



RETINA VITREOUS ASSOCIATES
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Diabetic Retinopathy

What is Diabetes and how can it affect my retina?

Diabetes is a condition that affects your body's ability to control blood sugar levels, causing them to rise higher and higher if not treated. Over time, high blood sugar can damage the small blood vessels in your eyes, kidneys, and other organs. The blood vessels in your retina are particularly sensitive to this injury referred to as "**diabetic retinopathy**".

What are the earliest signs that Diabetic Retinopathy is in my retina?

"**Non-proliferative diabetic retinopathy**" is the early stage of diabetic retinopathy where tiny capillary blood vessels become twisted and small spots of blood appear. Monitoring your retina is important because the damage can progress to more serious forms of retinopathy that require treatment to prevent blindness. In addition to these forms of retinal damage, small capillary blood vessels injured from diabetes may leak fluid. In the normal retina, these capillaries are water-tight, like garden hoses, and they exchange oxygen and nutrients without oozing any blood or plasma. The fluid that leaks from diabetic blood vessels can build up in the retina, causing it to swell and blur your vision. We call this "**diabetic macular edema.**" Left untreated, diabetic macular edema can permanently damage the retinal nerve cells over time.

How can Diabetic Macular Edema be treated?

As part of your eye evaluation, your eyes will be studied with a fluorescein angiogram or optical coherence tomography scan to help assess the level of damage and to guide treatment decisions. For macular edema, to stop the leakage and reduce the retinal swelling caused by diabetes, gentle laser treatment can be used to cauterize the leaky vessels. Injectable drugs such as Avastin, Lucentis, or triamcinolone may also be helpful, either alone or in conjunction with laser surgery. Commonly, these treatments are repeated over time, because the problem typically recurs as the treatment wears off or the retinopathy progresses. The goal of therapy is to slow or halt progression of vision loss, and occasionally the vision can even improve.

Other than Diabetic Macular Edema, what other diabetic retinal problems can be treated?

As diabetic retinopathy worsens, abnormal blood vessels may start to grow or proliferate on the retinal surface. This stage is termed "**proliferative diabetic retinopathy.**" These new blood vessels are very fragile and can break, causing bleeding into the eye known as a "**vitreous hemorrhage.**" Even worse, this problem can lead to scarring and detaching of the retina, a potentially blinding problem requiring surgery. In these cases, more aggressive laser treatment is applied to the retina to stop the vessel growth and prevent blindness. A common side effect of laser is mild worsening of your contrast and side vision, but in general this effect is minimal. In some cases of advanced diabetic retinopathy, normal blood vessels die off (called ischemia). The resulting nerve cell death from insufficient blood flow may permanently blur the vision. If bleeding into the eye is significant, surgery called vitrectomy may be required as well.

Controlling your blood sugar along with your blood pressure and cholesterol with your primary medical provider is always a critical component to preventing ongoing retinal damage from diabetes.