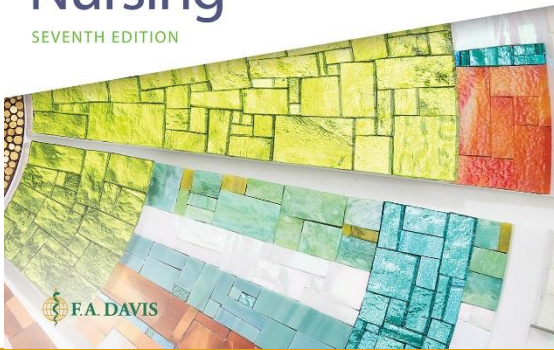


Williams | Hopper
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Davis Advantage for

Understanding Medical-Surgical Nursing

SEVENTH EDITION



Chapter 52

Nursing Care of Patients With Sensory Disorders: Vision and Hearing

Learning Outcomes

- Explain the pathophysiology of each of the disorders of the sensory system.
- Define blindness and the refractive errors of vision.
- Explain the etiologies and signs and symptoms of each sensory disorder.
- Assist with planning nursing care for patients undergoing tests for sensory disorders.
- Identify therapeutic measures for each sensory disorder.

Learning Outcomes (continued)

- Identify medications contraindicated for patients with acute angle-closure glaucoma.
- List three ototoxic drugs.
- List data to collect when caring for patients with disorders of the sensory system.
- Assist with planning nursing care for patients with disorders of the eye or ear.
- Assist with planning nursing care interventions for the patient with a hearing impairment.

Eye Infections and Inflammation

- Conjunctivitis
 - Inflammation of the conjunctiva
- Blepharitis
 - Inflammation of the eyelid margins
- Keratoconjunctivitis sicca
 - Dry eye disease

Eye Infections and Inflammation (continued)

- Hordeolum
 - Staphylococcal abscess in sebaceous gland
- Chalazion
 - Abscess in tarsal (Meibomian) glands
- Keratitis
 - Inflammation of the cornea

Nursing Diagnoses

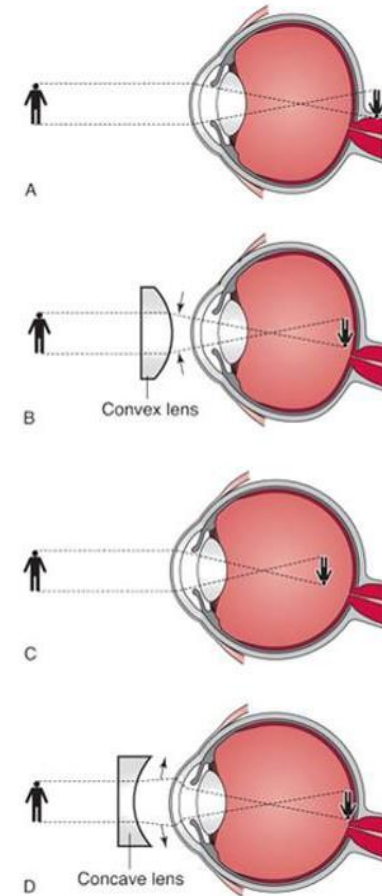
- *Acute Pain*
- *Risk for Injury*
- *Deficient Knowledge*

Refractive Disorders

- Emmetropia
 - Normal vision
- Hyperopia
 - Farsightedness
- Myopia
 - Nearsightedness
- Astigmatism
 - Unequal curvatures in cornea
- Presbyopia
 - Loss of lens elasticity

Refractive Disorders (continued)

- A. Hyperopia
- B. Corrected hyperopia
- C. Myopia
- D. Macular degeneration

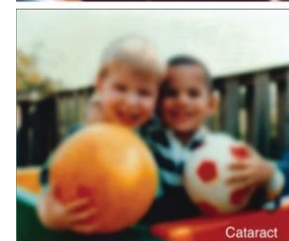


Blindness

- Obstacle to rays of light
- Disease of optic nerve or tract of brain connected with vision

Visual Field Abnormalities

- A. Normal vision
- B. Diabetic retinopathy
- C. Cataracts
- D. Macular degeneration
- E. Advanced glaucoma



