EXTRAOCULAR MUSCLES

- There are seven skeletal extraocular (extrinsic) muscles associated with the eye.

1. Levator palpebrae superioris is an elevator of the upper eyelid,
2. Other six are capable of moving the eye in almost any direction and they are

superior rectus

medial rectus

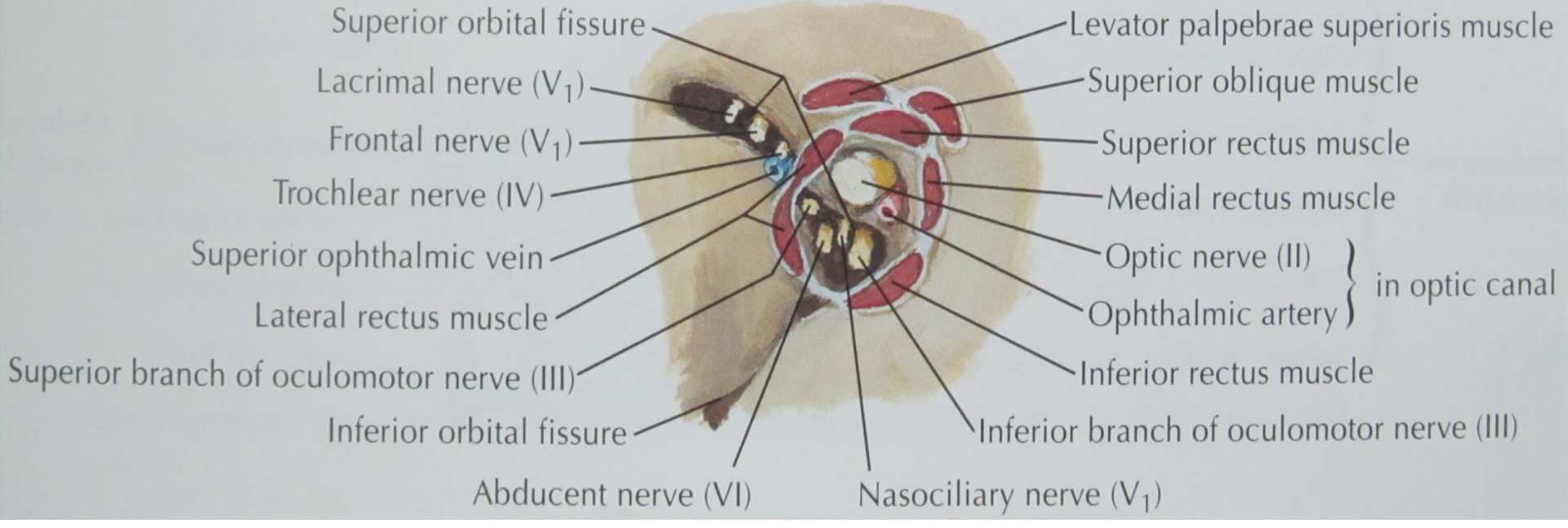
