



Our vision: Is for Australians to be free of glaucoma blindness

Eye drops and glaucoma

Eye drops, used in the treatment of glaucoma work by reducing the intraocular pressure (IOP) within your eyes. Increased eye pressure is a major risk factor for optic nerve damage.

Eye drops are the most common form of treatment for glaucoma. Since glaucoma often has no symptoms, people may be tempted to stop taking, or may forget to take their medication/eye drops. It is important that you follow your treatment plan and appointments, as recommended by your eye care practitioner. This is because glaucoma is a life-long, often progressive condition, and appropriate treatment can prevent vision loss.

Approximately one half of patients don't take their glaucoma medication as prescribed, increasing the amount of visual loss caused by glaucoma.

Eye drops work in two ways to reduce eye pressure:

- They reduce the amount of aqueous fluid secreted into the eye, or
- Help increase the outflow of aqueous fluid from the drainage angle.

What can I do to make sure my eye drops work effectively?

- It is very important to use your eye drops every day as instructed by your eye care practitioner.
- Try to use your eye drops at the same time each day. Set an alarm on your smart phone or watch to remind yourself to instil your drops at the correct times each day.
- Make sure the eye drops are instilled in the correct eye.
- Only administer one drop at a time.

- If you miss a dose of your eye drops, use it as soon as you remember.
- DO NOT instil extra drops to make up for the missing dose.
- Remember to get a new script for your eye drops if you know you are about to run out of the current ones. Your GP can also prescribe the drops for you if you don't have an appointment with your ophthalmologist.
- If you have difficulty instilling your eye drops, consider asking someone else to instil them for you. Or contact Glaucoma Australia to check if there is a Dose Administration Aid available to assist you.

Before instilling eye drops

- Always check the label on your eye drop container before instilling your drops. Make sure they have not expired.
- Make sure you have the correct eye drop and it is the correct time of day to instil it.
- If you wear contact lenses – remove them at least 15 minutes beforehand. You can then replace your contact lenses 15 minutes after the drops have been instilled.
- Keep handy a couple of clean tissues.
- Wash your hands. Carefully remove the cap of the eye drop container, ensuring the tip of the container doesn't touch anything to reduce risk of contamination and infection. Place the cap on a clean tissue.

Instilling eye drops step-by-step

You can choose to carry out the next steps standing up, sitting down or lying down. *Note: Most people find it more difficult standing up.*

- Tilt your head slightly back. Gently pull down the lower eyelid to form a pocket (or pouch).
- With the other hand, hold the bottle upside down above the eye – aiming for the pocket created by the lower lid. You may want to rest that hand on your forehead to keep your hand steady.
- Gently squeeze the container. Try to allow only one drop to fall onto the inside of the lower eyelid.

- Gently release the lower lid and close your eye.
- Press the tip of your finger against the inside corner of the closed eye, applying gentle pressure over the drainage canal opening and hold for at least two minutes to stop the eye drops from draining down to the nose and throat.
- Gently wipe off any excess medication that may have spilt onto your face with a clean tissue.
- Repeat steps 1 to 6 if you need to instil an eye drop in the opposite eye.
- If you have a number of different eye drops to administer, leave at least 5 minutes between each different drop.

Side effects

Glaucoma eye drops, like any other prescription medication can have side effects. You may have some side effects or none at all. It is advised that you speak to your eye care professional if you experience one or more of the following:

- Eyes appear red, itchy, watery or swollen
- Pupil seems to be large/dilated
- Headaches or pain above the brows
- Dry mouth
- Feeling tired, weak or dizzy
- Feeling nervous or depressed
- Difficulty breathing
- Difficulty noticing low blood sugar symptoms if you are Diabetic
- Slower or faster heart rate
- Light sensitivity
- Changes in taste of food and drinks
- A skin rash especially if allergy to sulpha drugs
- A permanent change in eye colour
- Eyes appearing to be sinking in their sockets creating appearance of deep set eyes

It is normal to have some stinging or burning sensation, blurry vision or watery eyes immediately after using eye drops. Speak to your doctor if these symptoms are lasting longer than expected.

Safety measures

Do not adjust the frequency and/or the number of eye drops you have been prescribed without consulting your eye care practitioner.

- Never allow another person to use your eye drops and do not use anyone else's drops.
- Keep eye drops out of the reach of children.
- Keep the tip of the bottle clean to avoid risk of any infection.
- Ensure you discard the eye drop container and contents after the recommended use-by-date.
- Never miss a scheduled appointment with your eye care professional.
- Always contact your GP, optometrist or ophthalmologist if you think you are experiencing any side effects from your eye drops.
- Always store your eye drops in a cool place. The drop bottles do not actually require refrigeration while in use, but should be kept in away from hot areas of the house and not left in the car.

Don't let your eye drops lose their cool

Keeping your eye drops at the right temperature when travelling can be a problem.

The good news is the FRIO cooling wallet will keep your eye drops below 26 degrees Celsius for 40+ hours without refrigeration, simply activate with cold water.

The wallets are light, compact, re-usable and come in four sizes.

