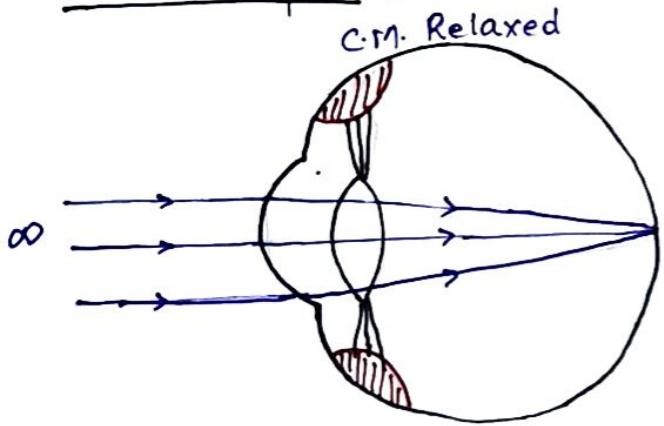
ERRORS OF REFRACTION

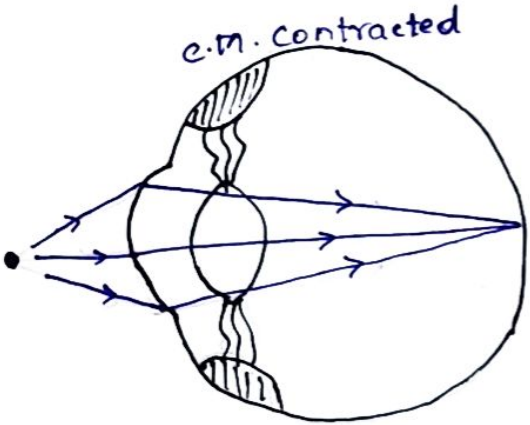
Emmetropia (Normal vision)

