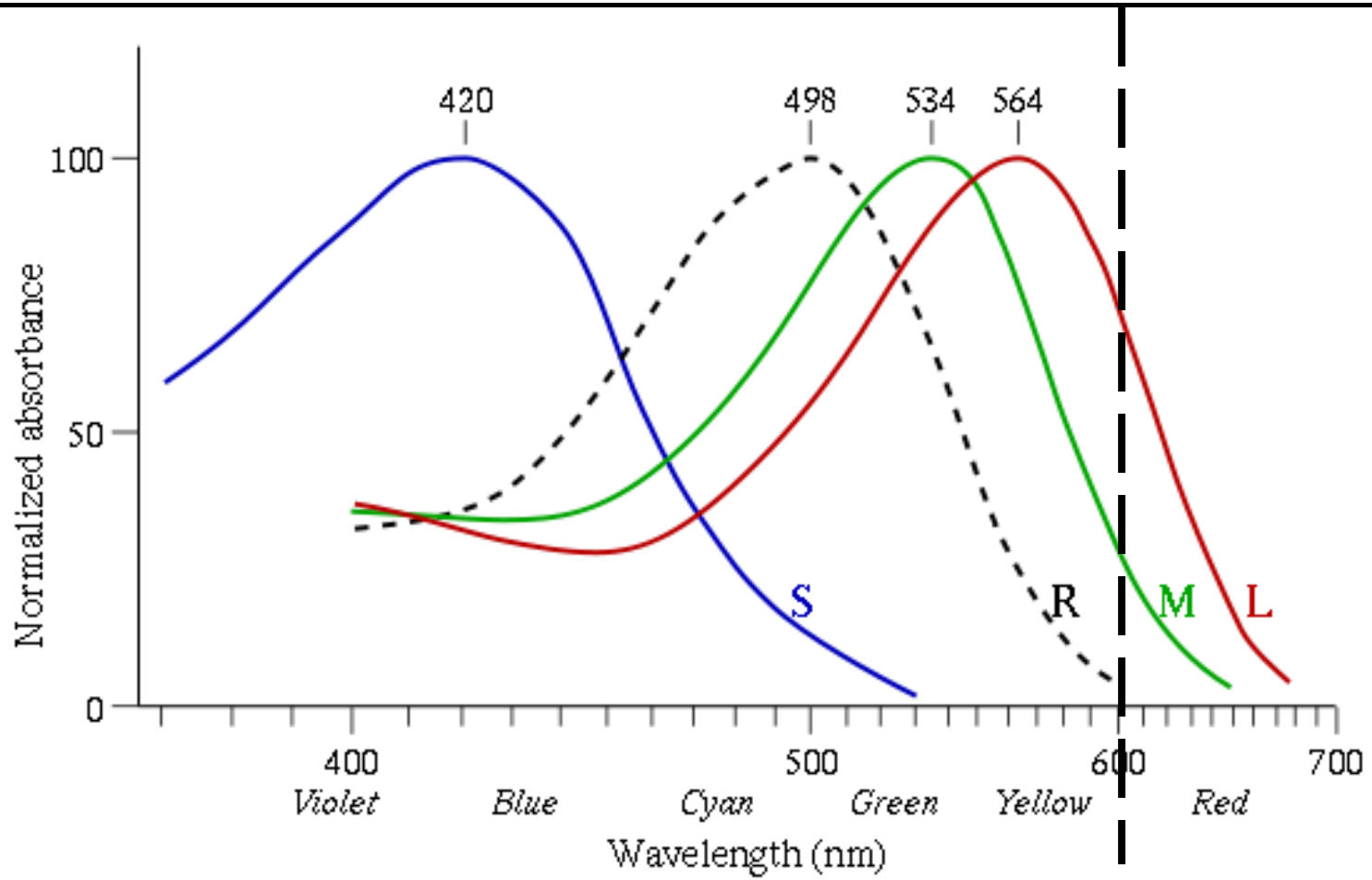
Night Vision & Eye Rods & Cones



Bowmaker J.K. and Dartnall H.J.A. (1980). "Visual pigments of rods and cones in a human retina". M.R.C. Vision Unit, University of Sussex, Falmer, Brighton, BN1 9QG, Sussex. J. Physiol. 298: 501–511, 1980

