

# Training for Job Placement Providers to Assist Individuals with Vision Loss Find Employment

SESSION #1

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# Overview

- ▶ Introductions
  - ▶ Misconceptions
  - ▶ Anatomy of the Eye
  - ▶ How we see
  - ▶ Definitions
  - ▶ Statistics
- 
- ▶ Handout – cross section of the eye
- \*Please put questions into the chat box & make sure to mute yourself.

# Opening Round

- ▶ Introduce yourself:
  - ▶ name, business, location
- ▶ What do you know about blindness?
- ▶ What myths have you heard about blindness/vision loss?

# Misconceptions

- ▶ People with blindness see black.
- ▶ Other senses improve – they hear better than others.
- ▶ All people with blindness need to use a cane (only 2% of blind use a cane – only 2% use a dog guide).
- ▶ All people with blindness need to use Braille and can read Braille (only 2% of blind read Braille).

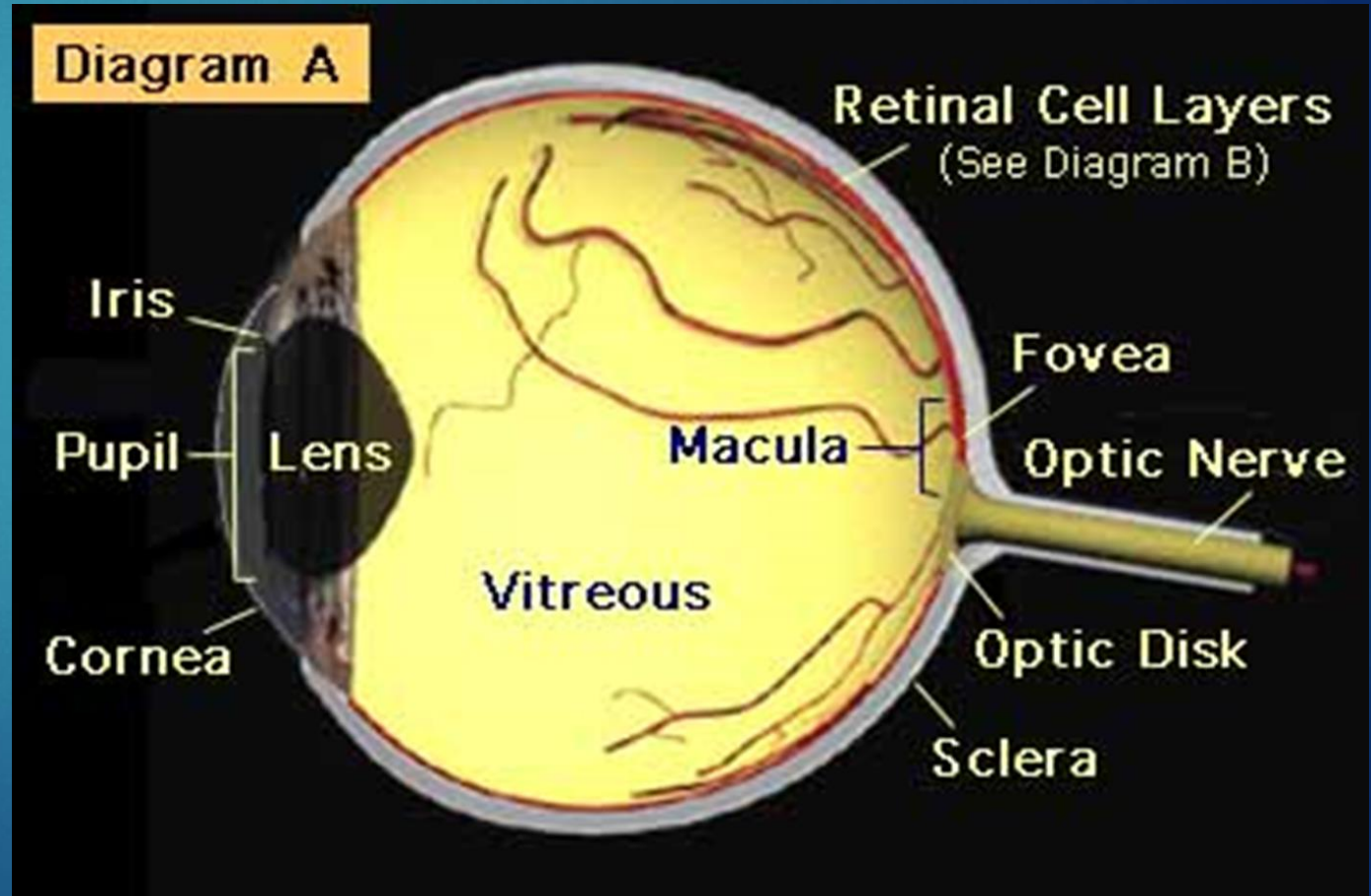
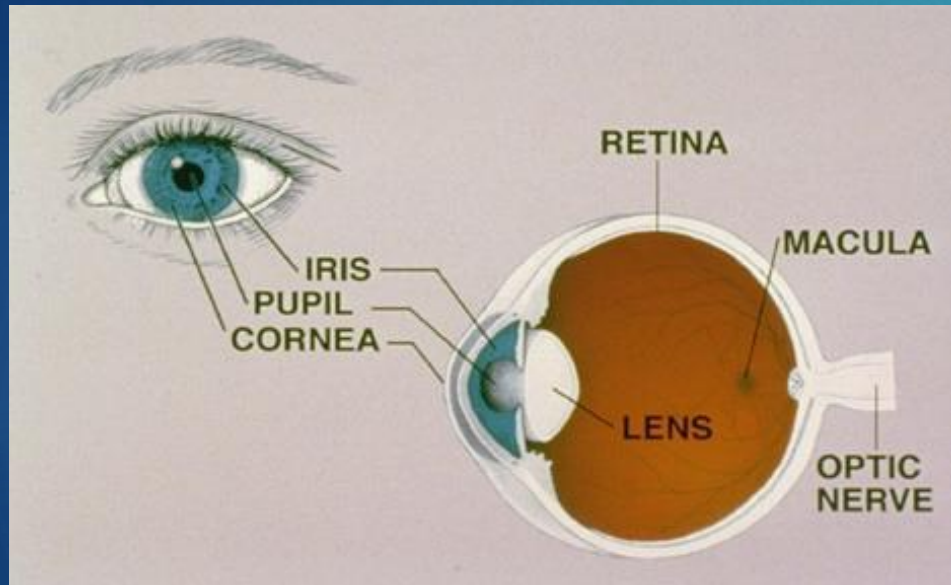
# Misconceptions cont.

