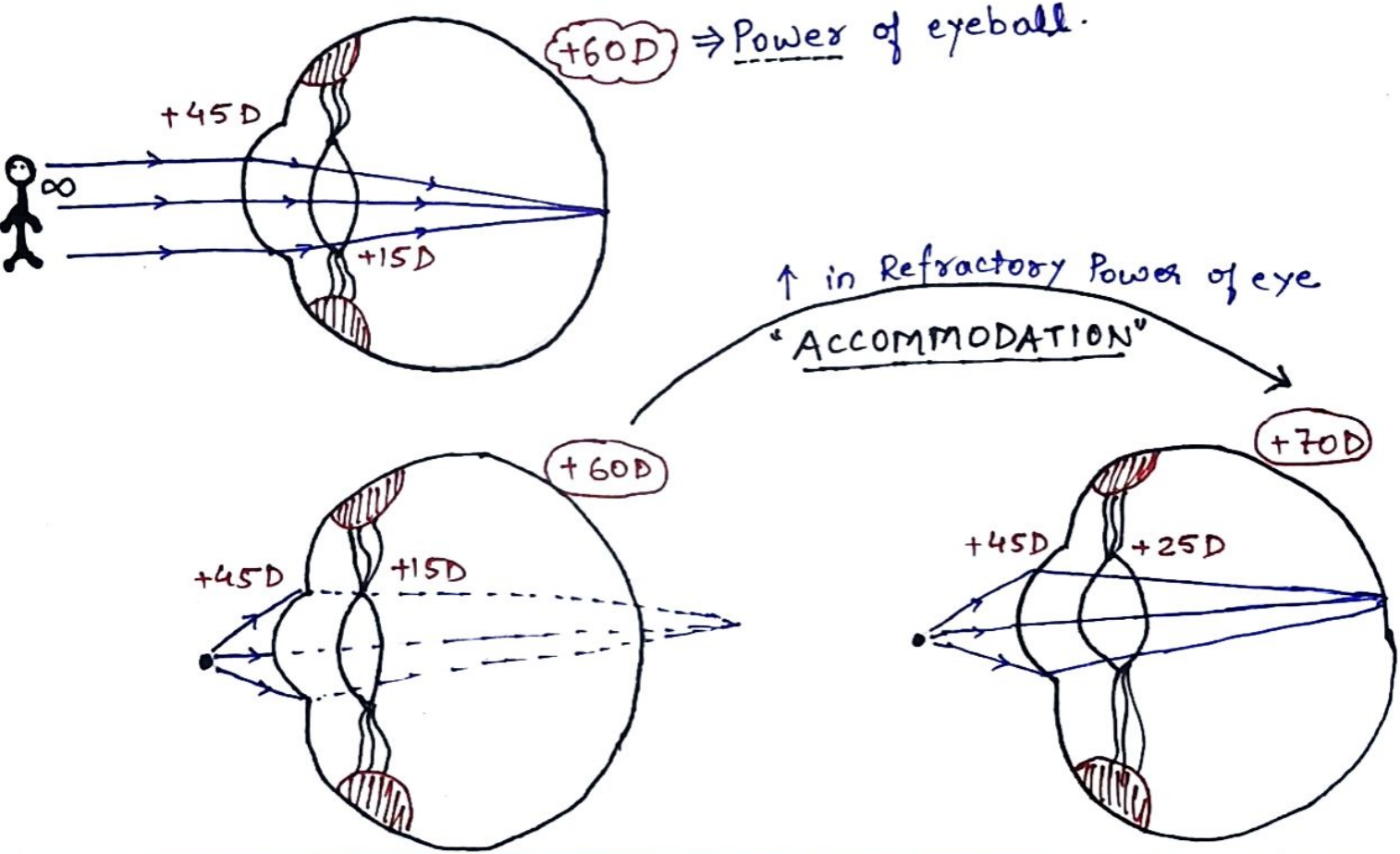
ACCOMMODATION :-

The ability of eye to increase refractory power of lens to focus on near objects.



Far vision (∞)

Ciliary muscle - Relaxed

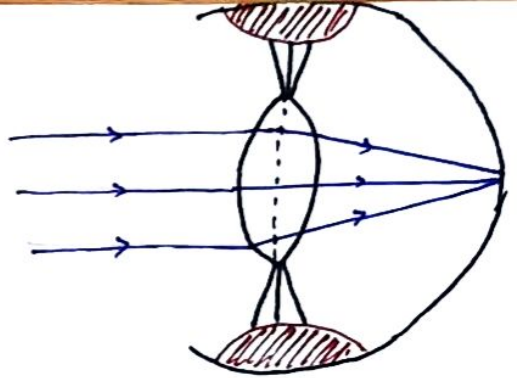
⬇

Suspensory ligament - Tight

⬇

Lens - flattened

(Ⓝ Refractory power)



