

RETINA CONSULTANTS OF WESTERN NEW YORK

Faruk M. Koreishi, MD
Williamsville (632-5324)

Paul J. Lee, MD Mehdi Khan, DO
Orchard Park (712-2440)

Christopher Jermak, MD
Niagara Falls (205-0152)

Diabetic Retinopathy

What Is It?

- Diabetes is a condition that damages the blood vessels throughout your body.
- Within the eyes, the damaged blood vessels can leak and/or close.
- **Nonproliferative Diabetic Retinopathy (NPDR)**
 - In the early stages, there is minimal blood vessel damage leading to scant bleeding in the retina. This stage is called NPDR and is divided into mild, moderate and severe stages.
- **Clinically-Significant Macular Edema (CSME)**
 - If the leaking vessels occur in the macula, then the macula will become swollen. This condition is called CSME.
 - Macula is the part of the retina that allows you to see the small details and the center part of the vision.
 - CSME can cause permanent vision damage. A study sponsored by the National Eye Institute called the Early Treatment of Diabetic Retinopathy Study (ETDRS) showed that without treatment, there is 40% chance in 3 years that your vision will be ½ of your current vision.
- **Proliferative Diabetic Retinopathy (PDR)**
 - If the blood vessels close, then the nutrients delivered to the eye by these vessels will decrease. This condition is called ischemia.
 - The body will try to compensate by creating new blood vessels and this process is called neovascularization.
 - This stage of diabetic retinopathy is called Proliferative Diabetic Retinopathy (PDR).
 - Unfortunately, these new blood vessels are fragile and they can break and bleed further. This can cause severe and permanent vision loss.
 - A study sponsored by the National Eye Institute called the Diabetic Retinopathy Study (DRS) showed that without treatment, there is 40% chance in 3 years that your vision will be 1/3 of your current vision.

ANALOGY

- Diabetes causes progressive damage to the blood vessels. This is equivalent to the piping system in a house that is corroding. Imagine the damage that can occur to these pipes if they continue to corrode for many years. Diabetic damage to the blood vessels is similar in that the damage continues to accumulate in the blood vessels.

Treatment Options

- The primary goal of any treatment is to help to stabilize your vision. Whatever vision that has been lost may be permanent. However, therapy can help to stabilize the vision.

- The most important part of treatment is tight blood sugar control.
- The damage that is present now is a reflection of the damage that has been done until today. Tighter sugar control will help to lessen the chance of further damage.

Laser Treatment

- The leaking vessels can be induced to close with laser. This will take about 10 minutes with minimal pain. This treatment is called **focal/grid laser** therapy.
- The new blood vessels can't be destroyed with laser. Laser will help to lessen the chances of other new fragile vessels from forming. This procedure will take 20-30 minutes and may involve pain. This treatment is called **panretinal photocoagulation (PRP)**.
- Your vision will be darker for the remainder of the day after a laser treatment. Please take the appropriate precautions.
- Each treatment may need to be repeated several times.

Intravitreal Injection

- Additional medications may be injected directly into the eye if the laser is ineffective or not of the type that would respond to laser treatment.
- **Kenalog/Triessence/Avastin** are the medications that are usually injected into the eye.
- These help to stabilize the leaking blood vessels.
- No one can predict the number of injections that will be required. We will monitor you with the appropriate testing.
- After the injection, you may see the medication or air bubbles floating in the form of dark clouds/shadows or spheres which may interfere with normal daily activities. These will improve gradually over the next 1-2 weeks.
- After the injection, the eye will feel irritated with burning sensation and you may feel as if there is something in the eye for 3-4 days.
- Antibiotic eye drops will need to be taken 4 times per day for the next 5-7 days. Artificial lubricating tears can be used to help to reduce irritation.
- Please call if you have any questions. There is someone on call 24/7.
- Call especially if you begin to experience any decrease in vision, eye pain, swelling around the eye. In general, it is advised that you call for any of the listed symptoms worsen or you think are worse than they should be.
- The risks include infection, bleeding, retinal tear/detachment, loss of vision or eyeball.

Follow-up

- Depending on the level of diabetes in the retina (diabetic retinopathy).
- Laser treatment and/or intravitreal injections may need to be repeated.
- Tight blood sugar control can decrease the need for a retreatment.