- ▶ Everything a person with blindness does is amazing and super-human.
- ▶ People with blindness become very wise and insightful.
- ▶ All people with vision loss need to be supervised all the time. They can't take care of themselves or do work. They are incapable, dependent, and needy.
- ▶ Blindness is worse than death, punishment for sin.
- ▶ Dog guides can take a person with blindness anywhere the blind person wants to go.

# Misconceptions cont.

- ▶ People with blindness are always looking for a cure.
- ▶ They sat too close to the TV (monitor).
- ▶ Their eyes hurt, they didn't take care of it, and they hurt their eyes.
- ▶ People who have never had vision do not dream visually – they commonly dream including feeling, sounds, tastes, and smells. If they have had vision, dreams can be quite visually vivid.

# Anatomy of the Eye



# Cornea

- ▶ Window of the Eye
- ▶ Refractive power
- ▶ Extremely transparent
- ▶ Protection – very sensitive
- ▶ Nutrition, oxygen, and hydration comes from inside the eye
- ▶ Has no blood vessels





# Sclera

- ▶ Protection for the inner structure
  - ▶ Leathery
- ▶ Opaque
- ▶ Has blood vessels



# Aqueous

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- ▶ Maintains the shape and pressure of the eye
- ▶ Nutrition, oxygen, and hydration to cornea and lens
- ▶ Refreshed every 6-8 hours
- ▶ Normal range of IOP is 11-20



# Iris

- ▶ The colored part of the eye
- ▶ Controls light coming into the eye
- ▶ Moderates temperature of the eye



# Lens

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- ▶ Focuses the image
- ▶ Extremely transparent
- ▶ Flexibility for accommodation
  - ▶ Rounder for near
  - ▶ Flatter for distance
- ▶ Keeps vitreous in place



