

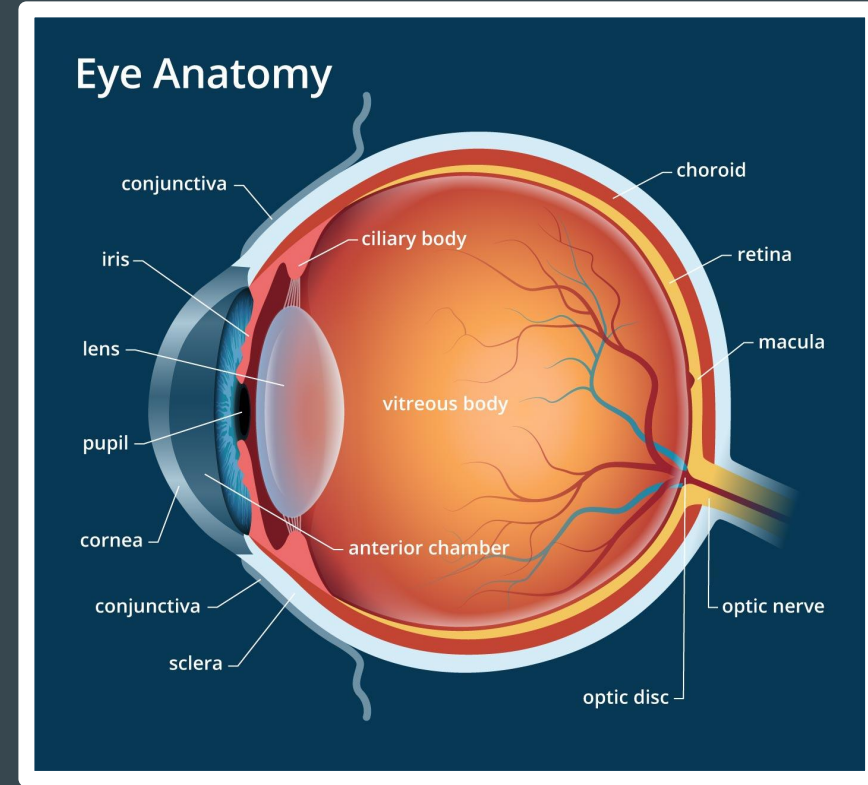
Eyes, Ears, Nose and Throat
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EYES

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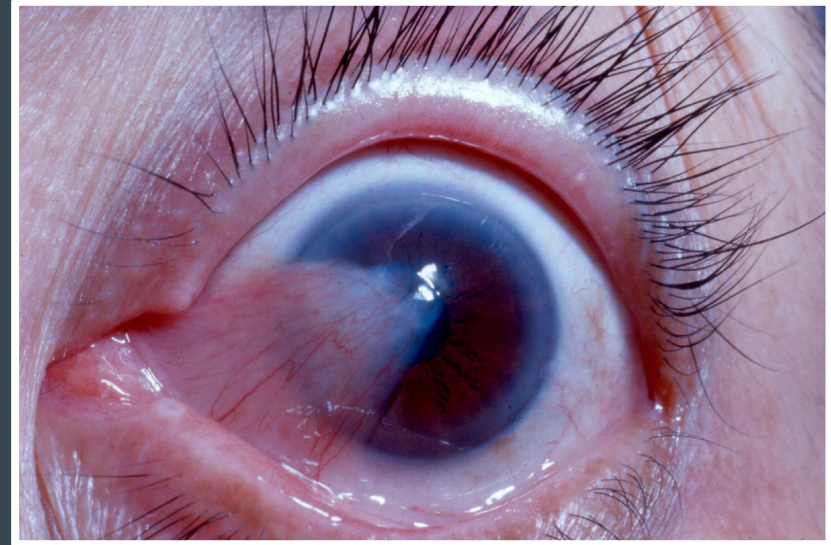
Anatomy

- Iris
 - ◆ Controls the size and diameter of the pupil
- Pupil
 - ◆ Opening in the center of the iris that lets light into the interior of the eyes
- Lens
 - ◆ Transparent biconvex structure, refracts light to focus on retina
- Cornea
 - ◆ Transparent front portion, focusing power
- Sclera
 - ◆ Outer layer that supports and protects the eyeball
- Choroid
 - ◆ Supplies blood to the eyeball
- Retina
 - ◆ Nerve layer that lines the back of the eye. It senses light and creates impulses that travel through the optic nerve and to the brain
- Macula
 - ◆ Is a small spot where vision is the sharpest in the retina
- Optic Nerve
 - ◆ Transmits visual information from the retina to the brain
- Optic Disc
 - ◆ “Blind spot”, beginning of the optic nerve



