* Overview of Anatomy and Physiology
* Anatomy of the eye
* Accessory structures of the eye
* Eyebrows
* Eyelashes
* Eyelids
* Lacrimal apparatus
* Figure 53-1
* Overview of Anatomy and Physiology
* Anatomy of the eye *(continued)*
* Structures of the eyeball
* Sclera
* Cornea
* Choroid
* Ciliary body
* Iris
* Pupil
* Retina
* Overview of Anatomy and Physiology
* Anatomy of the eye *(continued)*
* Chambers of the eye
* Anterior chamber
* Aqueous humor
* Posterior chamber
* Vitreous humor
* Figure 53-2
* Overview of Anatomy and Physiology
* Anatomy of the ear
* External ear
* Auricle
* External auditory canal
* Tympanic membrane
* Middle ear
* Eustachian tube
* Malleus
* Incus
* Stapes
* Figure 53-3
* Overview of Anatomy and Physiology
* Anatomy of the ear *(continued)*
* Inner ear
* Labyrinth
* Bony labyrinth—filled with perilymph
* Semicircular canals
* Vestibule
* Cochlea—organ of Corti
* Membranous labyrinth—filled with endolymph
* Figure 53-4
* Overview of Anatomy and Physiology
* Other special senses
* Taste and smell
* Taste buds: salty, sweet, sour, bitter
* Olfactory receptors: sense of smell
* Touch
* Tactile receptors
* Position/movement
* Proprioceptors
* Laboratory and Diagnostic Examinations
* Diagnostic eye tests
* Snellen test
* Color vision
* Refraction
* Ophthalmoscopy
* Tonometry
* Amster grid test
* Schirmer’s tear test
* Disorders of the Eye
* Blindness and near-blindness
* Etiology/pathophysiology
* Loss of visual acuity
* Congenital or acquired
* Legal blindness
* 20/200 with corrective eyewear (normal 20/20)
* Visual field less than 20 degrees (normal 180)
* Disorders of the Eye
* Blindness and near-blindness *(continued)*
* Clinical manifestations/assessment
* Diplopia
* Pain
* Floaters and light flashes
* Pruritus; burning of the eyes
* Loss of peripheral vision
* Halos
* Orbital pressure
* Bulging of the eyes
* Disorders of the Eye
* Blindness and near-blindness *(continued)*
* Medical management/nursing interventions
* Corrective eyewear
* Canes
* Seeing-eye dogs
* Magnifying systems
* Surgical procedures
* Disorders of the Eye
* Refractory errors
* Etiology/pathophysiology
* Astigmatism—unequal curve in the shape of the cornea or lens
* Strabismus—inability of the eyes to focus in one direction; cross-eyed
* Myopia—nearsightedness; eyeball is too long
* Hyperopia—farsightedness; eyeball is too short
* Disorders of the Eye
* Refractory errors *(continued)*
* Clinical manifestations/assessment
* Diminished or blurred vision
* Medical management/nursing interventions
* Corrective lenses
* Surgical correction
* Radial keratotomy (RK)
* Photorefractive keratectomy (PRK)
* Laser-assisted in-situ keratomileusis (LASIK)
* Disorders of the Eye
* Conjunctivitis
* Etiology/pathophysiology
* Inflammation of the conjunctiva
* Bacterial or viral infection
* Allergy
* Environmental factors
* Commonly called *pink eye*
* Disorders of the Eye
* Conjunctivitis *(continued)*
* Clinical manifestations/assessment
* Erythema of the conjunctiva
* Edema of the eyelid; crusting discharge
* Pruritus; burning; excessive tearing
* Medical management/nursing interventions
* Warm compresses
* Eye irrigations with normal saline
* Antibiotic drops or ointment
* Keep free from exudate
* Disorders of the Eye
* Keratitis
* Etiology/pathophysiology
* Inflammation of the cornea
* Injury, irritants, allergies, viral infection, or diseases
* *Pneumococcus*, *Staphylococcus*, *Streptococcus*, and *Pseudomonas* are most common types of bacterial causes
* Herpes simplex is most common viral cause
* Disorders of the Eye
* Keratitis *(continued)*
* Clinical manifestations/assessment
* Severe eye pain
* Photophobia
* Tearing
* Edema
* Visual disturbances
* Disorders of the Eye
* Keratitis *(continued)*
* Medical management/nursing interventions
* Pharmacological management
* Topical and systemic antibiotics
* Analgesics
* Pressure dressings
* Warm or cold compresses
* Epithelial debridement
* Keratoplasty
* Disorders of the Eye
* Dry eye disorders (keratoconjunctivitis sicca)
* Etiology/pathophysiology
* Lacrimal gland dysfunction from an autoimmune mechanism
* Clinical manifestations/assessment
