# Posterior capsule opacification – why laser treatment is sometimes needed following cataract surgery

Posterior capsule opacification (PCO) is a common complication that can occur sometime after cataract surgery. It is estimated to occur in roughly one in five eyes that have cataract surgery. People develop PCO months to years after having cataract surgery.

PCO can cause vision to become cloudy again and can even make it seem as though your cataract has returned, with symptoms of hazy vision or glare from lights. PCO can be easily treated with a quick, painless, outpatient laser procedure known as YAG (Yttrium Aluminium Garnet) laser surgery, to make vision clear again. Once you have had the YAG laser treatment, PCO doesn’t normally cause any long-term problems with your sight.

## What causes vision to become cloudy again after cataract surgery?

A cataract is a clouding of the lens in your eye and normally occurs as part of the ageing process, although there are other reasons why a cataract can develop earlier in life, such as medications you may have taken, other eye or health conditions, or trauma to the eye.

During cataract surgery the natural lens of your eye, which has become cloudy, is replaced by a clear artificial lens also known as an intraocular lens implant or “IOL”. This new artificial lens is placed inside your lens capsule, the membrane that originally covers your natural lens. Your lens capsule is clear and should remain clear following your cataract surgery.

PCO occurs because cells remaining after cataract surgery grow over the back (posterior) of the capsule causing it to thicken and become slightly opaque (cloudy). This means that light is less able to travel clearly through to the retina at the back of your eye. As a result, your sight can become blurred and cloudy, or you may have problems with bright lights and glare.

The effects of PCO on your sight are very similar to the changes you may have had when your cataract first started to cause you problems. If you have had cataract surgery in both eyes, PCO can affect both eyes, but each eye may be affected at different times.

### Why do some people get PCO?

Although PCO is quite common, there are some reasons why you may be more likely to develop it. If you have other pre-existing medical conditions such as diabetes related eye conditions, glaucoma, retinitis pigmentosa or have very short sight (high myopia), you are more likely to develop PCO. The younger you are when you have cataract surgery, the more likely it is that this thickening will occur. PCO is also more common in people who have had a complication during or after their actual cataract surgery, such as where inflammation (swelling) is present in your eye. However, it’s not unusual to develop PCO even if you don’t have these conditions.

## What happens when I go for laser treatment?

PCO is treated by a low risk, quick, painless laser treatment. It is carried out in the outpatient clinic. If you have PCO in both eyes, then it is possible to have treatment for both on the same day.

At the appointment you will be given some eye drops to dilate (widen) your pupil. These can make your vision blurrier. Sometimes, but not always, the ophthalmologist (hospital eye doctor) may use a contact lens to help to keep your eye in the right position and help with focusing the laser. If this is needed, then you will also be given eye drops to anaesthetise (numb) the front of your eye so that you do not feel any discomfort, although you will be aware that the contact lens is touching the eye.

Once your pupil is dilated, you will be asked to sit and place your head on the headrest of the laser machine. This will help to keep your head and eye still, which is necessary, while the ophthalmologist uses the laser to remove part of the capsule. There may also be a nurse present while the treatment takes place.

The ophthalmologist focuses the laser exactly onto the back of the lens capsule in order to cut away a small circle-shaped area to allow light to pass without obstruction. This leaves some of the capsule behind to keep your artificial lens in place (like a cuff around the IOL) but removes enough in the middle to allow the light to pass directly through to the retina.

The laser uses a wavelength of light that cannot be seen, but you may notice a red light, which helps the ophthalmologist focus the laser beam. Each laser pulse is over in a fraction of a second and you will not feel any pain or discomfort. You may notice a few flashing lights or hear some faint clicks coming from the machine as the laser works. The procedure does not take very long; normally it will take about 5-10 minutes.

### What are the risks of laser treatment?

The laser treatment is considered very safe. All procedures carry some aspect of risk, but serious side effects from laser treatment for PCO are rare.

Laser treatment for PCO is carried out using a very low energy laser called a “Nd: YAG laser”, sometimes referred to as just “YAG”. The Nd: YAG laser is just a special sort of light that can delicately cut the lens capsule without any risk of damage to other parts of your eye.

Sometimes, if a contact lens was used to steady your eye during the treatment, your eye may be a little sore afterwards, but this should soon wear off.

For some people, laser treatment for PCO can cause eye pressure to rise. This can be an issue if you already have a pre-existing eye condition such as glaucoma, as your eye pressure may already be higher than normal. If your ophthalmologist is concerned about this, they will check your eye pressure soon after the laser treatment. If your eye pressure has increased, you will be given some eye drops or a tablet to bring it back down.

