

## Dry Eye: Why is it a Disease and not Just a Nuisance?

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.

Aging causes a gradual decrease in production of tears and individuals over 60 make less than half the tears as a thirty year old. A number of medical conditions such as rheumatoid arthritis and various medications can also diminish tear production.

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.

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**“Tears play several important roles in keeping your eyes healthy”**

## The Importance of Comprehensive Eye Examinations

We often seek medical attention if our eyes hurt, or turn red, or if our vision becomes blurry. But we don't often get our eyes examined regularly if we are not having any problems with them. Routine eye examinations are important even if our eyes and vision are fine—because many blinding eye diseases have few or no warning signs until they have taken away some or all of our vision.

The most common cause of blindness in the United States is diabetic eye disease. In the early stages, when it is most easily treated, diabetic eye disease has no symptoms. The only way for an individual with diabetes mellitus to know if he or she has diabetic eye

disease is to get a yearly comprehensive medical eye examination.

The second most common cause of blindness in the US is glaucoma. Glaucoma is called the silent thief of sight because it has no symptoms at all until the disease is very advanced. And in glaucoma, once vision is lost, it can never be regained, so finding it in the advanced stage is often too late to save the sight. Glaucoma is common in older adults, but can occur at any age. The only way to know if you have glaucoma is to have a comprehensive eye examination on a regular basis. Almost all glaucoma, when treated, can be successfully controlled.

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### Office Hours

Monday thru Friday

8:00 am—5:00 pm

### Information / Appointment Line:

612-338-4861 or

1-888-448-3177

## Laser Vision Correction: A Solid Investment

### The real cost of laser surgery vs. glasses and contact lenses

Everyone likes a good investment, and we are all looking for ways to save money in this tough economy. One way of saving money, as well as making a serious investment in your personal well-being, can be to have laser vision correction (refractive surgery). Although the decision to have refractive surgery should be made primarily on life style and medical reasons, the economic part of the equation is intriguing.

How can you save money by having refractive surgery? When you “do the math” and add up all the costs of contact lenses and glasses over time, the total can be a little surprising. Here are a couple of breakdowns that show how this works:

	Typical Contact Lens Wearer		Laser Vision Correction Surgery	
	Yearly	Ten Years	Yearly	Ten Years
Surgery	\$0.00	\$0.00	\$4,900.00	\$4,900.00
Eye Exam	\$200.00	\$2,000.00	\$200.00	\$2,000.00
Prescription Glasses	\$170.00	\$1,700.00	\$0.00	\$0.00
(One pair \$340 every two years; bifocals or designer frames can cost much more)				
Contact Lenses	\$576.00	\$5,760.00	\$0.00	\$0.00
(\$48/month, some are more)				
Contact lens supplies	\$144.00	\$1,440.00	\$0.00	\$0.00
<b>Total</b>	<b>\$1090.00</b>	<b>\$10,900.00</b>	<b>\$5,100.00</b>	<b>\$6,900.00</b>
	(about \$90.00 a month)		(about \$57.00 a month)	

This assumes that you don't purchase any prescription sunglasses (add \$170.00 a year based on a \$340.00 pair every two years), you don't wear reading glasses with your contact lenses (add anywhere from \$25.00 to \$75.00 a year for the over-the-counter kind), and you don't wear sports glasses (another \$170.00 per year, based on the two year replacement pattern). This also assumes that you don't have any infections or other problems from wearing your contact lenses which might require extra doctor visits and prescription medications, which can run into quite a bit of additional expense depending on deductibles and co-pays.

Depending on your individual expenditures, this means that you would have paid for laser vision correction in around six years with the normal amount you spend on your eye care in that time frame. When you think about how many years you've worn glasses and contact lenses, how much that has cost you so far, and how many years you might be wearing corrective lenses in the future, then the total for laser vision correction seems much more reasonable.

When you make an appointment for your annual eye exam with Dr Sher, you can also be evaluated to determine if you are a candidate for laser vision correction. There is no additional cost for the refractive surgery testing, and you still receive all of the normal services of your routine examination. Be certain to let the scheduler know that you wish to have this evaluation when you call.

**“The normal amount spent on eye care in six years would pay for laser vision correction.”**



Dr. Neal A. Sher

#### Neal A. Sher, MD, FACS

Eye Care Associates, PA  
 Medical Arts Building, Suite 2000  
 825 Nicollet Mall  
 Minneapolis, MN 55402  
 Telephone: 612.338.4861  
 Facsimile: 612.333.8306  
 Email: info@drsher.com  
 Website: www.drsher.com

## Happy Patient Letters

***A recent letter from a soldier who had laser vision correction performed by Dr. Sher without charge.***

Dear Dr. Neal Sher,

The gift of sight I have received from you and the Phillips. Eye Institute is more appreciated than you can ever know. As an experienced combat veteran, prior to having the PRK done my eyesight was my greatest vulnerability. No man wants to admit to a weakness but without my eye glasses I was legally blind.

During my last tour in Ramadi, Iraq some of my daily concerns were based on where my glasses were. Most nights I slept on a small cot with no table or chair to place personal belongings. Often there were dust storms and when they occurred my glasses were completely covered, so much so that I could not see when I initially put them on.