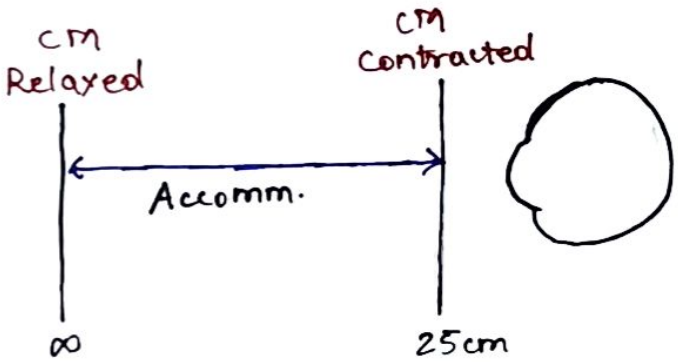


→ Far point (∞) ✓

→ Near point (25cm) ✓

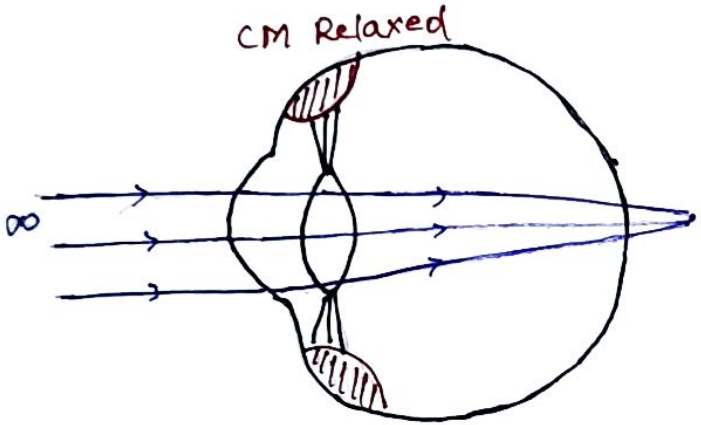
→ Accommodation ✓

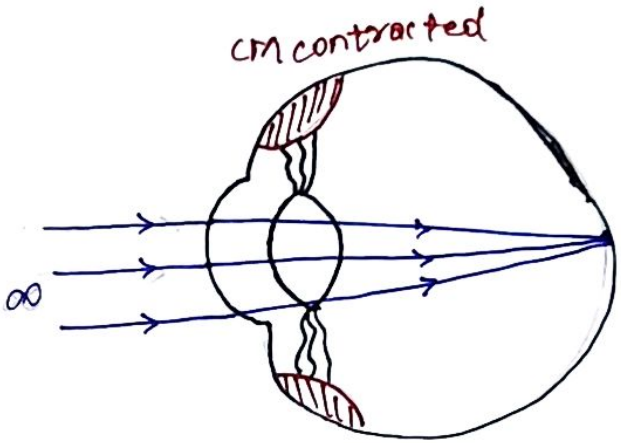


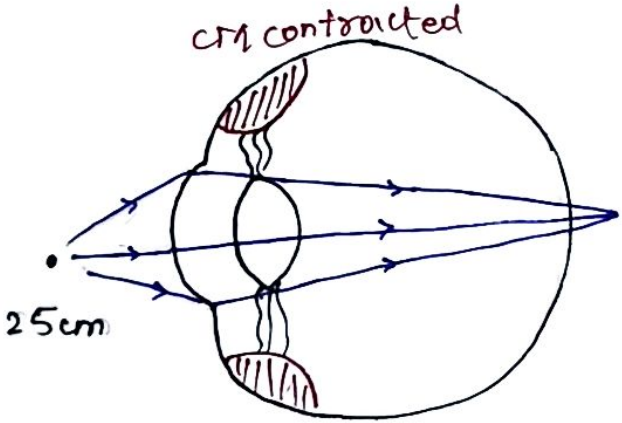


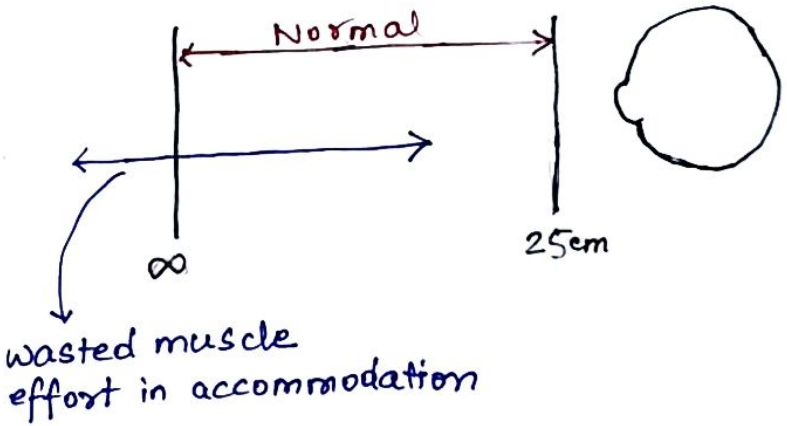
① Hypermetropia (Hyperopia)

↳ Far sightedness

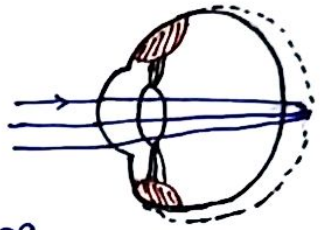




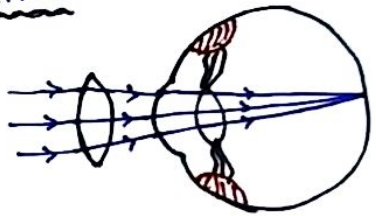




- Reason :- (i) Refractory power of lens ↓
  (ii) Small A-P axis diameter



- Image of distant object forms at behind retina



- Far point = (∞)
- Near point = (↑ses)

