



WHAT DOES MY OPTOMETRIST SEE?



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During a comprehensive eye examination, your optometrist examines your visual acuity (how clearly you see); refraction (nearsightedness or farsightedness); eye health and eye skills, such as visual alignment (ability of both eyes to aim at the same object); eye tracking (ability of both eyes to maintain alignment on a moving object); and eye focusing (ability of the lens of the eye to change shape to allow clear vision at all distances).

To further evaluate eye health, your optometrist will sometimes put drops in your eyes so that your pupils become dilated. This allows the optometrist to actually see into your eyes through your open pupils during the examination. This is considered a dilated eye examination.

When the optometrist looks inside the eye at the retina, he or she can see the blood vessels directly. The eye is the only place on the body that blood vessels can be seen without having to look through skin or tissue that interferes with the view. As a result, optometrists can detect many diseases that affect our blood vessels. Two such diseases include hypertension and diabetes.

Hypertension (or high blood pressure)

With hypertension, the optometrist can see a narrowing of the blood vessels. Sometimes he or she sees the blood vessels blocked with cholesterol, plaques or fatty acids. Vessels that have high pressure also tend to be more tortuous (full of twists and turns) and cross each other a little differently. Sometimes those high-pressure blood vessels leak fluids, causing swelling of areas in the retina. Also blood vessels can break, causing localized bleeding in the retina. Furthermore high pressure and/or debris in the vessels can cause a larger vessel to be fully blocked, which causes bleeding in the eye.

Diabetes

Diabetes can also cause small areas of leakage and/or bleeding. These are generally smaller bleeds than with hypertension. However, the blood vessels may not be narrowed or as blocked. Additionally, the crossing of the vessel is more normal and the vessels are not as tortuous. However, diabetes can cause swelling of the macula (the area of detailed vision), which can lead to permanent vision loss. More advanced diabetes can also cause neovascularization (new vessel growth) because of poor circulation in the retina. Circulation problems in the retina can lead to blindness from diabetes.

For many optometrists, one of the first clues for detecting diabetes is unexplained blurred vision or temporary changes in the patient's eyeglass or contact lens prescription. Many times these changes occur before the retinal problems appear.

Diabetes and hypertension in the retina can look very similar and some patients have both. The next step in diagnosis of these diseases is a blood pressure and blood glucose test.

The good news for the patient at this point is that testing has begun and a diagnosis is not far behind. Treatment can begin soon. Further, the optometrist has a baseline from which to monitor the disease or diseases.