Nursing Diagnoses

- *Self-Care Deficit* (Bathing, Dressing, Feeding)
- *Risk for Injury*
- *Deficient Knowledge*

Diabetic Retinopathy

- Vascular changes in retinal blood vessels
 - Microaneurysms
 - Proliferative retinopathy
- Therapeutic interventions
 - Laser photocoagulation
 - Vitrectomy
- Nursing diagnosis
 - *Ineffective Health Management*

Retinal Detachment

- Separation of retina from choroid layer of eye
- Signs and symptoms
 - Sudden change in vision
 - Flashing lights, floaters
 - Looking through a veil
 - Curtain being lowered over vision
 - No pain

Retinal Detachment (continued)

- Therapeutic interventions
 - Laser surgery
 - Cryopexy
 - Pneumatic retinopexy
 - Scleral buckling

Glaucoma

- Group of diseases
- Most have elevated pressure within eye
- Damage is silent, progressive, irreversible
- Optic nerve is damaged
- Can lead to blindness
- Lifelong treatment needed
- No cure

Glaucoma (continued_1)

- Primary open-angle glaucoma (POAG)
 - Degeneration of drainage system blocks aqueous fluid
 - Increased intraocular pressure >20 millimeters of mercury
 - Gradual and painless
 - Signs and symptoms
 - Mild eye aching
 - Headache
 - Halos around lights
 - Frequent visual changes

Glaucoma (continued_2)

- Angle-closure glaucoma (ACG)
 - Narrowed angle blocks aqueous fluid
 - Medical emergency
 - Increased intraocular pressure may be >50 millimeters of mercury
 - Signs and symptoms
 - Severe eye pain
 - Blurred vision
 - Halos around lights
 - Eye redness, cloudy cornea
 - Nausea and vomiting

Glaucoma (continued_3)

■ Medications

- Miotics

- Physostigmine (Isopto Eserine)
- Pilocarpine (Pilocar)

- Agents to decrease production of aqueous fluid

- Betaxolol (Betoptic)
- Timolol (Timoptic)

Glaucoma (continued_4)

- Contraindicated in ACG
 - Mydriatics
 - Dilate pupil, which leads to increased ocular pressure
 - Examples
 - Atropine (Isopto Atropine)
 - Diphenhydramine (Benadryl)
 - Hydroxyzine (Vistaril)
 - Can cause blindness!
 - Always know medication action before giving!

Activity: Cue Recognition 52.1

You are caring for an 80-year-old female resident who reported difficulty sleeping. Her health-care provider (HCP) ordered diphenhydramine (Benedryl) 25 mg po prn sleep. She has a history of hypertension and ACG.

What do you do?

Cue Recognition 52.1: Answer

- Do not administer the medication.
- Notify the HCP.

