

Diabetes and Your Eye Health

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The information provided here is for purposes of general education. It is not intended as medical advice for specific recipients of this article.

Diabetes is caused by the body's inability to create or effectively use its own insulin, which is produced by islet cells found in the pancreas. Insulin helps regulate blood sugar (or glucose), which provides energy to the body's cells and tissues. In 2018, more than 34 million people, or 10.5% of the United States population, had diabetes. Almost one in five people who have diabetes remain undiagnosed. Diabetes is the seventh leading cause of death in the United States and is the most common cause of vision impairment and blindness among working-age adults.

Diabetes causes Diabetic Retinopathy, which can cause vision loss by damaging the part of the eye called the "retina". The retina is a layer of nerves lining the back part of the eye, and its job is to process light and images. The macula is the central part of the retina, and it allows us to see details for reading, driving, or seeing someone's face. Diabetic retinopathy is classified into 2 forms: non-proliferative diabetic retinopathy and proliferative diabetic retinopathy. Non-proliferative diabetic retinopathy is characterized by leaking blood vessels in the eye. Proliferative diabetic retinopathy is caused by severe damage to the blood vessels and subsequent growth of abnormal blood vessels inside the eye.

In non-proliferative diabetic retinopathy, the blood vessels of the retina become damaged and develop tiny leaks. The leaking vessels can lead to swelling (edema) of the macula causing loss of vision including blurring, distortion



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or darkening. Severe macular edema can lead to permanent loss of vision making it difficult or impossible to read and drive. Macular edema is typically treated with injections into the eye that can help stop the leakage and sometimes allow vision to improve.

Proliferative diabetic retinopathy, if left untreated, can cause bleeding inside the eye, growth of scar tissue, and death of parts of the retina. These serious problems can lead to severe vision loss or even total blindness. Proliferative diabetic retinopathy can be treated with both laser therapy and injections. Laser treatment attempts to cause regression of the abnormal blood vessels in the eye lessening the chance of bleeding and scarring. Injections are also used to cause regression of the abnormal blood vessels but need to be repeated to maintain the benefits. The damage cannot be reversed with either treatment but can be limited if it is done before extensive damage has been caused. In some cases, surgery is needed to remove blood from within the eye as well as to remove some of the scar tissue on the retinal surface.

Many studies have shown the benefits of blood sugar and blood pressure control for the health of diabetic patients. With good control of both blood sugar and blood pressure, the risk of diabetic retinopathy can be reduced significantly. Although there is no cure for diabetic retinopathy, some treatments can prevent permanent vision loss.

What should you do if your patient has diabetes?

If your patient has diabetes, an annual dilated eye exam is recommended. This can help catch vision problems at an early stage, increasing the chances of preventing severe vision loss.

At Associated Eye Care we can help manage & treat your diabetic eye condition. Schedule an appointment today by calling **651-275-3000**.
