



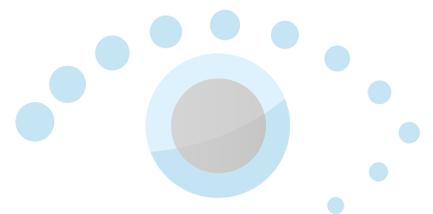
Your Aging Eyes

A Guide to Maintaining Your Best Vision After Age 40



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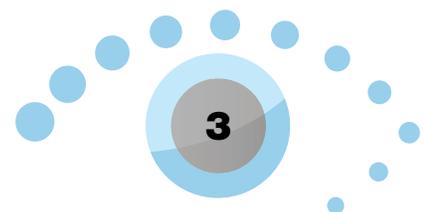
Introduction

Your Eyes After 40: See Young and Stay Young

It's a fact of life...as we get older our bodies begin to show the signs of aging. The first symptom of aging eyes appears for most of us in our early-to-mid 40s. You may notice a blurring of your close-up vision, and find that you need reading glasses, or magnifiers, to use your mobile phone or read labels.

We all age differently – depending on our genetics, environmental risk factors and lifestyle choices. And our eyes are no different from any other body system. The earlier we start preventive measures, the less likely we are to experience problems later.

Once you reach the age of 40, it's time to start really paying attention to your eyes: scheduling regular eye exams, making sure you're getting all the right tests, and asking your eye doctor the right questions. What you do now can go a long way toward keeping your eyes healthy as you age.



Presbyopia

It's Time for Reading Glasses!

Are you holding books and magazines at arm's length to read them? You have probably developed presbyopia. Presbyopia is a refractive eye condition where the lens has become hard and inflexible with age, making it difficult to focus actively on nearby objects. Presbyopia is a normal part of aging and is not preventable.

Symptoms

Presbyopia causes blurred near vision, especially in low light, or eyestrain when reading for long periods.

Diagnosis

Presbyopia can be diagnosed in a comprehensive eye exam. Your eye doctor will test your ability to read up close.

Treatment

Non-prescription glasses: Reading glasses sold over-the-counter range from least powerful (+1.00) to most powerful (+4.00). When purchasing them, try on different strengths to determine a comfortable reading distance for you.

Prescription glasses or contacts: If over-the-counter glasses aren't strong enough or if you already need prescription lenses for nearsightedness, farsightedness or astigmatism, your doctor can fit you for contacts or glasses. Bifocal lenses have come a long way and can now be fitted into many stylish frames.



Fact:
Most people
have some
degree of
presbyopia by
age 40.

Presbyopia *continued*

Surgical Options

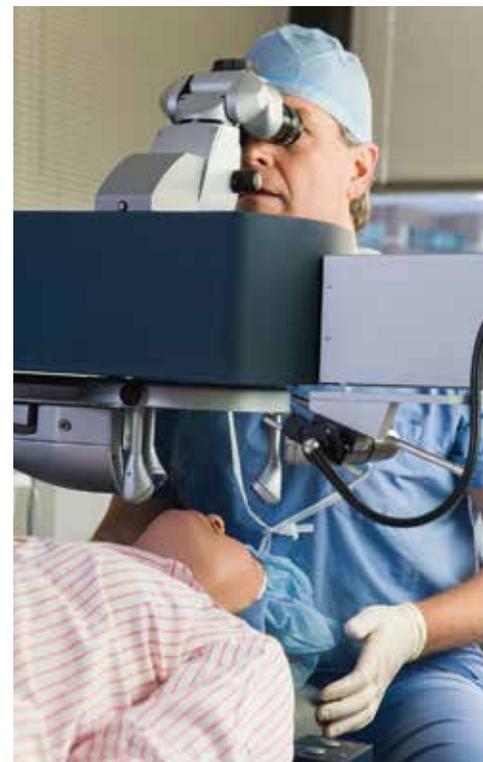
While some people need glasses as children, others require them as they age. If you wish to avoid glasses or contacts, there are options you may wish to consider:

Refractive surgery permanently changes the shape of the cornea. This change in eye shape restores the focusing power of the eye by allowing the light rays to focus precisely on the retina for improved vision. There are several types of refractive surgeries, but the most popular are **LASIK** and **PRK (Photorefractive Keratectomy)**.

Both procedures are effective in correcting low to moderate levels of nearsightedness, farsightedness and astigmatism. Some patients with presbyopia may benefit from PRK but could require reading glasses after surgery to obtain sharp near vision.