Color Selection Eye Focal Points

- Rods
  - Let us see monochrome images
  - Very sensitive to brightness
  - Saturate in bright light need time to recover (~ 15 min)
  - Let us see at night
- Cones
  - Let us see in color
  - Less sensitive than rods
- Red light does not stimulate Rods
  - Red maintains night vision & allows some cone vision

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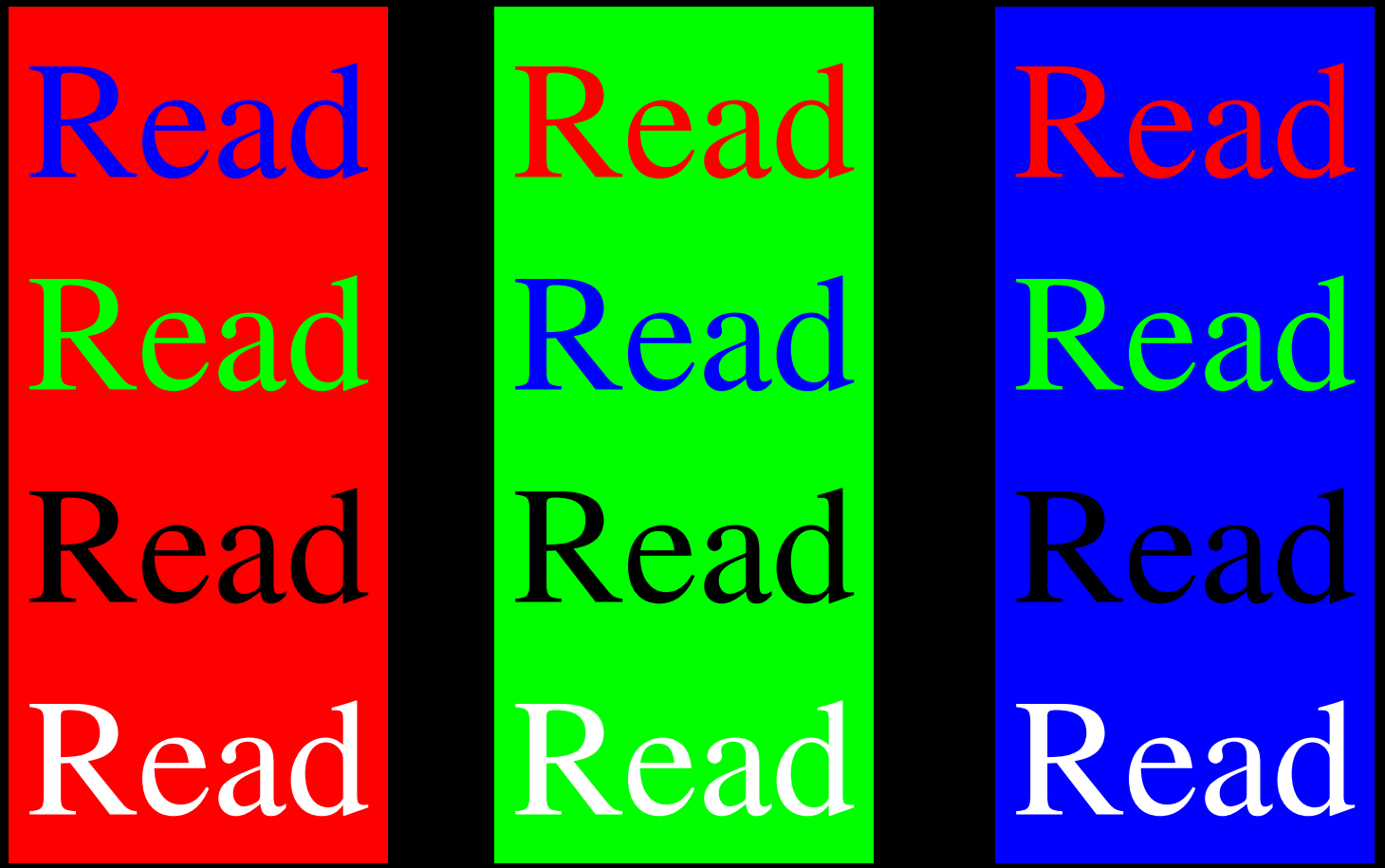

