

WHAT IS DRY EYE?



ABOUT DRY EYE



Dry eye has become a popular term in the eye care community in the last several years. You may have heard about dry eye therapy the last time you had an eye exam. That's because more and more North Americans are experiencing this eye condition.

DID YOU KNOW?

Experts suggest that **over 20%** of the global population is affected by dry eye. That's over 115 million North Americans, alone!

If you suffer from dry eyes, you know what a strain it can be on daily life. Let's explore what exactly dry eye is and how you can recognize it. We'll also look at the causes of this eye condition and what treatment options are available today.

Dry eyes might be more common than ever. But optometrists and eye care professionals are working hard to provide your eyes relief.

What is Dry Eye?

Dry eye is a very common condition that occurs **when your eyes feel discomfort due to inadequate production, distribution, or quality of tears**. Since tears lubricate the eyes, this results in your eyes feeling uncomfortable and scratchy.

Symptoms can range from tolerable to debilitating. Although dry eye alone will rarely lead to vision loss, it can increase the risk of eye infection. Excessive dry eye left untreated can damage corneal tissue and cause vision impairment.

The two predominant forms of dry eye are **Aqueous Dry Eye** and **Evaporative Dry Eye**. These can occur individually or simultaneously, resulting in Mixed Dry Eye (MDE).

Aqueous Deficient Dry Eye (ADDE)

This type of dry eye occurs when your tears aren't producing enough water. Blinking can be painful and uncomfortable if you suffer from ADDE.

Evaporative Dry Eye (EDE)

EDE is a form of dry eye characterized by a lack of oil in your tears. This is the most commonly diagnosed type of dry eye.

THE ROLE OF YOUR TEARS



Tears help express a little emotion from time to time, but they do much more than that for your vision! Healthy tear production is essential for healthy eyes. So what are the benefits of normal tear production?

- Tears lubricate the eyes and keep the eyes' surface smooth.
- Tears protect your eyes from bacteria and infection.
- Tears help prevent dirt and dust from reaching your eyes' surface.
- Tears help focus light so you can see clearly.

Your tear film is composed of **3 distinct layers** that each have a specific role in keeping your eyes lubricated, protected, and comfortable. When these layers are imbalanced, it leads to dry eyes.

Lipid Layer

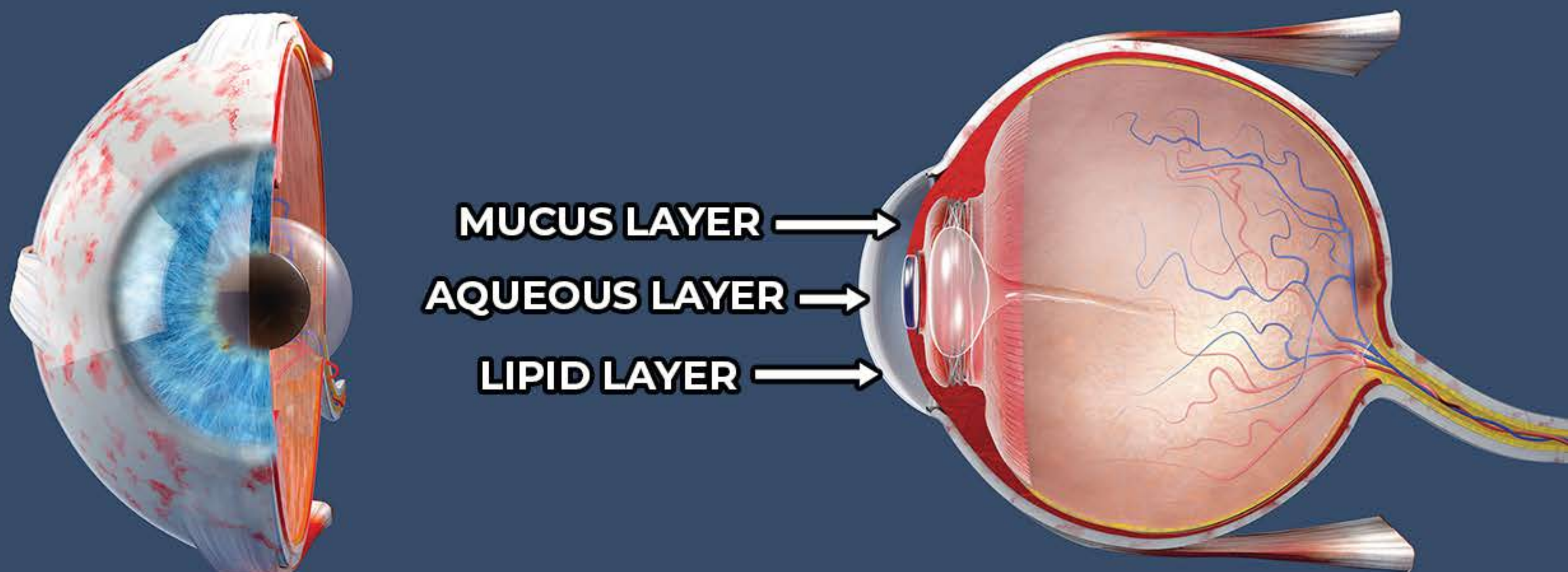
The primary function of the lipid layer is to reduce the evaporation of tears. This is the oily layer produced by the meibomian glands. Problems with these glands are one of the most common causes of EDE.

