

candid answers

about dry eye



All About Dry Eye

Do you have dry eyes? Up to 12 million Americans suffer from a disease called dry eye syndrome. People with dry eyes frequently experience burning and stinging of their eyes, their eyes often feel sticky, and their eyes are often red. Some people with dry eyes also have periods when their eyes get so watery that tears spill over their eyelids and run down their cheeks.

Your eyes normally make small amounts of tears all day long. Tears play several important roles in keeping your eyes healthy and your vision clear. Tears lubricate the eye's surface, wash away debris, provide a smooth surface to help keep your vision clear, and also contain natural antibiotics that keep your eyes safe from germs that might cause infections.

Tears coat the eye in a smooth film made up of three separate layers. The layer of tears closest to the front surface of the eye is called the mucin layer. Its job is to smooth out the uneven spots on the eye surface. Next, a layer of aqueous tears covers the mucin layer. The aqueous layer is watery, and makes up the majority of

the tear film. Its job is to lubricate the eye and keep it moist. The final layer of the tear film is an oily layer called the lipid layer. This is the outermost layer, and its job is to cover the aqueous layer and prevent it from evaporating.



Each layer of the tear film is made by a different part of the eye. The mucin layer is made by the eye surface itself. The aqueous layer is made by a tear gland tucked under the upper eyelid. And the

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lipid layer is made by small glands in the eyelids. For the tear film to do its job, all three layers have to be in their proper places in the correct amounts, like a recipe. If any layer is missing or abnormal—which can happen for a number of reasons—the

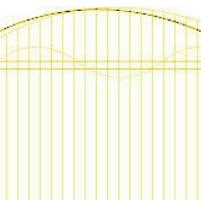
Dry Eye: Why is it a disease and not just a nuisance?

tear film becomes disorganized and no longer soothes the eye like it should. When that happens, the symptoms of dry eye syndrome occur. The front surface of the eye gets dried out (causing stickiness)

and gets inflamed (causing stinging and burning). Once it gets inflamed, the eye ignores the proper tear film recipe and starts making large quantities of the aqueous layer in an effort to soothe itself. These bad tears don't soothe the eye at all—they just run down your face, washing away the mucin and lipid layers as well. This makes the eye even more irritated, so it makes even more bad tears, and the cycle continues.

For some people, the stinging and burning and redness and watering may seem like little more than a nuisance, but in fact, if left untreated, dry eye syndrome can lead to serious eye problems, including blindness. Dry eyes are inflamed eyes. Inflammation of the front surface of the eye increases the risk of some infections, and can also lead to scarring. Once scarring occurs, permanent loss of sight can occur.

If you have symptoms of dry eye syndrome, ask your doctor for a dry eye evaluation. Treatments are available to halt the disease and save your sight.



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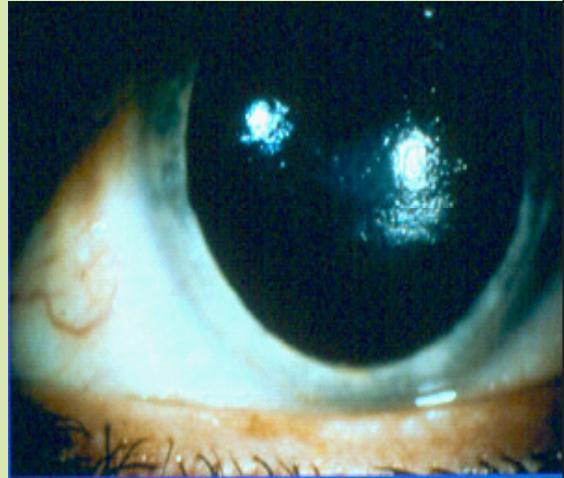
What Can I Do for My Dry

Dry eye syndrome is a common condition that affects as many as 10 million people in the United States. Symptoms of dry eye syndrome include burning and an itchy or scratchy sensation, like having sand or grit in your eyes. Many people with dry eye syndrome have intermittent blurry vision that temporarily improves with rapid blinking. There are many causes of dry eye syndrome, but in general, the condition occurs because your tears are either abnormal or they are evaporating from your eye's surface too quickly.

