

DRY EYE

Introduction

Dry eye syndrome, also known as keratoconjunctivitis sicca, is a condition where your eyes do not make enough tears, or your tears evaporate too quickly. This can lead to your eyes drying out, and becoming inflamed.

How common is dry eye syndrome?

Dry eye syndrome is a common condition. However, estimates of how many people are affected by the condition vary. Some studies have suggested that between 17-30% of people experience dry eye syndrome at some point during their life.

Who is affected by dry eye syndrome?

Dry eye syndrome is more likely to affect people who are over the age of 60, and the condition is more common among women than men.

Symptoms

The symptoms of dry eye syndrome may include:

- feelings of dryness, grittiness, or soreness, in both your eyes, which get worse throughout the day,
- redness of your eyes,
- your eyes water, particularly when you are exposed to wind, and
- your eyelids stick together on waking.

Causes

Dry eye syndrome can have many different causes, including environmental factors, illnesses, side effects of medicines, hormonal changes, and ageing. However, in many cases, there is no one single identifiable cause.

Hormones and the nervous system

Hormones and the nervous system can play an important part in tear production. Hormones help stimulate the production of tears. The changes that occur in hormone levels during the menopause may explain why older women are more susceptible to dry eye syndrome.

The nervous system can trigger an increase in tear production, often as a way of protecting your eyes from potentially harmful substances. This is why, for example, your eyes water if you are exposed to smoke.

Environment

Environmental factors can have a drying effect on your eyes, causing your tears to evaporate. These factors include:

- sun,
- wind,
- dry climate,
- hot blowing air, and
- high altitude.

Occupation

When you are carrying out an activity that requires visual concentration, such as reading, writing, or working with a computer, you tend to blink less frequently. This can cause your tears to evaporate and lead to dry eye syndrome.

Medicines

There are several medicines that are thought to cause dry eye syndrome in some people. These include:

- antihistamines,
- antidepressants,
- beta-blockers, and
- diuretics.

Beta-blockers and diuretics are often used to treat high blood pressure (hypertension).

Laser surgery

Some people who have had laser-assisted in-situ keratomileusis (LASIK) surgery find that they experience dry eye syndrome in the weeks after surgery. However, the symptoms will usually clear up after a few months.

Contact lenses

In some people, contact lenses can irritate the eye and cause dry eye syndrome. Changing to a different type of lens, or limiting their use, will usually help to resolve the symptoms.

Menopause

In some women, the changes in hormones that occur during the menopause, can lead to a reduction in tear production, resulting in dry eye syndrome.

Medical conditions

Most people with dry eye syndrome also have blepharitis, inflammation of the rims of the eyelids. Blepharitis is commonly associated with:

- seborrhoeic dermatitis, a common skin condition that is often referred to as seborrhoeic eczema, and
- rosacea, a less common inflammatory skin condition that affects the face.

Other medical conditions that can cause dry eye syndrome in some people include:

- contact eczema, and
- conjunctivitis.

Less commonly, dry eye syndrome can be caused a number of other conditions which are outlined below.

- **Sjögren's syndrome**, a condition that causes excessive dryness of the eyes, mouth, and vagina.
- **Rheumatoid arthritis.**
- **Lupus**, a condition where your immune system attacks healthy tissue.
- **Scleroderma**, a skin condition that can also affect the blood vessels.
- **Previous trauma**, such as burns or exposure to radiation.
- **Shingles**, a nerve and skin infection caused by the herpes virus.
- **Bell's palsy**, a condition that affects the nerves in the face.
- **HIV**, Human Immunodeficiency Virus.

Aging

As we get older, we produce fewer tears. This, combined with the effects of the menopause, probably explains why dry eye syndrome is particularly common among older women.

Treatment

Once dry eye syndrome develops, some people have recurring episodes for the rest of their lives.

Although no cure exists for dry eye syndrome, there are a range of treatments, such as eye drops, that can control your symptoms.

Blepharitis treatment: (see blepharitis information leaflet)

Most people with dry eye syndrome also have blepharitis, which is a common (and usually mild) chronic inflammation of the rims of the eyelids. The basis of treatment of blepharitis is eyelid hygiene. In other words, keeping the eyelids clean, and massaging any trapped material out of the glands in the rim of the eyelid.

Tear substitutes

Mild to moderate cases of dry eye syndrome can normally be successfully treated with eye drops that contain 'tear substitutes', a liquid that is designed to mimic the properties of tears. There are many different types of eye drops, so you can try a different type if your original choice proves ineffective. Ointment can also be used to help lubricate your eyes. However, it can often cause blurred vision, so it is probably best to use it last thing at night.

Anti-inflammatory medicine

Anti-inflammatory medicines can be used to help reduce the inflammation associated with more severe cases of dry eye syndrome. They work by blocking the functions of your immune system that are involved in triggering inflammation.

Anti-inflammatory medicines are normally prescribed in the form of a cream or ointment.

Specialised eyewear

Some cases of dry eye syndrome can be treated using specialist eyewear. These include specially made glasses, known as moisture chamber spectacles. These wrap around your eyes like goggles, helping to retain moisture and protecting your eyes from irritants.

Surgery

One surgical technique, known as punctal occlusion, involves using small plugs to seal your tear ducts, which help keep your eye protected by tears. Temporary plugs made of silicone are normally used first to see if the operation has a positive effect. If it does, more permanent plugs can be used to replace the silicone ones.

Prevention

There are several self-care techniques that can help prevent, or reduce, the symptoms of dry eye syndrome.

- **Keep your eyes clean.** This will help prevent dry eye syndrome and the associated condition of blepharitis. Gently clean your eyelids using cotton wool and hot (but not boiling) water. A cotton bud can also be used to clean your upper and lower eyelid and remove any crustiness. Massage the eyes by gently rolling your first finger over them in a circular motion. This will help to push out any of the mucus-like fluid from the tiny eyelid glands.
- **Protect your eyes from wind and hot air.** Wraparound glasses provide good protection.
- **Position your computer workstation is correctly to minimise eye strain.** Most companies will have a health and safety officer, or representative, who can advise you about this. Your monitor should be at, or just below, eye level.
- **Stop smoking and avoid smoke** to reduce irritation to your eyes.
- **Use a humidifier at work and at home.** This will help moisten the surrounding air. If you cannot afford a humidifier, lightly spraying your curtains with water several times a day can help keep the air moist. Open the windows for a few minutes on cold days, and longer in the spring and summer. This will also help to keep the air moist and prevent the build-up of mould.

Diet

There is some evidence that eating a diet that is high in omega-3 fats can help prevent dry eye syndrome. The exact reasons for this are unclear, but it is known that omega-3 fats are used in the production of tears.

The best source of omega-3 fats are oily fish, such as mackerel, salmon, sardines, tuna, and herring. Eat at least two portions of oily fish a week.

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