inferior rectus

lateral rectus

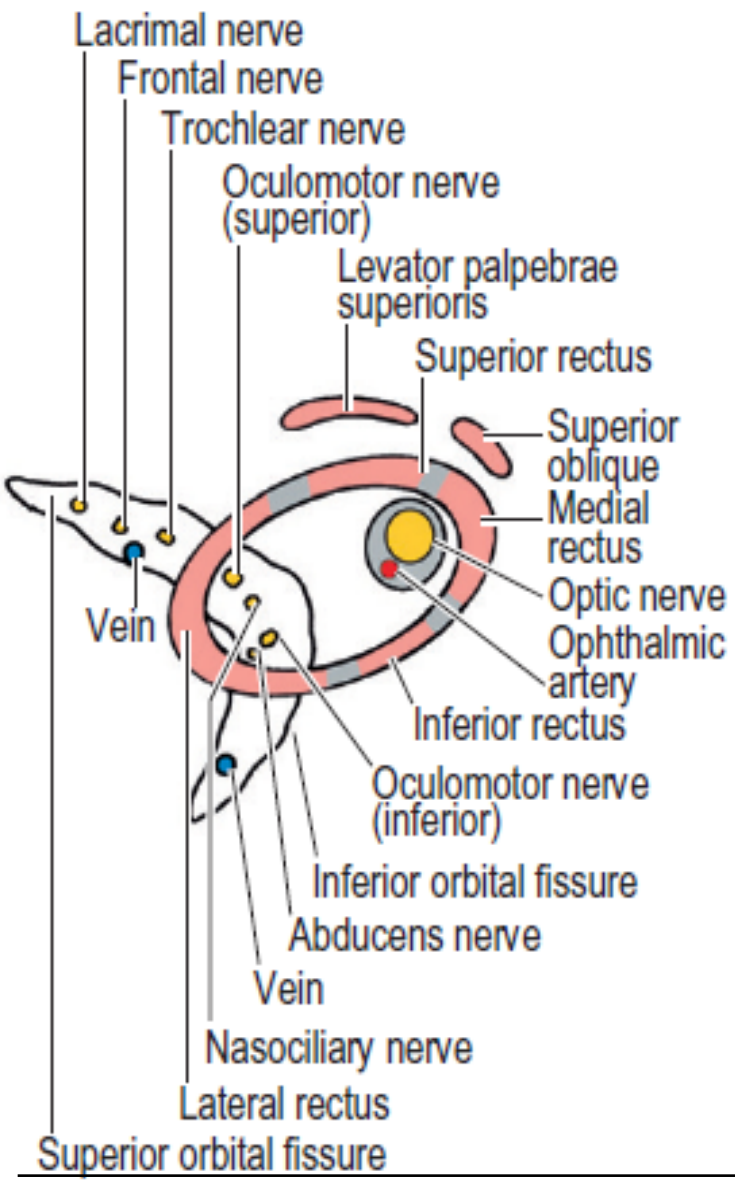
superior oblique

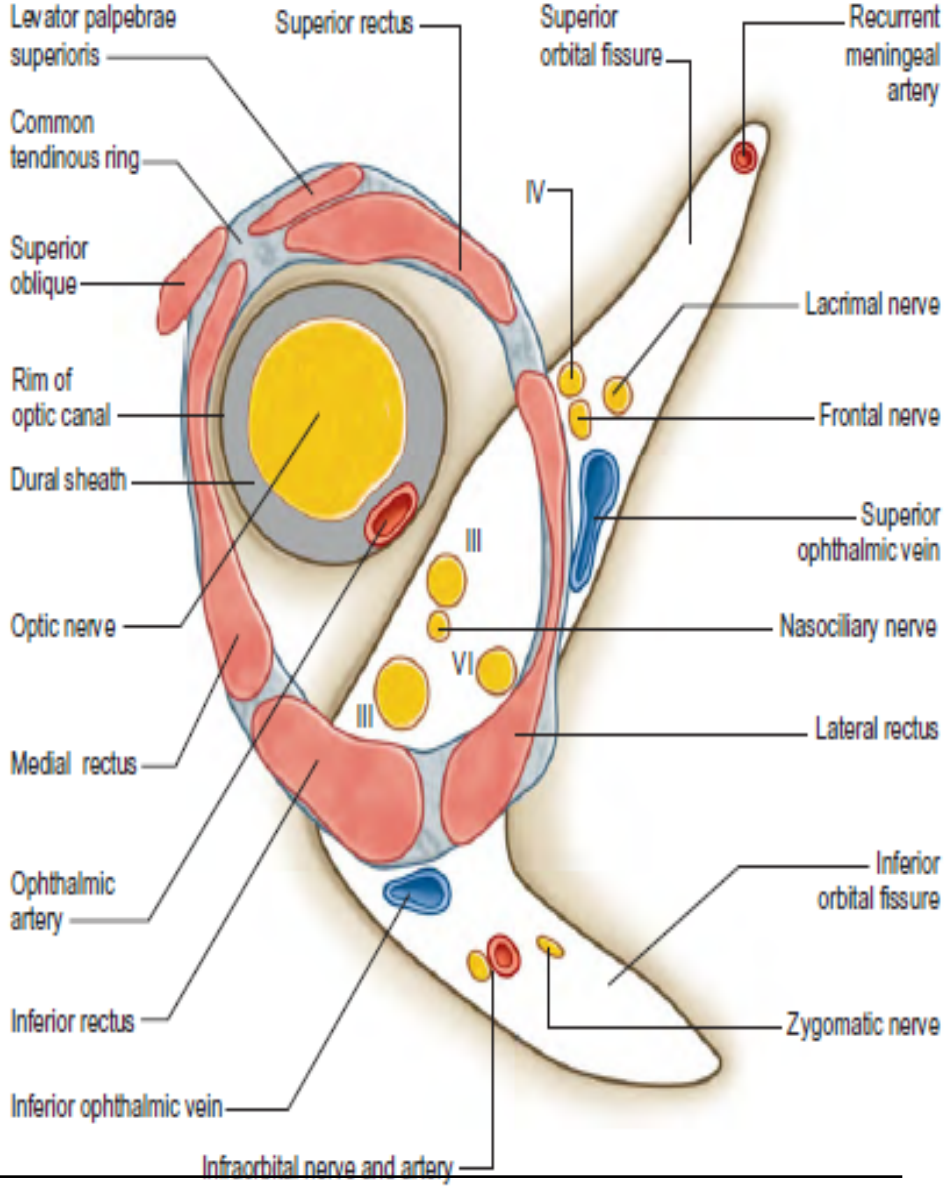
inferior oblique

Muscle attachments and nerves and vessels entering orbit

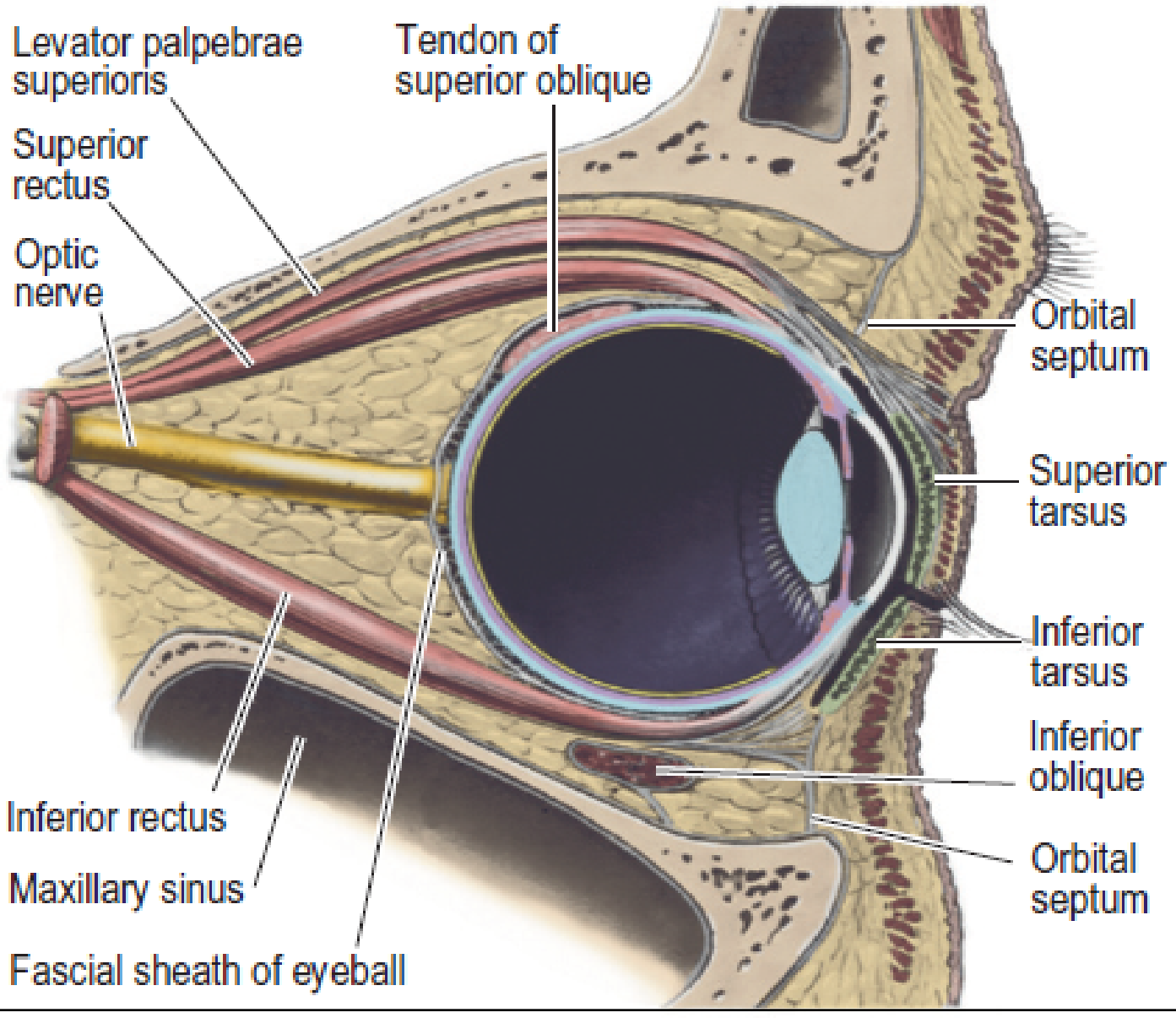


The common tendinous ring with its muscle origins superimposed.

