

Infant Visual Perception

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Acuity: The ability to see details

Humans see with rods and cones that are located throughout the back of the eye

*RODS help us see in the dark or in
dim light (120 million rods)*

*CONES help us see in bright light, and in
color with detail (5 million cones)*

ÿ *The retina contains the cones & rods that we use for vision.*

ÿ *In the center part of the retina is the fovea. It contains only cones.*

When we go to the eye doctor, he tests our acuity by having us read an eye chart.

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EXAMPLE OF: Snellen Eye chart

He can use this type of test because we can read and talk!

Babies cannot read or talk yet, so how do we test how well they can see?

Testing Infants:

We know that when we are born, our retina is not fully developed and there are not very many cones in the fovea. Thus, babies cannot see details or color very well.

ÿ *We use the fact that we know that babies PREFER to LOOK at objects with details they can see rather than plain objects(they are more interesting)*

ÿ *2 grating stimuli are presented to the baby*

- ÿ *We then adjust the width of the stripes to test acuity (or other features to measure other visual abilities)*
- ÿ *We know what their acuity is by determining the narrowest width of the stripes that made them look longer*
- ÿ *At birth, infant acuity is 20/400 OR 20/600. By 6mo., it is almost 20/20*

(Compared to us, when new babies view the world, it looks like they are looking through a window of frosted glass.)

Infant Face Perception

- ◆ *At birth*
 - *they can see rough features (outline of head or hair) but it is difficult to detect facial expressions*
- ◆ *By 3 mo.*
 - *Babies can see facial expressions*
 - *Babies can tell the difference b/w a happy face & a surprised or an angry facial expression*

Infant color vision

- ↳ *Humans have 3 different cone types used for color vision*
- ↳ *Adults that have all 3 cone types are called TRICHROMATS*
- ↳ *These 3 cone types are present by 2-3 mo. old*
- ↳ *Color vision is present w/in the first few months of life*
 - *@ 1 mo.- *50% of the babies tested could tell the difference b/w green & yellow*
 - *@ 4mo.- *All the babies tested could see colors the same as adults (but*