

Treating Dry Eyes Naturally

How the Soothing Power of Dry Heat Can Offer You the Relief You Deserve



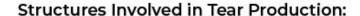
MD, MS Diplomate, American Board of Ophthalmology Treating Dry Eyes Naturally
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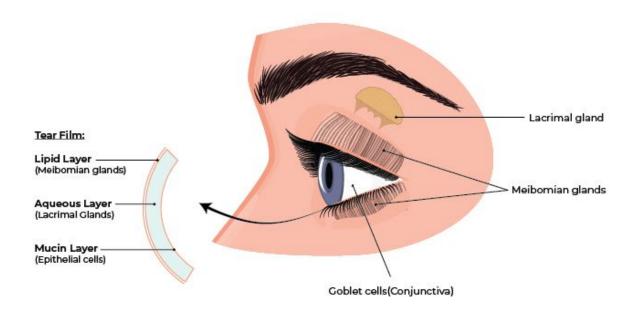
Barry J. Linder, MD, MS Diplomate, American Board of Ophthalmology

What is Dry Eye?

Our eyes rely on tears to keep them moist and comfortable and to ensure our vision remains clear. That means that when we have problems with tears it can cause a lot of unpleasant symptoms. Dry eye is caused by several factors, including an unstable tear film that leads to rapid evaporation. Though you may not notice it your eyes maintain a constant layer of tears on their surface, which is an essential part of keeping your eyes healthy and your vision clear. This thin layer of tears washes away dust, dirt, and other debris that could damage your cornea and potentially cause infection.

How Healthy Tears are Made





Normal tears are made up of three components:

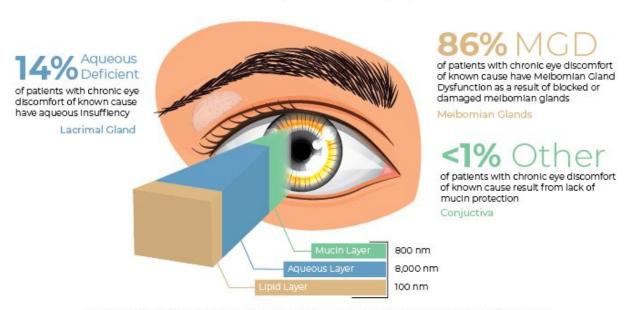
- A lipid (oily substance called meibum) layer on the outside
- An aqueous (watery) layer in the middle
- A mucin (mucous-like) layer next to the eye

These three components are all essential parts of the tear's makeup. The meibum keeps our tear film from evaporating too quickly, the mucin helps to anchor our tears to the surface of our eyes and spread them out in a thin, even coat, and the aqueous component in the middle helps to nourish the cornea and maintain a normal tear film thickness.

These three components are produced by three different sources on or near our eyes.

- The meibum is produced by our meibomian glands, which are located in our eyelids.
- The aqueous component is produced by our lacrimal glands, which are located behind the outer edges of our upper eyelids.
- The mucin component is produced by our goblet cells in the conjunctiva, which covers the sclera (white portion) of our eyes.

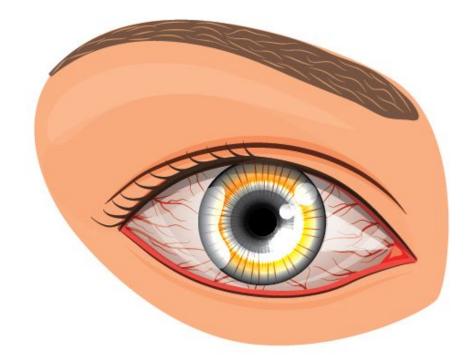
Two Primary Forms of Dry Eye



The two primary forms of dry eye are Evaporative Dry Eye, also known as Melbomian Gland Dysfunction or MGD and Aqueous Dry Eye. The majority of the dry eye sufferers have MGD.

If any of these components, or their sources, have a problem it can affect the quality of our tears and cause dry eye. Dry eye is most commonly caused when our eyes are unable to produce the three components in the right ratio or quality, resulting in poor quality tears. The underlying cause of your dry eye will determine which treatment your dry eye will require. One treatment that may be recommended is EyeGiene® Insta-Warmth™.