Aqueous Layer

The aqueous layer is the watery layer distributed from the lacrimal glands (tear glands). The aqueous layer is all about lubrication, designed to help provide clear vision and wash away bacteria. When this layer is not functioning correctly, it results in ADDE.

Mucus Layer

The mucus layer is the sticky part of your tear film, meant to keep tears on your eyes' surface. Its function is to act like velcro and attach the tear to the underlying cornea. The production of this layer is more commonly healthy.



DRY EYE SYMPTOMS & SIGNS



If you can believe it, the most obvious symptom of dry eye is that your eyes feel, well...dry. But the irritations associated with this condition are wide-ranging and may differ from time to time.

If you experience signs of dry eye, especially in combination with each other, it's best to see your optometrist for a diagnosis. Dry eye symptoms can include:

- A heavy, tired feeling of the eyes
- Eyestrain, difficulty reading or working on a computer
- Blurriness or fluctuating vision
- Burning, stinging, or scratchy sensations
- Inability to cry
- Foreign body sensation (feeling like there is something in the eye)
- Tearing
- Increased sensitivity to light
- Itching & irritation
- Discomfort when wearing contact lenses
- A sandy or gritty feeling, as if something is in the eye
- Pain and redness of the eyes

DID YOU KNOW?

Excessive watering of the eyes is a symptom of dry eye. Because your eyes are not properly lubricated, a reflex reaction tells your glands to produce more tears. But if these tears are chemically imbalanced, it continues the whole cycle.



CAUSES & RISK FACTORS OF DRY EYE



As eye doctors understand dry eyes better, they can attribute certain risk factors to the condition. We are learning that many elements of modern life can affect our tear production and cause our eyes to feel dry.

Our eyes are influenced by so many variables each day. You may be exposed to one of these causes or affected by several factors. Being aware of the underlying causes of dry eye can help you communicate with your optometrist during an eye exam. One of these causes may be the reason your eyes feel dry, itchy, and irritated:

Environmental Factors

The air quality around you can have a major impact on how your eyes feel. Spending extended periods in unwelcome environments can increase your dry eye symptoms. Try to find reprieve if you find your eyes exposed to:

- Smokey air
- Strong winds
- Low humidity
- Bright sun
- Pollution & smog

Meibomian Gland Dysfunction

Remember the oily layer of your tears? The meibomian glands secrete the lipid layer. Meibomian gland dysfunction (MGD) occurs when these glands are not secreting enough oil or when the oil they secrete is of poor quality. This abnormal oil may be crusty and cause irritation.

MGD is one of the most common causes of dry eye, often leading to an EDE diagnosis. Dry eye symptoms usually increase with the existence of MGD, and this dysfunction may further irritate eyelid inflammation.

Blepharitis

Anterior Blepharitis

is most often caused by bacteria and eyebrow dandruff that collect at the front edge of the eyelid and irritate the area. If left untreated, an infection may occur. This irritation and infection can contribute to increased dry eye effects.

Posterior Blepharitis

occurs when the meibomian glands can't produce oil regularly. This condition affects the inner eyelid that touches the eyeball. This oil deficiency creates a bacteria-friendly environment, and the discomfort mirrors that of dry eye.

CAUSES & RISK FACTORS OF DRY EYE

Lifestyle Factors

Your vision is an integral part of your body, and so many things you do affect how your eyes feel. Your lifestyle and daily routine can amplify or diminish dry eye symptoms.

Remember that:

- Getting a healthy sleep each night helps reduce dry eye. **Aim for 8 hours a night!**
- Alcohol is a natural diuretic (it dehydrates you). **Heavy drinking can exaggerate dry eye.**
- Both tobacco and cannabis consumption has been linked to dry eye. **Smoking may leave your eyes feeling red and irritated.**
- **Diet plays a role in how your eyes feel.** Vitamin A deficiency can negatively impact how your eyes feel and lead to dry eye.

Digital Eye Strain

This condition is also known as **Computer Vision Syndrome**, and it describes a group of vision-related problems linked to extended periods using digital screens. Your eyes are not designed for staring at a computer for hours on end, so this type of behavior leads to vision problems.