# Vitreous

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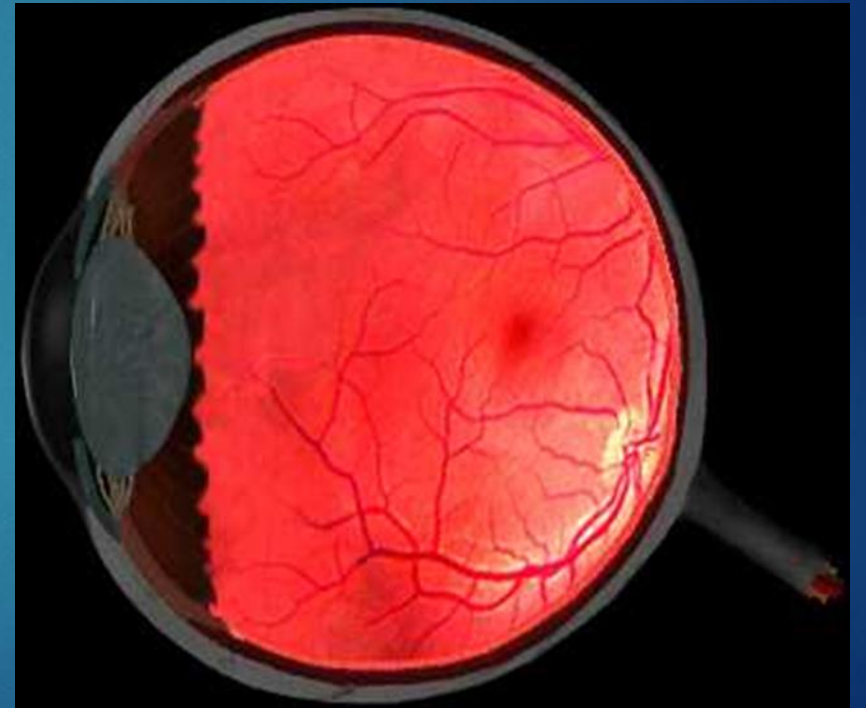
- ▶ The vitreous maintains the shape of the eye.
  - ▶ Fills the entire back of the eye.
- ▶ Extremely transparent
- ▶ Consistency of Jello
- ▶ Keeps retina in contact with the blood supply layer



# Retina

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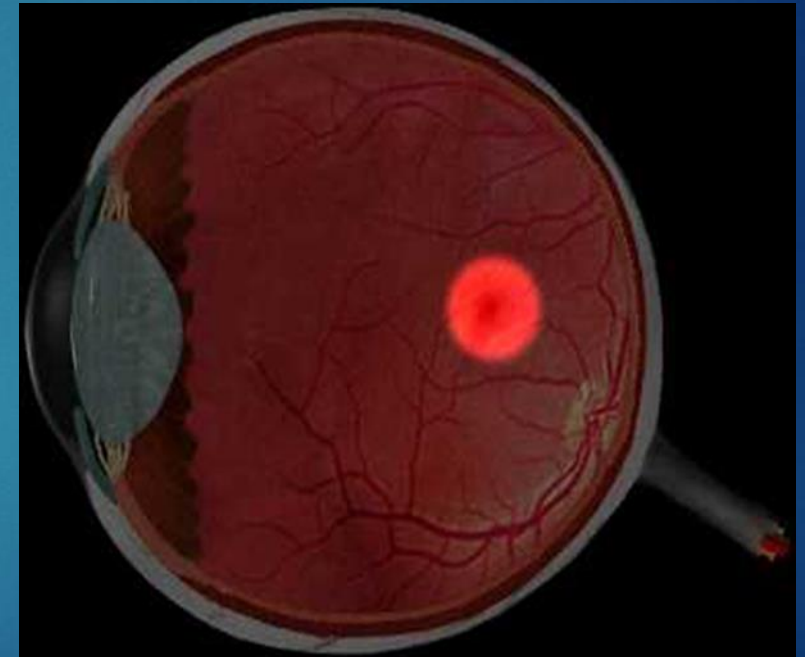
- ▶ Receives light
- ▶ Back part of the eye
- ▶ Provide central and peripheral view
- ▶ Sensitive to light
- ▶ Includes the macula
- ▶ Not attached