Dry Eye Symptoms



There are a wide variety of symptoms associated with dry eye. These include:

- A burning or itching sensation
- Achy eyes
- Heavy eyes
- Sore eyes
- Tired eyes
- A stringy discharge
- A dry sensation in your eyes
- Red eyes
- Blurry vision
- Sensitivity to light
- Foreign body sensation
- Watery eyes
- Difficulty wearing contact lenses
- Difficulty driving at night

Foreign body sensation is the feeling that there is something stuck in your eye, even if there is nothing actually there.

As strange as it sounds watery eyes can also be a symptom of dry eyes. This is because an inadequate tear film on the surface of our eyes can cause them to overproduce the aqueous component as a protective mechanism. This "reflex tearing" can help wash away dirt or other debris, but because the tears produced are too watery they evaporate quickly and cannot fix the underlying dry eye condition.

If you experience any of these symptoms regularly, you should make an appointment to see your eye care professional. They will be able to assess your condition and determine if you have dry eye, and prescribe an appropriate treatment such as EyeGiene®.

Common Causes of Dry Eye

Dry eye is an increasingly common condition. There are a wide variety of factors that can increase your risk of developing dry eye. These may include:

Aging

As we get older our <u>eyes age</u> as well and can become more susceptible to problems. Dry eye can occur at any age but is most commonly found in individuals over the age of 50.

Undergoing Menopause

Postmenopausal women are more likely than men of the same age to develop dry eye. The exact role that menopause plays in the development of dry eye is not well understood, but changes in our hormone levels can have a widespread impact on our bodies.

Certain Health Conditions

Some systematic conditions such as <u>diabetes</u>, <u>lupus</u>, <u>thyroid diseases</u>, <u>rheumatoid arthritis</u>, and <u>Sjogren's syndrome</u> can contribute to dry eye related problems.

Eyelid Problems

A condition called <u>lagophthalmos</u>, which occurs when you don't completely close your eyelids while blinking or sleeping, can cause severe dry eye symptoms. Lagophthalmos is typically caused by aging, but may also occur in patients who have undergone <u>cosmetic blepharoplasty</u> or other eye-related cosmetic surgeries.

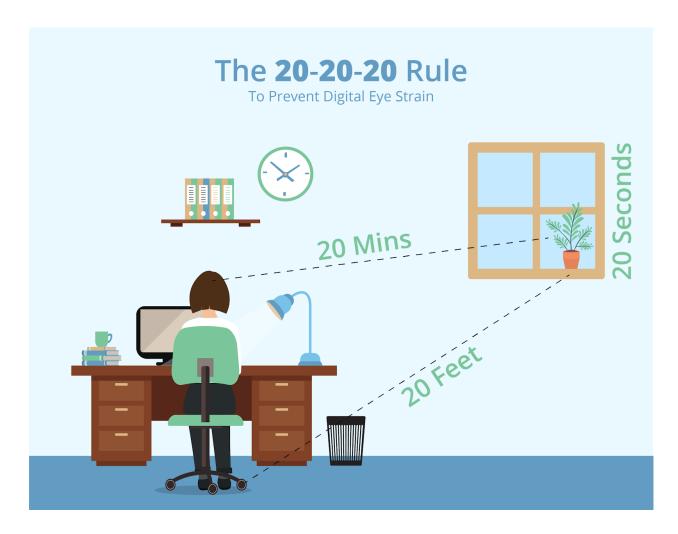
Allergies

A common side effect of many <u>seasonal allergic reactions</u> is dry eye.

Certain Medications

Individuals who take a variety of <u>prescription and nonprescription medications</u> such as antihistamines, antidepressants, select blood pressure medications, and birth control pills have a higher risk of developing dry eye.

Increased Computer Use



When we stare at a computer screen or use our smartphones or other digital devices we tend to blink less frequently then we should, causing a condition called <u>digital eye strain</u>. This causes greater tear evaporation and increases your risk of developing dry eye. The best way to keep your eyes moist while using digital devices is to follow the <u>20/20/20</u> rule: Every 20 minutes you should take a 20-second break and stare at something at least 20 feet away from you.