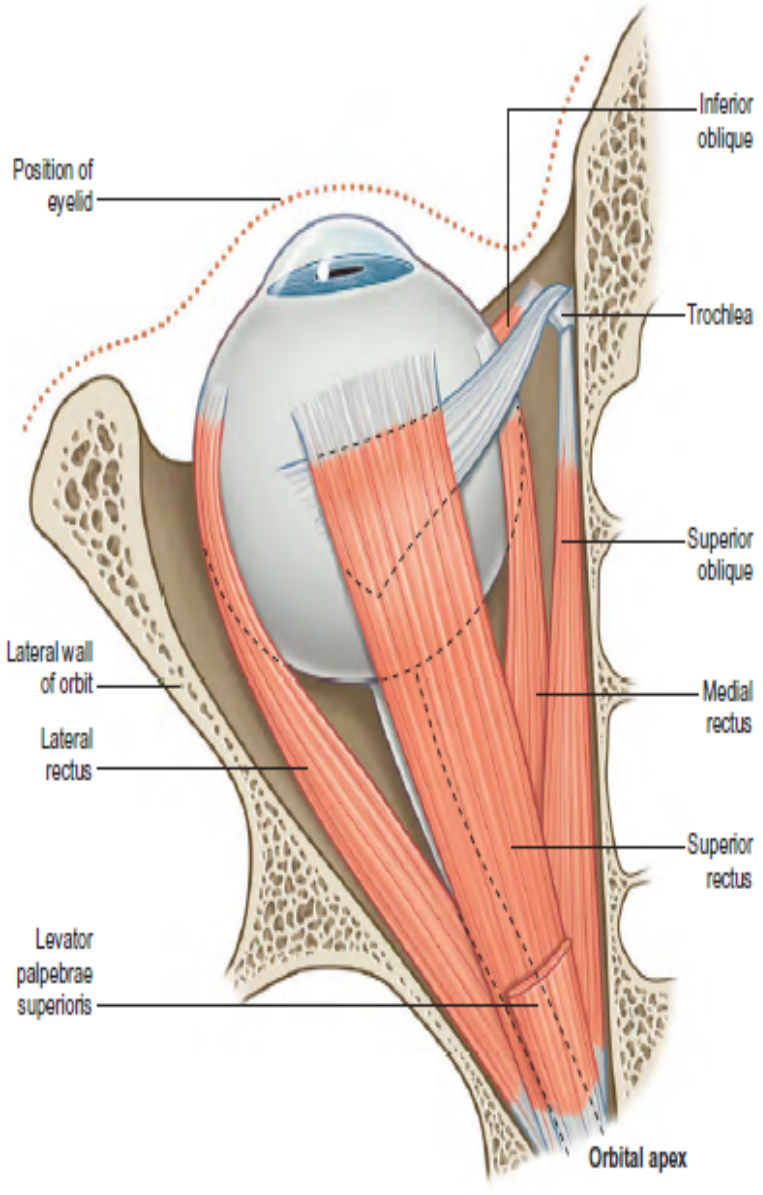


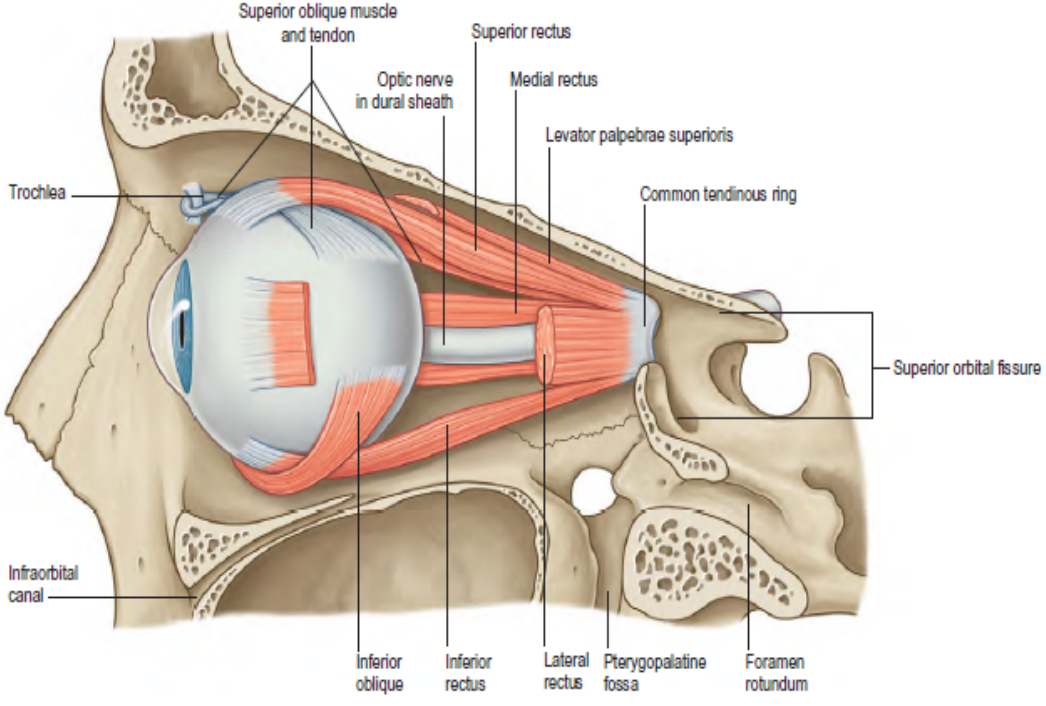


Levator palpebrae superioris