Many offices and work areas are constantly air-conditioned, which doesn't help people with dry eye symptoms. Digital eye strain can exacerbate the discomforts of dry eye. In addition, heavy screen time can lead to:

- Eyestrain
- Fatigue
- Headaches
- Blurred vision
- Neck and shoulder pain



DID YOU KNOW?

Blinking delivers tears to the surface of your eyes. On average, people blink 66% less when using a computer, tablet, or cell phone. Less blinking equals increased dry eye symptoms.

CAUSES & RISK FACTORS OF DRY EYE



Laser Eye Surgery

Because most laser eye surgery involves cutting some nerves in the cornea, your eye produces fewer tears moving forward. So it is common for patients to experience dry eyes following their corrective surgery.

Bodily Changes

It's an unfortunate truth, but getting older increases your propensity for having dry eye. Most notably, people over the age of 50 are especially vulnerable to the symptoms of this condition. Tear production slowly diminishes as you age.

Women with changing hormone levels are also particularly susceptible to dry eye. Hormonal reactions stimulate tear production; pregnant women or women experiencing menopause may feel the effects of dry eye. Taking birth control pills can also be a factor contributing to dry eye.

Improper Contact Lens Use

Contact lenses can cause dry eye when not worn according to your optometrist's guidelines. Some contacts limit the amount of oxygen reaching your eye's surface, which adds to dry eye symptoms. Leaving contacts in at night is bound to make your eyes feel dry.

You may be wearing the wrong contact lenses altogether. And this can lead to chronic dry eye. Make sure to receive a contact lens exam and fitting with your optometrist before committing to a specific contact brand. The right fit might just relieve some discomfort.



CAUSES & RISK FACTORS OF DRY EYE

Other Existing Health Conditions

Several underlying health conditions can impact the way your eyes feel day-to-day. Unfortunately, some conditions are connected to chronic dry eye symptoms. Some of the more common conditions considered dry eye risk factors include:

- Diabetes
- Sjögren's syndrome
- Arthritis
- Lupus
- Thyroid disorders

Even more frustrating is that sometimes the medications prescribed for these conditions also add to dry eye symptoms. Some medications alter the mucus produced in your tears, creating tear imbalance and leaving your eyes feeling burned out. The following medications are associated with dry eye:

- Antihistamines
- Antidepressants
- Diuretics
- Beta-blockers
- Acne control medication
- Painkillers
- Gastrointestinal medication

If you have underlying health concerns but want to reduce the burn and irritation of dry eye, speak with your doctor and optometrist about potential alternative medications.



THE WIDE WORLD OF DRY EYE



We know that the causes of dry eye are vast. And so are dry eye treatment options. Modern optometry is continually developing solutions for patients, trying to help the ever-growing dry eye demographic.

There are some treatments you may not qualify for and others that might make the most sense for your lifestyle and comfort. Discuss your dry eye treatment options with your optometrist to find the solution that works best for you.

And don't be afraid to inquire with your local eye doctor about specific dry eye treatment technologies they may offer.

Positive Lifestyle Changes

Taking a holistic approach to managing your dry eye symptoms is never a bad idea. Your vision is connected to other systems in your body and taking care of yourself can help reduce dry eye outcomes.

Alcohol, tobacco, and cannabis can all negatively affect someone with chronic dry eye. If you have a social habit, try reducing your consumption and giving your eyes a chance to hydrate.

Vision-Friendly Diet

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THE WIDE WORLD OF DRY EYE

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These foods and vitamins are all great for healthy vision and may reduce dry eye discomfort:

- Vitamin A
- Vitamin C
- Vitamin D
- Fish containing omega-3 (tuna, salmon)
- Antioxidants
- Flaxseed oil

Lubricating eye drops provide moisture to dry eyes and relieve you from painful symptoms. These products are also known as artificial tears. The better eye drop choices are preservative-free brands, especially if you wear contact lenses. Preservative-free artificial tears do expire, but they won't irritate your eyes if you use eye drops often.

People with more severe dry eye symptoms may prefer a lubricant ointment. These products are more viscous and don't wash out of your eyes as quickly. Ask your optometrist which products they recommend that are safe for your vision and symptoms.



Optimize Your Digital Workstation

Set your eyes up for success if you need to use computer screens for long stretches. Try to have your screen at eye level and keep your back at a 90-degree angle to your chair. This will help optimize your viewing angle and reduce some fatigue and dry eye associated with digital eye strain.

Blinking exercises can help keep tears flowing normally while you're on the computer. Here are a couple of blinking rhythm exercises you can try throughout the day:

- Close both eyes normally, pause for 2 seconds, and open.
- Close the eyes normally, pause for 2 seconds, and then squeeze your eyelids together tightly for 2 seconds. Open your eyes.