Wearing Contact Lenses

Though it isn't always easy to determine how much <u>contact lens wear</u> contributes to dry eye problems the number one reason patients stop wearing contact lenses is because of discomfort.

Smoking

Smoking can cause a wide variety of <u>health problems</u>, and <u>increase your chances of developing</u> <u>dry eye</u>. Smoking has also been linked to an increased risk of serious eye problems including macular degeneration, cataracts, and uveitis.

Environmental Conditions

If you spend a lot of time in a dry environment, either inside or outside, it can increase your risk of developing dry eye. Air conditioning, forced air heating units, and ceiling fans all contribute to our tears to evaporating too quickly and cause dry eye symptoms. This is also true for individuals who <u>frequently fly</u>, since the air found in airplane cabins is extremely dry, which can cause and worsen dry eye symptoms.

Individuals who live in arid climates or areas that are frequently dry or windy may also find that their ability to produce adequate amounts of high-quality tears may be impacted.

Dry Eye Complications

Individuals with dry eye have a higher risk of developing other complications. These can include:

Eye Infections

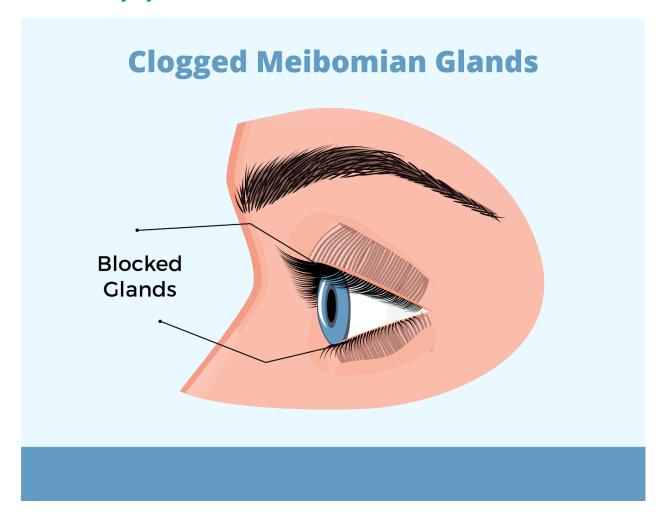
Individuals with dry eyes have a greater risk of developing eye infections than individuals without dry eye. Our tears protect the surface of our eyes from infection, so without an adequate amount of high-quality tears, our eyes are more vulnerable to infection.

Surface Damage

Untreated dry eye can make our eyes more vulnerable to a variety of serious problems including:

- Eye inflammation
- Corneal abrasions
- Corneal ulcers
- Other vision problems

Heat and Dry Eyes



Tears require meibum, which is produced by the meibomian glands in our eyelids, to keep them from evaporating too quickly. Meibomian gland dysfunction, or MGD, is a condition that occurs when our eyelids are unable to produce enough meibum to meet our needs, causing evaporative dry eye. Evaporative dry eye is the most common cause of dry eye, and one study found that as many as 70% of dry eye cases are caused by MGD.

Heat is an effective treatment for MGD because it softens the meibum, allowing it to flow more freely. This, in turn, allows our eyes to create a more robust oil film on the surface of our tears, which slows down the evaporation rate of our tears. Studies have shown that applying heat can also reduce tear evaporation after treatment, improving dry eye symptoms over time. One convenient way you can use heat to treat your dry eye symptoms is with an EyeGiene® mask and Warming Wafers.

Traditional Dry Eye Treatments and Their Drawbacks

For years eye care professionals have used warm compresses to treat dry eye. At home, this typically took the form of a cloth either soaked in warm water or dampened and then microwaved. However, wet heat may not be the most effective method for treating dry eye symptoms.

