

About Diabetic Eye Disease

If you suffer from diabetes, your body does not use sugar properly. High blood sugar levels can damage blood vessels in the retina, the nerve layer at the back of the eye that senses light and helps to send images to the brain. This damage to retinal vessels is referred to as Diabetic Retinopathy.

Changes in lifestyle and diet, and increases in obesity and life expectancy rates, have led to a marked increase in the incidence of Diabetic Retinopathy. Diabetic Retinopathy is a progressive disease, which if left untreated, can cause visual impairment and blindness.¹

What is Diabetic Macular Edema?

Diabetic Macular Edema (DME) is the most common form of Diabetic Retinopathy and is caused by swelling of the central retina (maximal retinal thickening, macular edema). This swelling is caused by the leakage of fluid from small blood vessels within the macula that have been damaged by diabetes. This may involve the central macula (centre-involving) or outer macula. The result is progressive degradation of fine, detailed vision.^{2,3}

Who is at risk?

Patients who suffer from diabetes have a risk of developing DME over time. In order to preserve vision and prevent progression of DME, it is important to take control of your blood sugar levels, blood pressure, and blood cholesterol. The list below includes some of the factors that may put you at higher risk for DME.^{2,3}

- Duration of diabetes — the longer you have diabetes, the greater your risk of DME.
- Poor control of your blood sugar level
- High blood pressure
- Smoking

What if 2RT doesn't work for me?

If macular edema still persists after initial 2RT treatment, additional treatment with 2RT may be beneficial. Or, your ophthalmologist may recommend a different form of treatment.

What are my other treatment options?

- Conventional Photocoagulation
- Drug Therapy: Eye injections of anti-VEGF medications are the standard treatment approach for center-involving CSME. Anti-VEGF injections can achieve good results but require numerous eye injections.
- Vitrectomy: Performed in the operating room, this surgical procedure involves the permanent removal of the vitreous gel from the back of the eye, which is subsequently replaced with fluid. This is only indicated in very selected, complicated cases.

Your ophthalmologist will be able to discuss these options with you in more detail.

References

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This pamphlet has been prepared by based on currently available information and is not intended to recommend a particular procedure. Please consult your physician to determine whether 2RT is a suitable option for you.

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2RT, Retinal Rejuvenation

A Better Laser Treatment for Diabetic Eye Disease

DIABETIC MACULAR EDEMA

What is 2RT?

Also known as Retinal Rejuvenation Therapy, 2RT is a non-invasive retinal laser procedure that stimulates a natural, biological healing response in the eye to treat diabetic eye disease. It is performed in your ophthalmologist's clinic and typically takes no more than 10 minutes.

How does 2RT work?

2RT applies nanosecond pulses of low-energy laser light to the areas of non central macular edema, stimulating a process of cellular rejuvenation.⁴ This process helps to reduce swelling of the retina stopping or slowing the progression of DME.^{5,6}

Unlike conventional retinal laser therapy, which uses millisecond treatment times,⁷ 2RT applies nanosecond pulses of low-energy laser light to induce the necessary therapeutic effect while preserving the sensitive structures of the retina from collateral thermal damage.⁴ It also uses 500 times less energy than conventional retinal laser therapy.⁵

What happens during the procedure?

2RT is performed as a 'walk-in, walk-out' outpatient procedure; you do not have to stay overnight in a hospital.

Immediately prior to treatment, your ophthalmologist will administer eye drops to prepare the eye for treatment. A contact lens will then be placed on your eye and the laser light delivered through a specially designed microscope, similar to that used for eye examinations. During the procedure you will hear a clicking sound. You may also see a flashing light; this is the aiming beam used by the ophthalmologist to position the laser light in your eye.

Generally speaking, 2RT does not cause any pain.^{5,6} You may experience slight pressure in your eye upon application of the contact lens, but it is important to note that you will not feel the application of the laser light.

What should I expect after treatment?

You can resume normal, day-to-day activities, such as watching TV, soon after treatment. Your ophthalmologist will want to re-check the treated eye during periodic follow-up visits.

What are the side effects of 2RT?

As with any eye procedure, there may be side effects. Clinical studies have reported no complications or adverse events during or following the procedure.^{5,6}

Before undergoing 2RT, it is recommended to first discuss the possible risks and benefits of the procedure with your ophthalmologist.

Who will benefit from 2RT?

2RT is suitable for patients with non center-involving clinically significant macular edema (CSME).

In some cases, 2RT may also be an effective adjunct therapy to anti-VEGF medications for selected patients.

HOW DOES DME AFFECT VISION?

The macula is a small but vital area of the retina at the back of your eye. It is about 5 mm in diameter and is essential for your central, detailed vision. As DME progresses, detailed vision is affected and becomes worse. If left untreated, DME can result in vision impairment or blindness.¹⁻³

