MACULAR DEGENERATION
Age-related macular degeneration is a common cause of visual impairment in adult New Zealanders.

The symptoms relate to degenerative processes that are occurring at the macula and can affect both eyes.

**THE MACULA**

The macula is that part of the retina that we use for fine visual tasks. The retina is a layer inside the eye on which light is focused by the cornea and lens. It is rather like a film of a camera in that it responds to a focused light and transmits signals to the brain enabling us ‘to see’.

Different parts of the retina perform different visual tasks. For example, the peripheral retina is useful for night vision and detecting movement and motion. The central part of the retina, the macula, is needed for fine visual tasks such as reading, writing, threading a needle, and tying fishing flies, etc. In macular degeneration, degenerative processes occur which impede central vision.
TYPES OF MACULAR DEGENERATION

There are many categories of macular degeneration and these sub-divisions can be based on appearance, age at onset, etc. One common classification includes a subdivision of wet or dry appearance to the macula.

In early forms of macular degeneration, accumulations of waste products can be seen underneath the retina. These deposits are called drusen and can be either small discreet types or larger confluent disturbances. Progression of this stage can be heralded by abnormalities in pigmentation or thinning of the retina. If the disease process progresses, then these changes can become more marked and can be associated with complications of macular degeneration.
The thinning of the macula can become more widespread with time and lead to features of atrophic macular degeneration. This typically is a slow process with affected people becoming symptomatic in their eighties. Some patients with advanced macular degeneration can develop a more exudative reaction where there is leakage of fluid or development of abnormal blood vessels beneath the macula. This process tends to be faster and occurs at a younger age group than atrophic changes.

There is no proven treatment or lifestyle change that has been shown to prevent macular degeneration. However, high blood pressure and smoking are known to increase the risk of visual loss from macular degeneration. Equally, controlling high blood pressure and stopping smoking dramatically decreases that risk.

The National Eye Institute has also shown that for patients with moderate or advanced forms of macular degeneration, a combination of vitamins and anti-oxidants can be beneficial. In New Zealand this formulation is not funded by Pharmac and before starting treatment it is advisable to have a thorough eye examination, including photographs of the macula, to ensure the medication is going to be of benefit.
Historically, retinal laser surgery was the treatment of choice. However, the development of a class of drugs that can act on the abnormal leaking vessels in the eye has led to a widespread change in practice. These drugs, such as Avastin, Lucentis and Eylea are injected into the vitreous cavity within the eye and allow for better visual outcomes. A retinal scan (OCT), and sometimes fluorescein angiography, is required to diagnose and monitor the effect of the treatment. Repeat injections are often required to reduce the leaking vessels causing the reduction in vision.
Ask your doctor for an Amsler Grid to ensure you can regularly test yourself for any signs of distortion.
Patients who lose or have defective reading vision can be helped with low visual aids (LVA) such as magnifiers or closed circuit television. If the central vision is totally lost, talking books can replace the written word. More sophisticated aids with computers and talking typewriters can enable patients who lose central vision to continue to lead a normal life and occupation. Auckland Eye work with specialist optometrists who are experienced in assisting people requiring LVA and can arrange referral if required.
FUTURE DEVELOPMENTS FOR TREATMENT

Treatment and techniques to reduce macular degeneration (both the wet and dry form) will be increasingly important as it is a major cause of visual impairment in the developed world, including New Zealand. Auckland Eye actively participates in international clinical trials investigating new drugs for both the treatment and possible prevention of AMD in the future.

MACULAR DEGENERATION NEW ZEALAND (MDNZ)

MDNZ is a charitable trust with a vision to provide awareness, education and support to those who suffer from the disease. If you would like further information then please contact Macular Degeneration New Zealand:

Web: www.mdnz.org.nz
Tel: 0800 MACULA (0800 622 852).
Auckland Eye, New Zealand’s leading private sub-specialty eye centre, is dedicated to providing the highest quality service in a caring environment. Auckland Eye’s team of leading experts are each highly trained in their particular area of expertise, providing assessment and management of a comprehensive range of ophthalmic problems.

They now provide surgical services in their brand new state-of-the-art facility, Oasis Surgical, the largest purpose built ophthalmic day-stay facility in New Zealand.

Auckland Eye and Oasis Surgical are the only procedure and consulting group in Auckland accredited by the DAA group for quality of patient care.

Auckland Eye and Oasis Surgical are centrally located in Remuera with easy motorway access, plentiful off street parking and wheelchair access.

Auckland Eye also has dedicated consulting facilities in Albany and New Lynn as well as providing appointments at a wide range of other locations across the Auckland region.

Auckland Eye is an affiliated provider to Southern Cross Health Society.

For more information on macular degeneration please contact our friendly specialist team.
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