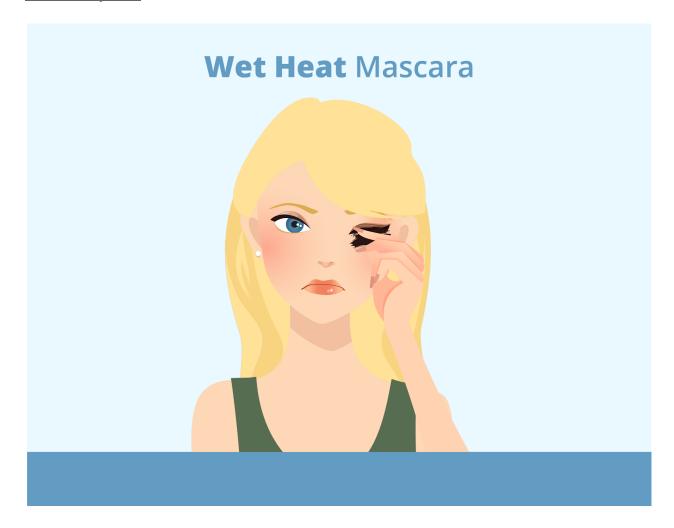
The Drawbacks of Wet Heat

Though it may seem logical that "dry eyes" would benefit from "moist heat", most dry eye cases are not caused by a lack of moisture but by a lack of meibum. Applying heat is an effective way to treat dry eyes, but **moisture does not contribute to results in any significant way**. Furthermore, the moisture of a compress ends up on the outside of the eyelids, not in the ear film or on the eye's surface. Wet heat can also cause a variety of secondary problems including:

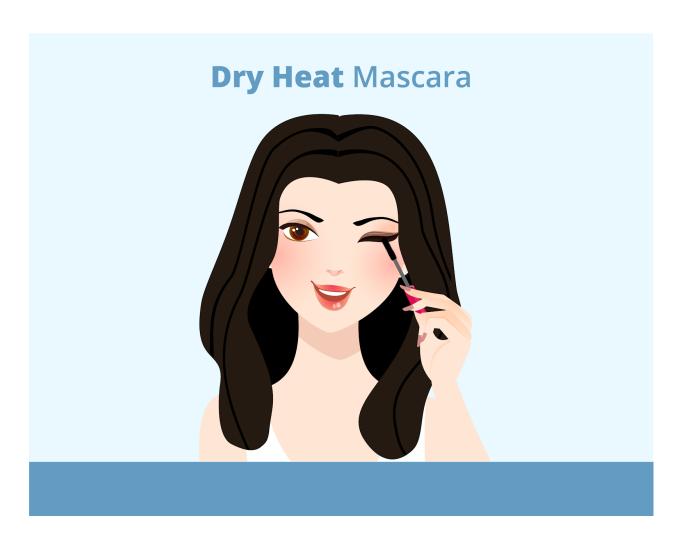
Premature Cooling

When water heats up it evaporates, which in turn produces a cooling effect. That is why we feel cold when we step out of the pool, even if it is a hot summer day. A warm wet compress is effective for a short period of time, but as soon as the heat source is removed it begins to cool rapidly. This premature cooling may limit the effectiveness of the compress and can cause the meibum to stiffen up again sooner and limit the effectiveness of the treatment. Studies have shown that prolonged controlled heat is more effective than a warm moist compress at treating dry eye symptoms.

Unnecessary Mess



Many Americans wear makeup regularly. A wet compress can wreak havoc on carefully applied eye makeup, causing an unnecessary mess and additional work. To avoid having to redo their makeup many women may opt to limit how many times per day they apply wet heat to their eyes. In turn, this can limit the effectiveness of the treatment since meibum may stiffen up again between compresses.



Dry heat, such as that provided by <u>EyeGiene</u>, makes it easy to treat your dry eyes wherever you are without having to worry about ruining your makeup or getting water everywhere.

<u>Unpredictability</u>

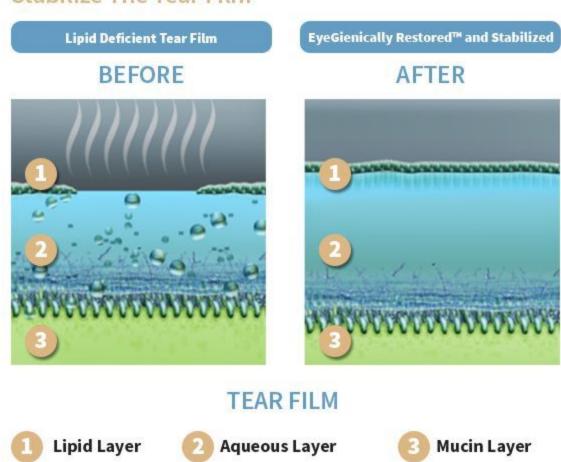
A warm wet towel is unpredictable and is not an effective way to transfer constant heat to our bodies. Soaking a towel in warm water or microwaving a damp towel is not a precise science, which can make it next to impossible to achieve the ideal temperature required for treatment. If the towel is too cold the treatment is less effective, and if the towel is too hot you may risk burning yourself.