The vigorous activities I was tasked to perform made it necessary for me to consider keeping my spare glasses readily available. The way our uniforms were styled (I wore Desert Camouflage Uniforms) it was difficult to find safe holding places on my person for my spare glasses in case my primary pair were broken or damaged.

Going to the firing range and being fitted for gas masks used to be a long drawn out experience. Wearing eyeglasses makes firing, particularly when in full battle rattle, more of a challenge and when being fitted for a gas mask the eye inserts did not always fit properly restricting peripheral vision and sometimes preventing a proper seal on the mask. All of this is easier for me now because of the procedure you did to restore my eyesight.

Sincerely,  
Joel O., US Army



## Dry Eye: Why is it a Disease and not Just a Nuisance? (continued from page 1)

The final layer of the tear film is an oily layer called the lipid layer. This outermost layer, covers the aqueous layer and prevents 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 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 tear film becomes disorganized and no longer soothes the eye.

When that happens, the symptoms of dry eye syndrome occur. The front surface of the eye dries out (causing stickiness) and becomes inflamed (causing stinging and burning). Once inflamed, the eye ignores the proper tear film recipe and produces large quantities of the aqueous layer in an effort to soothe itself.

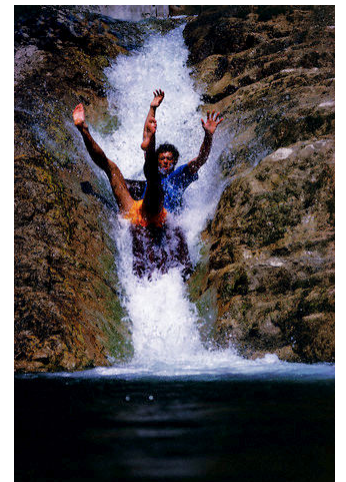
This type of tears doesn't soothe the eye much—they just run down your face, washing away the mucin and lipid layers as well. This makes the eye even more irritated, so it makes even more aqueous tears, and the cycle continues.

For some people, the stinging, burning, redness and watering may seem like little more than a nuisance. In fact, if left untreated, dry eye syndrome can lead to more serious eye problems. 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.

There are a wide variety of treatments for dry eye. These include various type of artificial tears and tear ointments.

Topical medications such as Restasis can increase tear production. Occluding the tear drainage system with tiny tear duct plugs is another easy and effective treatment used to treat some patients. Dr. Sher can determine the best treatment for your dry eye

**“If left untreated, dry eye syndrome can lead to serious eye problems.”**





**NEAL A. SHER, MD, FACS  
EYE CARE ASSOCIATES, PA**

Medical Arts Building, Suite 2000  
825 Nicollet Mall  
Minneapolis, MN 55402  
Website: [www.drsher.com](http://www.drsher.com)  
Telephone: 612.338.4861  
Facsimile: 612.333.8306  
Email: [info@drsher.com](mailto:info@drsher.com)

**Neal A. Sher M.D.** is an internationally recognized expert in laser vision correction and has focused his practice on refractive surgery for almost two decades. He has performed thousands of procedures. He was one of the first surgeons in the world to perform laser vision correction and one of the initial researchers to participate in those clinical trials. Dr. Sher was one of the founding members of the renowned Phillips Eye Institute, where he also served as Chief of Ophthalmology. As an author and lecturer who has written numerous scientific articles and textbook chapters on refractive surgery, Dr. Sher is frequently asked to lecture in the U.S. and abroad. He is an Adjunct Clinical Professor of Ophthalmology at the University of Minnesota Medical School and a Fellow of the American College of Surgeons and the American Academy of Ophthalmology.



## **The Importance of Routine Eye Examinations** (continued from page 1)

The third most common cause of legal blindness among Americans over age 50 is age-related macular degeneration. In the early stages of macular degeneration, treatments can be used to prevent the disease from getting worse. But the early stages of macular degeneration have no symptoms. The only way to know if you have early macular degeneration—and to start treatment to prevent it from getting worse—is to have routine eye examinations on a regular basis even if your eyes seem fine. A number of new treatments for macular degeneration have been developed in the last five years including specialized drugs that inhibit blood vessel growth.

These are just a few of the eye diseases that can cause visual loss without your even knowing you have them. To be safe, you should have a thorough eye examination on a regular basis to be sure your eyes are as healthy as you think they are. Finding eye diseases as early as possible gives you the best chance of saving your sight.

How often should you have a routine eye examination?

Children should have their first examination, including a measurement of vision, before they begin kindergarten. Their vision should be measured at least every few years to make sure that sight is developing normally. It is a good idea for teens to have a full eye examination before beginning to drive, to make sure they will be safe behind the wheel. After that, adults should consider having an eye exam every year or two beginning at age 40, and at least once a year after age 50 when the blinding diseases listed above become more common. Patients who have had eye surgery such as cataract, PRK or LASIK should be seen annually.

There are a few exceptions to these guidelines. People with diabetes should have an eye examination every year starting when they are diagnosed with diabetes, no matter how old they are. People who have relatives with eye diseases, such as glaucoma or macular degeneration, should have examinations once a year beginning as soon as age 30.