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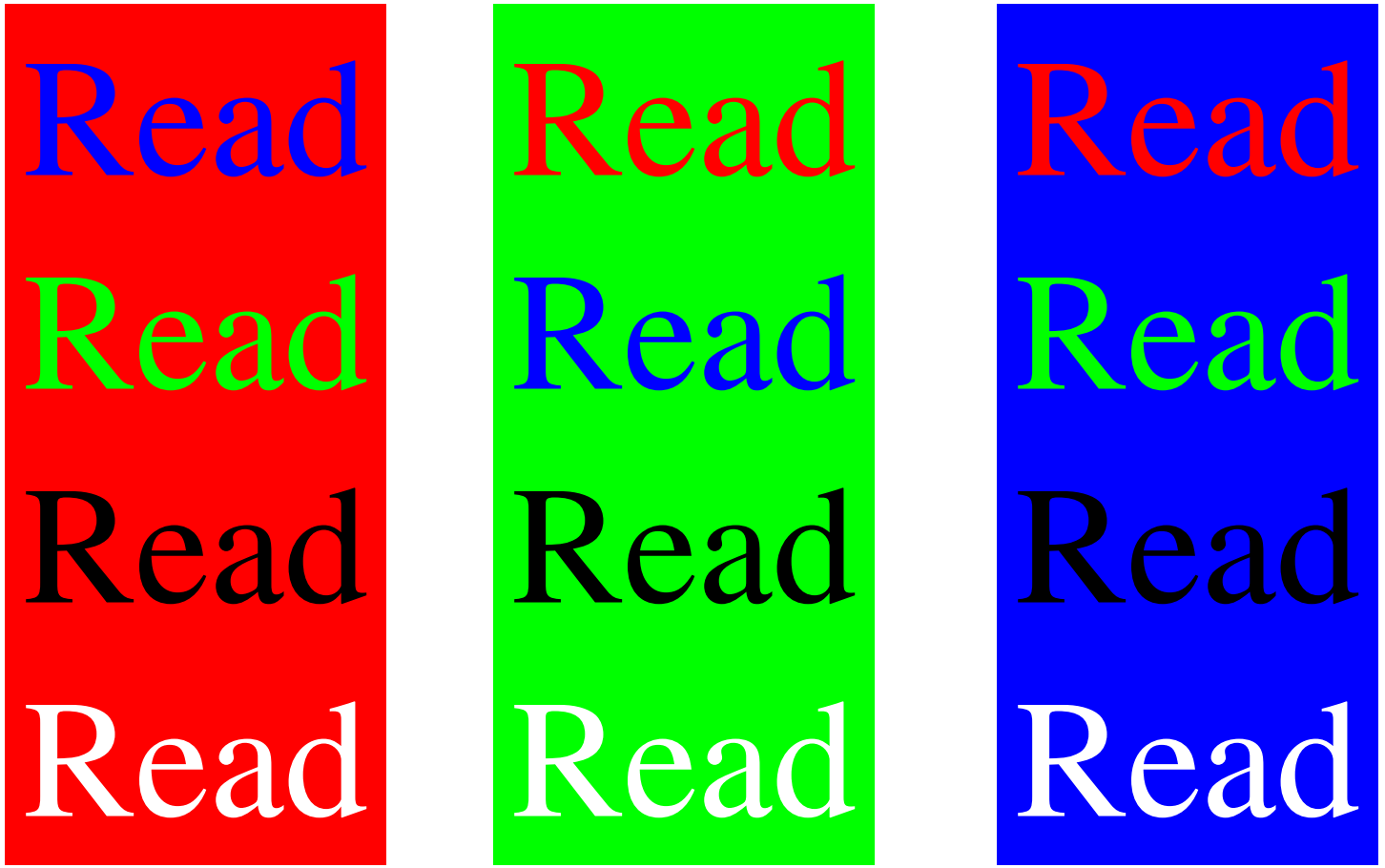

