

LASER SURGERY FOR BACKGROUND DIABETIC RETINOPATHY

Background diabetic retinopathy may cause macular edema, or swelling of the central portion of the retina, which may result in blurred vision.

The National Eye Institute concluded that laser treatment was more effective than observation for diabetic retinopathy with clinically significant macular edema in a national trial completed in 1985. Treatment reduced the risk of visual loss by more than 50 percent, increased the chance of visual improvement and decreased the frequency of persistent macular edema. The treatment was found to be better at preventing visual loss than improving it and may be indicated even with 20/20 vision if the center of the macula is threatened. There is no alternative treatment for background diabetic retinopathy other than good control of underlying medical problems, laser therapy or intravitreal injections. Laser is often used as an adjunctive therapy with diabetics to decrease the injection burden.

The treatment involves dilation of the pupil with eye drops and numbing of the eye with anesthetic drops to allow temporary placement of a contact lens for the treatment. The contact lens helps to aim the laser and minimize eye movements. Up to several hundred laser applications, perceived as bright flashes of light, are applied to the affected eye to the leaking area surrounding the macula. The laser applications last 100 milliseconds and cause little or no pain.

After laser treatment, you may take Tylenol and resume normal activities. You should avoid aspirin, straining and coughing and control your blood sugar and blood pressure. Your vision should return to the pretreatment level by the day after the laser treatment, and may gradually improve over the next six weeks, when you will be reevaluated.

Due to the destructive nature of the treatment, a small loss in the visual field or minute blind spots may be noted near the center of your vision. This is usually not evident when using both eyes together. Occasional

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instances of scarring involving the exact central area of vision rarely occur, but would severely limit vision. Retreatment may be necessary if the macular edema persists or returns, and reevaluation with fluorescein angiography may be required. Advancement to proliferative diabetic retinopathy may require additional laser treatments to prevent bleeding.

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