Other extraocular muscles





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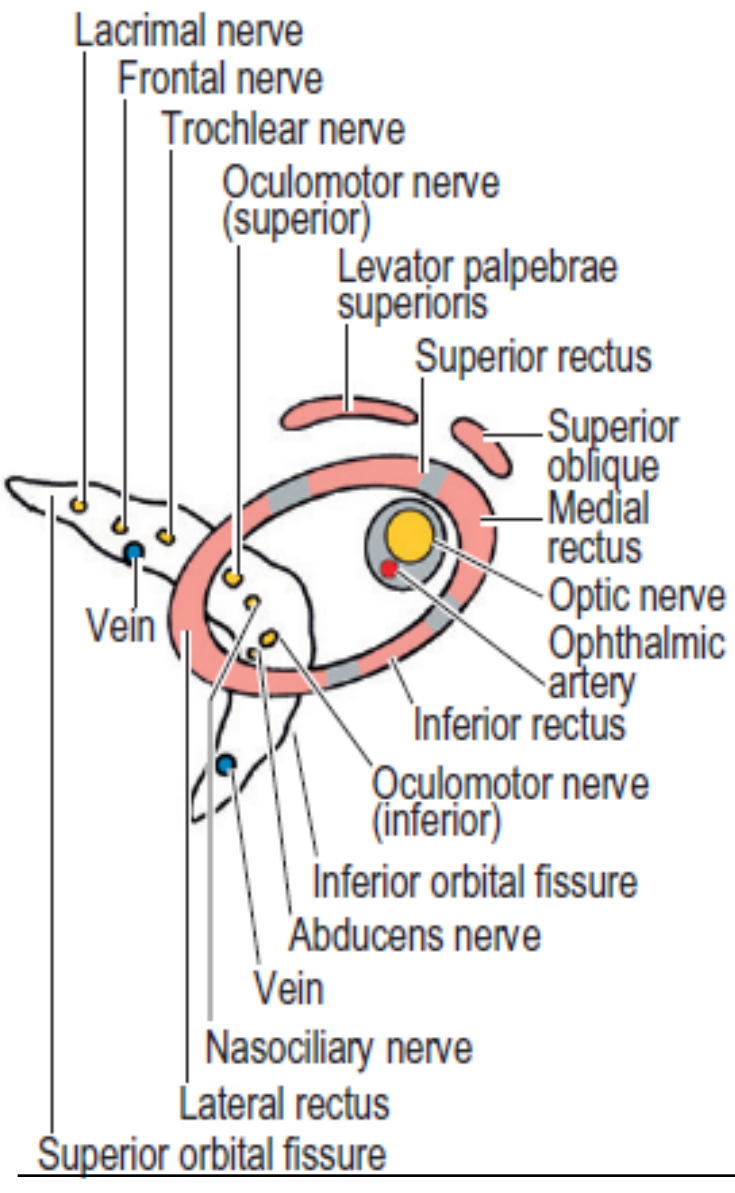
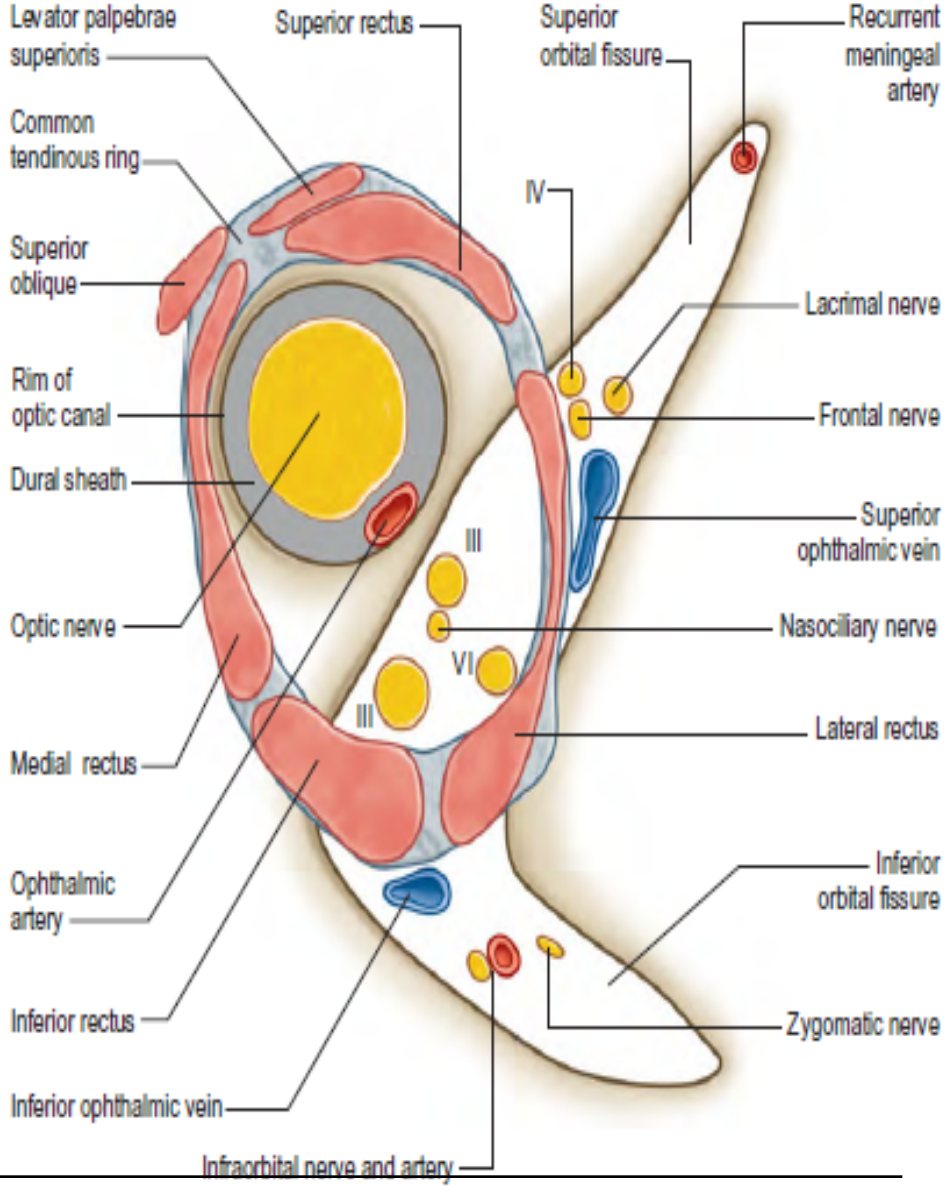
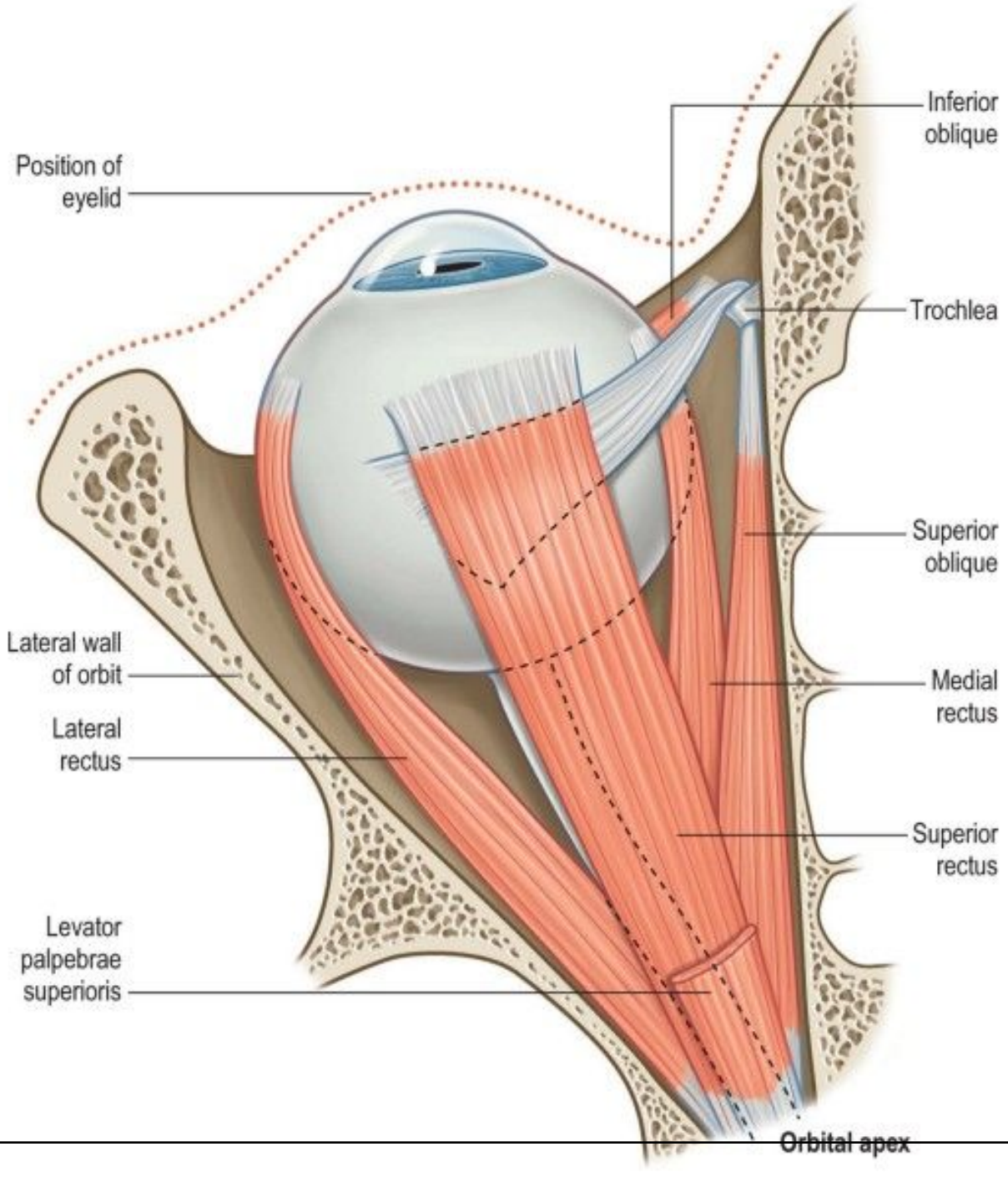
