

BIOS252 Week 5 Case Study: Blurry Vision

Introduction Recap

The eye is a complex organ composed of several layers, each with unique structures and functions. Here are the main layers of the eye, starting from the outermost layer:

1. Fibrous Tunic (Outer Layer):

- **Sclera:** The tough, white outer layer of the eye, covering approximately 80% of its surface. It provides structural support and attachment for the eye's muscles.
- **Cornea:** The transparent, dome-shaped front surface of the eye that covers the iris, pupil, and anterior chamber. It refracts light entering the eye and contributes to the majority of the eye's focusing power.

2. Vascular Tunic (Middle Layer):

- **Choroid:** A layer of blood vessels and connective tissue between the retina and the sclera. It provides oxygen and nutrients to the outer layers of the retina.
- **Ciliary Body:** A ring-shaped structure located behind the iris. It contains ciliary muscles and processes that produce aqueous humor and control the shape of the lens.
- **Iris:** The colored part of the eye that surrounds the pupil. It regulates the amount of light entering the eye by controlling the size of the pupil.

3. Nervous Tunic (Inner Layer):

- **Retina:** The innermost layer of the eye, composed of light-sensitive cells called photoreceptors and various layers of neurons. It converts light into electrical signals that are transmitted to the brain via the optic nerve.
 - **Macula:** A small, specialized area near the center of the retina responsible for central vision and high visual acuity.
 - **Fovea:** The central pit within the macula that contains a high density of cone photoreceptor cells, providing the sharpest vision.
- **Optic Nerve:** A bundle of nerve fibers that carries visual information from the retina to the brain for processing and interpretation.

In addition to these main layers, the eye also contains various structures within these layers that contribute to its overall function, such as the aqueous and vitreous humor, the crystalline lens, and the extraocular muscles responsible for eye movement. Understanding the layers of the eye is crucial for diagnosing and treating various eye conditions and disorders.