# Macula

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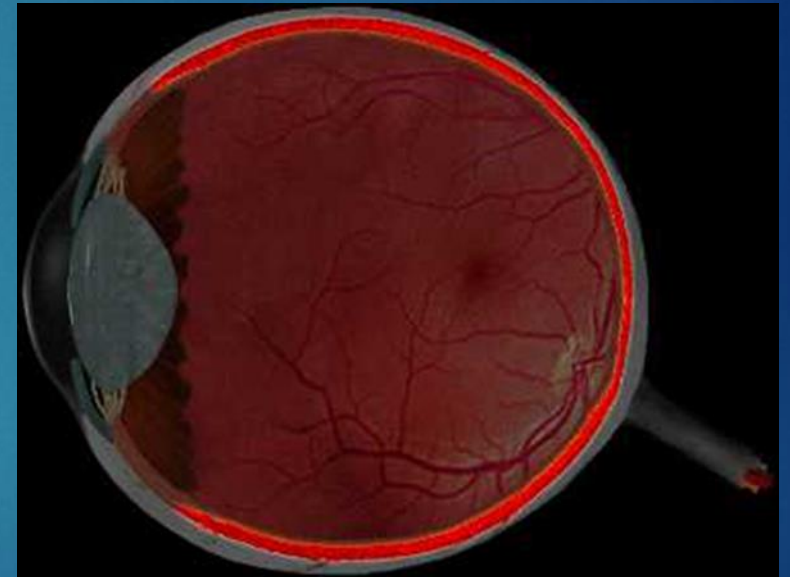
- ▶ The center portion of the posterior retina
- ▶ Central vision
- ▶ Mostly cones (seeing color and sharpness)



# Choroid

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- ▶ Support layer immediately below retina
- ▶ Provides blood supply to the retina
- ▶ Passageway for nerves



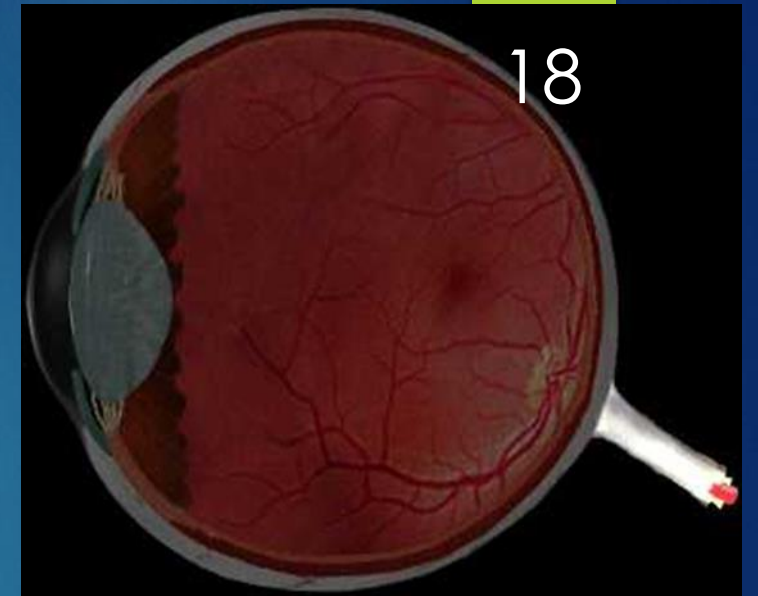


# Optic Nerve Head

- ▶ The exit point for the optic nerve
- ▶ Where blood vessels enter the eye
- ▶ Creates a blind spot

