

Eye Conditions

There are many different types of eye conditions that can affect people. Some can be easily fixed with over-the-counter medicines and do not cause any permanent damage; however others are more serious and may require urgent medical attention. This information leaflet will discuss the most common types of eye conditions that present in our LiveLife pharmacies and what treatments we have available for you.

Anatomy of the Eye

The front part of the eye (the part you see in the mirror) includes the:

- Iris (the pigmented part – the amount of pigment is determined by genes inherited from both parents)
- Cornea (a clear dome over the iris)
- Pupil (the black circular opening in the iris that lets light in)
- Sclera (the white part)
- Conjunctiva (an invisible, clear layer of tissue covering the front of the eye)
- Lens (helps to focus light on the back of the eye)
- Retina (special light-sensing cells that cover the inside lining of the eye – the retina converts light into electrical impulses which are then carried to the brain)
- Optic nerve (carries these electrical impulses)
- Macula (a small sensitive area within the retina that gives central vision)

Eye drop/ointment Administration

Here are some basic steps to remember when administering products into the eye:

1. Shake the bottle if required and wash the hands.
2. Sit in front of a mirror if needed so you may see what you are doing
3. Wipe the eyes to clear any discharge (with a clean tissue/pre-moistened eye wipe)
4. Tilt the head back and gently pull down the lower eyelid and look up
5. Hold the dropper or bottle above the eye and gently squeeze into the inside of the lower eyelid – please note: it is important to take care not to touch the eye or eyelashes with the dropper/bottle so as to avoid cross-contamination
6. Press the tip of the index finger gently against the inside corner of the closed eye (over the tear duct) for 2 minutes to reduce drainage and increase the effectiveness of the medicine.
7. Repeat the procedure with the other eye if needed and replace the lid.
8. If you have more than one type of eye drop to instil, wait 5 minutes before putting the next one in. This ensures the second drop won't wash away the first one.
9. If using eye ointment, usually a 1.5cm line of ointment inside the lower lid is a sufficient amount, then blink the eyes to distribute evenly

Are there certain storage conditions I should know about?

Some eye drops require refrigeration (e.g. some prescription products from the pharmacist); this is done in order to maintain integrity of the product and avoid premature degradation. However, most drops given over-the-counter may be kept below 25degrees Celsius.

You may prefer to still keep the drops in the fridge; this is fine and may even be a good idea, as they will feel "cold" when put into the eye, thus making it easy to know whether the drop has made it inside the eye or not. Instilling "cold" eye drops will not do any damage to the person's eyes.

If the eye drops are to be used at bedtime, it might be a good idea to keep them on your bedside table, hopefully aiding in compliance.

Always have a look at the expiry instructions for the eye drops/ointment you are buying; most eye drops used to have an expiry of 1 month after opening; however, there are some new preservatives on the market now that allow you to keep your bottles/tubes for up to 6 months. It is important to be aware of this, as keeping your eye drops for too long may lead to bacterial contamination.

Preservatives in eye drops – are they are problem?

It is important for anything that is put into the eye to be sterile. Thus, preservatives are often put into eye drops in order to make them last longer as a sterile product for your use. Of course these preservatives are safe; however, some people don't tolerate them or may have some type of allergy when they use them.

There are a couple of options when this happens:

1. The person can try and pinpoint if there is a particular preservative that irritates their eye (e.g. benzalkonium chloride) and try other drops that use a DIFFERENT preservative; OR
2. They can try using "preservative free" drops in the single use minims (ask your pharmacist for further information).

Why are there moisturising drops, gels and ointments for dry eyes? What is the difference and why are all of these different formulas needed?

- Drops are quite thin in consistency; they are easy to apply into the eye, cause negligible blurring of the eyes and spread easily over the eyeball.
- Gels are generally a bit thicker in consistency than drops but are still water based. They are still quite easy to apply and spread easily over the eye. Because they are thicker, they will generally last longer than the drops before draining out through the tear ducts.
- Ointments are thick and greasy; this makes them more difficult to apply and they can cause blurring of the vision before they melt into the eye. However, they provide intense moisture for the eyeball and do last considerably longer in the eyes, so are perfect for bedtime use. Often your pharmacist may suggest use of a similar product in "drop form" for during the day, then reserve the use of the ointment for bedtime.

Why does the pharmacist ask about contact lenses? Why would that make any difference to what drops go into my eyes?

Some eye drops can damage the contact lenses if put in at the same time as a person is wearing the lenses. It is important that you let your pharmacist know if you are planning on wearing contact lenses whilst using other eye preparations.

Conjunctivitis

Most people think that conjunctivitis is when you get a sticky eye with yellow discharge. Although this may be correct in some cases, you may not be aware that there are actually **many** different varieties of conjunctivitis all with very different symptoms. The information below should help you to distinguish between these different conditions, but please remember you should speak with the pharmacist with any symptom based requests. To explain what conjunctivitis is, this condition is an inflammation or infection of the transparent surface layer that covers the white of the eyes (i.e. the conjunctiva).

