

Dry Eye Disease

Dry eye occurs when your eye doesn't produce enough tears, or the right kind of tears. This can have a big impact on your productivity and overall quality of life and is one of the most common eye issues our patients are facing.

Common symptoms associated with dry eye are:

- Burning, stinging, or a scratchy sensation
- Eye redness
- Blurred vision and/or fluctuating vision throughout the day
- Light sensitivity
- Eye fatigue
- Feeling like there is something in your eyes
- Difficulty wearing contact lenses
- Watering eyes

There are 2 main types of dry eye disease:

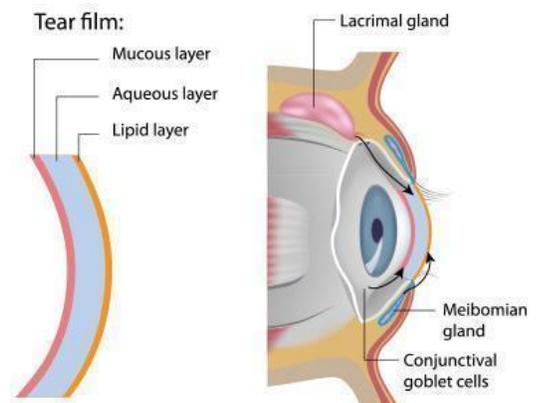
1. Evaporative dry eye, also known as Meibomian Gland Dysfunction (MGD) - happens when the tear film evaporates too quickly because the meibomian glands (oil glands) are not producing enough oil to coat the tear film. MGD is the leading cause of dry eye disease.
2. Aqueous deficient dry eye- the lacrimal glands (water glands) that produce the tears are not functioning properly so they cannot create the water layer of the tear film. Health issues such as autoimmune disorders or inflammatory conditions can both affect this layer.

Some patients may even experience a combination of both forms.

What causes Dry Eye Disease?

To understand why your eyes are dry, it's important to know what a healthy tear film looks like. Your tear film is made up of three main ingredients:

- Lipid layer- composed of oil called meibum which gets pushed out from the meibomian glands. The job of the lipid layer is to prevent your tears from evaporating too quickly.



- Aqueous (water) layer- the salt water component forming the bulk of your tears. It contains a variety
- of different elements to help protect your eyes while lubricating them.
- Mucous layer- composed of mucin which coats the cornea and helps spread the tear film evenly across your eye.

If your tear film composition is imbalanced or you are not able to produce enough good quality tears, this can leave you with dry eyes.

Finding the root cause for your dry eye can be difficult as there are many factors that can cause our eyes to not produce healthy tears. Here is a list of possibilities:

- Prolonged computer/screen use
- Lack of blinking during screen use
- Medications like antihistamines, mood stabilizers, birth control, hormone replacement, beta-blockers, pain relievers, gastrointestinal medications, retinoid, chemotherapy and more.
- Environmental, air quality, heating & cooling systems
- Medical conditions likes Diabetes, Sjrogren’s syndrome, Rheumatoid arthritis, thyroid disorders, Lupus
- Natural aging process, menopause
- Allergies
- Smoking
- Wearing a face mask

What can I do?

Treatments for dry eyes range from simple artificial tear drops or ointments, to special tear duct plugs that keep the natural tears on the eye. In some cases, dry eye can be further treated with oral supplements containing Omega-3 fatty acids. In other cases, it may be treated with a prescription eyedrop that stimulates tear production.

For more detailed treatment options please see the attached chart.

Your eye doctor should be made fully aware of any dry eye symptoms to maintain the long-term health and vision of your eyes.



DRY EYE TREATMENTS

SPADINA OPTOMETRY

METHOD	WHY DOES THIS WORK?	WHAT CAN BE USED?	HOW TO USE	PRODUCTS TO LOOK FOR
Heat	Helps open clogged meibomian glands along the eyelid by softening the hardened meibum. This allows the natural oils to flow more freely lubricating the eyes.	Warm compress/heat mask (Best method as the compress maintains heat for a long time).	Heat mask - Warm the mask, following the heating directions listed for your mask. Lay over your eyes for 5-10 min 1 or more times a day.	Any heatable heat mask.
Artificial tears	Lubricates the eye and helps maintain moisture.	Preservative free eye drops are best as they can be used as many times a day as needed. Depending on the cause of your dry eye you may want to look for something specialized like allergy relief or a gel formula for more intense moisturization.	Instill 1-2 drops to each eye at least four times a day.	Hilo hydraSense Bio true Bausch + Lomb Sooth Systane
Omega 3 fatty acid	Reduces inflammation of the eye while also improving the function of the meibomian glands.	Omega 3 is found in fish, seafood, flaxseed, chia seeds & supplements. While these are the best food sources it can be hard to eat the amount needed to have any impact on your dry eye making a supplement the best option.	Aim to take 2000-3000 mg over the course of the day. Look for a 3:1 EPA to DHA ratio in a re-esterified form which is most easily metabolized by the body.	DE3 Dry Eye Omega Benefits.
Eye Ointment	Lubricates the eye overnight and helps maintain moisture.	A preservative free eye ointment.	Apply about 1/8th of an inch, to the inner, lower eyelid before bed. The ointment will cause blurred vision so it is best used immediately before sleep.	Ocunox.
Hypochlorous Acid Spray	An antibacterial, antiviral, antifungal solution that removes bacteria and reduces inflammation from the eye effectively, safely, and comfortably.	An Ophthalmic hypochlorous acid spray.	Follow manufacturer instructions.	BIHOCL.
Manual Gland Expression	Clears clogged oil glands.	This is an in office treatment offered by Spadina Optometry.	Your optometrist or a trained technician will perform this service.	Talk to your optometrist about if this procedure is right for you.
Restasis/Cequa eye drops	Helps increase your eyes' natural ability to produce tears by reducing inflammation in the tear glands.	Restasis or Cequa prescription eye drops.	One drop in each eye twice a day. Use at least 12 hours apart.	Restasis and Cequa are prescription eye drops.
Radio Frequency with TempSure	TempSure uses radiofrequency to gently warm the eye area and open clogged meibomian glands. By softening the hardened meibum the natural oils can flow more freely lubricating the eyes. After the full treatment cycle TempSure offers longer dry eye relief than other options.	Radio Frequency with TempSure is a specialty dry eye treatment offered by Spadina Optometry.	Our trained technician will perform the treatments that have been described as similar to a "hot stone massage".	TempSure Envi.
Tear duct plugs	Punctal plugs are tiny devices that are placed in the eye's tear ducts. About the size of a grain of rice, the plug stops fluid from draining from the eye. This helps keep the eye's surface moist and comfortable.	Temporary/dissolving plugs or Semi-permanent plugs.	The plugs are inserted and removed by your doctor.	Your doctor will speak with you about options.
Autologous blood serum drops	These are eye drops made into a serum from your own blood. The serum is diluted with a sterile solution to produce a tear substitute.	Your own specially made eye drops.	Instill on the eye like regular eye drops.	Speak with your doctor about if this is an option for you.

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