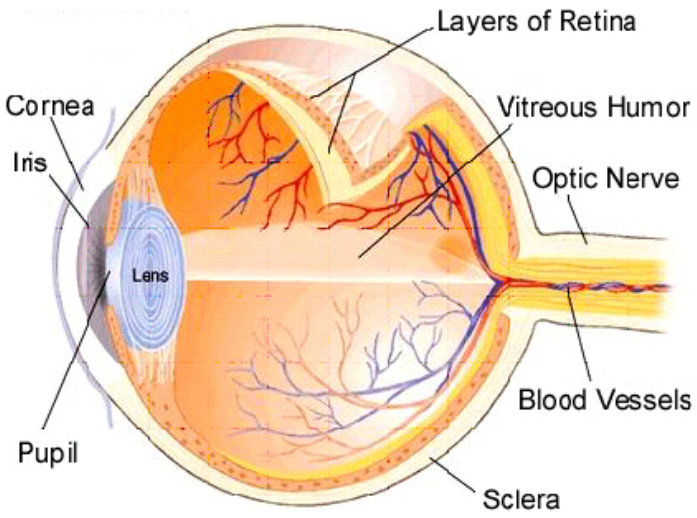
THE EYE



Cornea – The transparent front part of the eye that covers the iris, pupil, and anterior chamber. Together with the lens, the cornea refracts light.

Iris – A membrane in the eye, responsible for controlling the amount of light reaching the retina.

Lens – A transparent structure in the eye that helps to refract light to be focused on the retina. The lens, by changing shape, functions to change the focal distance of the eye so that it can focus on objects at various distances.

Pupil – A circular opening located in the center of the iris of the eye and that controls the amount of light that enters the eye. It appears black because most of the light entering the pupil is absorbed by the tissues inside the eye.

Retina – A light sensitive tissue lining the inner surface of the eye. There are two types of photoreceptors – rods and cones. Rods function mainly in dim light, while cones support daytime vision.

Vitreous Humor – The clear gel that fills the space between the lens and the retina of the eyeball.

Optic Nerve – Transmits visual information from the retina to the brain.

Blood Vessels – Provides the blood supply to the eye.

Sclera - Also known as the ***white of the eye***, is the opaque fibrous, protective, outer layer of the eye containing collagen and elastic fibers.

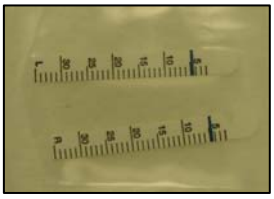
The Ophthlamic Exam – What are we doing?

- *Physical exam* – The doctor is able to assess the general condition of the eye by observing the physical characteristics of the eye and noting any changes. The ophthalmoscope allows the doctor to visualize the inner structures of the eye, including the lens, retina, retinal vessels, and the optic nerve. They will perform other tests to determine the cause of the eye problem.

Diagnostic tests include:

- *Topical eye anesthetic* – To relieve sensation, aiding the doctor to take a deeper look without causing discomfort or pain.

- *Fluorescein eye stain* – This is indicated for any irritation and trauma to the eye. It is an orange stain applied to the eye to determine if there is a corneal lesion or ulcer.



- *Schirmer Tear Test* – Measures the amount of tears produced by the eye in a one-minute time period. This aids in detecting if low tear production is an underlying cause or contributing to the eye problem. Low tear production can cause inflammation and chronic eye irritation.

- *Tonometry* – This is the measurement of the pressure inside the eye; which is called "intraocular pressure". Intraocular pressure is the pressure exerted against the outer layers of the eyeball. Determining the pressure inside the eye aids in the diagnosis of glaucoma, which is caused by the build-up of fluid inside the eye.

Common ocular diseases/conditions:

- *Corneal Ulceration* – Layers of the cornea have been removed by either irritation, infection, and/or trauma. Fluorescein eye stain (see above) will make the ulcer visible.

- *Conjunctivitis* – Inflammation and redness of the tissues coating the eye and lining the eyelids. Caused by allergies, viruses, bacteria, foreign body.

- *Ocular Discharge* – The accumulation of material in or around the eye. The discharge can appear to be a variety of colors (i.e. clear, yellow, green) and consistencies (i.e. watery, thick). Caused by irritation, infection, trauma, foreign body.