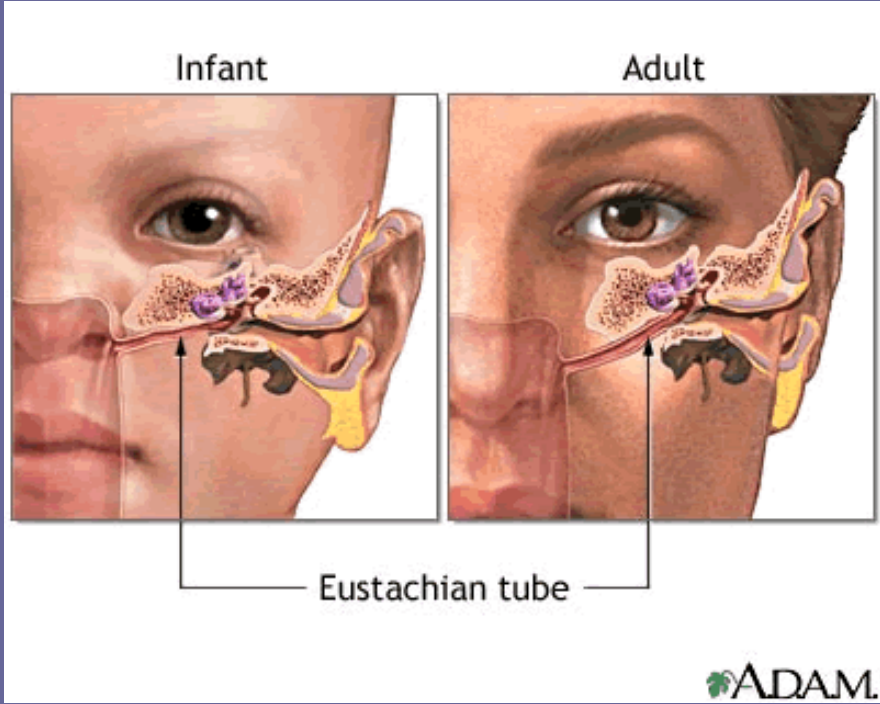
- Often occurs after child has had a cold
- Child has an elevated temp
painful ear
- Eustachian tube becomes inflamed, air is not able to reach inner ear and fluid cannot drain
- Antibiotics may be required



Otitis Media with Effusion (Glue Ear)

- In middle ear infections the lining of the middle ear secretes fluid
- It becomes thick, obstructing air
- This can reduce hearing for the child
- Antibiotics may be prescribed
- It can be recurrent
- If it persists a myringotomy (grommets) may be needed to prevent hearing loss and speech delay
- Grommets are tiny tubes (2mm) inserted into the tympanic membrane to allow fluid to drain





Differences between adult and child's ears



Assessing Hearing for the HKC

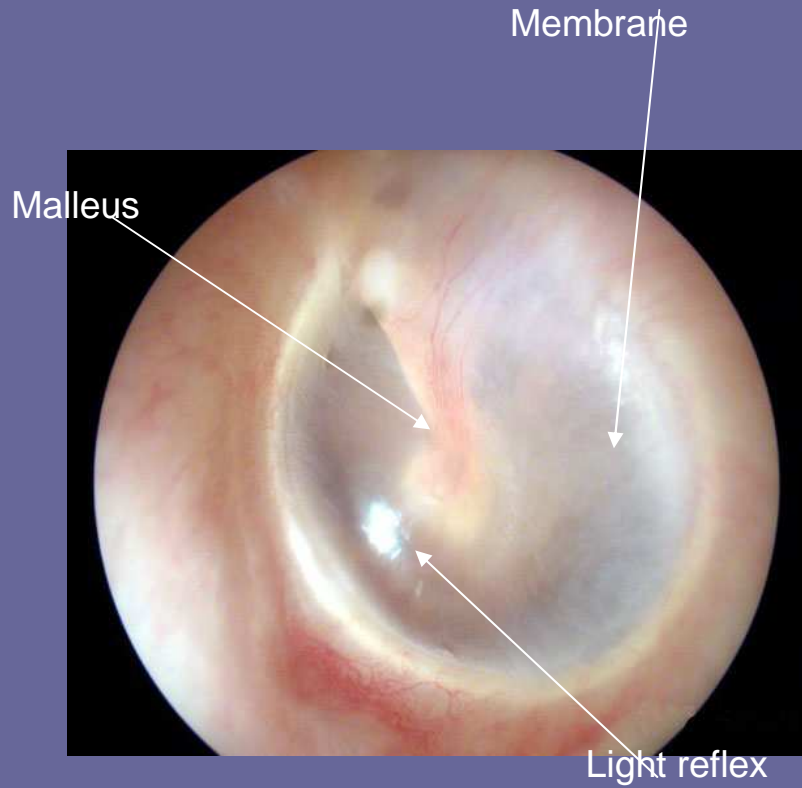
- Check family history of hearing loss
- Complete questions in the Personal Health Record
- Ascertain child's speech development, if below expected level, be suspicious
- Is child's voice loud
- Can conduct a visual inspection of the ear
 - Appearance
 - Discharge
 - Touch pinna for signs of pain



Examination of the Ear

- Explain to child what you are going to do
- Pull ear up and back
- Ensure you have correct size tip
- Insert into ear canal
- Inspect the ear canal and visualise the tympanic membrane
- The membrane should be greyish pink in colour
- Light reflex should be present with other landmarks visible
- If there is an infection present the membrane will appear red and bulging





Healthy Tympanic Membrane



Tympanic membrane with
otitis media

When to refer.....

- Parents are concerned
- Identified risk factors at SWISH newborn screen
- Family History of hearing loss
- Speech delays
- Behavioural problems
- Learning difficulties
- Child speaking loudly
- Child not responding to normal speech
- Repeat ear infections



Questions