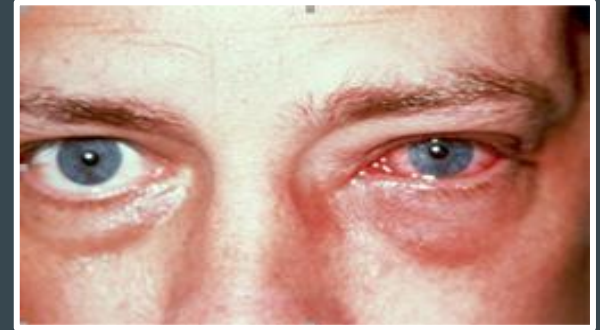
Pterygium

- Noncancerous growth of the clear, thin tissue (conjunctiva) that lays over the sclera
- Grows from the nasal side of the sclera
- **Causes:**
 - ◆ UV-light exposure (ex: sunlight)
 - ◆ Sand, dust, pollen, and smoke
- **Common:**
 - ◆ People who spend a lot of times outdoors in sunny and windy environments
 - ◆ People who live relatively close to the equator and in low altitudes
 - ◆ People with commonly dry eyes
- **Symptoms:**
 - ◆ Irritation, redness, inflammation, dryness
- **Treatment:**
 - ◆ Surgical Removal



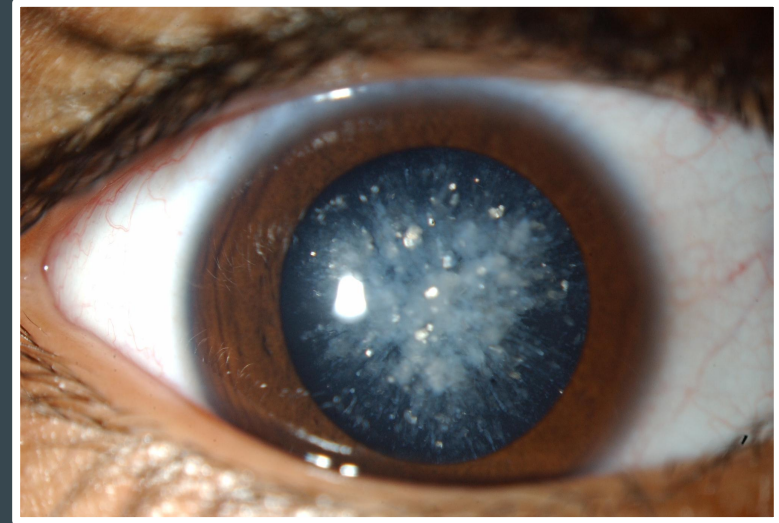
Conjunctivitis

- “Pink Eye” or madras eye
- Refers to the viral infection of the conjunctiva.
- The swelling or infection of the membrane lining the eyelids (conjunctiva)
- **Causes:**
 - ◆ Bacterial infection or Viral infection (most common)
 - ◆ Allergic reaction to pollen, household dust, and pet dander
 - ◆ Irritants such as pollutants, smoke, chemical exposure, chlorine in swimming pools
 - ◆ Spreads the contact, use of contact lenses
- **Symptoms:**
 - ◆ Redness, pus formation, irritation, increased tearing, itching of the eye, sensitivity to light and blurred vision
- **Treatment:**
 - ◆ Antibiotic eye drops or ointments: To treat bacterial infections.
 - ◆ Antihistamine eye drops: Treats allergic conjunctivitis by reducing inflammation.
 - ◆ **Selfcare:**
 - Use a lint- free cotton cloth soaked in boiled water to wipe the lashes and clean off the crusts.
 - Artificial tear drops may be used to reduce dryness and irritation.
 - Apply a cold compress to soothe the eyes.
 - Stop wearing contact lenses until your eyes heal.