Dry eye syndrome is often a nuisance, and in some cases, can lead to scarring of the

eye's surface with loss of vision. There are several treatments available. These range from simple lifestyle modifications to prescription medications, depending on the severity of the condition.

- Insufficient tear film and/or inadequate quality of tears
- More common with aging
- Symptoms – excess tearing/ foreign body or gritty feeling



If you have mild dry eyes, you may be able to improve your symptoms just by changing your environment. Sitting too

ry Eyes?

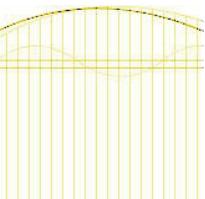
close to a heating or air conditioning vent exposes the eye to a constant flow of forced air, which can make tears evaporate too quickly. Most heating systems dry out your home's air even if you don't sit too close to the vent; a humidifier can help put moisture back into the air. Cigarette smoke can irritate and dry out the eye surface as well, and quitting smoking often improves symptoms of dry eye syndrome.

If your eyes don't produce enough tears or don't produce healthy tears, there are tear replacements available. These artificial tears are sold over the counter in most drugstores and grocery stores. If your symptoms are mild to moderate, putting artificial tears into your eyes two to four times daily often helps relieve your symptoms. Artificial tears are available in multi-dose bottles and single-dose vials. The multi-dose bottles are less expensive but contain preservatives that some people cannot tolerate more than four times daily. The single-dose vials contain no preservatives, and can be used more than four times daily, but they are generally more expensive.

If you require artificial tears more than four times daily, you may benefit from punctal plugs. The punctum is the opening in the lower eyelid through which your tears drain away. Plugging the punctum makes your tears—or artificial tears—stay on your eye surface longer, which improves your dry eye symptoms. Punctal plugs are quickly, easily, and painlessly inserted during an office visit, and provide significant relief for many dry eye sufferers. If for any reason you are unsatisfied with them, they can be removed as easily as they are inserted.

Moderate to severe dry eye may require medical therapy. Prescription eye drops are available that stimulate your tear glands to produce more of your own natural tears. All medications have side effects, and prescription medications can be costly, so this solution may not be for everyone.

Based on your lifestyle and the severity of your symptoms, your doctor will work with you to design a treatment plan to make your eyes comfortable.



Treatment Options

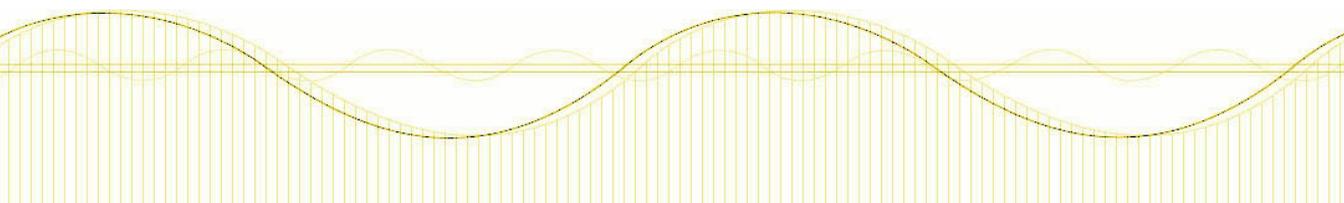
Your tears are important in keeping your eyes healthy. If you have dry eyes, many different treatments are available to maintain moist and healthy eyes. Your doctor can help you develop a treatment plan that is right for you. Some of those treatments may include:

Environmental changes: Mild dry eyes can often be improved by making simple changes in your surroundings. One of the most common problems is air blowing in your face, which can evaporate your tears faster than your eye can make them. Don't sit directly in front of a heating or air-conditioning vent at home or at work, and in the car, make sure the vents are not aimed directly into your face. Avoid using hair dryers, or at least shield your eyes when using one. If you smoke, you should seriously consider quitting, because smoking also aggravates dry eyes.

Tear replacement therapy: If the environmental changes alone don't restore your eyes' moisture level, many over-the-counter eye drops—called artificial tears—are available. These

drops are highly effective in soothing dry eyes for most people, but they must be used frequently—often 4-6 times a day—in order to maintain constant moisture throughout the day. Artificial tears are available in multi-dose bottles and in single-dose vials. The bottles are easier to handle and contain preservatives so that the tears won't spoil before you use the whole bottle. Some people develop allergies to the preservatives if they use the drops more than 3-4 times a day. The single-dose vials do not contain preservatives, and are recommended for anyone who needs to use the drops more than 3-4 times a day. These products can be purchased without a prescription in any supermarket or drug store. When selecting artificial tear products, avoid anything that “gets the red out,” because those products contain medications that can make your eyes worse instead of better.

