

# Primary angle closure and glaucoma

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**Primary angle closure glaucoma (PACG) is due to fluid being unable to drain away from the eye properly. The main difference between primary angle closure and primary open angle glaucoma (POAG) is that PACG is more closely connected with the shape of the eye and blockage of the drainage systems, whereas POAG is related to the open drainage systems not working as effectively as they should.**

Glaucoma leads to an increase in eye pressure. The increase in pressure damages the optic nerve by reducing the amount of blood that can get through the tiny blood vessels and by pressing on the nerve itself.

Your eye pressure is controlled by watery fluid called aqueous humour, or just 'aqueous'. Aqueous is made in a ring of tissue that sits behind the iris called the ciliary body. It then flows through the pupil and drains away through tiny channels called the trabecular meshwork. The trabecular meshwork is found in the angle between the cornea and the iris (often called the drainage angle). If this drainage angle is narrow, this can reduce the effectiveness of fluid escaping the eye, or even close completely, causing fluid to build up and eye pressure to rise.

## **What are risk factors for primary angle closure glaucoma?**

**Age** – Acute and chronic angle closure are more common with increasing age. It is rarer below the age of 40.

**Gender** – Women are affected 50% more often than men.

**Ethnicity** – Those of Asian origin are more at risk of angle closure glaucoma than those of European origin.

**Family history** – Family members of those with PACG are 10 times more likely to develop it.

**Long sightedness** – Primary angle closure is also more common in people with smaller eyes and those with long sight (hyperopia).

## **Symptoms of primary angle closure glaucoma**

PACG can be chronic or acute. Chronic angle closure develops slowly, usually without symptoms, as the drainage angle gets smaller and the eye pressure slowly rises. Acute primary angle closure, also known as 'acute glaucoma' happens when a blockage is sudden and causes the pressure to rise very high, very quickly. Symptoms include intense pain, redness of the eye, blurred or reduced vision, headache and nausea. It is vital that you seek medical advice immediately, as this sudden rise in eye pressure can cause permanent damage to your sight. Sometimes, people get a series of mild attacks of angle closure. These are called 'sub-acute' attacks. Symptoms may include blurred vision, halos around lights and headaches. These attacks may come and go, but if this happens, it's very important to seek immediate medical advice as it might be a warning of a future serious attack.

## **Treating narrow angles and primary angle closure glaucoma**

Narrow angles that are at risk of causing PACG can be treated with laser or cataract

## Primary angle closure and glaucoma *continued*

(lens) surgery. The laser reduces but does not eliminate the risk whereas lens removal removes the risk.

Chronic primary angle closure is treated with drops to lower the pressure. In addition, laser treatment or cataract surgery is performed to prevent further angle closure.

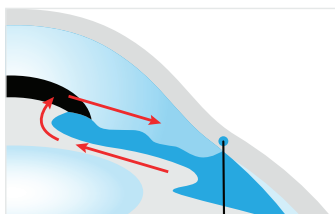
Acute PACG is a medical emergency. If diagnosed and treated without delay there may be an almost complete and permanent restoration of vision. However, any delay in addressing the problem may result in permanent damage to the affected

eye. Occasionally the pressure may remain raised and ongoing treatment will be required.

**If you have symptoms include intense pain, redness of the eye, blurred or reduced vision, headache and nausea** contact Dr Adams at **Insight Eye Surgery** on **07 3154 1515** (Brisbane) or **07 5345 5011** (Noosa) in business hours or attend your local hospital emergency department after hours.

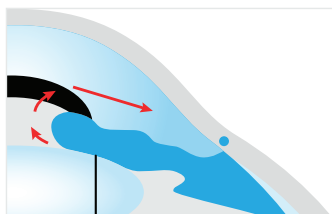
Visit [www.glaucoma.org.au](http://www.glaucoma.org.au) for more information.

NORMAL FLUID FLOW

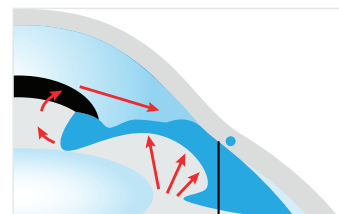


drainage canal

ANGLE-CLOSURE GLAUCOMA



iris and lens stick together



pressure pushes iris against cornea, blocking trabecular meshwork