Cataracts

- A clouding that develops in the crystalline lens of the eye or in its envelope
- **Causes:**
 - ◆ overexposure to UV light, aging, hypertension, family history, eye trauma
- **Symptoms:**
 - ◆ blurred vision, blindness, myopia (caused by the increased power of the lens)
- **Treatment:**
 - ◆ Surgical removal of lens and insertion of artificial lens



EARS

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Anatomy

→ External ear (pinna)

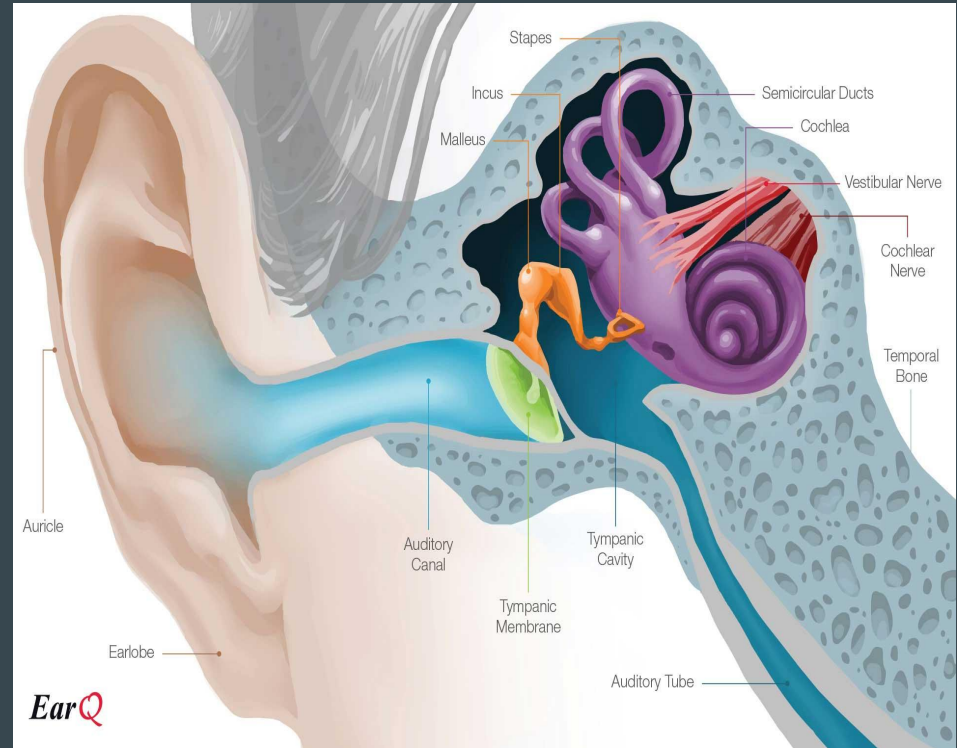
- ◆ made up of rigid cartilage covered by skin
- ◆ Sound funnels through **pinna** into external auditory canal

→ Middle Ear

- ◆ Sound causes **eardrum (tympanic membrane)** to vibrate

→ Inner Ear:

- ◆ Vibrations conducted to **cochlea** (inner ear)
- ◆ **Cochlea**
 - transforms sound into nerve impulses that travel to brain
- ◆ **Fluid-filled semicircular canals**
 - sends information on balance and head position to the brain
- ◆ **Eustachian (auditory) tube**
 - drains fluid from the middle ear into the throat (pharynx) behind the nose



Otitis

→ Infection of inflammation of the ear.

→ Causes:

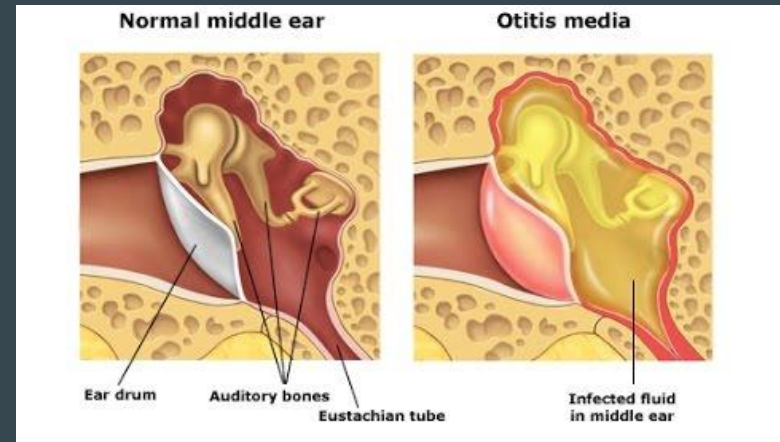
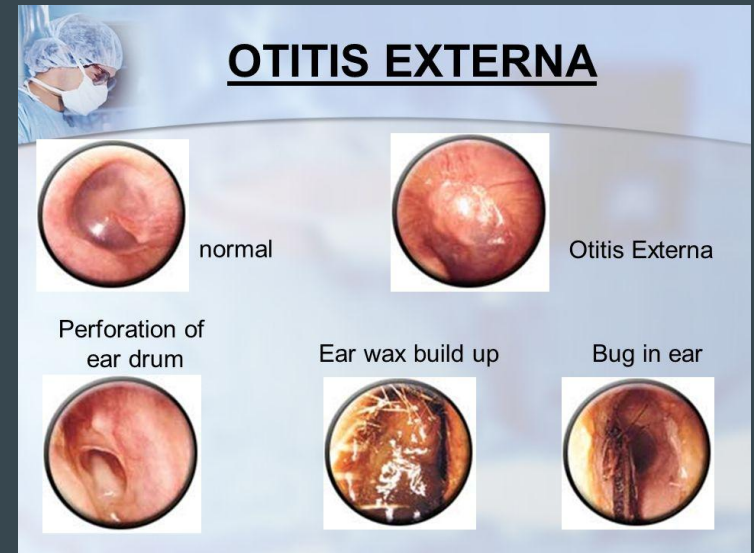
- ◆ not always associated with ear disease.
- ◆ May be caused by teeth, sinus disease, inflamed tonsils, or infections in the nose and pharynx.

