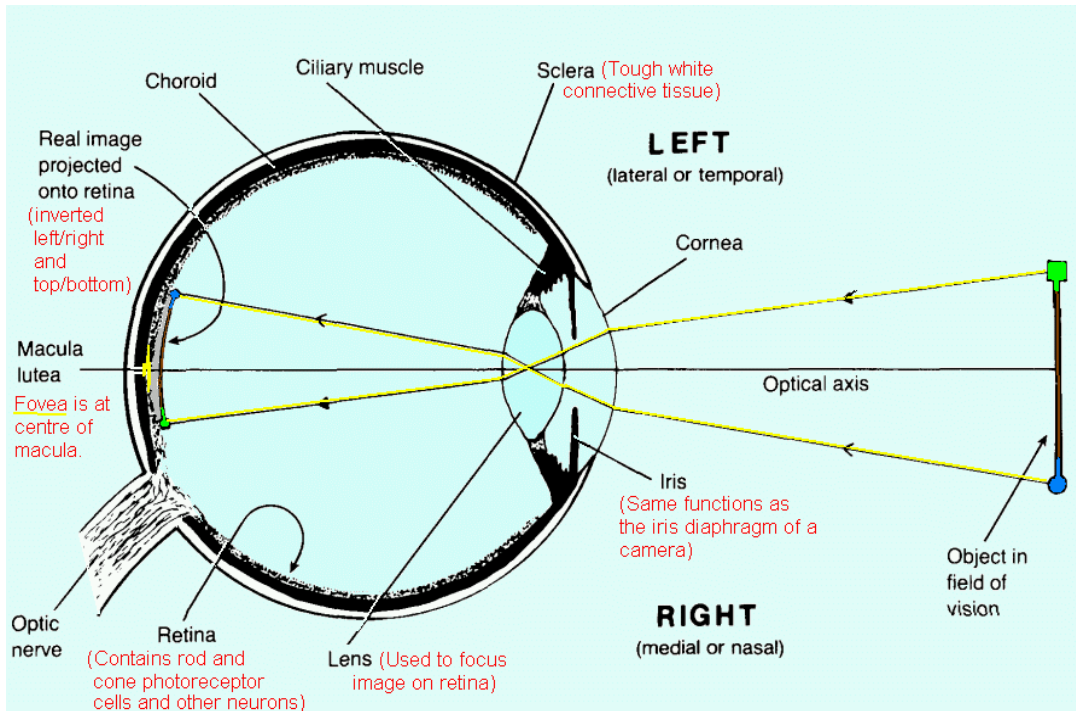
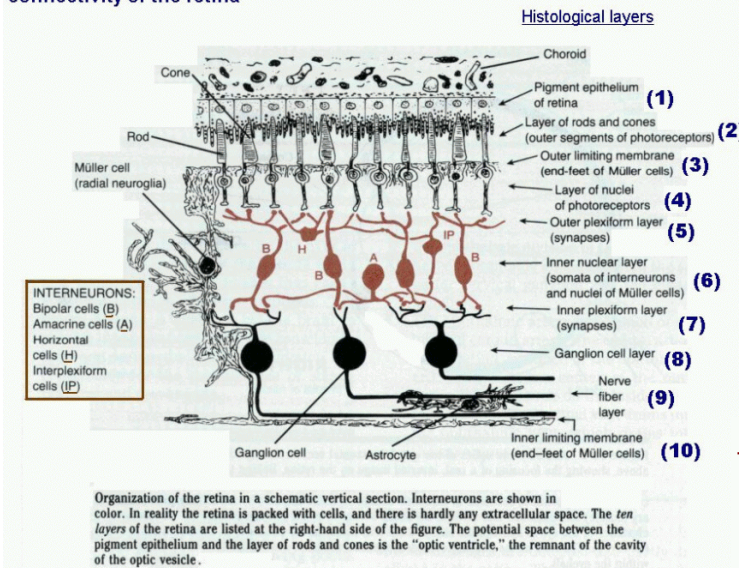


VISUAL SYSTEM



Histology and neuronal connectivity of the retina



(For Anatomy 9535 students are not expected to learn the names of the histological layers of the retina.)

