

# Dry Eye Syndrome

## WHAT IS DRY EYE?

Dry eye is a condition that commonly affects people of all ages.

People over the age of 45, particularly females, are more commonly affected by dry eye. It occurs when there is inadequate lubrication of the eye from lack of quality or quantity of tears.

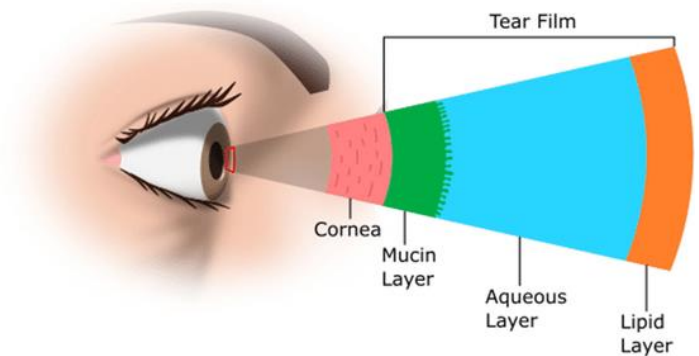
The tear film is made up of three microscopic layers:

1. a mucous layer, closest to the surface of the eye,
2. a watery (aqueous) layer, and
3. an oily (lipid) layer on the front surface of the tear film.

The different components of the tears are produced by a variety of glands located in the conjunctiva and eyelids.

These layers are in a fine balance.

The balance may be disturbed by lack of production of one or more of these three main components. The tear film will then either not be produced in sufficient quantity or will evaporate from the eyes too quickly. Therefore, causing dry eye symptoms.



## WHAT ARE THE SYMPTOMS OF DRY EYE?

- Blurred vision.
- Sore or stinging eyes.
- Sandy, gritty or scratchy eyes.
- Foreign body sensation.
- Burning or irritated eyes.
- Sensation of dryness.
- Persistently watery eyes.
- Red eyes.
- Decreased tolerance to contact lenses.

## WHY DO SOME PEOPLE GET WATERY EYES WHEN THEIR EYES ARE DRY?

People who have excessively watery eyes usually have a condition known as Meibomian Gland Dysfunction. This results from a lack of the oily layer in the tears.



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The oily layer is necessary to keep the tear film from evaporating. Without it, the front of the eye dries out and as a reflex mechanism watery tears are secreted in excess from the lacrimal gland (the gland we use when we cry).

By improving the quality of the tear film, the eyes will be more lubricated and less likely to cause excessive watering.

## WHAT CAUSES DRY EYE SYMPTOMS?

There are many different causes of dry eye symptoms. The following are some of the most common:

Common Causes	Explanation
Environment	Dry or windy weather, heaters, and air conditioning may alter the evaporation of tears from the surface of the eye. Cigarette smoke may also cause irritation if the tear film is unstable.
Concentration	When concentrating, we tend to not blink as often, so using a computer, watching television, driving, or reading may cause irritation if the tear film is unstable.
Contact lens wear	Wearing contact lenses may result in changes in tear film stability and evaporation. Symptoms of dry eye are one of the main reasons people discontinue wearing contact lenses.
Aging	As we age there is a natural decline in tear production. At age 65, the tear glands produce about 40% of what they did at age 18.
Hormonal changes	During pregnancy and after menopause, hormonal changes may alter tear film stability and tear production.
Contraceptive pill	The contraceptive pill may affect hormone balance, causing dry eye symptoms.
Medication	Certain prescription drugs including antihistamines, diuretics and anti-anxiety pills may alter tear stability. Some anti-allergy and common cold or influenza medications can also cause eye dryness.
Blepharitis or Meibomian gland dysfunction	Blepharitis is a common condition causing an overgrowth of the normal bacterial residing on our eyelids and lashes. This results in eyelid redness, inflammation, and a dandruff like appearance on the lashes. Meibomian gland dysfunction causes blockages in the oil glands of the eyelids. This causes a lack of oils in the tear film and poor-quality tears which dry up too quickly leaving the eye exposed and dry.
Arthritis and related diseases	Arthritis may be associated with dryness of mucous membranes and tear film instability. Sjögren's syndrome is a condition where the body's immune system attacks its own healthy cells that produce tears and saliva. Sjögren's syndrome is characterised by dry eyes and a dry mouth.



## HOW IS DRY EYE DIAGNOSED?

An optometrist or ophthalmologist is the most appropriate person to diagnose dry eye.

These eye care practitioners will conduct tests that investigate tear production and tear evaporation. They may also instil dyes into the eye that allow detection of areas of dryness or irritation.

## HOW IS DRY EYE TREATED?

The way in which dry eye is treated depends on the type and severity of the condition.

The first step in managing mild dry eye involves the use of ocular lubricant drops or gels. Ocular lubricants are not designed to cure or treat dry eye, they merely treat the symptoms by replacing the tears, moisturising, and lubricating the eye's surface. An eye care practitioner can recommend the eye drops that will work best for you.

Alternate management strategies range from treating any co-existing issues such as blepharitis with lid hygiene, to plugs to stop excessive drainage. At Gulf and Ranges Optometrists, we are also able to treat more severe cases of dry eye with intense-pulsed light therapy (IPL) with the E>Eye Machine to stimulate oil production for the tear film or using quantum molecular resonance (QMR) technology with the Raxon Eye Machine to help stimulate natural regeneration of tissues and cells.

\*\*See Gulf & Ranges Dry Eye Treatment Packages for more information on IPL and Raxon Eye.

## WHAT ELSE CAN BE DONE TO REDUCE DRY EYE SYMPTOMS?

Avoiding environmental conditions that aggravate the condition may reduce dry eye symptoms.

Wearing wrap-around sunglasses or side-shields on your spectacles may protect the eye from the drying wind.

Taking frequent breaks when working on the computer or concentrating on blinking more frequently may be beneficial.

Some research shows Omega 3 and Lacritec supplements to be beneficial at increasing tear production.



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