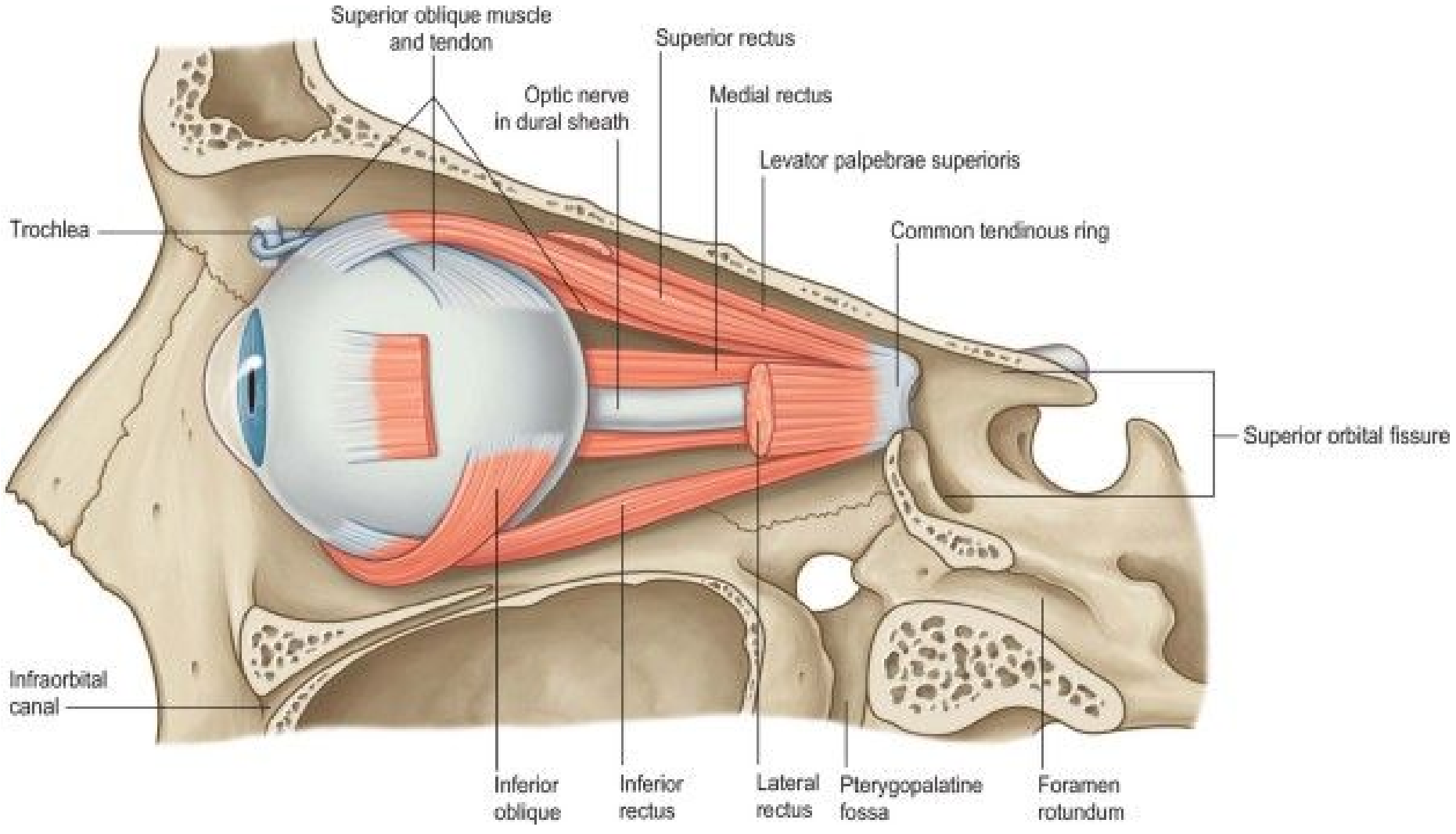
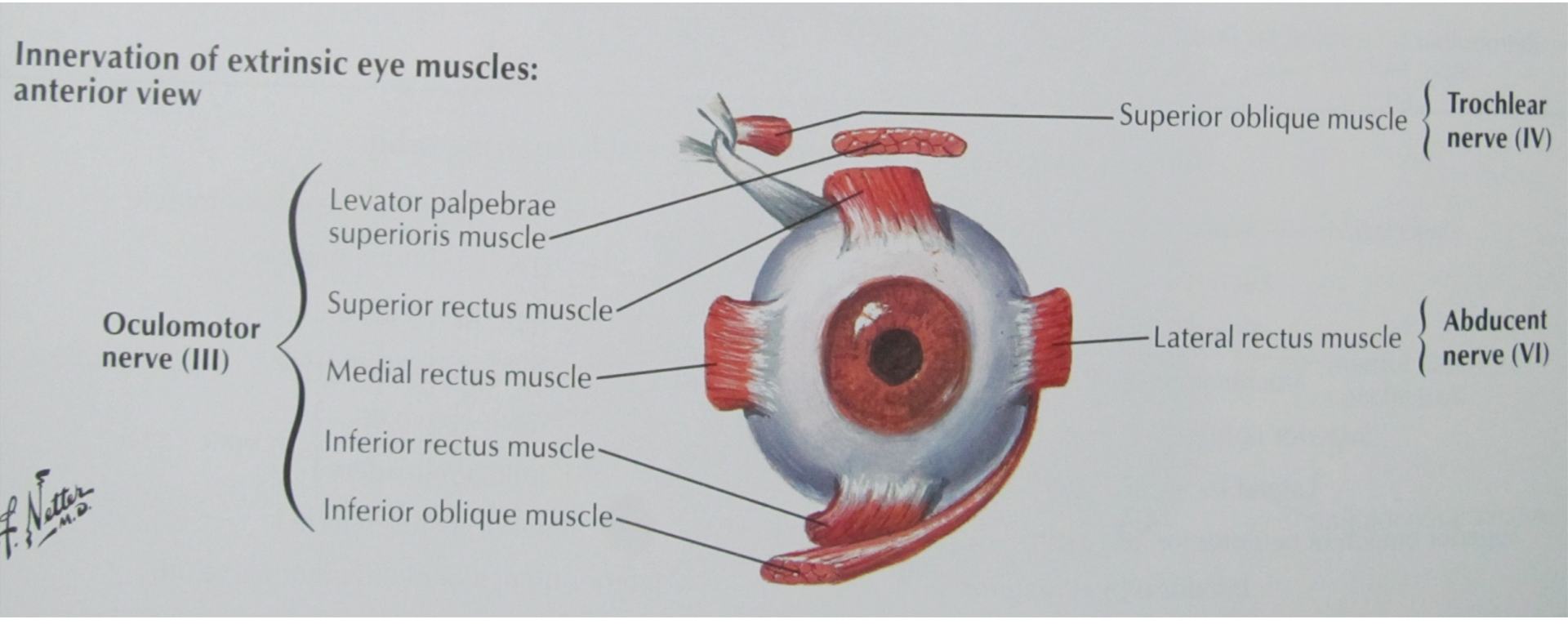