Cue Recognition 52.1: Answer Rationale

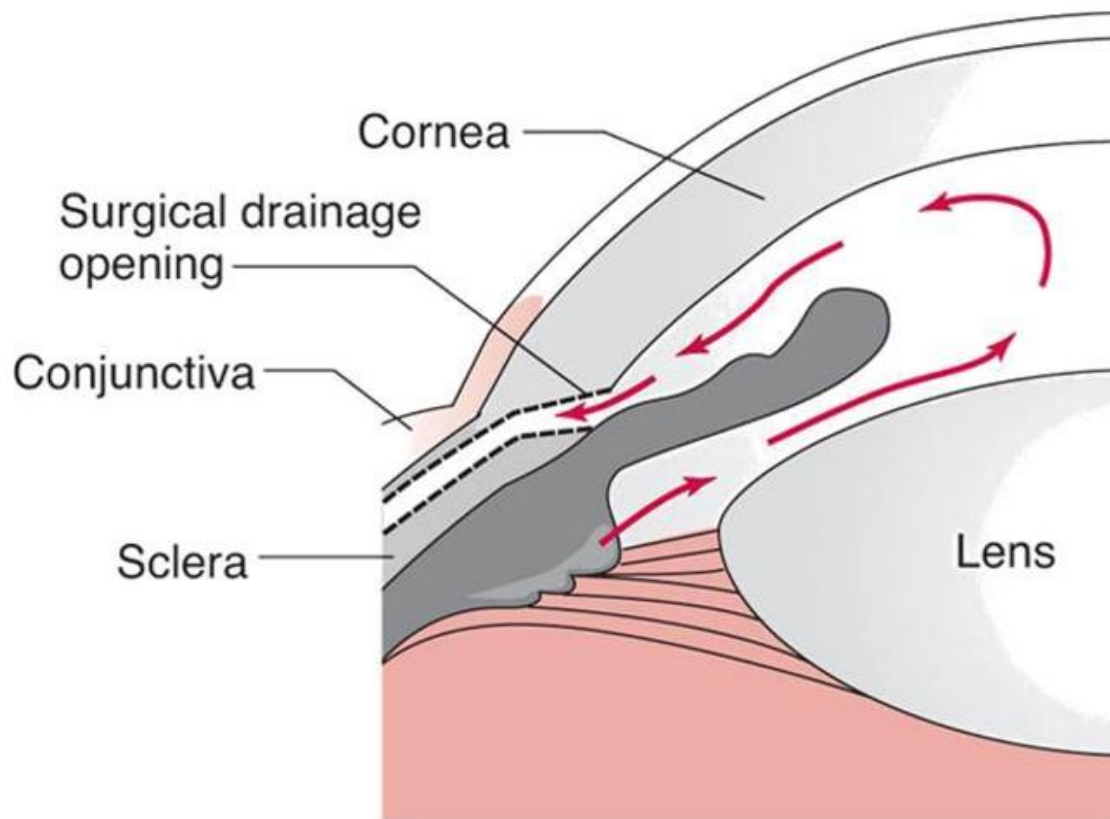
- Certain medications can cause blindness and are contraindicated in patients with ACG. Benadryl is one of these medications.
- You should not administer the medication and contact the HCP to change the order.

Glaucoma (continued_5)

■ Surgery

- Laser trabeculoplasty
- Trabeculectomy
- Glaucoma drainage devices (shunts)
- Laser peripheral iridotomy
- Surgical refractory

Flow of Aqueous Humor After Trabeculoplasty



Cataracts

- Opacity in eye lens
 - Loss of visual acuity
 - Difficulty with night vision
 - Difficulty reading fine print
 - Sensitivity to glare
 - Increase in nearsightedness

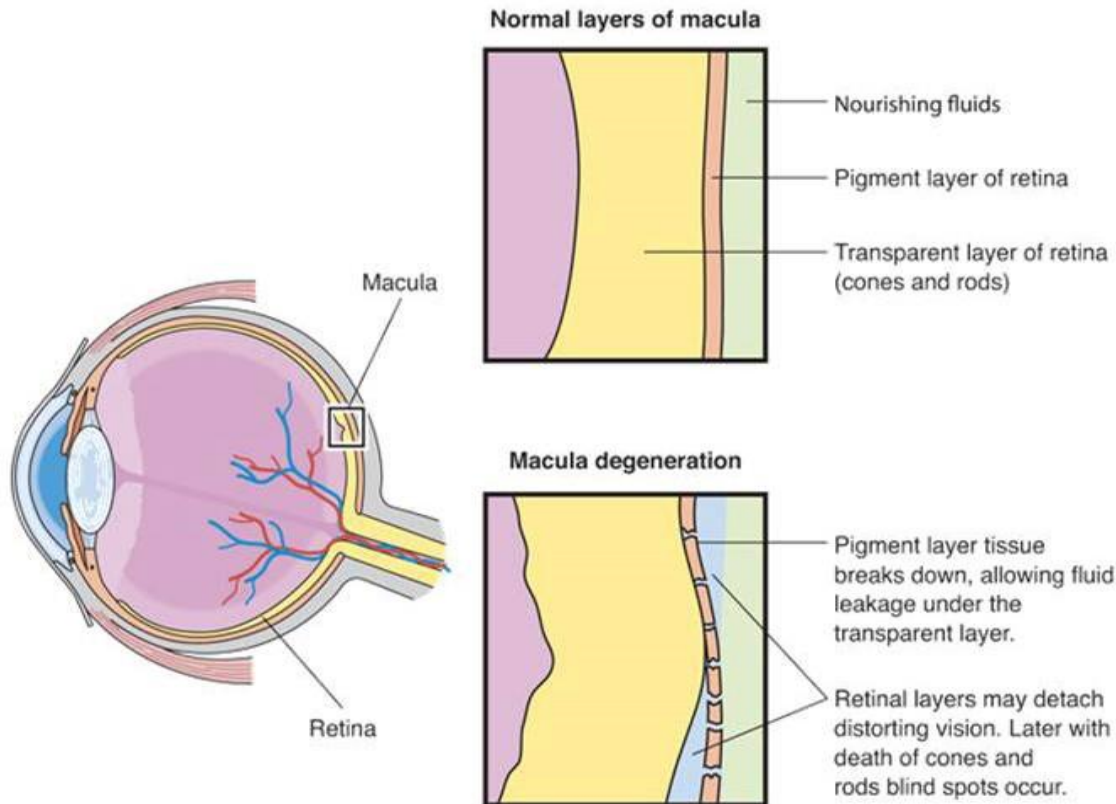
Cataracts (continued)