Rarely, laser can cause a retinal detachment which can happen days, weeks, months or years after the treatment. This is more likely to happen if you are very short sighted. If it does occur, retinal detachment can be treated with surgery to re-attach the retina.

It’s important to have your eyes checked immediately if you experience the following symptoms, as these may be a sign of a retinal detachment:

* a sudden onset of new floaters (other than those immediately after laser treatment)
* flashing lights
* a dark curtain moving up, down or across your vision.

Retinal detachment can be treated with surgery to re-attach the retina, but this needs to be done quickly, which is why it’s important to have your eyes checked immediately if you notice these symptoms. Having your eyes examined on the same day or within 24 hours of the start of new or worsening symptoms means that your ophthalmologist or optometrist (optician) can look for any signs of retinal tear or detachment.

You can find more information about retinal detachment on our website **rnib.org.uk/eyehealth** or by calling our Helpline **0303 123 9999**

It is important to stress that these risks are rare complications of the laser treatment. Most people get an excellent and permanent improvement in their vision following laser without experiencing any issues.

### What will my sight be like after treatment?

It may take a few days for your sight to become clear again, and you may notice “floaters” after your laser treatment. Floaters are harmless clumps of cells which move around inside the vitreous (a clear jelly-like substance which fills the inside of the eye). You may see floaters as dots, circles, lines, clouds or cobwebs. Over time these will settle down and become less noticeable.

Because the laser treatment does not require any incisions or stitches, you are normally able to return to your daily activities straight away. However, immediately after treatment, your pupils will still be dilated so your vision may be blurred for a few hours afterwards. You will need to avoid driving until this blurriness has gone.

**You should not drive yourself home after the treatment as it can take some time for the drops that dilate your pupils to wear off, and your vision may still be blurry following the laser treatment.**

**You should arrange to get home by public transport or arrange for someone else to drive you home following your treatment.**

After laser treatment for PCO, your sight should go back to the way it was following your original cataract surgery, provided no other problems have developed in your eye. You will still have to use any glasses you used before the PCO developed, but your vision should be clear again with these, unless you have any other eye conditions affecting your sight.

Your optometrist may have advised against updating your glasses prescription at your last eye examination, because they were referring you for YAG laser for PCO. If this is the case, it may be necessary for you to return to your optometrist to have your glasses prescription rechecked, before any new glasses are made up. However, the spectacles prescribed after a cataract operation and before the PCO would normally be quite adequate again after the YAG treatment.

## Can PCO come back?

You will generally only need to have laser treatment for PCO once. Very rarely, certain cells may develop in the area of the posterior capsule, or the opening in the capsule made by the first laser treatment can shrink, causing PCO to come back. If this does happen it is possible to have further laser treatment if needed.

## Help to see things better

PCO can cause your vision to become blurry, and you may have glare or difficulties in bright light before you have the laser treatment. You may also find reading difficult. There are a lot of things you can do to make the most of your vision if you are having any difficulties while you wait for treatment. This may mean making things bigger, using brighter lighting, or using colour to make things easier to see. However, once you’ve had laser treatment for PCO, your vision should return to how it was before the PCO developed.

## How we can help

We have a series of leaflets with helpful information on living with sight loss, including how to make the most of your sight. You can find out more about our range of titles by calling our Helpline **0303 123 9999**.

Most people with PCO find that their vision improves once they have had laser treatment. However, it’s completely natural to be upset when you are diagnosed with an eye condition. It’s normal to find yourself worrying about the treatment or about the change in your sight.

If you have questions about anything you’ve read in this factsheet, or just want to speak to someone about your eye condition, please get in touch with us. We’re here to support you at every step.

## Further help and support

Whether you have just been diagnosed or have been living with sight loss for a while, we are here to help and support you through your journey.

The RNIB Helpline is your direct line to the support, advice and products you need. We’ll help you to find out what’s available in your area and beyond, both from RNIB and other organisations.

Whether you want to know more about your eye condition, buy a product from our shop, join our library, find out about possible benefit entitlements, be put in touch with a trained counsellor, or make a general enquiry, we’re only a call away.

### RNIB Helpline

Call our Helpline on **0303 123 9999**, we’re ready to answer your call Monday to Friday 8am – 8pm and Saturday 9am – 1pm. You can also email us at **helpline@rnib.org.uk**. You can also say, “**Alexa, call RNIB Helpline**” to an Alexa-enabled device.

You can also get in touch by post or by visiting our website:

**RNIB**

105 Judd Street

London WC1H 9NE

**rnib.org.uk**

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RNIB

105 Judd Street

London

WC1H 9NE

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