

# You can't spot eye disease.

## Common eye problems

### Age-related macular degeneration

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#### What is age-related macular degeneration?

Age-related macular degeneration (AMD) is a progressive deterioration of the very sensitive central part of the retina, the macula, which is the area at the back of the eye that provides fine vision for daily tasks such as reading, recognising faces and driving.

#### What are the types of age-related macular degeneration?

AMD is classified as being either dry or wet. Dry AMD is the most common and evidenced by fatty deposits called drusen in the macula. Wet AMD is less common and results from abnormal blood vessels forming and leaking into the macula. Vision loss tends to be gradual for those with the dry form, while it is often sudden for those with the wet form and vision loss may be severe.

#### What causes AMD?

AMD is related to advancing age, a family history of the disease and smoking. More recent research suggests that people with low levels of carotenoids and the antioxidant vitamins C and E in their blood are also at an increased risk of developing AMD.

#### Why is early detection important?

In the early stages, AMD may have no symptoms and by the time it has been diagnosed, the eyes have suffered irreversible loss of central vision, usually in both eyes. People with advanced AMD may maintain sufficient peripheral vision to be able to move around independently, however, they may be legally blind and their capacity to undertake daily activities is significantly limited.

AMD can be detected early, before symptoms develop, by a comprehensive eye examination which includes looking carefully at the macula at the back of the eye. Early diagnosis gives the best chance of preventing or reducing vision loss.

#### What is the treatment for age-related macular degeneration?

There are treatments available for some forms of wet AMD. These treatments are not a cure for the condition, but can help reduce the risk of advancing vision loss in selected cases.

For more information visit the **Macular Degeneration Foundation** website [www.mdfoundation.com.au](http://www.mdfoundation.com.au)

### Glaucoma

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#### What is glaucoma?

Glaucoma is a disease involving damage to the optic nerve and subsequent vision loss or blindness. The condition is often associated with increased intraocular pressure; however, it can also occur with normal, or even below normal, eye pressure.

#### What causes glaucoma?

Advancing age is associated with the development of glaucoma, although it can occur at any stage of life. Other risk factors include:

- high intra ocular pressure
- family history
- extreme short-sightedness
- conditions such as diabetes and high blood pressure
- eye injury
- steroid use.



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## What can be done for diabetic retinopathy?

Laser treatment (also known as photocoagulation) is used to treat retinopathy. A narrow, high energy light beam is aimed through the pupil and onto the retina to shrink the abnormal blood vessels. The efficacy of timely laser photocoagulation in preventing vision loss from DR is well established, however laser treatment cannot restore vision that has already been lost.

Therefore, in addition to maintaining good blood sugar control, early detection and timely treatment is the key to reducing blindness and low vision from DR. All people with diabetes need to have a comprehensive eye examination:

- on diagnosis
- more frequently if retinopathy is found.
- at least every two years if no retinopathy is present

For more information visit the **Diabetes Australia** website [www.diabetesaustralia.com.au](http://www.diabetesaustralia.com.au)

## Retinitis pigmentosa

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### What is retinitis pigmentosa?

Retinitis pigmentosa is the name of a group of genetic (inherited) eye conditions that result in progressive degeneration of the light sensitive cells in the retina. It is caused by the inability or reduced ability of the body to provide the necessary protein to sustain the health of the retina. The condition affects night vision and peripheral vision.

The disease usually appears firstly in childhood, but severe vision problems do not often develop until early adulthood. Retinitis pigmentosa is the leading cause of youth blindness in Australia.

### Who is at risk?

The only risk factor identified to date is a family history of the disease.

### What can be done about it?

There is currently no effective treatment for retinitis pigmentosa. However, the use of sunglasses to protect the retina from ultra violet light may have a vision-preserving effect.

For more information visit the **Retina Australia** website [www.retinaaustralia.com.au](http://www.retinaaustralia.com.au)

## Trachoma

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### What is trachoma?

Trachoma is a bacterial infection of the eye that can lead to blindness if not treated. This preventable disease is linked to poor hygiene and is often associated with poverty. Lack of facial cleanliness is a key factor related to the spread of the infection.

### Who is at risk?

Trachoma is strongly associated with sub-optimal housing and living environments. The bacterial infection can be passed on by not washing infected hands, coughing, sneezing and by eye-seeking flies.

### What can be done about it?

Better, cleaner living environments and treatment of infected persons and close contacts with antibiotics can assist in decreasing transmission and preventing consequences such as blindness. Ensuring adequate personal hygiene and face washing will also assist.