- Surgical management
 - No stitch surgical removal of lens
 - Laser removal
 - Lens implant

Macular Degeneration

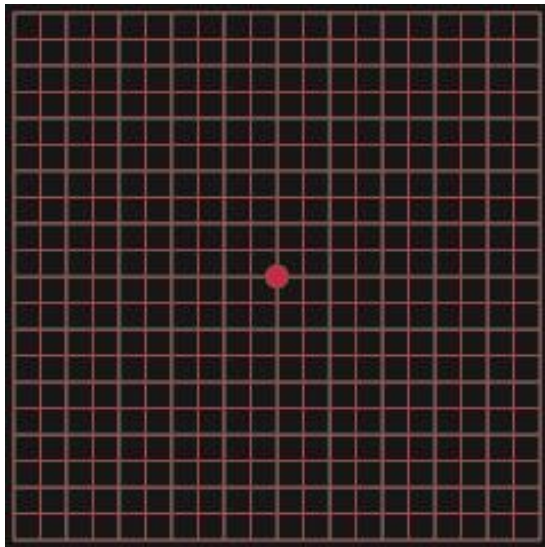
- Deterioration in macula
 - Wet
 - Dry
- Common over age 64 years
- Slow, progressive loss of central/near vision
- Daily screening
 - Amsler grid

Macular Degeneration (continued_1)

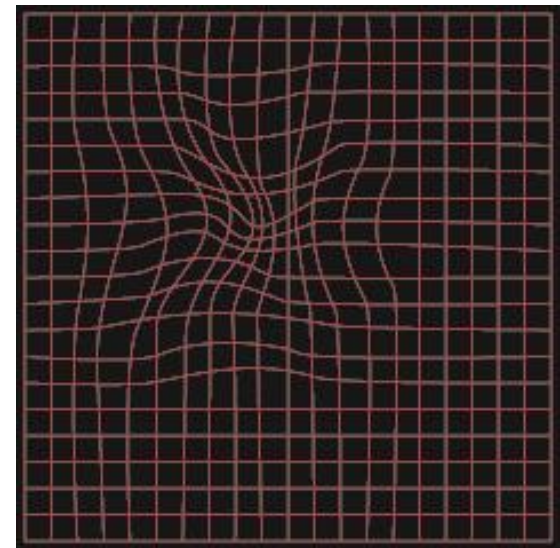


Amsler Grid

Normal Amsler grid



Abnormal Amsler grid



Macular Degeneration (continued_2)

- Therapeutic interventions
 - Dry
 - None
 - Wet
 - Antiangiogenesis medication
 - Ranibizumab (Lucentis)
 - Aflibercept (Eylea)

Macular Degeneration (continued_3)

■ Nursing Diagnoses

- *Self-Care Deficit* (Bathing, Dressing, Feeding)
- *Risk for Injury*
- *Deficient Knowledge*

Eye Trauma

- Emergency
 - Foreign bodies
 - Burns
 - Abrasions
 - Lacerations
 - Penetrating wounds

Eye Trauma (continued_1)

- Therapeutic measures and nursing care
 - Foreign object
 - Irrigate
 - Normal saline
 - Chemicals
 - 15- to 20-minute irrigation
 - Penetrating object
 - Do not remove.