Contrast

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  - Red maintains night vision & allows some cone vision
- So much for BLUE

Contrast & Transparent Windows

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- Cones
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  - Less sensitive than rods
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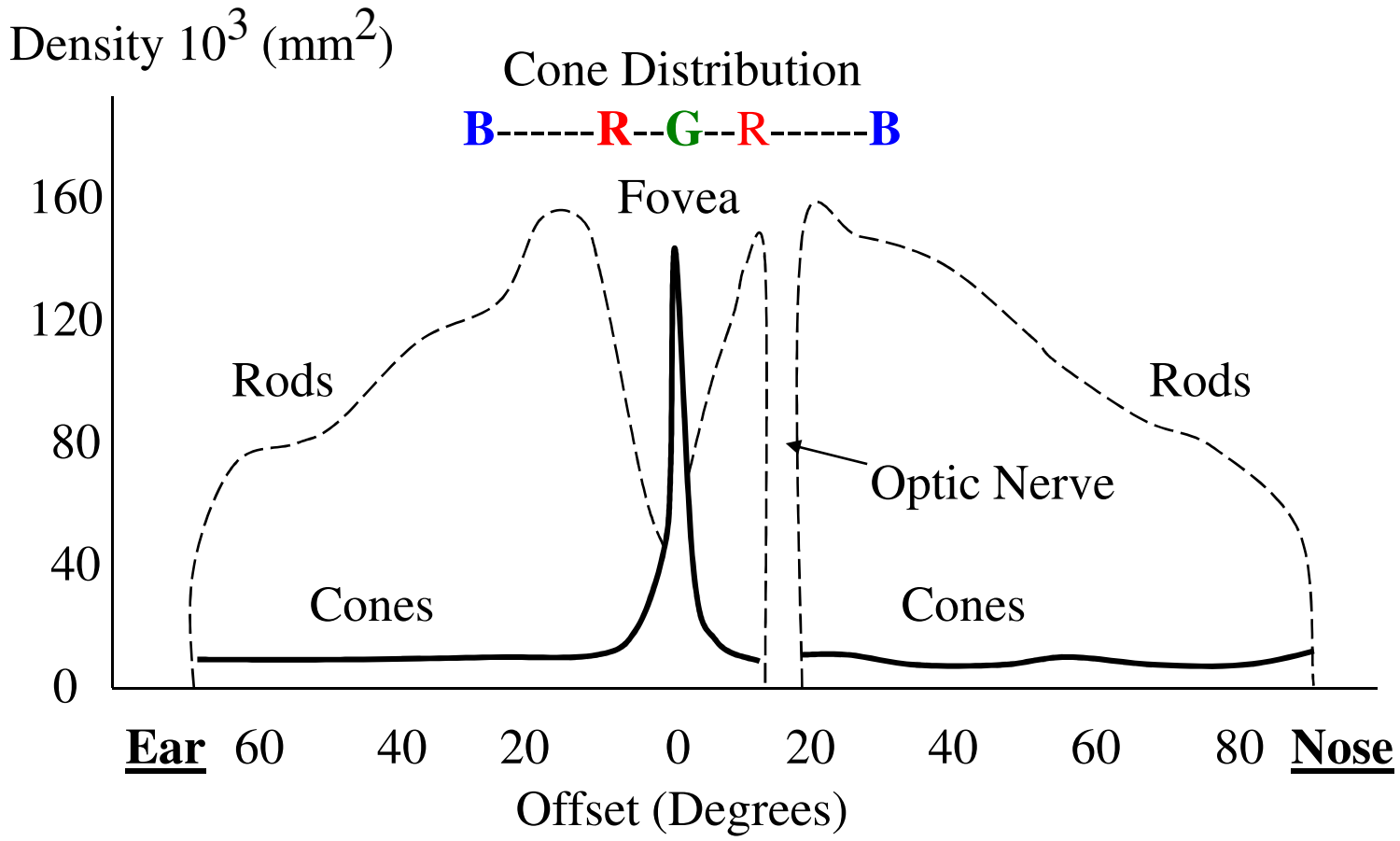
  - Red maintains night vision & allows some cone vision
- So much for BLUE

