

What You Need to Know About DRY EYE

What is dry eye?

In a healthy eye, tears are responsible for the perfectly smooth ocular surface, which allows clear vision. Tears also clean and lubricate the eye. Every time we blink, a fresh layer of tears, called the tear film, spreads over the eye. The tear film is important for keeping the eye moist and comfortable. Sometimes, the eye may stop producing enough tears or tears evaporate too quickly. This common and often chronic condition is referred to as dry eye syndrome.

It affects your quality of life!

People with dry eye syndrome may experience irritated, gritty, scratchy, or burning eyes, excess watering, and blurred vision. The level of discomfort is increased if you wear contact lenses or live in a dry climate. Paying attention to dry eye symptoms is important. If left untreated, it may become so severe that it interferes with work and normal life activities.

Causes

Lifestyle - Staring at computer screens, televisions or electronic readers for long periods of time, exposure to air conditioning, wind, smoke, and dry climates.

Age - Dry eye syndrome often gets worse as we age.

Gender - Women are more likely to develop dry eyes.

Other factors - Long-term use of contact lenses, refractive eye surgery, some medications, medical conditions such as rheumatoid arthritis, diabetes, thyroid problems, and inflammation of the eyelids.

The tear film

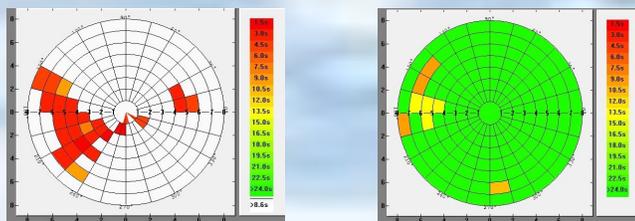
The tear film is structured with 3 components that work together: a complex mucus component, a watery portion (aqueous) and a complex oil outer layer (lipid).

The oil component (lipid) is important for reducing evaporation of tears and also provides structure to the tear film. Lipid is produced by the meibomian glands and is injected into the tears with each blink. Meibomian Gland Dysfunction (MGD) can create a deficiency in the lipid component of the tears, which leads to evaporative dry eye.

The watery component produced by the lacrimal glands (aqueous) is also important. A lack of aqueous production can result in another type of dry eye called aqueous deficient dry eye. This can be associated with disorders such as rheumatoid arthritis and lupus.

Quality and quantity of the tear film

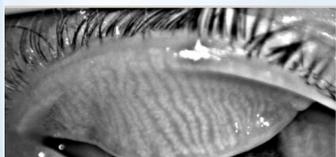
To measure the quality & stability of the tear film, we measure the tear film breakup time noninvasively. This test takes less than 30 seconds



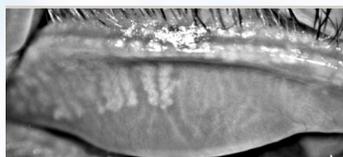
Tear film quality before and after dry eye treatment

Meibography

Located in both upper and lower lids, the meibomian glands produce complex oils that stabilize the tear film and prevent tear evaporation. If the meibomian glands do not function properly, dry eye usually occurs.



Healthy meibomian glands



Meibomian gland dysfunction

DRY EYE TREATMENTS

There has been a veritable explosion in understanding the causes of dry eye. A variety of options are now available to help people who suffer from dry eyes. Current approaches include advanced artificial tear drop formulations, prescription eye drops that increase tear production and reduce inflammation, and new approaches to effectively treat meibomian gland dysfunction, which is now understood to play a primary role in most dry eye cases.

Dry eye treatment can now be targeted to address the underlying cause of the problem. Some patients suffer from lack of tear production, others from excessive evaporation of their tears. Most suffer from a combination of both. After a comprehensive examination using advanced diagnostic tools, your doctor can more accurately assess the precise cause and severity of your dry eye. Using this information, they can ultimately recommend the best course of treatment.