What is EyeGiene?

EyeGiene is a revolutionary new product by Board Certified Ophthalmologist. Barry J. Linder MD, MS that delivers the heat of a wet compress without the mess and variability of moisture. EyeGiene® uses a soft, comfortable, reusable Eye Mask and gentle Warming Wafers to deliver dry, consistent heat to your ocular region and relieve your dry eye symptoms.

Treat Your Dry Eyes with Your Natural Tears

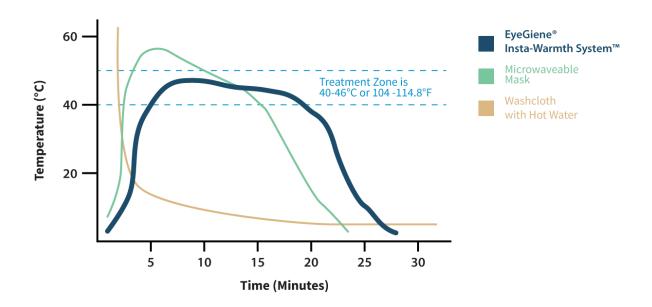
Naturally Restoring the Lipid Layer to Stabilize The Tear Film



The best treatments for dry eye encourage our eyes to improve the quality and quantity of our own natural tears. The application of dry heat is an effective way to soften meibum and increase meibum flow, allowing our eyes to produce the high-quality tears we need.

Consistent Heat

Only EyeGiene® Insta-Warmth System™ Provides The Right Treatment at the Right Temperature for the Right Amount of Time



<u>EyeGiene</u> is able to deliver a consistent level of heat to your ocular area, making it more effective than a wet compress. Wet compresses lose heat quickly because they do not have a consistent or constant heat source.

The ideal temperature for thinning meibum is between 40°C and 45°C (or between 104°F and 113°F). EyeGiene's proprietary Insta-Warmth System is able to deliver consistent heat at the ideal temperature for the duration of your treatment. The EyeGiene System takes a couple of minutes to reach the target temperature, giving you time to get settled and relax while you put on your mask. Once the target temperature has been reached, you should leave your mask on for 10 minutes.

No Mess

Warm wet compresses are messy and finicky, which means most people are less likely to bother with them. The application of regular heat is an essential part of relieving dry eye symptoms, which is why EyeGiene aims to make it easy for you to manage your dry eye symptoms.

Easy to Use

The <u>EyeGiene System</u> is easy to use and portable. Simply remove the EyeGiene Warming Wafers from their sealed foil package and slip them into your EyeGiene Eye Mask. Then, sit back, relax, and let the soothing heat of your EyeGiene System work its magic.

EyeGiene is incredibly portable, making it easy to fit into your everyday routine. As previously discussed in this book prolonged and frequent computer use can cause and exacerbate dry eye symptoms. With the EyeGiene System, you can easily take a few minutes out of your lunch break to refresh your eyes and keep them moist and happy.

EyeGiene Frequently Asked Questions

Here are some of the most common questions dry eye sufferers have about EyeGiene. For more information, please visit our <u>website</u>.

How does EyeGiene work?

Evaporative dry eye occurs when our tears do not contain enough meibomian gland oil (lipids) and is typically associated with clogged meibomian glands. This causes our tears to evaporate too quickly, leaving an inadequate film of tears on the eye's surface. The EyeGiene Insta-Warmth System gently warms the eyelid, thinning the oil and unclogging the meibomian glands. This allows the oil to flow more easily and fortify our tears against evaporation.

Do I need a sink, stove, or microwave to use EyeGiene?