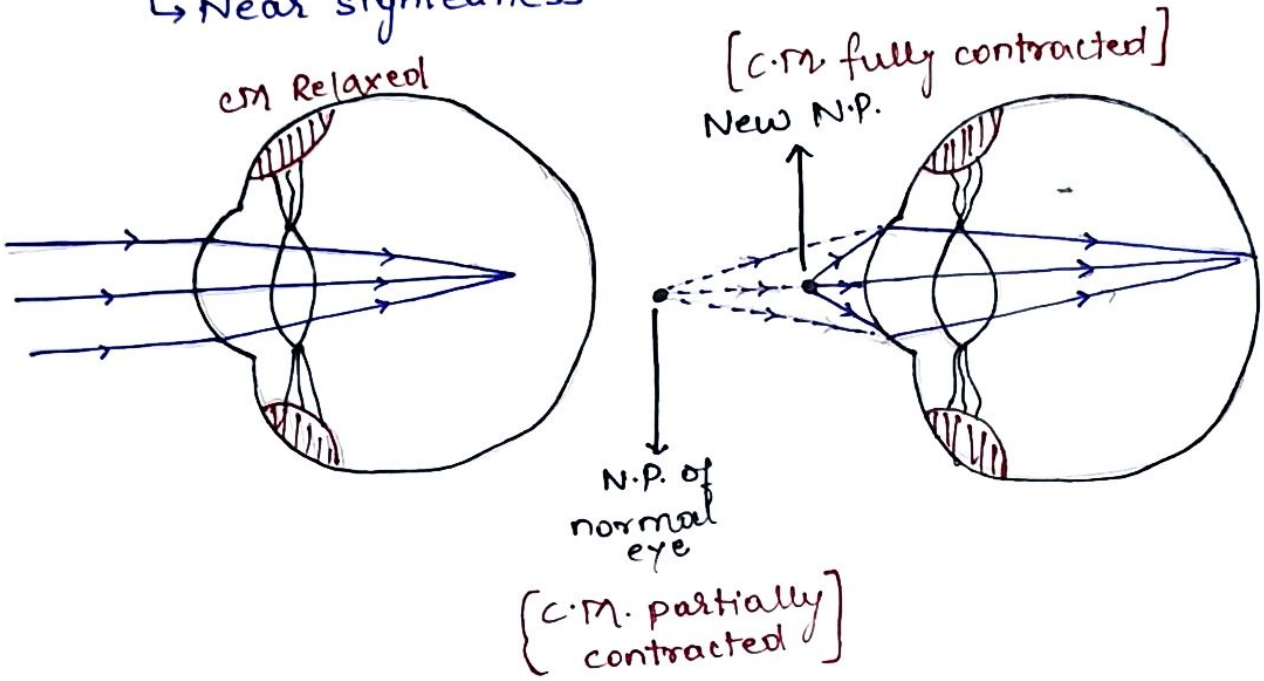
Correction = CONVEX LENS

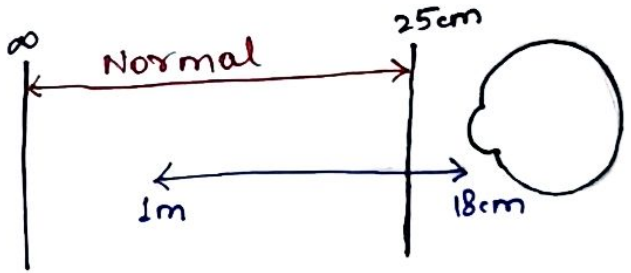
- Continued accommodation is seen
  - → Leads to Hypertrophy of ciliary muscle.
  - → D/t prolonged convergence leads to squint/strabismus

- Hypermetropic eye + Presbyopia (Loss of accomodation)
  - ↓ can't even focus distant objects
  - ∴ Correction required.

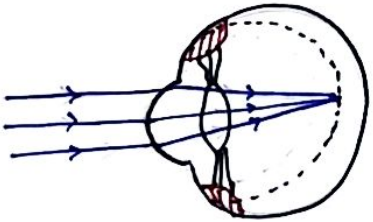
② Myopia

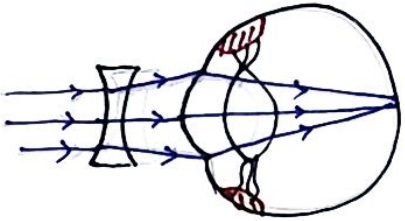
↳ Near sightedness





- Reason :- (i) Refractory power of lens ↑
  (ii) ↑sed A-P axis diameter
- Image of distant object forms in front of retina
- Far point = At definite distance
- Near point = More closer
- **Correction = CONCAVE LENS**





	Myopia	Hyperopia
1.) Parallel light rays towards (CM Relaxed)	Front of Retina	Back of retina
2.) Reason	- Refractory power ↑ - [redacted] A-P axis ↑	- Refractory power ↓ - [redacted] A-P axis ↓
3.) far point	Definite distance	∞
4.) Near point	Nearer	Far
5.) Correction	Concave lens	Convex lens