Diabetic Retinopathy: Having Laser Treatment

You have diabetic retinopathy, a condition that occurs when diabetes damages blood vessels in the rear of the eye, near the retina. It can lead to vision loss or even blindness. However, a treatment called laser photocoagulation may help slow or stop the disease. Laser treatment can't always be used for diabetic retinopathy. Sometimes eye surgery is needed.

What is Laser Photocoagulation?

Laser photocoagulation is a treatment that uses a laser (high-energy light source) to control the growth of new blood vessels, a condition that affects people with diabetic retinopathy. A laser beam is focused on the retina. The heat from the laser beam causes scarring which decreases the growth of new blood vessels. New capillary growth is slowed or stopped with the procedure. Lasers may also cause inflammation, which promotes the healing process and the absorption of extra fluid (macular edema) which can reduce vision. Laser photocoagulation is done using one or more of the types of laser treatments listed below. Sometimes laser treatment is combined with medication, such as injections of steroids or blood vessel inhibitors into the eye (such as anti-VEGF drugs).

Types of Laser Treatment

The type of treatment you receive depends on the extent and location of damaged capillaries. Treatment may take from a few minutes to a half hour or so. You may need more than one treatment session or type of treatment. Treatments include the following:

- **Panretinal treatment** reduces growth of new capillaries throughout the retina (the inside lining of the eye).
- **Grid treatment** treats swelling (macular edema) in different areas of the macula (a spot in the middle of the retina responsible for clear vision).
- **Focal treatment** seals up small areas of leakage in the retina.

Preparing for Laser Treatment

Tell your doctor about all medications, herbal remedies, and supplements you take. This includes aspirin, ibuprofen, ginkgo, Coumadin (warfarin), or other blood thinners. Be sure to have an adult family member or friend drive you home after laser surgery. You should also bring dark sunglasses to wear on the way home.

During Laser Treatment

Laser treatment may be done at the doctor’s office, hospital, or eye center. You’ll be awake during the procedure. First, the doctor uses eye drops to widen (dilate) your pupil. Then drops are placed to numb the surface of the eye. He or she then places a special contact lens on your eye to help focus the laser treatment on the retina. You will be asked to fixate on a light with your other eye so that your eyes stay still and do not move during the laser treatment. Once the laser treatment is completed, the lens is removed.

Following Laser Treatment

You may be given an eye patch to wear for a few days, and you may be instructed to use eye drops. Ask your doctor when you can resume any blood-thinning medications you may have used in the past. Ask your doctor how long you need to avoid lifting, exercising, or swimming. Also, ask when you can drive and return to work.

Controlling Pain

Laser treatment rarely causes pain. You’ll be given medication to treat eye irritation, if it occurs. If you have significant eye pain or discomfort call your doctor.
Risks and Complications of Laser Treatment

- Eye irritation
- Bleeding in the retina
- Watery eyes
- Dilated pupils
- Mild headache
- Double or blurry vision
- Decreased vision
- Seeing spots
- Problems with glare
- Loss of night or side (peripheral) vision

When to Call Your Doctor

If you have sudden pain or notice decreasing vision after surgery, call your eye doctor right away.

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