No, that is the beauty of the EyeGiene System. The EyeGiene System is portable and convenient, you don't need to boil water or microwave your mask to heat it, so there is no need for a stove, sink, or microwave. To use your EyeGiene Eye Mask simply remove the Warming Wafers from their sealed foil package and place them in the EyeGiene Eye Mask.

Does EyeGiene get hot enough to melt my meibomian gland oils?

Yes. Most studies done on the efficacy of warm compresses found that the ideal temperature for thinning meibomian gland oils is between 40°C-45°C (104°F-113°F). The Warming Wafers in your EyeGiene Eye Mask are carefully designed to deliver this ideal temperature and not exceed it.

Unlike other dry eye treatment methods such as microwavable heat packs or warm washcloths which lose heat quickly, your EyeGiene Eye Mask delivers consistent heat for the entire length of the treatment (slightly more than ten minutes).

How do I activate the EyeGiene Warming Wafers?

How to Use



1. Adjust the mask strap to ensure it will fit comfortably over your face



2. Open the foil package and remove single use warming wafers



3. Add the single warming wafers to the individual mask pockets



4. Sit back, relax and wear over your closed eyelids for 10-15 minutes



5. The warming will stop automatically so you can also wear to sleep!

The Warming Wafers are designed to automatically activate when they are removed from their sealed foil package and placed inside the EyeGiene Eye Mask.

How long does heat from the EyeGiene Warming Wafer last?

The EyeGiene System reaches the ideal temperature within a few minutes, giving you time to relax, get comfortable, and put your mask on. The warmth continues for just over ten minutes, providing you with a controlled source of reliable heat.

How do I know when I should take my EyeGiene Eye Mask off?

Once your mask begins to cool you may remove it.

What is included in my EyeGiene Eye Mask Starter Kit? What about the Refill Kit?

What is included in my EyeGiene Eye Mask Starter Kit? What about the Refill Kit? EyeGiene® REFILL Pack 30 Pairs of Warming Wafers EyeGiene® Starter System 1 Mask & 10 Pairs of Warming Wafers

The EyeGiene Starter Kit comes with everything you need to begin treating your dry eye symptoms. This includes one eye mask and ten pairs of Warming Wafers (twenty Wafers in total). The EyeGiene Refill Kit contains thirty pairs of Warming Wafers.

Is my EyeGiene Eye Mask washable? How often should I wash it?

Your EyeGiene Eye Mask can either be washed by hand with warm, soapy water or placed in the washing machine on a Gentle or Delicates setting. Depending on how frequently you wash your EyeGiene Eye Mask it should last up to six months. Depending on the severity of your dry eyes and your personal preferences you may wash your EyeGiene Eye Mask daily, weekly, or monthly.

My EyeGiene Eye Mask doesn't feel warm in my hand. How do I know it is working?

The EyeGiene Warming Wafers are engineered to work with the specially designed EyeGiene Eye Mask. As such, the Warming Wafers will not reach full temperature until they are inserted into your EyeGiene Eye Mask and applied to your ocular area. To avoid discomfort, the Warming Wafers are designed not to feel too warm while in your hand.

Can I put two EyeGiene Warming Wafers in one side of my EyeGiene mask?

No. You should never place more than one Warming Wafer into each side of your EyeGiene Eye Mask.

Are there any conditions for which the EyeGiene System may not be suitable?

Like with any ocular warming product different individuals may react differently to the EyeGiene System. Individuals who have recently undergone surgical procedures on their eyes or eyelids, such as <u>LASIK</u>, <u>blepharoplasty</u>, or <u>cataract surgery</u>, should consult with their eye care professional before using the EyeGiene System.

Is EyeGiene Right for Me?

If you suffer from dry eyes then <u>EyeGiene</u> may be able to offer you the relief you crave. However, if you have recently undergone any surgical procedures on your eyes or eyelids (such as <u>LASIK</u>, <u>blepharoplasty</u>, or <u>cataract surgery</u>), you should consult with your eye care professional before using the EyeGiene System.

For more information about EyeGiene, please visit our <u>website</u>. If you would like to order your EyeGiene Starter System, Refill Pack, or EyeGiene Eye Mask, please visit our <u>online store</u>.

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