Punctal plugs: You have a tear duct in the inner corner of each eyelid (upper and lower). As new tears reach your eye, old tears either evaporate or drain away into the nose through the tear ducts (which is



why you get the sniffles when you cry). The opening to the tear duct is called the punctum, and if artificial tears make your eyes feel better, but you have to put them in very often to keep them moist, your doctor can put a small plug in the tear duct punctum to prevent your tears from draining away. By making your tears last longer, you may maintain eye moisture with fewer tears overall. This simple procedure can be done in the office in just a minute or two, is painless, and if you don't like them, they can be removed just as easily. The surgical procedure is somewhat expensive and the plugs may fall out.

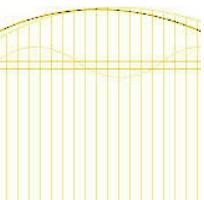
Prescription medications: A prescription medication called cyclosporin is now available to help relieve dry eye symptoms. Cyclosporin helps your tear glands to produce more tears, but with some trade-offs. The medication is more expensive than other treatments for dry eyes and may sting or burn.

Remember, your doctor can help you develop a dry eye treatment plan that is right for you.

Over the counter artificial tears are the most common treatment for dry eye.



Information in this booklet provided by BSM Consulting.



Women and Dry Eye

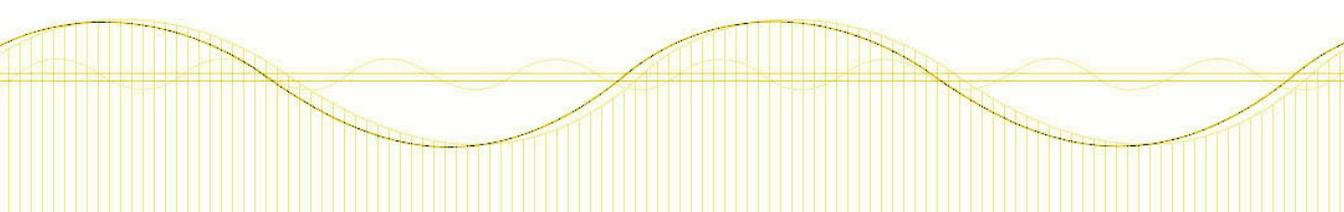
The cause of dry eye syndrome is unknown, but the disease becomes more common as we age, and is particularly common in women. Dry eye syndrome affects women two to three times more often than men. This is thought to be related to hormones. Male hormones (such as testosterone) seem to be good for the tear glands, and female hormones (particularly estrogen) seem to be bad for the tear glands. In a recent study, women who were on hormone replacement therapy after menopause were at higher risk for developing dry eyes. Compared to women not receiving hormone replacement therapy, women using estrogen alone were 70 percent more likely to develop dry eyes, and women on both estrogen and progesterone were 30 percent more likely to develop dry eyes. By one estimate, 1 in 20 women over the age of 50, and 1 in 10 over the age of 75, have dry eye syndrome. This amounts to over 3.2 million middle-aged or older women with dry eye syndrome in the US alone.

One particular form of dry eye syndrome occurs in patients with Sjögren's

syndrome. Patients with Sjögren's syndrome suffer from dry eyes and dry mouth, because their bodies mistakenly produce small molecules that attack their moisture-producing glands, in addition to causing other problems, such as rheumatoid arthritis or lupus. Ninety percent of people with Sjögren's syndrome are women.

Dry eye syndrome may sound like more of a nuisance than a serious problem. But if left untreated, severe cases of dry eye syndrome can result in permanent loss of sight.

If you have dry eye syndrome, there are numerous treatments available to help protect your eyes and your sight. For many dry eye sufferers, small changes in their daily habits can make the problem better. For others, tear replacement drops, medications, and plugs to block tears from escaping once they reach the eye surface are all effective in reducing or eliminating dry eye symptoms. Your doctor can help you develop a treatment plan that's right for you.







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