Infective: Both viruses and bacteria can infect the eye and cause conjunctivitis. However it is important to be able to distinguish between these, as they require very different treatment regimens. You can catch infective conjunctivitis from being in close contact with another person who has it, so it's important to wash the hands after coming into contact with another infected person.

- **Viral** – often caused by a virus called adenovirus, this condition is accompanied by redness, irritation and clear, tear-like discharge from the eye. Usually starts in one eye, then moves to the other. This condition is usually treated with a combination of lubricant eye drops and decongestant if needed for redness/irritation; e.g. Visine advanced
- **Bacterial** – commonly caused by bacteria found in the skin/respiratory system (i.e. Staphylococcus aureus or Streptococcus pneumonia). This condition is accompanied by redness, irritation and a moderate-large amount of thick pus-like discharge (usually yellow) from the eye. Usually starts in one eye then moves to the other. It is important if you have this conditions, that you speak with the pharmacist, as the drops generally used are a S3 (pharmacist only) product; e.g. Chlorsig. The pharmacist may also need to refer onto the GP/optometrist.

Allergic – usually accompanied by intense itching, tearing, and swelling of the eye membrane. Pain is usually minimal or absent. This condition may also be accompanied by other "allergic" symptoms such as sneezing, itchy nose, scratchy throat and some swelling of the eyelid(s). Usually affects both eyes. Treated with a variety of different drops depending on the symptoms; e.g. antihistamine drop like Livostin or Zaditen, combination antihistamine/decongestant if there is associated redness e.g. Naphcon-A, a combination of oral antihistamine tablets plus eye drops, or even prescription products if not properly controlled with over-the-counter products.

Chemical - Conjunctivitis due to chemicals is treated via irrigation with saline solution. This type of eye injury is a medical emergency, as it can lead to severe scarring and intraocular damage. People with chemically induced conjunctivitis should not touch their eyes, regardless of whether or not their hands are clean, as they run the risk of spreading the chemical to another eye. A cleansing solution/rinse is usually used to try and remove the chemical; e.g. Optrex wash. However, it is important that all people with a possible chemical injury speak directly to the pharmacist.

Dry Eyes

A thin film of tears is swept over the eye surface every time you blink. However, sometimes you are unable to produce enough tears (lubrication) for your eyes, thus causing the surface of the eye to dry out. This condition can occur at any time in our lives; however it is most common as we get older because we produce a smaller volume of tears. Some medicines can also predispose a person to dry eye, as can some health conditions. Laser eye surgery may also cause a decreased tear production and dry eyes. If a person is suffering with dry eyes, they may find it difficult to wear contacts and spend time in air-conditioned environments. There are many different brands/varieties are dry-eye products; these will be discussed later in the leaflet.

So what type of symptoms does a person with dry eye experience? They may feel stinging or burning, itchiness in the corners of the eyes, redness, excessive tearing (to try and compensate for the dryness), stringy mucous in/around the eyes and increased sensitivity to smoke/wind, difficulty wearing contact lenses and blurred vision.

Welding flash/flash burn

This occurs when you are exposed to bright UV light and results in painful inflammation of the cornea, which is the clear tissue covering the front of the eye. It is quite common among welders (thus the name) as they are often exposed to a welding torch. Other causes may be from direct sunlight, a sunlamp in a tanning salon or reflection of the sun off the water or snow. This is generally a self-limiting condition that may be controlled with over-the-counter decongestant eye drops (which we will discuss later), but if the person does see any flashes of light, have changes in vision or worsening pain, it is important for them to be referred to an optometrist/GP.

****Prevention is always better than treatment—Protective eyewear should always be worn when in contact with bright UV light!**

Blepharitis

This is an inflammatory condition that affects the eyelids and usually involves the part of the lid where the eyelashes grow. People suffering from blepharitis may experience itchy eyelids that can appear greasy, red and swollen eyes/eyelids, flaking of skin around the eyes, crusted eyelashes and even loss of eyelashes. The cause of this condition isn't clear, but it is often associated with a type of dermatitis (seborrheic), bacterial infections, certain medications and allergies to eye medications/makeup. People with this condition need to clean the eyelids regularly and manage with over-the-counter products to minimise outbreaks; e.g. LidCare (we will discuss further later)

Blocked tear duct in an infant

Many infants are born with tear ducts that are not fully developed, or are narrower than usual. This means that the tears produced to keep the eye lubricated and moist are not able to drain through the tear ducts, into the nose. As a result of this, the infant's eye is kept too moist and develops a sticky discharge (often referred to as "sticky eye"), with tears running down onto the cheek.

This condition is usually managed by regularly rinsing the eyes with sterile saline and wiping away the tears/sticky discharge with a clean cotton wipe. Sometimes gently massaging the tear duct will also help to drain away the tears. We have sterile saline wipes (Fess Little Eyes) available in the pharmacy which are perfect for use in this condition also. Please remember if the condition does not clear itself and/or if the discharge starts to look yellow/green, it is important to speak with your pharmacist.

