



High-resolution Optical Coherence Tomography

At The Retina Partners, we are proud to offer our patients the latest in optical coherence tomography (OCT) technology. OCT works essentially like an ultrasound, but instead of using sound waves, OCT uses light waves to obtain higher resolution and magnification than what is possible with ultrasound. We perform OCT scans of the macula to obtain a magnified view of the full thickness of the macula (that is, an optical "slice" through the macula). Your doctor studies the images of your macula to determine the presence of conditions such as macular edema, macular pucker, and macular hole, to name a few. Repeat OCT scans are sometimes needed to follow the response to treatment. With OCT technology, your doctor will be able to detect tiny amounts of leakage and other abnormalities in the macula that are too small to be seen by examination alone.

What to Expect

OCT is rapid, painless and non-invasive. You will be seated comfortably and instructed to place your chin in a chin-rest on the machine. You will then be instructed to look at a target inside the machine while the images are obtained. The entire process takes only a few minutes. Your doctor will review the results with you in the examination room.

The Spectralis® High-resolution OCT

Spectral domain OCT is the latest advancement in OCT technology. With spectral domain OCT, we are able to obtain greater resolution images of the macula than older OCT technologies and the images are acquired in a fraction of the time, making it easier for our patients.

With automatic eye tracking and noise-reduction technology, the Spectralis® has the ability to acquire images at a resolution of a few thousandths of a millimeter. Higher resolution images enable the doctor to see more of the details of the macula and retina in making a diagnosis and planning treatment. In a study* on reproducibility comparing different spectral domain OCT machines, the Spectralis® was able to detect the smallest changes in anatomy (even down to 1 thousandth of a millimeter!).*