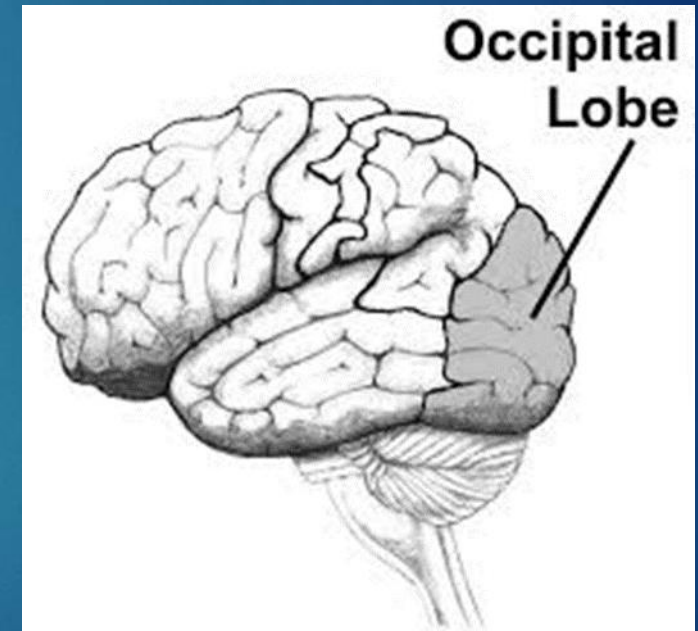
# Optic Nerve

- ▶ Blood supply for the inside of the eye comes through the optic nerve.
- ▶ Carries messages from the eye ball to the brain.



# Occipital Lobe

- ▶ Located at the back of the brain.
- ▶ Is the main location for vision in the brain.
- ▶ Not the only places that gives us visual perception.



Questions???

# How We See

## ▶ Light

- ▶ We need light to see
- ▶ 2 types: direct and reflected
- ▶ Characteristics
  - ▶ Brightness
  - ▶ Color
  - ▶ Direction – Usable and valuable vs. glare
  - ▶ Closer to the light source = brighter and more vivid color
  - ▶ Farther from the light source = dimmer and grayer
  - ▶ Narrower angle of reflection = brighter
  - ▶ Ambient vs. focused

# How We See cont.

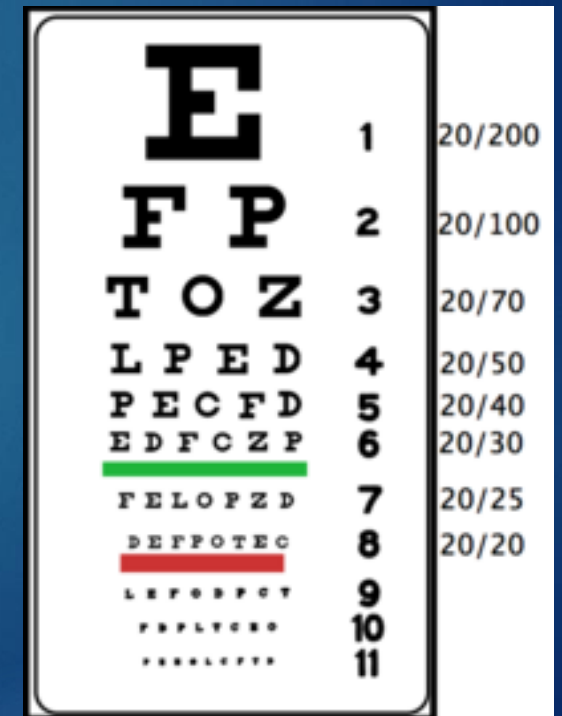
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- ▶ Color
  - ▶ Direct
  - ▶ Reflected
- ▶ Glare
  - ▶ Angle of light
  - ▶ Reflection
  - ▶ Light sources

# Definitions



- ▶ Legal blindness – 20/200 or less in the better eye or fields of 20 ° or less in the better eye.
- ▶ Totally blind & Blindness – Usually thought to be “black blind”, but most considered “blind” can see something – light, colors, shadows.
- ▶ Visual Impairment – usually considered anyone who has any vision loss beyond normal vision after any correction with glasses, contacts, or treatment – usually between 20/60 and 20/200.



# Other vision problems to note:

- ▶ Night blindness
- ▶ Depth perception
- ▶ Double vision
- ▶ Variability in vision functioning throughout the day
- ▶ Fatigue and “blurring out”



# Blindness Statistics

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- ▶ Blind or visually impaired in Sioux Falls – @ 2,200 people
- ▶ In South Dakota – @ 9,000 – 15,000
- ▶ In US – @ 14 million (estimates vary widely – difficult to gather accurate stats)
- ▶ In the world – estimated as high as 285 million (about the population of the US)
- ▶ 8 out of 10 people over the age of 75 have some functional vision loss
- ▶ Hearing Loss – Half of those with vision loss over the age of 75 also have hearing loss.

Questions???

# Next Session:

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- ▶ Common eye diseases and how to accommodate them.
- ▶ Thank you!
- ▶ Bob and Kellie with the Rehabilitation Center for the Blind