Near Object

ciliary muscle - Contracted

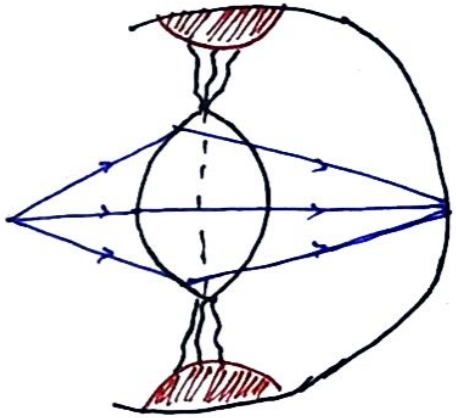
⬇

Suspensory ligament - Loose

⬇

Lens - Thicker (More convex)

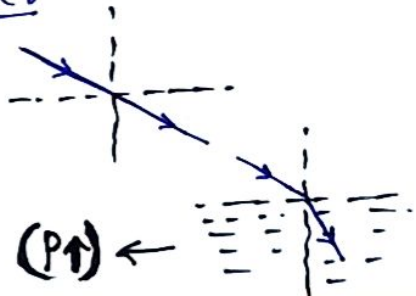
(Ⓟ Refractory power)



Power

Thin ⇒ P↓

Thick ⇒ P↑



ACCOMMODATION REFLEX :-

a.) ↑ in curvature of lens

b.) Pupillary constriction

c.) Convergence of eyeball

OBJECT → Eye → Ganglionic cell layer of retina

Afferent

↓ optic nerve

↓ optic chiasma

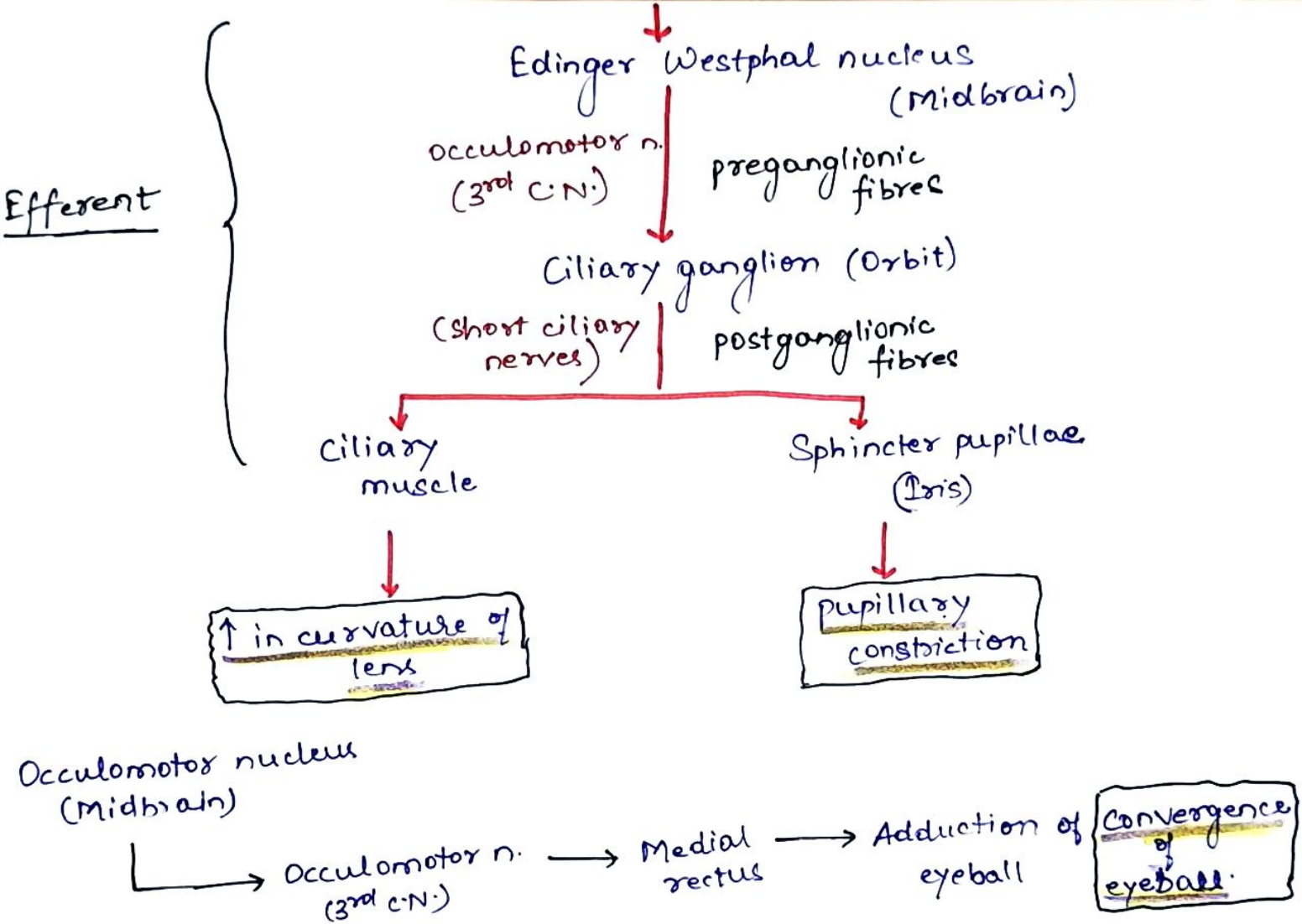
↓ optic tract

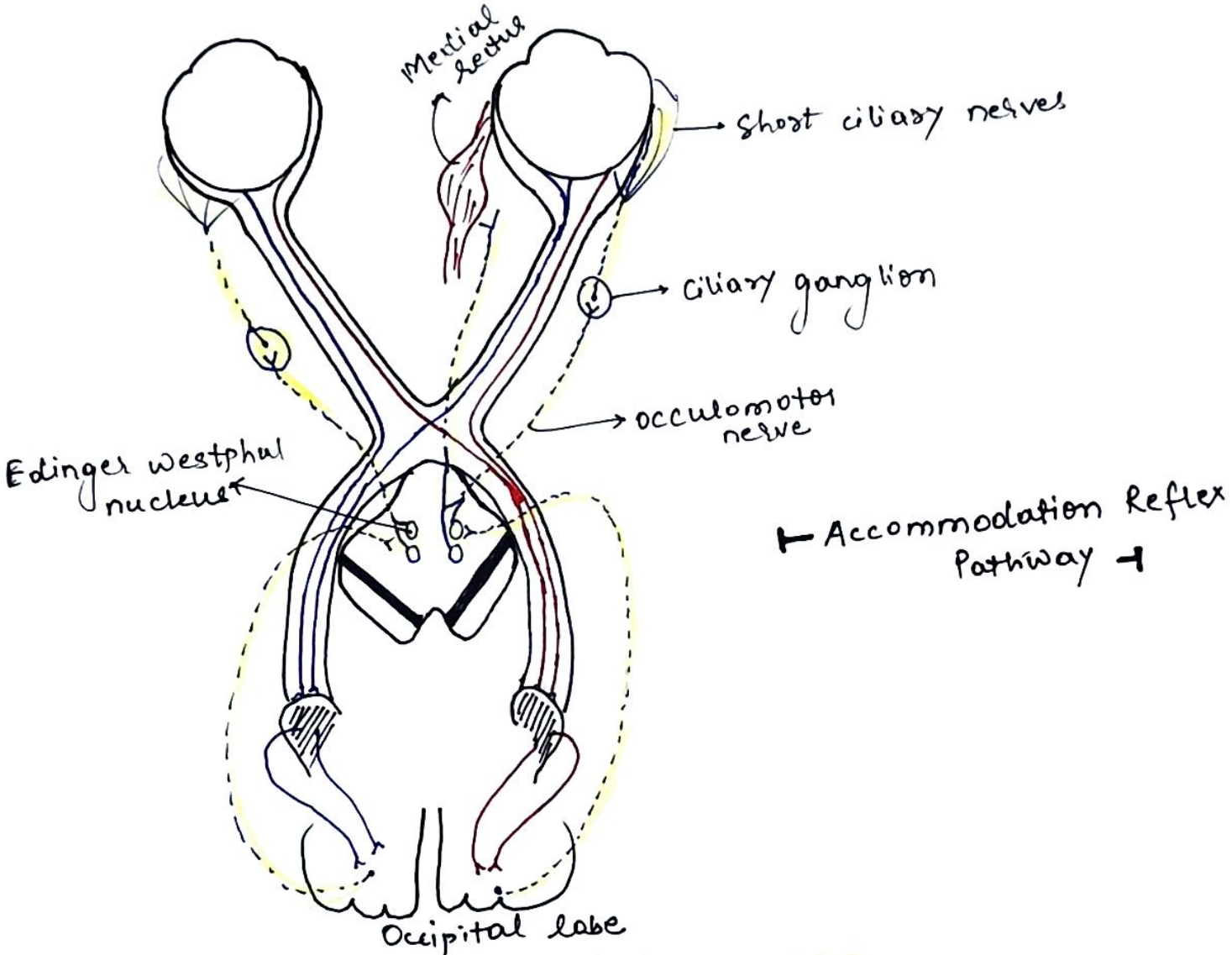
↓ Lateral geniculate Nucleus (thalamus)

↓ optic radiation

Integration

↓ Primary visual cortex (Occipital Lobe) → Visual association cortex


Efferent
Edinger Westphal nucleus
(Midbrain)
occulomotor n.
(3rd C.N.)
preganglionic fibres
Ciliary ganglion (Orbit)
(short ciliary nerves)
postganglionic fibres
Ciliary muscle
Sphincter pupillae
(Iris)
↑ in curvature of lens
pupillary constriction
Occulomotor nucleus
(Midbrain)
Occulomotor n.
(3rd C.N.)
Medial rectus
Adduction of eyeball
Convergence of eyeball.


Medial rectus
Short ciliary nerves
Ciliary ganglion
occulomotor nerve
Edinger westphal nucleus
Accommodation Reflex Pathway
Occipital lobe

PRESBYOPIA :-

- Loss of accommodation of lens

@ old age

- Elasticity of lens ↓ [Denaturation of proteins]
- power of accommodation ↓

- Bifocal lens are prescribed
  - upper part ⇒ for far seeing
  - Lower part ⇒ for near seeing