Order online glaucoma.org.au/shop or call 1800 500 880



Frequently Asked Questions

Q. What do my eye drops actually do?

A. Eye drops used in the treatment of glaucoma work by reducing the intraocular pressure (IOP) within your eyes. There are several classes of drops, which have different mechanisms of action. Prostaglandins, such as latanoprost, travoprost and bimatoprost reduce IOP by increasing drainage outflow from the eye. Other drop classes reduce the formation of fluid within the eye – such as beta blockers (e.g. timolol), alpha agonists (e.g. brimonidine, apraclonidine) and carbonic anhydrase inhibitors (e.g. dorzolamide, brinzolamide).

Q. I was told to use my eye drops every day and to make sure I did it at the same time each day. Why is that important?

A. The eye drops only work when they are being used – if you stop using them the eye pressure will increase again. Hence it is important to use them every day, otherwise the IOP will fluctuate. There is some evidence to suggest that fluctuations in IOP may be as harmful to the optic nerve as high IOP.

Use the drops at the same time each day to prevent day-to-day fluctuations in 24 hour IOP patterns. Getting into a fixed daily routine generally helps patients to remember to use the drops each day. If, on the occasional day, you are a little late with using the drops, it is better to use the drops late than not at all.

Q. Why are there different preservatives in my eye drops, and in some cases none at all?

A. Eye drops used in the treatment of glaucoma typically come in bottles that last approximately 1 month and are then discarded. Preservatives in the solutions are important in preventing bacteria building up in the bottles after opening.

The most common preservative, benzalkonium chloride, is very good at preventing bacterial growth, but can be irritating to the surface of the eye. Hence in recent years some eye drops have been formulated with other, potentially gentler preservatives that seem to be just as effective at preventing bacterial growth. Still other eye drops have been formulated with

no preservatives at all – these may be the gentlest form of glaucoma drops and may be suitable for sore, irritated eyes.

The preservative-free eye drops are designed for single usage – they come in very small, clear plastic dispensers designed to be discarded after each drop administration – hence are only ever used on opening, when the solution is still sterile.

Q. The information says to discard my eye drop bottle 28 days after opening. I always have some left, why can't I keep using it until it is empty?

A. On average, the preservatives in bottles of glaucoma medications are designed to safely prevent bacterial growth for 28 days. Hence using the bottle longer than is recommended by the manufacturer can potentially lead to solution degradation, less effective active ingredients and dangerous build-up of bacteria that can lead to infection of the surface of the eye.

Q. I use a product that comes in single use containers. Do I have to throw it out after one use if it holds more than I need for the day?

A. Single use containers generally have preservative free medication formulations within them. These are designed to be used once and then immediately discarded. If kept for a period after being opened, bacteria and other harmful micro-organisms could potentially grow in the solutions to dangerous levels. If reused after this period the micro-organisms in the solution could lead to a harmful infection of the surface of the eye.

Q. Do I need to keep my drops cool?

A. It is recommended to store eye drops refrigerated before opening the bottle. Once opened, the bottle can be kept at or below 25 degrees (room temperature), ensuring it is out of direct sunlight and not in a hot environment for prolonged periods, to avoid medication degradation.

Q. When travelling overseas or in a different time zone when should I take my eye drops? Should I adjust my treatment regimen to the new time zone?

A. Like recovering from jet-lag, it is useful to have a period of adjustment for 24-48 hours and then change over to the new time zone for administering medications. For example – daily drops can be administered slightly later one day to get in the new time zone.

Q: I don't think my drops are making my vision any better.

A: At this point in time there is no cure for glaucoma. Fortunately though, for most people with glaucoma, taking the appropriate eye drop medication will preserve their vision and minimise the chance of further losses. This is why early detection, ensuring the medication is taken as prescribed and attending regular follow-up appointments is so important.

At these follow-up appointments the effectiveness of treatment is assessed by taking a reading of the pressure in your eye, examining the health of the eye structures and measuring how well you see from the centre of your vision all the way to the edge of your sight. If you are experiencing problems taking your medication or with their side effects then this should be discussed with your eye-care practitioner as there may be a more suitable medication or treatment option for you.

Q: Is it OK for my GP to renew my glaucoma eye drop prescription?

A: It is vital to continue to use your prescribed glaucoma eye drops every day. Erratic dosing can contribute to vision loss and may ultimately result in the need for more aggressive glaucoma interventions.

In the event that you run out of your eye drops, repeat prescriptions can be obtained from your GP. However, only your ophthalmologist or optometrist is able to assess if the medication is still effective. For this reason regular assessments (as directed) with your eye care professional remain critical in the management of your glaucoma.

If you are not able to see your ophthalmologist before your prescription runs out you may be able to renew your prescription with your optometrist if they are therapeutically endorsed. Optometrists are also very familiar with

glaucoma management and have equipment not available in GP practices to determine if your eye drops are still effective in controlling your glaucoma.

Q: Can I instil 2 drops to make sure it goes in?

A: Firstly, it is important that you follow the dosage as prescribed. If one drop has been prescribed there is no need for a second. Two drops will generally not cause your eyes harm, but will mean you run out of drops faster and spend more money on your treatment. One good tip is to get into the practice of closing your eye and lightly pressing the inside corner of your eye when the drop has gone in. This maximises the absorption of the drop by your eye and stops it from being washed away into your tear duct.

If you take more than one type of drop, you should leave 5 minutes between each type. It is preferable that the drop doesn't make contact with your skin, but if it does, simply wipe it away.

If you are having trouble instilling your drops, [click here](#) for further