Eye Trauma (continued_2)

- Therapeutic measures and nursing care (continued)
 - Antibiotic ointment
 - Surgery
 - Enucleation
 - Entire eyeball removal

Hearing Loss

- Conductive hearing loss
 - Interference with sound conduction to external auditory canal, eardrum, middle ear
- Sensorineural hearing loss
 - Involves hair cells and nerve endings
- Mixed
- Presbycusis
 - Aging process
 - Degeneration of organ of Corti
 - Inability to decipher high-frequency sounds

Hearing Loss (continued)

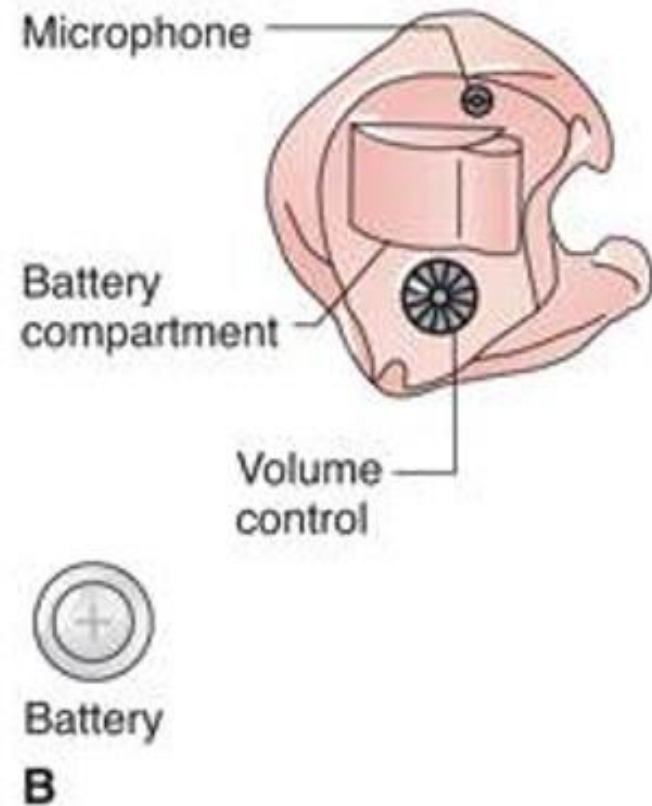
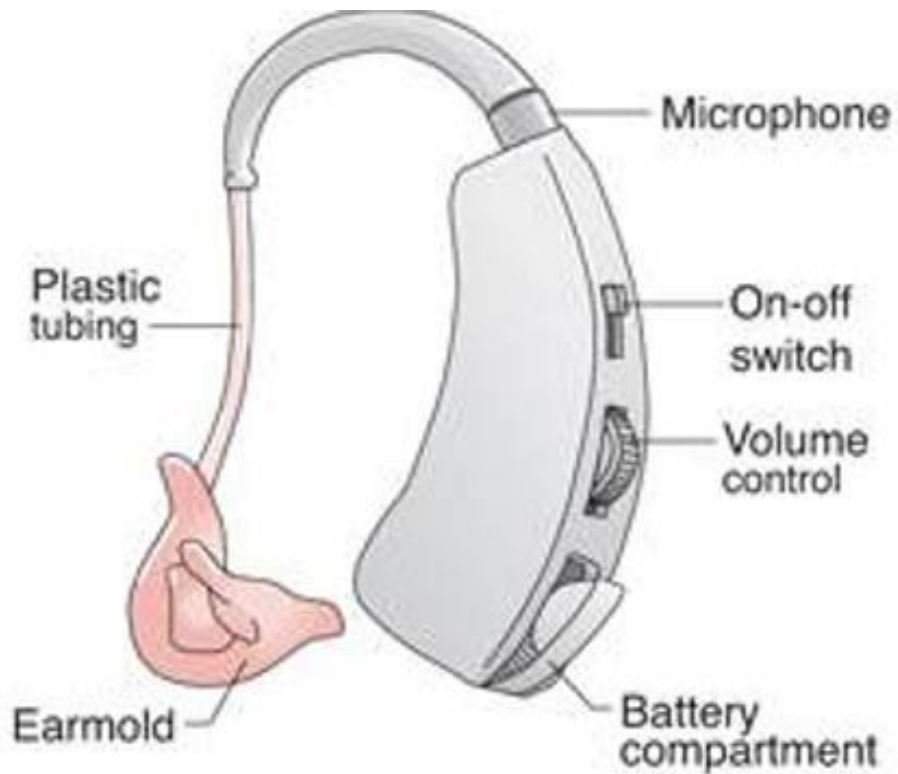
- Therapeutic measures