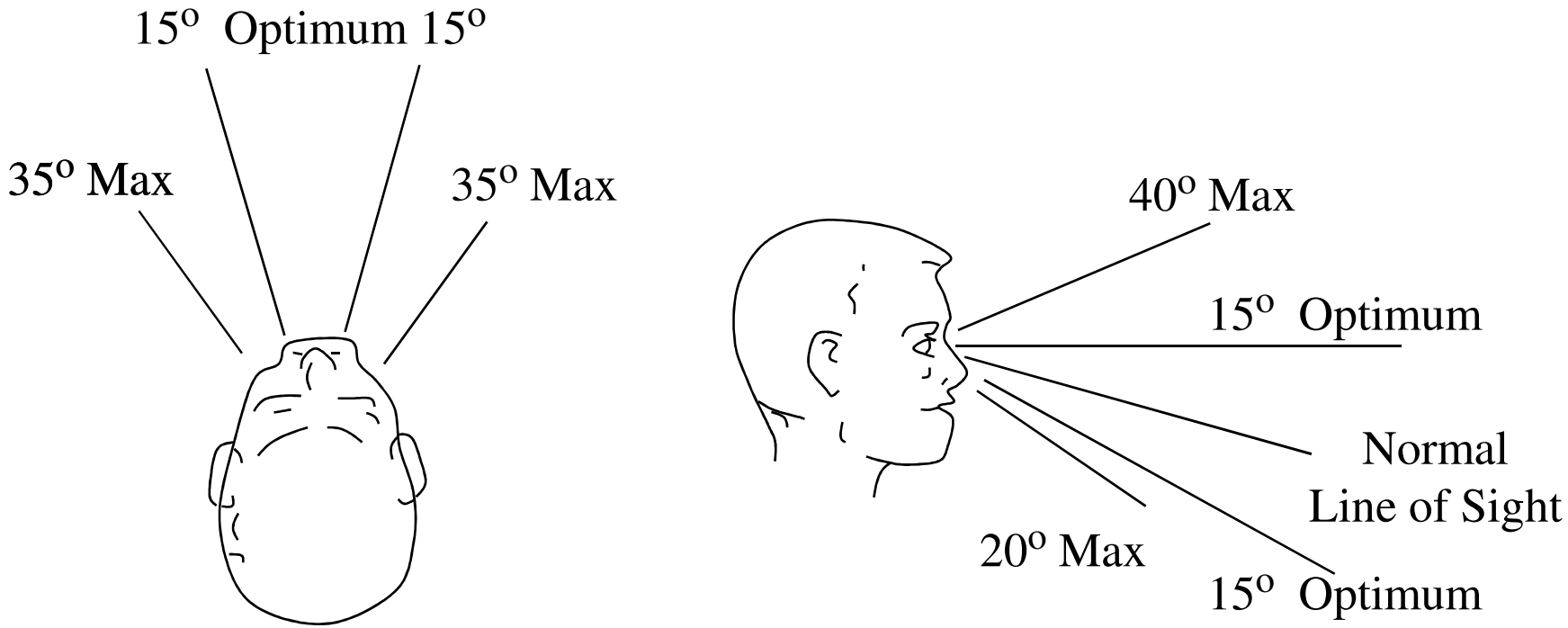
- Hello
- I am transparent
- Are your overloaded yet

