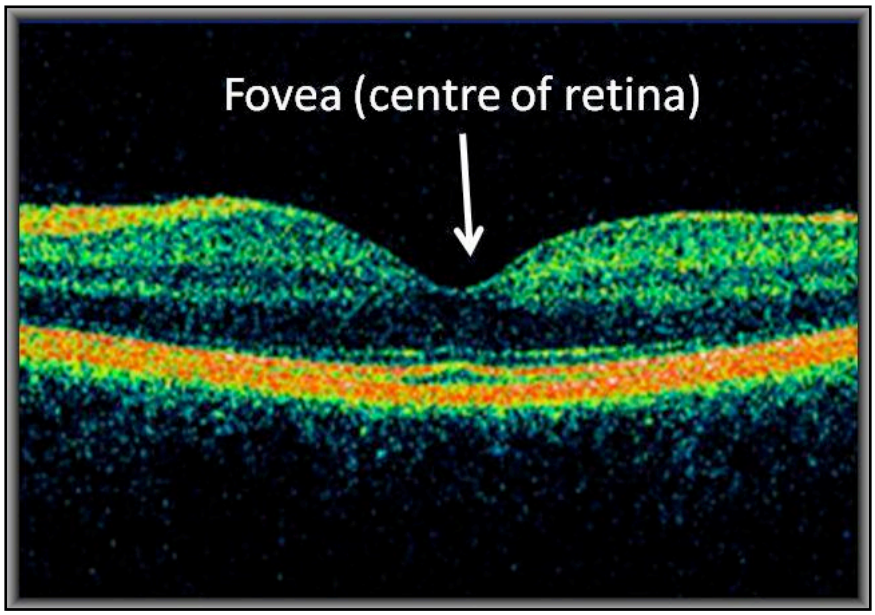
The Eye is Part of the Brain

Retinal Nerve Maps the Brain

"Eye Retinal Nerve Fiber Layer Measurement Correspond Well to Processes in the Brain."



The eye is the only part of the body that provides a direct view of the brain, central nervous system, and blood vessels. The retina, which is part of the brain, can be examined with a microscope or sophisticated instruments.

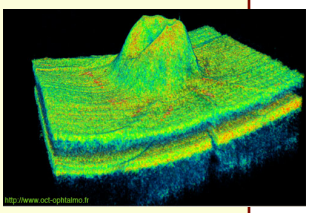
We are just learning how these easily measured properties of the retina provide insight into the concealed parts of the brain.

The premise that the retina changes with brain health is supported by studies that link glaucoma (a retinal disease) with Alzheimer's disease.

Retinal Nerve

Glaucoma is optic nerve deterioration characterized by a loss of retinal ganglion cells and their axons that comprise the RNFL.

The connection between RNFL health and brain cell health is emerging. It is becoming clear that diseases that lead to the loss of optic nerve tissue also destroy brain tissue. Thus measuring the RNFL provides information on both brain AND eye health. And detectable atrophy in the RNFL occurs well before a patient has symptoms of glaucoma or Alzheimer's. Measuring the RNFL in detail, and periodically, is a method of very early detection and a way to monitor the benefits of treatment.



A sick eye = a sick brain.

Retina Decay Linked to Brain Decay.

The relationship between atrophy of the retina and Alzheimer's is not new and dates to 1986 research titled, "Optic nerve degeneration in Alzheimer's."

In 2009 researchers showed a very clear connection between the thickness of the retinal nerve and cognitive functions.

Some researchers suggest, "Retinal nerve measurement has potential as a monitoring tool in AD patients." More proof is provided by research that shows a strong correlation between brain atrophy noted by MRI and retinal nerve atrophy noted by OCT, an eye tissue measurement instrument.