



WHAT IS DRY EYE?



Dry eye is a chronic condition that affects millions of people worldwide. Usually, your eyes make a steady stream of moist tears that coat your eyes as you blink. Tears consist of the lipid

(oil) layer, the aqueous (water) layer, and the mucin layer. The lipid layer prevents tear evaporation, while the aqueous layer provides moisture and nourishment to the eye. If a person can't produce enough tears to maintain healthy, comfortable eyes, they have dry eyes.

WHAT ARE THE TYPES OF DRY EYE?

Aqueous deficient dry eye

Aqueous deficient dry eye occurs when the lacrimal gland, which produces the watery portion of the tears, does not provide enough aqueous to keep the eye comfortable and moist

Evaporative dry eye

Evaporative dry eye occurs when the lipid layer of the tears is deficient. It is estimated that 86% of all dry eye patients have evaporative dry eye caused by blockages in the meibomian glands in the upper and lower eyelids. There are approximately 75 of these glands in the lids of each eye. They create an oil layer that prevents the tears from evaporating too quickly. Tears can evaporate from 4 to 16 times faster with a deficient lipid layer. The lipid produced by a normal functioning meibomian gland has the consistency of olive oil and flows freely. With meibomian gland dysfunction, this oil can have the consistency of toothpaste and get trapped in the glands. With chronic disease, the structure of the glands is affected either by shortening in length or by completely shutting down. When this occurs, it may be irreversible and can cause a worsening of symptoms.

WHAT CAUSES DRY EYE?

Some causes of dry eye include side effects from medications for allergies, anxiety, beta-blockers and blood pressure, diseases like thyroid disease, lupus, and rheumatoid arthritis. Lifestyle causes include dry climates, smoky environments, long-term contact lens use, looking at computers, smartphones, tablets, and engaging in activities that reduce blinking.

WHAT ARE THE SYMPTOMS?

Symptoms include regular irritation, itching, burning, stinging, excessive tearing, redness, and tiredness. Sometimes blurry vision and even sensitivity to light will also occur.

- **Regular irritation**
- **Itching**
- **Burning**
- **Stinging**
- **Excessive tearing**
- **Tiredness**

HOW IS DRY EYE DIAGNOSED?

Ophthalmologists will perform a comprehensive evaluation to determine which type of dry eye you have. Tests include measuring the quality and thickness of your tears along with the quantity and how quickly you produce them.

Please Note: In preparation for a dry eye evaluation, please avoid using eye drops, oil-based facial makeup, or sunscreens on the day of your exam. Do not use ointments in the eyes or swim at least 24 hours before your dry eye appointment. These types of products and activities can affect the findings of the tests and render them useless.

WHAT ARE THE TREATMENTS?

There are several treatments. Artificial tears (non-prescription eye drops) and other newer prescription eye drops are used to replace your tears' moisture and oil concentrate. Silicone (punctal) plugs are inserted in the tear ducts to stop the tears from draining as fast, thus keeping more tears on the eye for a more extended period. Cyclosporine ophthalmic emulsion 0.05% eyedrops, typically known as Restasis (a prescription eye drop), can increase tear production.