MOVEMENTS OF THE EYES

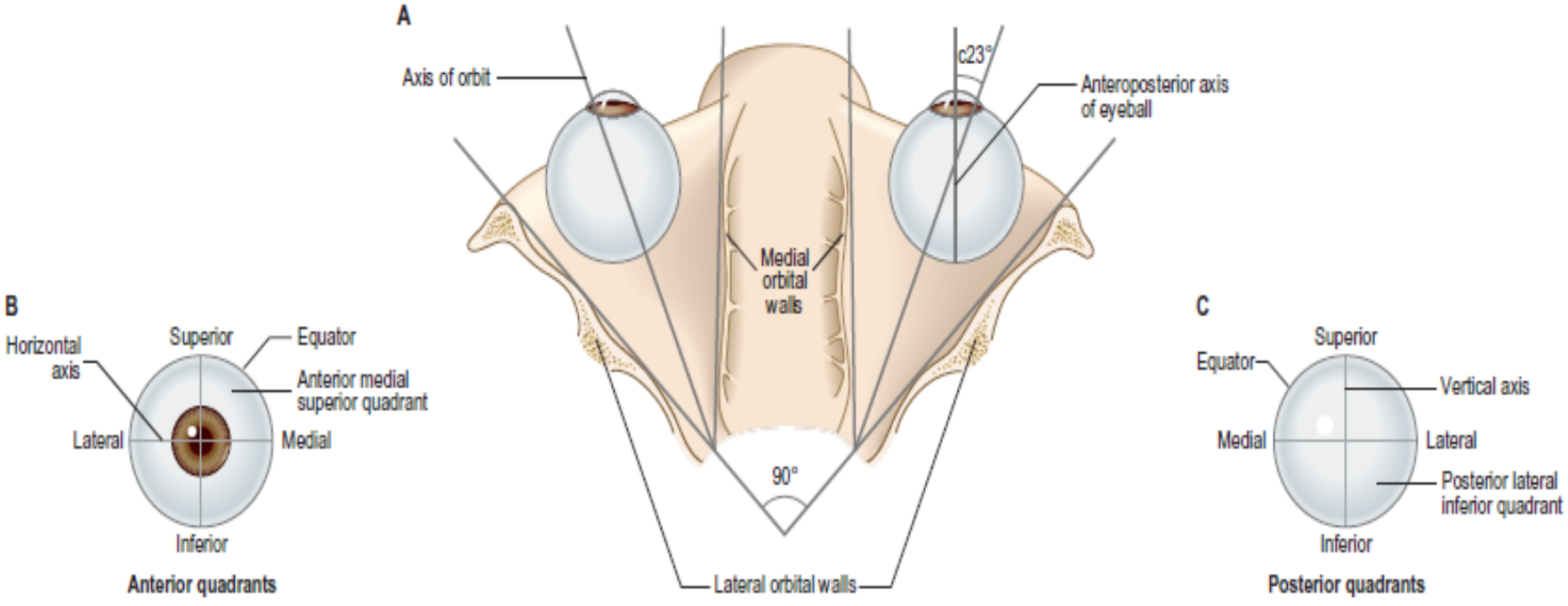
- Movements of the eyes involve rotations around a centre of rotation within the globe. For practical purposes, this can be considered to lie 13.5 mm behind the corneal apex.

- Normal eye movements are binocular.

- Movements of the eyes in the same direction are termed versions, whilst those in opposite directions are termed vergences.

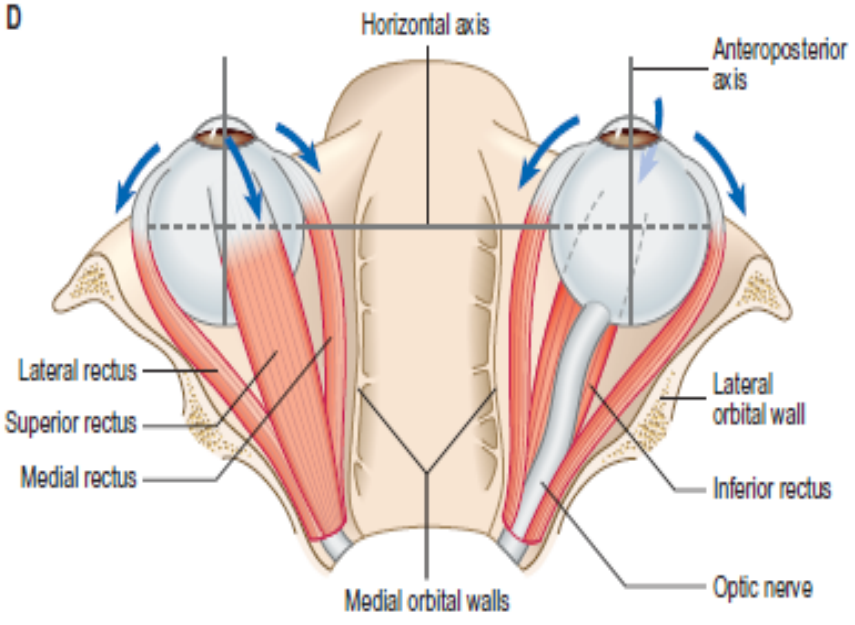
- Eye movements are often accompanied by corresponding movements of the eyelids, particularly in upgaze, where the activity of levator palpebrae superioris is closely coupled to that of superior rectus.