Styes

A stye is a sore, red lump near the edge of eyelid, commonly caused by an infection at the base of an eyelash (in the hair follicle). The bacteria that can cause this infection commonly live on our skin, but if our skin is damaged, they can cause infection. As you have probably already guessed, this condition can sometimes occur as a complication of blepharitis if not well managed. Usually styes will clear up within a few days by using a hot/cold compress on the eye. However, if the condition does not clear spontaneously, the person may require assistance with an over-the-counter product – please consult the pharmacist with this symptom based request. See optimal care section for treatment options. NB. It is important NOT to squeeze the stye – it contains bacteria, which if released, may make the condition spread and worsen.

Foreign objects in the eye

A foreign body simply means when there is an object in the eye that shouldn't be there; this may refer to things such as a speck of dust, wood chip, metal shaving, insect or piece of glass. Obviously this is something we need to clear from the eye as quickly as possible. Usually we would recommend a cleaning solution such as Optrex to try and clear the object from the eye asap; however, it is also important the person is referred to an optometrist/GP for further observation, as the objects can sometimes cause a scratch on the eye's surface and/or infection.

Scratches to the eye—usually occur after a foreign object has been in the eye. It is important that the eye is rinsed out thoroughly as described above and the person should be referred straight away to their optometrist/GP.

Floaters

Floaters are tiny dark specks that may be seen in your field of vision, especially when looking at something light-coloured such as a blue sky or white wall. They are created when little clumps form in the clear, jelly-like substance inside the eyeball. The floaters are suspended in this jelly, so they move when the eyeball moves. Usually floaters are normal and harmless; however, a sudden increase in their number may indicate damage to particular internal structures of the eye (e.g. retina) and thus requires urgent medical attention, especially if there are any other associated symptoms such as flashing lights or auras. Please speak to your pharmacist if you experience this.

Optimal Care Products

- **Lubricating eye drops/gels/ointments**—e.g. Refresh Tears Plus, Genteal Drops/Gel, Optive, Lacrilube
 - These preparations moisturise and lubricate the eyes by replacing an artificial tear film.
 - Useful for dry eyes, irritated eyes (e.g. after laser surgery)
 - Available over-the-counter
- **Antihistamines**—e.g. Zaditen, Livostin, eyezep
 - Eye drops useful for treating allergic conjunctivitis
 - Available over-the-counter (schedule 2)
- **Anti-redness**—e.g. Clear Eyes, Albalon
 - Contain "decongestants" such as naphazoline, phenylephrine, tetrahydrozoline—these work by constricting the blood vessels in the eyes and thus reducing redness
 - Useful for welding flash, viral conjunctivitis, sore red eyes from swimming
 - NB. These products should not be used regularly for more than 5 days, as they can lead to REBOUND CONGESTION (i.e. the condition worsening)
- **Combination products**—Visine Advanced, Albalon-A, Naphcon-A
 - Contain a combination of lubricant/antihistamine/decongestants so they may control several symptoms; e.g. Visine advanced is decongestant plus lubricant, Naphcon-A and Albalon-A are decongestant plus antihistamine
 - Useful when the person is suffering from several symptoms (e.g. redness and dryness, or itching, swelling and redness)
- **Antibiotic Drops/Ointment**—e.g. Chlorsig. These are a S3 item that will need pharmacist involvement. Useful in bacterial conjunctivitis and sometimes in styes.
- **Wash solutions**—e.g. Optrex
 - These solutions are made to soothe tired, dry or irritated eyes and are also really useful for rinsing out the eyes if there has been any "contamination" of the area (e.g. sunscreen, moisturisers etc that can sting the eyes).
 - Optrex has an eye bath inside the packaging—how do I use that? Rinse eye bath before and after use. Fill eye bath one third full. Bend head slightly forward, holding eye bath by its base. Placed over eye. Slowly raise head with eye open so that the wash flows freely over it. Gently rock head from side to

side for at least 30 seconds. Discard any wash left in eye bath. Repeat for other eye with fresh wash solution.

- **Eye-lid cleaners**—for blepharitis; e.g. Lid-Care. These solutions help to cleanse the lid and lashes of any crusting, oils etc in order to control blepharitis.
- **Eye baths** sold separately—these are useful to have at home even with some sterile saline ampoules just in case of any accidents requiring a quick eye wash—great for first aid kits too!
- **Contact multipurpose solutions**—these come in a variety of sizes—people going on holidays sometimes like to purchase “travel size” as well as their usual “bulk size” so they have something practical to pack
- **Storage containers for contacts**—essential for storing/disinfecting those contact lenses.
- **Fess Little eyes**—these are the sterile pre-moistened saline wipes mentioned earlier in the conjunctivitis and blocked tear duct section. They are especially useful for parents to keep with them during the day (as open saline ampoules can be quite impractical for cleaning the eyes when out-and-about). These are very safe and may be used at any age. Also great for first aid kits!
- **Saline ampoules**—may be purchased separately—yet again another essential for the first aid kit, not only for the eyes, but also for washing down any wounds. May be used to rinse the eye if irritated and also to cleanse in between using eye drops for conditions that cause any exudate from the eye (e.g. Conjunctivitiis)
- **Make-up wipes** (preferably without the messy fibres so they don't get stuck in the eyes)—useful for wiping the eyes out after rinsing with saline.