* Complaints of sandy or gritty sensation in the eye
* Medical management/nursing interventions
* Artificial tear replacement
* Punctal plugs or repair if injured
* Disorders of the Eye
* Ectropion and entropion
* Etiology and pathophysiology
* Noninfectious disorders of the eye lid causing abnormal eyelid margins
* Clinical manifestations
* Abnormal direction of the eyelid
* Corneal dryness
* Medical management/nursing interventions
* Topical medications to reduce conjunctival and corneal drying
* Surgery
* Disorders of the Eye
* Cataracts
* Etiology/pathophysiology
* Noninfectious opacity or clouding of the lens
* Congenital; acquired; senile
* Clinical manifestations/assessment
* Blurred vision
* Diplopia
* Photosensitivity
* Decreased night vision
* Opacity in the center portion of lens
* Disorders of the Eye
* Cataracts *(continued)*
* Medical management/nursing interventions
* Surgical removal
* Lens implant or glasses
* Postoperative
* Avoid direct sunlight
* Bed rest with bathroom privileges (BRPs)
* Analgesics
* No bending down or straining
* Avoid coughing, sneezing, and blowing nose
* Disorders of the Eye
* Diabetic retinopathy
* Etiology/pathophysiology
* Capillary microaneurysms, hemorrhage, exudates, and formation of new vessels and connective tissue in the retina
* Clinical manifestations/assessment
* Microaneurysms
* Progressive loss of vision; “floaters”
* Medical management/nursing interventions
* Photocoagulation
* Vitrectomy
* Disorders of the Eye
* Macular degeneration
* Etiology/pathophysiology
* Slow, progressive loss of central and near vision due to aging retina
* Clinical manifestations/assessment
* Gradual and variable bilateral loss of vision
* Color perception may also be affected
* Medical management/nursing interventions
* Usually no treatment
* May use photocoagulation
* Disorders of the Eye
* Retinal detachment
* Etiology/pathophysiology
* Separation of the retina from the choroid in the posterior area of the eye
* Clinical manifestations/assessment
* Flashes of light; floating spots
* Loss of a specific field of vision
* Medical management/nursing interventions
* Photocoagulation; cryosurgery; diathermy
* Scleral buckling
* Figure 53-8
* Disorders of the Eye
* Glaucoma
* Etiology/pathophysiology
* An abnormal condition of elevated pressure within an eye; obstruction of outflow of aqueous humor
* Open-angle
* Closed-angle
* Figure 53-9
* Disorders of the Eye
* Glaucoma *(continued)*
* Clinical manifestations/assessment
* Open-angle
* No signs or symptoms during early stages
* Tunnel vision
* Eye pain
* Difficulty adjusting to darkness
* Halos around lights
* Inability to detect colors
* Disorders of the Eye
* Glaucoma *(continued)*
* Clinical manifestations/assessment
* Closed-angle
* Severe pain
* Decreased vision
* Nausea and vomiting
* Erythema of the sclera
* Enlarged and fixed pupil
* Halos around lights
* Disorders of the Eye
* Glaucoma *(continued)*
* Medical management/nursing interventions
* Open-angle glaucoma
* Beta blockers
* Miotics
* Carbonic anhydrase inhibitors
* Closed-angle
* Osmotic diuretics
* Iridectomy
* Disorders of the Eye
* Corneal injuries
* Etiology/pathophysiology
* Result from injuries to corneal layers of the eye
* Clinical manifestations/assessment
* Pain with movement of eye
* Excessive tearing; pruritus
* Erythema of conjunctiva
* Disorders of the Eye
* Corneal injuries *(continued)*
* Medical management/nursing interventions
* Flush with normal saline or water
* Antibiotic drops or ointment
* Penetrating wounds
* Do not remove object if present
* Surgeries of the Eye
* Enucleation
* Surgical removal of the eyeball
* Keratoplasty (corneal transplant)
* Excision of the corneal tissue, followed by implantation of a cornea from a donor
* Photocoagulation
* A laser is directed into a small spot on the retina
* Vitrectomy
* Removal of excess vitreous fluid caused by hemorrhage and replacement with normal saline
* Laboratory and Diagnostic Examinations
* Diagnostic ear tests
* Otoscopy
* Tuning fork tests
* Weber’s test
* Rinne test
* Autometric testing
* Vestibular testing
* Romberg test
* Past-point testing
* Figure 53-13
* Figure 53-14