- Hearing aid
- Cochlear implants
 - Visit www.nidcd.nih.gov/health/cochlear-implants for information.

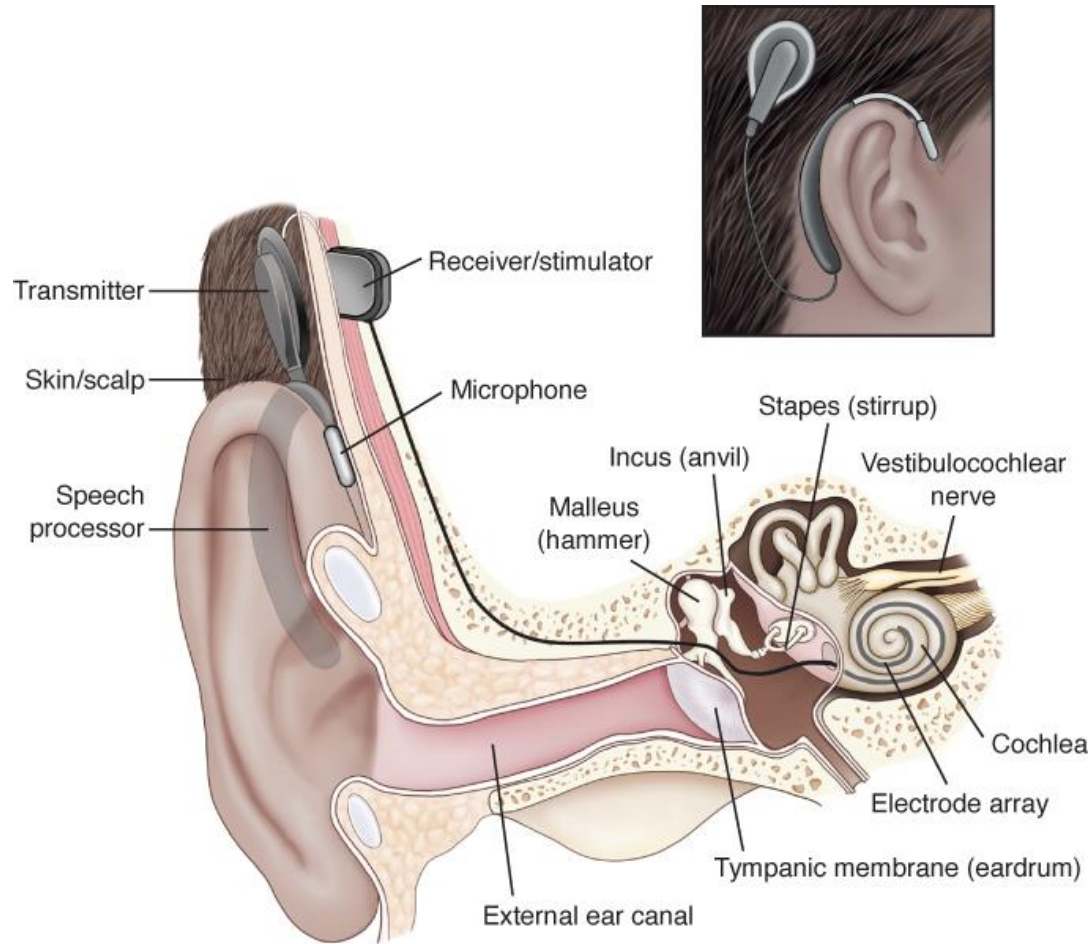
- Nursing diagnosis

- *Impaired Verbal Communication*

Hearing Aids



Cochlear Implant



External Ear

- Infections
 - External otitis
 - Ear canal furuncle
 - Otomycosis
 - Perichondritis