Field Of View & Eye Rod Cone Distribution

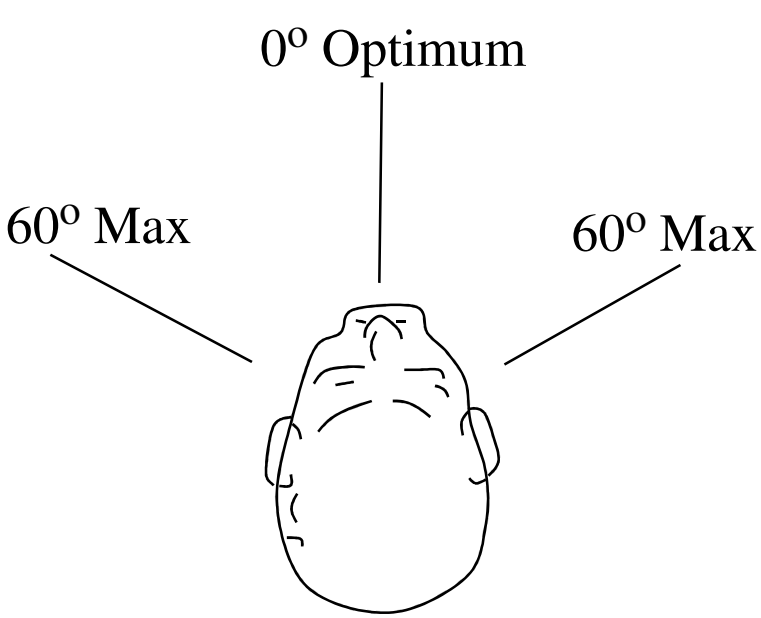


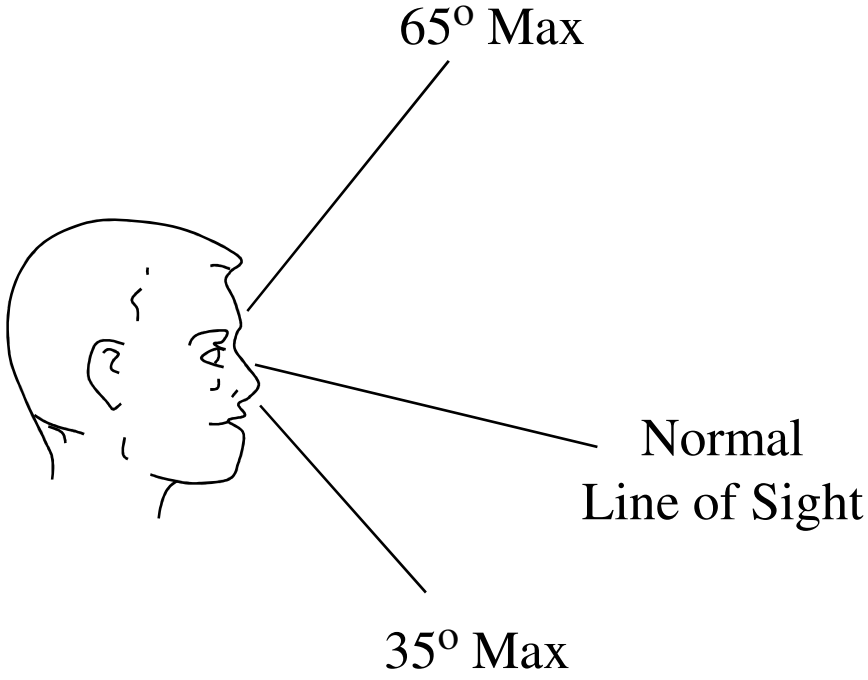
- Field of view determined by eye rod cone distribution

Field of View Eye Rotation



Field of View Head Rotation





Field of View Eye & Head Rotation