

# VISION: ACCESSORY STRUCTURES AND MUSCLES

2/7/82 RVSD 2/5/98, 3 Feb 00, 9 Feb 04, 14 Feb 05, 18 Feb 08, 16Feb09, 8Feb10, 14Feb11  
S&M p 39, Martini p 562-581, Martini 6<sup>th</sup>: 569-587, 7<sup>th</sup>: 554-573, 8<sup>th</sup>: 566-585

## 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 567)

## palpebra

eyelid. eyelids strengthened by tarsal plate of connective tissue

**Meibomian glands** enlarged sebaceous glands, lubricates margin, hold in tears.  
infected: **cyst on eye**

**eyelashes** have sebaceous glands too:  
infected: **sty**

**ciliary glands** modified sweat glands,

**canthi** medial and lateral, (angle): edges of fissure of lids

caruncle red mound in medial canthus

**conjunctiva** mucous membrane lining eye and inner eyelid (**fornix** where they join)

## LACRIMAL APPARATUS:

**lacrimal gland** superior lateral edge of orbit, ducts deliver

**tears** salt, mucin, lysozyme

**lacrimal drainage** medially, two projections, papilla contain

**puncti**, drain into

**canaliculus**, to

**lacrimal sac**,

**nasolacrimal duct** drains onto

**inferior nasal conchae**

## MUSCLES: (p 348)

### SIX EXTRINSIC

4 rectus: superior, lateral, inferior, medial

2 oblique: **inferior oblique**, up & lateral, **superior oblique**, down & lateral

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

### INTRINSIC MUSCLES:

**Accommodation**: pupil: (p 570), lens focus: (p 577)

**pupil** also constricts during accommodation

**ciliary muscles** contract, narrows ring of **ciliary body** (like a sphincter). less tension, lens bulges to more round.