External Ear (continued_1)

- Impacted cerumen
 - Normally ear self-cleaning
 - Older adult at risk
 - Hearing loss
 - Feeling of fullness
- Masses
- Trauma

External Ear (continued_2)

- Therapeutic interventions
 - Topical antibiotics
 - Irrigations
 - Analgesics
 - Incision and drainage

Middle Ear Infection

- Otitis media
 - Fever, earache, and feeling of fullness
 - Antibiotics
 - Myringotomy

Otosclerosis

- New bone along stapes
- Conductive hearing loss
- More common in women than in men
- Both ears
- Hereditary disease
- No cure

Otosclerosis (continued_1)

- Therapeutic interventions
 - Hearing aids
 - Ossiculoplasty
 - Stapedectomy

Otosclerosis (continued_2)

- Nursing care
 - Operative ear is upward when lying.
 - Insert earplug to protect.
 - Promote safety.

Otosclerosis (continued_3)

- Nursing care (continued)

- Teach not to
 - Cough, sneeze
 - Blow nose
 - Vomit
 - Fly
 - Lift heavy objects
 - Shower

Ear Trauma

- Tympanic membrane perforation
- Middle ear ossicle fracture

Inner Ear

■ Labyrinthitis

- Inflammation or infection of inner ear
- Vertigo, tinnitus, sensorineural hearing loss
- Antibiotics
- Sedation
- Bedrest

■ Neoplastic disorders

- Acoustic neuroma
 - Tumor of the eighth cranial nerve
 - Benign or malignant

Ménière's Disease

- Balance disorder due to fluid disturbance
- Triad of symptoms
 - Vertigo
 - Hearing loss
 - Tinnitus
- Episodic bouts
 - Two to three times a year

Ménière's Disease (continued)

■ Acute treatment

- Tranquilizers
- Vagal blockers
- Bedrest

■ Prophylactic treatment

- Salt-restricted diet
- Diuretics
- Antihistamines
- Vasodilators
- Avoid alcohol, caffeine, tobacco

Review Question #1

The nurse is caring for a patient with bacterial conjunctivitis. The patient would require further teaching if the patient stated which of the following? *Select all that apply.*

1. It is not a contagious infection.
2. It is also called “pink eye.”
3. Antiviral eye drops are used to treat it.
4. Conjunctival redness, itching, and pain may occur.
5. Frequent hand hygiene is essential.

Review Question #1 Answer

Correct Answer: 1, 3

Review Question #2

The nurse is caring for a patient with angle-closure glaucoma. Atropine 0.4 milligram IM is ordered now. What action should the nurse take?

1. Give the atropine now.
2. Consult the HCP.
3. Hold the atropine.
4. Contact the pharmacist.

Review Question #2 Answer

Correct Answer: 2

Review Question #3

The nurse is caring for a patient with cataracts. During data collection, which findings would the nurse expect? *Select all that apply.*

1. Loss of visual acuity
2. Halos around lights
3. Pain
4. Sensitivity to glare
5. Decreased color vision

Review Question #3 Answer

Correct Answer: 1, 2, 4, 5

Review Question #4

The nurse is caring for a patient who has presbycusis. Which action should the nurse take to communicate with the patient? *Select all that apply.*

1. Face patient when speaking.
2. Stand in front of bright background light.
3. Stand on patient's reduced hearing side.
4. Speak softly and overarticulate words.
5. Use lower tones when speaking.
6. Use appropriate nonverbal gestures.

Review Question #4 Answer

Correct Answer: 1, 5, 6

Review Question #5

The nurse is explaining ear care to a patient. Which patient statement would indicate need for further teaching of ear care? *Select all that apply.*

1. Avoid swimming in contaminated water.
2. Cotton swabs can be inserted into ear.
3. Earplugs can be used for swimming.
4. The ear must be manually cleaned.
5. Use an ear dryer after frequent swimming.
6. With a cold, blow nose with one nare closed.

Review Question #5 Answer

Correct Answer: 2, 4, 6