* Loss of Hearing (Deafness)
* Hearing impairment
* Etiology/pathophysiology
* Decreased auditory acuity; partial or complete
* Affects development of speech
* Types
* Conductive
* Sensorineural
* Mixed
* Congenital
* Functional
* Central
* Loss of Hearing (Deafness)
* Hearing impairment *(continued)*
* Clinical manifestations/assessment
* Requests for repeating information
* Nonresponse
* Delayed speech development
* Medical management/nursing interventions
* According to cause
* Hearing aids
* Surgical procedures
* Cochlear implant
* Inflammatory and Infectious Disorders of the Ear
* External otitis
* Etiology/pathophysiology
* Inflammation or infection of the external canal
* Clinical manifestations/assessment
* Pain with movement of auricle or chewing
* Erythema, scaling, pruritus, edema, watery discharge, and crusting of the external ear
* Medical management/nursing interventions
* Oral analgesics; corticosteroids
* Antibiotic or antifungal ear drops; oral antibiotics
* Inflammatory and Infectious Disorders of the Ear
* Otitis media
* Etiology/pathophysiology
* Inflammation or infection of the middle ear
* Clinical manifestations/assessment
* Fullness in the ear
* Severe, deep, throbbing pain
* Hearing loss
* Tinnitus
* Fever
* Inflammatory and Infectious Disorders of the Ear
* Otitis media *(continued)*
* Medical management/nursing interventions
* Pharmacological management
* Antibiotics
* Analgesics
* Nasal decongestants
* Local heat
* Aspiration of fluid from behind eardrum
* Myringotomy
* Inflammatory and Infectious Disorders of the Ear
* Labyrinthitis
* Etiology/pathophysiology
* Inflammation of the labyrinthine canals of the inner ear
* Most common cause of vertigo
* Viral infection from URI
* Drugs and food
* Tobacco and alcohol
* Inflammatory and Infectious Disorders of the Ear
* Labyrinthitis *(continued)*
* Clinical manifestations/assessment
* Severe and sudden vertigo; ataxic gait
* Nausea and vomiting
* Nystagmus; photophobia
* Headache
* Medical management/nursing interventions
* Antibiotics
* Dramamine or meclizine for vertigo
* IV fluids if nausea and vomiting present
* Inflammatory and Infectious Disorders of the Ear
* Obstructions of the ear
* Etiology/pathophysiology
* Impaction of cerumen in canal; foreign bodies
* Clinical manifestations/assessment
* Tinnitus and pain in the ear
* Slight hearing loss; tugging at ear
* Medical management/nursing interventions
* Removal of cerumen by irrigation
* Foreign objects are removed with forceps
* Carbamide peroxide to soften cerumen
* Noninfectious Disorders of the Ear
* Otosclerosis
* Etiology/pathophysiology
* Chronic, progressive deafness due to formation of spongy bone, especially around the oval window
* Clinical manifestations/assessment
* Slowly progressive conductive hearing loss
* Tinnitus; dizziness to vertigo
* Medical management/nursing interventions
* Stapedectomy
* Air conduction hearing aid
* Noninfectious Disorders of the Ear
* Ménière’s disease
* Etiology/pathophysiology
* Chronic disease of the inner ear
* Increase in endolymph fluid
* Clinical manifestations/assessment
* Vertigo
* Nausea and vomiting
* Hearing loss; tinnitus
* Diaphoresis
* Nystagmus
* Noninfectious Disorders of the Ear
* Ménière’s disease *(continued)*
* Medical management/nursing interventions
* No specific treatment
* Decrease fluid pressure
* Fluid restriction; diuretics; low-salt diet
* Dramamine, meclizine, and Benadryl
* Surgery
* Destruction of labyrinth
* Endolymphatic shunt
* Cryosurgery
* Vestibular nerve section
* Surgeries of the Ear
* Stapedectomy
* Removal of the stapes of the middle ear
* Tympanoplasty
* Operative procedures on the eardrum or ossicles of the middle ear to restore hearing
* Myringotomy
* Surgical incision of the eardrum
* Cochlear implant
* Surgical implantation of a hearing device for the profoundly deaf
* Nursing Process
* Nursing diagnoses
* Health maintenance, ineffective
* Anxiety
* Self-care deficit
* Fear
* Impaired environmental interpretation syndrome
* Impaired home maintenance
* Impaired social interaction
* Risk for injury
* Risk for loneliness
* Sensory perception, disturbed: auditory or visual