Ask your local eye care professional if they have blinking exercises that can help keep your eyes moisturized.

THE WIDE WORLD OF DRY EYE



DID YOU KNOW?

The American Optometrists Association and the Canadian Association of Optometrists recommend the 20-20-20 Rule. The rule is simple and should be used any time you spend extended time on a digital screen.

Every 20 minutes, take a 20-second break, and stare at something 20 feet away. This type of patterned focus breaks up your near-vision work. This helps reduce eye fatigue and dry eye symptoms while you're working on the computer. Try it!

Try Scleral Contact Lenses

If you wear contacts and are burdened with dry eye, consider switching to scleral lenses. Scleral lenses are more dome-shaped than conventional contacts and arch over the cornea resting on the sclera (white part of your eye). This can benefit dry eye patients because:

- The dome shape creates a bowl over your eye, which is then filled with artificial tears or other soothing solutions.
- Your eyes stay hydrated throughout the day as this reservoir is in constant contact with your eye's surface.

Discuss scleral contact lenses with your optometrist to determine if you're an ideal candidate for this treatment.

Improve Your Air Quality

You won't always be able to control the air in your environment. But keeping the air supply in your home and your workstation moisture-friendly can help reduce irritations and symptoms connected to chronic dry eye.



THE WIDE WORLD OF DRY EYE



The following strategies can all improve negative dry eye symptoms:

- Turn off air conditioners entirely or at least lower AC settings on very hot days.
- Do not aim fans directly in your face and avoid wind gusts near open windows.
- Use air filters in your home's HVAC systems and replace them often.
- Invest in a humidifier, either a central system or a portable humidifier.
- Consider placing air purifiers in the rooms you spend the most time in.

Practice Eyelid Hygiene

Because your eyelids contain glands that secrete tears, they can sometimes become clogged or dirty. Keeping up with proper eyelid hygiene is an easy way to lower the risk of **blepharitis** and eye irritation.

Inflammation of your eyelids can disrupt tear production. And abnormal tear production leads to dry eye.

Eyelid scrubs are specialized personal cleaning products designed to treat inflamed eyelids. These products wash away bacteria, residual oil, and crusts or crumbly deposits along your eyelashes. There are over-the-counter eyelid scrubs available but speak to your eye doctor about prescribed products that may be more effective with dry eye.

Use a Warm Compress

Because your eyelids contain glands that secrete tears, they can sometimes become clogged or dirty. Keeping up with proper eyelid hygiene is an easy way to lower the risk of **blepharitis** and eye irritation.

For many people, quick and effective relief of dry eye symptoms comes from a warm compress. A warm compress is a small towel or cloth that's been soaked in hot water, folded, and placed over the eyes for 5 to 10 minutes.

What does a warm compress do? The immediate effect is soothing, as the heat and moisture hydrate your itchy, burning eyes. But a warm compress can also unclog your meibomian glands. These glands, which line the eyelids, produce the lipid layer in a healthy tear film.

Beyond the relaxing and relieving sensation, warm compresses can help keep your tear production more regular and your dry eye at bay.

YOUR DRY EYE THERAPY IS UNIQUE



Explore Dry Eye Medications

Prescription medication may be an appropriate treatment for those who suffer from more severe or painful dry eye symptoms. Keep in mind that dry eye medications must be approved and that you require a prescription for medicated dry eye treatments.

The eye care industry continually strives for effective and practical dry eye treatment solutions. Current FDA-approved dry eye medications include:

- Ocular corticosteroid to be used as an eye drop.
- Anti-inflammatory drops with active ingredients.
- Nasal spray that stimulates tear production.

Speak to your optometrist about products and brands available in your region, the positives and negatives of each medication, and the treatments you qualify for.

Dry eye is a condition affecting more people each year. The symptoms are unpleasant and have a negative impact on your quality of life. Red, sore, itchy eyes can be caused by many different factors, such as air quality, other diseases, computer usage, and lifestyle choices.

There is no generic formula for dry eye treatment. Recommended therapies are dependent on your unique dry eye situation, and the results can vary from person to person. The good news is that professionals across the optometric community are working together to find better treatments that help more people feel relieved.

Comprehensive eye exams and a dry eye diagnosis are the first steps to managing the symptoms. From there, you can discuss treatment options and strategies with your eye doctor, because the perfect dry eye treatment package is different for every pair of eyes. And your eyes deserve to feel fresh.

New dry eye treatments include IPL (Intense Pulse Light) and thermal heating systems so book a dry eye assessment with us today to find out what will work best for your dry eye situation.