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## Why is early detection important?

In the early stages, glaucoma may have no symptoms. When diagnosis is delayed until after symptoms occur, the eyes have suffered irreversible loss of vision. Treatment cannot recover what has been lost. But it can stop or slow down the damage. It is important to detect glaucoma as early as possible, so treatment can be started with as little damage to the vision as possible. Glaucoma can be diagnosed before symptoms develop by a comprehensive eye examination.

## What are the treatments for glaucoma?

There are a range of treatments that have been shown to be effective in slowing down or halting the progress of glaucoma, including the use of medications such as prostaglandins, or surgical techniques, including laser surgery.

For more information visit the **Glaucoma Australia** website [www.glaucoma.org.au](http://www.glaucoma.org.au)

## Cataract

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### What is a cataract?

A cataract is the clouding of the eye's naturally clear lens. When the lens becomes opaque, the amount of light that passes through is reduced and scattered. The image cannot be correctly focused on the retina at the back of the eye, leading to blurred vision. The eyes may be more sensitive to glare and light and colours may seem faded or yellowed.

### What causes cataracts?

Cataracts are largely related to the ageing process, due to changes in the protein structure of the lens over time. There is some evidence that long-term exposure to sunlight, tobacco, and heavy alcohol consumption may be associated with cataract formation. Some research suggests that people who have a low dietary intake of fruits and vegetables, vitamin C and E and betacarotene are also at higher risk of the disease. Systemic diseases such as diabetes and vascular disease may increase the risk of cataract development, as may eye injury or the use of some medications, including corticosteroids.

### What can I do if I have cataracts?

When symptoms first appear, visual aids such as glasses, strong bifocals or a magnifying glass may be used to improve vision for a while. When the condition becomes serious enough to affect daily life, a surgical procedure becomes necessary to restore vision. The cloudy lens is removed and replaced with a clear, permanent intra-ocular lens. Cataract surgery is generally performed under local anaesthetic as day surgery.

For more information visit the **Better Health Channel** website [www.betterhealth.vic.gov.au](http://www.betterhealth.vic.gov.au)

## Diabetic retinopathy

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### What is diabetic retinopathy?

Diabetic retinopathy (DR) is a common complication of diabetes that affects the small blood vessels of the retina. It remains one of the leading causes of vision loss despite the availability of effective treatment.

### Who is at risk of diabetic retinopathy?

Everyone with diabetes is at risk of developing DR. People with diabetes who are most at risk include those:

- who have had diabetes for many years
- who have kidney damage
- whose diabetes is poorly controlled
- who have high blood pressure or high blood cholesterol.

Poor control of blood sugar is the most critical risk factor for the development and progression of DR.



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Although the disease is linked to developing countries, it has been documented in some Indigenous communities in eastern Australia, South Australia and the Northern Territory.

For more information on Trachoma, visit the **Better Health Channel** website [www.betterhealth.vic.gov.au](http://www.betterhealth.vic.gov.au)

## Eye injuries

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It is estimated that 500,000 blinding eye injuries occur world wide each year, and eye trauma is a major causes of monocular (one eye) vision loss. The greatest risk of eye injury is among the young and people over 70 years of age. Most eye injuries occur in young people and could be prevented by proper use of safety eyewear.

The causes of eye injury can be placed into four categories:

- impact or blunt force
- foreign bodies
- chemical injuries
- radiation.

### Risk factors for eye injuries

Eye injuries typically occur at work and while playing sport. In the workplace, those who are at greater risk include those who work with:

- mechanical equipment
- chemicals
- sources of radiation, eg UV radiation from welding and infra-red radiation from furnaces.

Playing sport is a common cause of severe eye injuries in the developed world. Injuries range from scratches on the cornea and bruises of the eye lids to internal eye injuries. Many of these injuries lead to vision loss and permanent blindness. Ball sports, team water sports and gun sports are all high risk sports for eye injuries.

### What can be done to prevent injury?

Nearly all cases of eye injury are preventable. Damage to the eye can be avoided by wearing the appropriate protective equipment and establishing safe working and playing rules before starting.

In Australia, there are standards for eye protection for:

- racquet sports
- high intensity radiation areas, such as with welding
- motor cyclists and racing car drivers
- laser products for the safe use of lasers in the building and construction industry.

Source: Department of Health and Ageing Eye Health in Australia – A background paper to the National Framework for Action to Promote Eye Health and Prevent Avoidable Blindness and Vision Loss. November 2005.