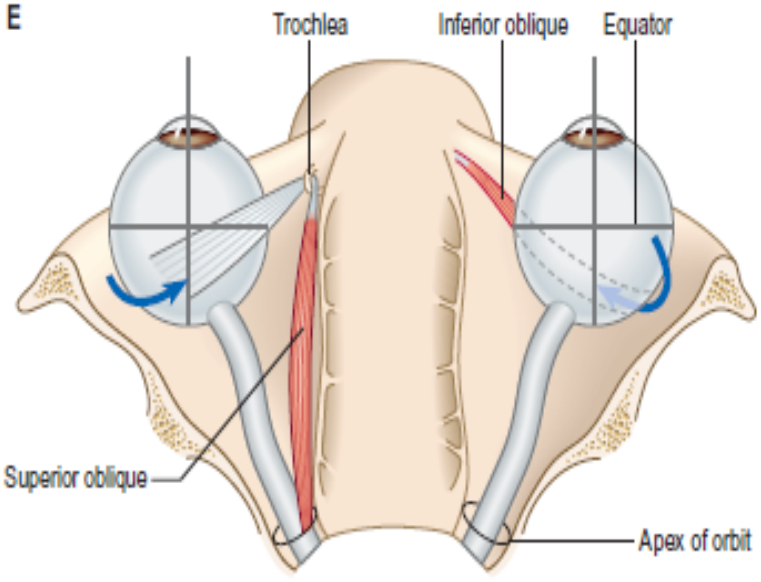
The geometrical basis of ocular movements. **A, The relationship between the orbital and ocular axes, with the eyes in the primary position,** where the visual axes are parallel. **B and C, The ocular globe in anterior and posterior views to show conventional geometry.**



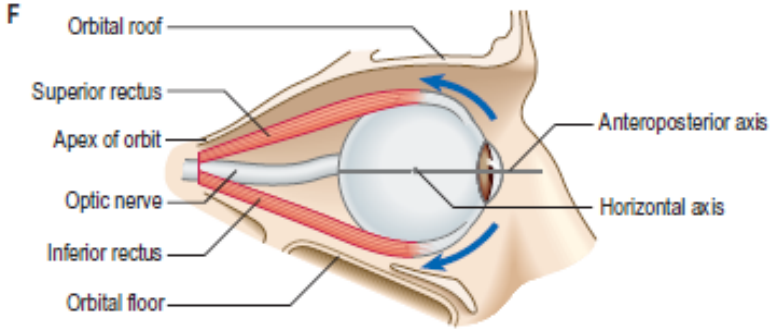
D, The orbits from above showing the medial and lateral recti and the superior rectus (left) and the inferior rectus (right), indicating turning moments primarily around the vertical axis.

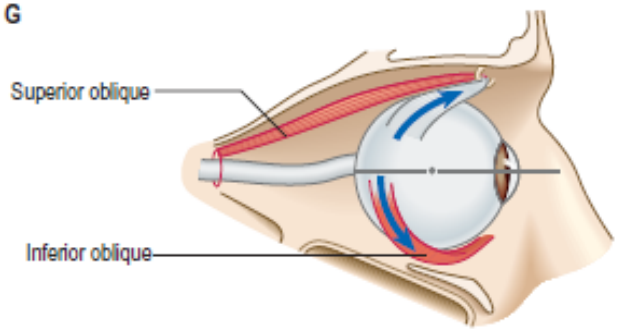
E, Superior (left) and inferior (right) oblique muscles showing turning moments primarily around the vertical and also anteroposterior axes.

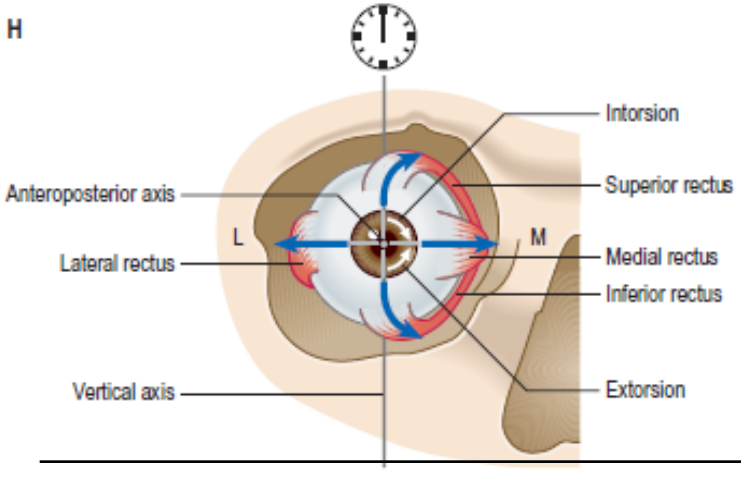


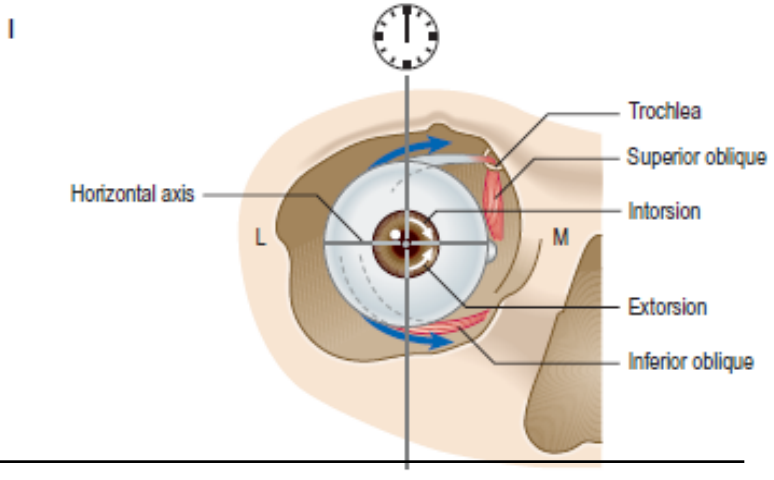


F, Lateral view to show the actions of the superior and inferior recti around the horizontal axis.
G, Lateral view to show the action of the superior and inferior oblique muscles around the AP axis.
H, Anterior view to show the medial rotational movement of the superior and inferior recti around the vertical axis. Conventionally the 12 o'clock position indicated is said to be intorted (superior rectus) or extorted (inferior rectus) as indicated by the small arrows on the cornea.
I, Anterior view to show the torsional effects of the superior oblique (intorsion) and inferior oblique (extorsion) around the anteroposterior axis, as indicated by the small arrows on the cornea.









Simplified summary of the actions of extraocular muscles