

ANATOMY OF THE EYE

The Eye Consists of Muscles, Nerves, Vessels, Ligaments and Fluids

More Than 75 % of the Information We Receive About the World Around Us Consists of Visual Information

The eye is a delicate and complex part of the body that is comprised of thousands of parts, which convert light into images to the brain. Details, color, distance and size are many different factors the eye has to manipulate and deliver to the brain.

The eye is made up of many different areas that provide hundreds of functions. This guide will provide information on most of those areas and their importance to your vision.

01 | Parts of the Eye Surface

- Sclera- The white part of the eye is comprised of a membrane of tendon in the eye; works to protect the retina and choroid.
- Episclera- Located on the surface of the sclera and is comprised of blood vessels that carry oxygen and nutrients to the sclera, causing the noticeable red veins in the white of the eye.
- Iris- This is the “color” of your eye which is a muscle that regulates the amount of light that enters the eye. The contraction from light and focus causes the pupil to appear larger or smaller.
- Pupil- This is the hole in the iris which allows light to reach the back of the eye and transmit images through the optic nerve.
- Cornea- This is a transparent dome over the iris, pupil, and anterior chamber. This area provides dioptric power which provides the clarity and refraction to images.

02 | Internal Parts of the Eye

- Lens- Located behind the posterior chamber within the eyeball that allows for focus of images and more dioptric power.

- Retina- The light sensitive tissue located in the back of the eyeball that sends visual signals to the brain, comprised of:
 - Cones- Light receptors within the retina that are color sensitive located in the center of the retina and absorb stronger light.
 - Rods- Are light receptors that see black and white and absorb softer light, this process allows you to see shapes.
- Macula- Located in the back of the eye which delivers high resolution images to the brain, providing you with most of your sight and peripheral vision.
- Fovea- The central part of the macula that delivers vision sharpness for about 5% of your vision field allowing you to read and watch TV.
- Optic Nerve- Sends signals from the eye to different areas of the brain to be interpreted into images. The optic nerves from both eyes reconnect from the eyes to provide a full field of vision and depth perception.

For more information on ophthalmology and conditions of the eye, please visit: <http://www.aaojournal.org/>

*Did You Know?
Eyes start to develop two
weeks after conception*

References

<http://www.lensshopper.com/eye-anatomy.asp>

<http://www.allaboutvision.com/resources/anatomy.htm>