Diabetic Retinopathy: The Big Picture

Who gets diabetic retinopathy?

Diabetes affects about one fifth of the American adult population, and diabetic retinopathy is the leading cause of legal blindness in this group. Diabetes affects the eyes in the same way that it affects the kidneys and other organs: small blood vessels are damaged and over the years, this can result in permanent tissue damage.

Vision loss in diabetes is due primarily to damage in the retina. The retina is like the film of the camera. Just as focusing the lens of a camera will not create a clear picture if the film is damaged, getting a pair of glasses will not improve the vision if diabetes has damaged the retina. Diabetes causes even more damage when combined with high blood pressure, so controlling both is important to prevent blindness.

Diabetic retinopathy is more common in patients with poorly controlled diabetes and patients with diabetes for more years. Diabetic retinopathy may already be present at the time of diagnosis of adult onset (Type II) diabetes.

Diabetic retinopathy begins long before the vision is affected. Regular examination of the retina is important to identify and treat diabetic retinopathy before vision loss occurs. Once the vision is affected, vision often improves with treatment but in some cases will not improve with treatment.

Diabetic retinopathy causes vision loss in three main ways:

• Blood vessels begin to leak fluid, like a garden hose with holes in the side. This fluid collects in the retina and causes swelling, called diabetic macular edema. Central vision may be reduced.

• Abnormal blood vessels grow out of the retina into the middle of the eye. These blood vessels may break and bleed into the middle of the eye, or they may continue growing and start pulling the retina off the wall of the eye. This is called proliferative diabetic retinopathy.

• Blood vessels may become blocked and starve the retina of oxygen. If this process, called ischemic retinopathy, continues long enough, the retina may permanently lose function.

Bay Area Retina Associates

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How is diabetic retinopathy treated?

• Controlling blood sugars and high blood pressure is critical to the treatment of all forms of diabetic retinopathy. Without good control of blood sugar and blood pressure, all other treatments are less likely to have positive outcomes.

• Diabetic macular edema is treated with laser or injections of medicine into the eye in order to stop the leakage of fluid. In some cases, surgery may help as well.

• Proliferative diabetic retinopathy is treated with laser photocoagulation. In some cases, micro-incisional / sutureless vitrectomy surgery is needed to remove blood in the eye or to remove scar tissue pulling the retina off the wall of the eye (tractional retinal detachment).

Bay Area Retina Associates is a group practice of retinal surgeons. All members of the group are board certified by the American Academy of Ophthalmology and have completed fellowship training in vitreoretinal surgery. BARA surgeons have expertise in the treatment of retinal detachment, diabetic retinopathy, age-related macular degeneration, macular hole, epiretinal membrane, and retinal vascular disease. BARA physicians see patients in eight offices and perform surgery at several hospitals and surgery centers around the East Bay.

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