DESTINATIONS OF THE OPTIC TRACT

HYPOTHALAMUS — Day/Night; Season of year

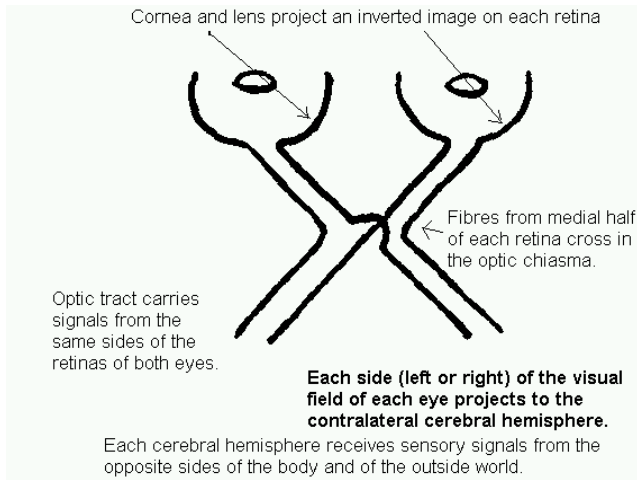
PRETECTAL AREA — Pupillary light reflex

SUPERIOR COLLICULUS — Eye movements

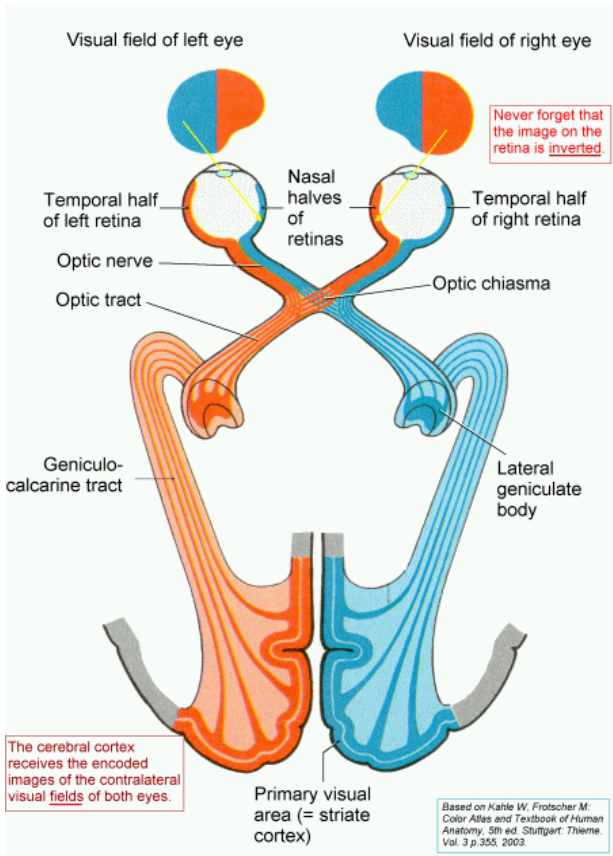
LATERAL GENICULATE BODY — Conscious vision

REMEMBER!

Each optic tract receives fibres from the left and the right retina.

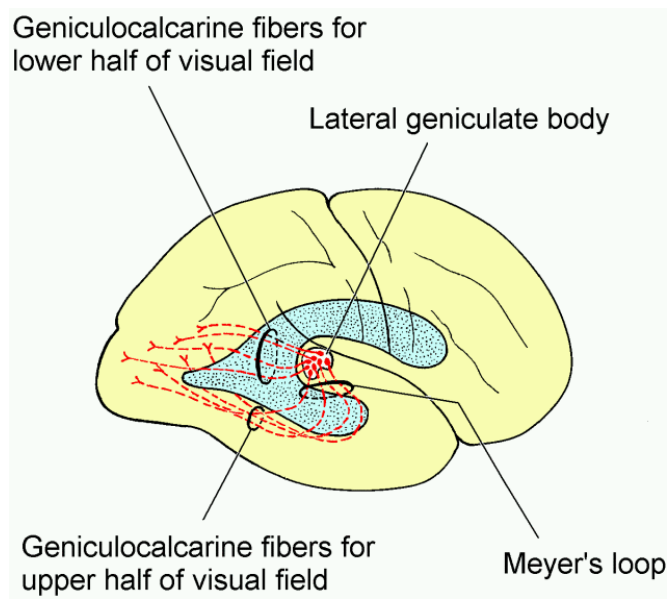


This simple diagram shows (1) inversion of image on retina, (2) the nature of the partial decussation of fibres in the optic chiasma, (3) the projection of the visual fields to the contralateral cerebral hemisphere.



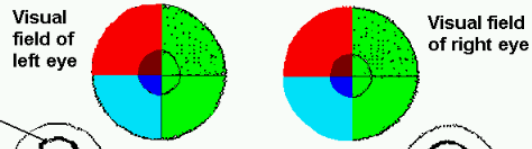
Plan view - the visual pathways from above.

Side view of the right geniculocalcarine tract.

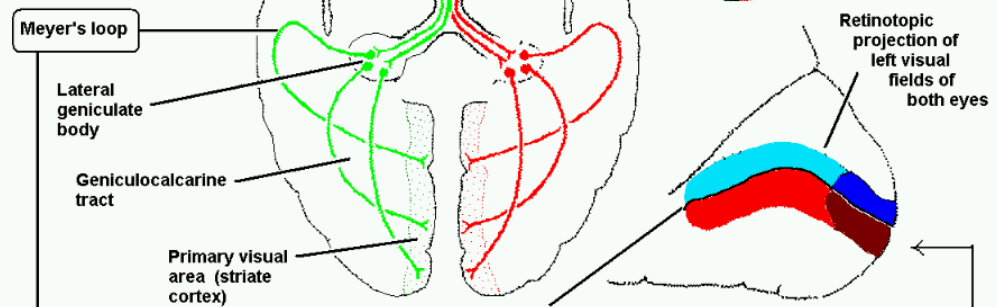
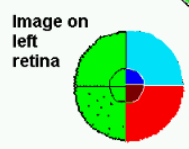


Retinotopic projection to the primary visual cortex

Always remember the optical inversion!



The inner circle of each visual and retinal field indicates central (macular) vision.



Geniculocalcarine fibres that carry signals from the lower halves of the hemiretinas (upper half of contralateral visual field). They go to the inferior bank of the calcarine sulcus.

Calcarine sulcus in medial surface of right occipital lobe

Macular vision is segregated from peripheral vision and has its primary cortical area near the occipital pole.

Fibres carrying signals from the macula are separated from those concerned with peripheral vision.

VISUAL FIELD DEFECTS. Locate a single lesion responsible for the abnormality.

