What is AMD?

Age-Related Macular Degeneration (AMD) is the leading cause of blindness in industrialized countries.[1] A chronic eye disease, over time AMD can result in irreversible loss of central vision. Early signs of the disease include waste deposits under the macula, known as drusen, and pigmentary abnormalities such as light or dark spots in the macula.[2]

AMD can be diagnosed with a simple eye examination. Detecting changes early through regular check-ups with your optometrist or ophthalmologist can identify the disease before sight-threatening complications occur.[3,4]

Who is at risk?

Age is a major risk factor for AMD. The disease incidence increases with age and is most prevalent over the age of 65.[1,3-6] Other significant risk factors for AMD include:

- Family history. People with a family history of AMD are at much higher risk
- Smoking. Research shows that smoking more than doubles the risk of developing AMD.

If you are over the age of 50 and particularly have a family history of AMD, make sure you speak with your ophthalmologist about AMD and the risk that it poses to you.

How can I slow AMD progression?

It is first recommended that you consult your optometrist or ophthalmologist. Once AMD has been diagnosed, regular monitoring is important. A healthy lifestyle and dietary factors can also play an important role. Do not smoke. Taking dietary supplements may also be beneficial.[7,8]

Who will benefit from 2RT?

It is necessary to first undergo an eye examination in order to determine your eligibility for 2RT. Upon discussion with your ophthalmologist, a number of factors will determine whether 2RT is a suitable treatment option, including:

- Early AMD as defined by the presence of large waste deposits (drusen) in the retina, and/or the presence of pigment abnormalities such as light or dark spots in the macula.[2-5]
- Pupil dilation > 5mm in the eye that needs treatment.

References

1. World Health Organisation (WHO), Global Initiative for the Elimination of Avoidable Blindness: action plan 2006-2011. [http://www.who.int/blindness/Vision2020_report.pdf]
2. Ferris FL et al; Clinical Classification of Age-related Macular Degeneration. Ophthalmology 2013;120:844-851.
3. Wang JJ, Rochtchina E, Lee AJ, et al. Ten-year incidence and progression of age-related maculaopathy: the Blue Mountains Eye Study. Ophthalmology 2007;114:92-8.
4. Seddon JM, Sharma S, Adelman RA. Evaluation of the clinical age-related maculaopathy staging system. Ophthalmology 2006;113:260-6.
5. 'Eyes on the future - A clear outlook on age-related macular degeneration'. Report by Deloitte Access Economics & Macular Degeneration Foundation, 2011
6. Taylor HR, Keeffe JE, Vu HT, et al. Vision loss in Australia.Med J Aust 2005 Jun 6;182(11):565-
7. A Simplified Severity Scale for Age-Related Macular Degeneration. AREDS Report No. 18. Arch Ophthalmol. 2005;123(11):1570-1574. doi:10.1001/archopht.123.11.1570
8. High-Dose Supplementation With Vitamins C and E, Beta Carotene, and Zinc for Age-Related Macular Degeneration and Vision Loss: AREDS Report No. 8; Arch Ophthalmol. 2001;119(10):1417-1436
9. Guymer, R.H., et al., Nanosecond-laser application in intermediate AMD - 12-month results of fundus appearance and macular function. Clin Experiment Ophthalmol. 2013 Oct 3. doi: 10.1111/ceo.12247
10. Wood, J.P., et al., Nanosecond pulse lasers for retinal applications. Lasers Surg Med, 2011. 43(6): p. 499-510.

This pamphlet has been prepared based on currently available information and is not intended to recommend a particular procedure. Please consult your ophthalmologist to determine whether Retinal Rejuvenation Therapy (2RT) is a suitable option for you.

2RT, Retinal Rejuvenation

A New Approach to AMD Management

AGE-RELATED MACULAR DEGENERATION

2RT. A New Approach to AMD Management.

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 the early stages of Age-Related Macular Degeneration (AMD). It is performed in your ophthalmologist's clinic and typically takes no more than 10 minutes.

How does 2RT work?

In order to treat early AMD, 2RT applies nanosecond pulses of low-energy laser light to small, specifically targeted areas of the outer macula. Clinical studies have shown that the application of the 2RT laser light delivers functional improvement in both the treated and untreated eye.[9] Many patients will also experience a reduction in drusen.[9]

Conventional retinal laser therapy uses millisecond treatment times. In contrast, 2RT applies nanosecond pulses of low-energy laser light to induce the desired therapeutic effect whilst preserving the sensitive structures of the eye from coagulative damage.[10]

Repeated ongoing eye injections (anti-vascular endothelial growth factor medications, anti-VEGF) are suitable for the wet, end-stage of the disease only. In contrast, 2RT is applied much earlier in the disease process to treat the early form of AMD.

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 spots of the 2RT 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. 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 can 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. It is important to remember that managing AMD is a lifelong process: even with 2RT you will need to continue to visit your ophthalmologist every three to six months.

What are the side effects of 2RT?

As with any eye procedure, there may be side effects.

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

Clinical studies have demonstrated that complications or adverse events associated with 2RT, both during and after the procedure, are very rare. There has been one reported incidence of spot bleeding from the retina at the time of treatment but this incident did not cause any problems for the patient and did not require additional treatment.[9]

HOW DOES AMD 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. Early AMD can have little or no effect on your vision. As AMD progresses, detailed vision is affected and becomes worse. In late, end-stage AMD all detailed central vision is permanently lost (legal blindness).[2-5]