



## WHAT IS DRY EYE SYNDROME?

**D**ry eye related discomfort is one of the most frequent complaints heard by eye doctors. The symptoms of dry eyes are varied and the list below is by no means all inclusive, however patients that suffer from dry eyes usually experience a number of the following symptoms.

*dryness, redness, scratchiness, blurred vision, stinging sensation, light sensitivity, excess mucous, burning sensation, excess watering / tearing, a foreign body sensation, sandy / gritty sensation, contact lens intolerance*

Dry eye syndrome, is a medical condition caused by insufficient and/or poor quality tears. There are three main components to human tears. The bulk of human tears are produced by the lacrimal gland. The oily component of tears is produced by the meibomian glands and the third component, the goblet cells, keeps all of the components mixed up. When one of the parts of this mixture becomes unbalanced, patients become symptomatic. There are numerous reasons as to why these glands may not be doing their part.

Insufficient tear production and/or poor tear quality are the most common causes of dry eye syndrome. Inflammation of the lacrimal gland is the most common cause of insufficient tear volume. Meibomian gland dysfunction, inflammation of the glands at the eyelid margin, contributes to poor tear quality. Medications frequently cause ocular dryness. Hormonal changes also contribute to insufficient and poor quality tears.

## WHO IS AT RISK FOR DRY EYE SYNDROME

Dry eye syndrome is very common. It is estimated that between 10% and 30% of the general population experiences dry eyes, resulting in up to 90 million affected individuals in the United States. The incidence of dry eye syndrome is higher, however in those over age 40 and in women.

## SYSTEMIC CAUSES

Some systemic disorders such as Sjögren syndrome, rheumatoid arthritis and acne rosacea make a person more likely to experience ocular dryness.

## REFRACTIVE SURGERY

Refractive surgery procedures disrupt the neural feedback loop and are common causes of dry eyes. Poor tears can cause both decreased visual acuity and cause discomfort for refractive surgery.

## CONTACT LENSES

Patients often report that their eyes do not seem to be dry until they wear contact lenses. Contact lenses don't cause dryness, however a patient with dry eyes will experience discomfort because their eyes can not support the presence of the contact lens. Contact lenses essentially work like a sponge in the eye, relying on our eyes to produce enough tears to hydrate the contact lenses and allow them to float on a cushion of tears. If there are not enough tears to both hydrate the lens and lubricate the eye then the patient experiences contact lens intolerance. Often a contact lens intolerant patient can wear contact lenses for a few hours but their wearing time decreases when in the presence of smoke, air conditioning, wind low humidity, etc.

## HOW IS DRY EYE SYNDROME DIAGNOSED

Dry eye syndrome is diagnosed in the office by considering the clinical presentation, patient's complaints and diagnostic testing. Determining the cause of the dryness whether it is insufficient tear production, poor tear quality or a systemic disease is critical in improving your comfort.

## HOW IS DRY EYE SYNDROME TREATED

Treatment is through numerous courses of action. Artificial tears are helpful in mild cases of dry eye syndrome. Moderate to severe cases are often treated with a combination of artificial tears, punctal occlusion and medication.

Numerous treatments are available. The depending on the cause of dryness. Systemic causes, such as acne rosacea, medications, and endocrine imbalance must be addressed first. If symptoms persist then other treatments are initiated such as artificial tears, ocular medications, and punctal plugs. Increasing the omega-3 fatty acids in one's diet can also reduce dry eye symptoms. A change in the type of contact lenses may also be beneficial.

There is no silver bullet to dry eye treatment, however, management almost always results in significant improvement in comfort. Symptomatic relief usually involves a multifaceted, systematic approach depending on the severity of your symptoms.



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