VISION: ACCESSORY STRUCTURES AND MUSCLES

2/7/82 RVSD 21 January 2016
S&M p 39, Martini p 562-581, Martini 6th: 569-587, 7th: 554-573, 8th: 566-585, 10th:

Embryonic development
outgrowths fr diencephalon via optic stalk, form optic vesicles
optic cups, 2x layered
inner layer: nervous tissue of retina
outer layer: pigmented layer of retina
organogenic induction:

lens placode: ectoderm thickens, invaginates, forms lens vesicle
fibrous and vascular coats formed by mesodermal aggregation (mesenchymal), cornea forms over lens vesicle

ACCESSORY STRUCTURES AND EXTERNAL FEATURES (p 571)
palpebra eyelid, eyelids strengthened by tarsal plate of connective tissue
Meibomian glands enlarged sebaceous glands, lubricates margin, hold in tears.
infected: sty
eyelashes have sebaceous glands too:
infected: cyst on eye
ciliary glands modified sweat glands, canthi (angle) medial and lateral:
Corners of fissure of lids
caruncle (flesh, little) red mound in medial canthus conjunctiva mucous membrane lining of eye:
bulbar conjunctiva
inner eyelid: palpebral conjunctiva
fornix (arch) where they join

LACRIMAL APPARATUS: (571)
lacrimal gland superior lateral edge of orbit, ducts deliver
ears salt, mucin, lysozyme
lacrical drainage papilla two medial projections puncti, open into canaliculus drain to lacrimal sac receiving chamber nasolacrimal duct drains onto inferior nasal conchae

MUSCLES: (p 347)
SIX EXTRINSIC
4 rectus: superior, lateral, inferior, medial
2 oblique: inferior oblique lateral & up
superior oblique lateral & down

Focusing of image on retina:
mostly by cornea, adjustments by lens.

INTRINSIC MUSCLES:
Accommodation: pupil: (p 558), lens focus: (p 562)
pupil also constricts during accommodation
ciliary muscles contract, narrows ring of ciliary body (like a sphincter).
less tension, lens bulges to more round.