→ Symptoms:

- ◆ **Bacterial:** Bacterial growth in middle ear behind eardrum.
- ◆ **Fungal:** black spores in the ear.
- ◆ **Viral:** More than one part of the body is infected. Sore throat, runny nose, fever, muscle aches, nausea, etc.
- ◆ Follows cold or upper respiratory tract infection. Pain in the ear, hearing loss, ringing or buzzing sounds, discharge from the ear.

→ Treatment:

- ◆ **Bacterial:** antibiotics
- ◆ **Fungal:** Topical antifungal creams
- ◆ **Viral:** Antiviral medication



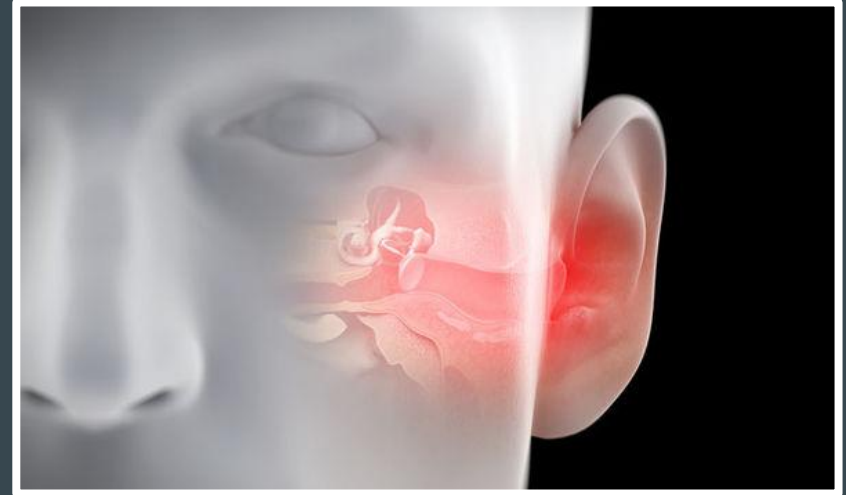
General Ear Pain

→ Causes

- ◆ **Infection:** bacterial, viral, fungal
- ◆ **Trauma:** to external canal and drum
 - fingernail, Q-tip, insect, swimming, diving can
 - rupture drum and cause secondary infections

→ Symptoms

- ◆ **External ear canal**
 - pain, swelling, redness, pain with external manipulation, enlarged lymph node, fluid drainage (cloudy to yellow pus)
- ◆ **Internal ('middle) ear**
 - medial to eardrum
 - reddened, inflamed, with +/- fluid, pus formation



Hearing Loss

→ Causes

- ♦ can be associated with any of the most recent slides
-
- a) Ear wax plug obstructing the ext. canal
 - b) Middle ear fluid
 - ♦ infection, obstructed Eustachian tube (allergies, infection)
 - c) Loss of auditory nerve function
 - ♦ loud noise injury, trauma, aging

The most frequent causes of hearing loss:



Exposure
to loud noise



Natural Aging



Heredity



Head Injury



Ototoxic
Medications



Illness

Source: Mayo Clinic

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Throat/ Nose

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Pharyngitis/Tonsillitis

→ Symptoms:

- ◆ Inflammation, redness, enlarged tonsils and
- ◆ lymph nodes, sore throat, fever
- ◆ cold-like symptoms

→ Causes:

- ◆ Inflammation of tonsils caused by viral or bacterial
- ◆ infection

→ Treatment:

- ◆ **Bacterial:** Antibiotics
- ◆ **Viral:** must resolve on its own
- ◆ If severe, tonsils may be removed.