Both LASIK and PRK can be used to create monovision, where one eye is corrected to focus well up close, while the other eye is set for distance vision. Before considering refractive surgery, many doctors recommend people try monovision contacts to determine if they can adjust to this kind of correction.

Lens implants: Lens replacement involves the removal of your clear natural lens and the insertion of a synthetic lens inside your eye. This procedure, called intraocular lens (IOL) implant, is similar to cataract surgery. In recent years, there have been significant advances in this procedure, and there are various options, including multifocal lenses allowing you to seeing close up and at a distance.



Glaucoma

Your Eyes Under Pressure

Glaucoma is not just one eye disease, but a group of eye conditions resulting in optic nerve damage. Abnormally high pressure inside your eye (intraocular pressure) usually, but not always, causes this damage.

There are two types of glaucoma that occur in aging eyes:

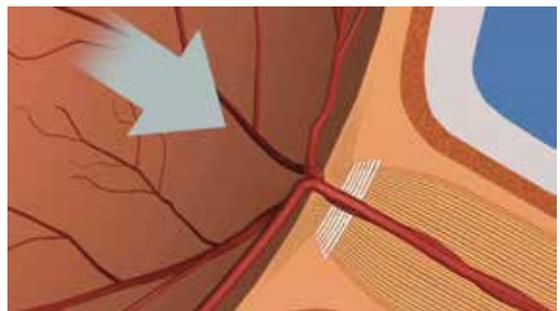
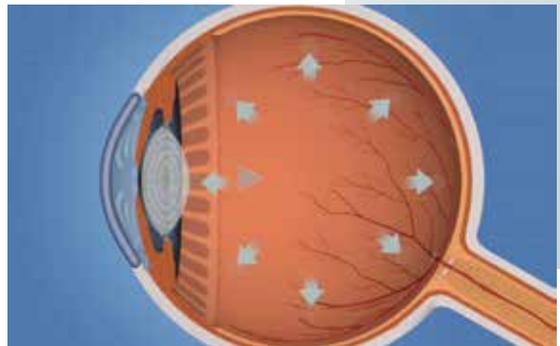
Open-angle glaucoma has no noticeable signs or symptoms except gradual vision loss. It is the most common type of glaucoma, is progressive, and slowly damages the optic nerve and causes vision loss. The right and left eye may progress at different levels.

Closed-angle glaucoma accounts for about 10 percent of glaucoma cases in America. The iris and lens block the movement of fluid between chambers of the eye and cause pressure to build up. Acute closed-angle glaucoma can happen suddenly and requires immediate medical attention to prevent permanent damage

Risk Factors

If you're over the age of 40, you have a higher risk for glaucoma. Race can also affect your risk, and African Americans and older Hispanic Americans have a greater chance of developing the disease. Having diabetes or having a close relative who has glaucoma puts you in a higher risk category.

Fact:
Glaucoma is the leading cause of irreversible blindness worldwide.



Glaucoma *continued*

An eye injury, an eye tumor or eye surgery can also be responsible for initiating glaucoma. Even some medications can make you more susceptible. Long-term use of corticosteroids such as prednisone and cortisone can cause serious damage to the optic nerve by elevating pressure in the eye.

Diagnosis

Most glaucoma is diagnosed through a routine pressure check, using tonometry. This test is a simple, painless procedure that measures your intraocular or internal eye pressure.

Treatment

The objective of glaucoma treatment is to reduce intraocular (inner eye) pressure. Medicated eye drops are the most common form of treatment. These medications work well for many people, but using eye drops is often more complicated than most people realize or wish to manage.

Your eye doctor may also recommend one of several surgical procedures. For closed-angle glaucoma, laser iridotomy may be recommended. Laser trabeculoplasty is often used to treat open-angle glaucoma. One of the newest technologies is the MIGS procedure, an emerging technology recently approved by the FDA.

Prevention

There is no way to prevent open-angle glaucoma, but you can prevent vision loss from the condition. Early diagnosis and careful management are critical. Individuals with a family history of open-angle glaucoma and anyone 60 and over should have an eye exam every one to two years, or as recommended by your eye doctor.



Cataracts

Easy to Diagnose. Easy to Treat.

Your eye is like a camera and uses a lens to focus. This lens is made up mostly of water and protein, arranged in a precise pattern to keep the lens clear and let light pass through it. But as you age, some of the protein may clump together and start to cloud a small area of the lens. This cloudy or blurry spot is called a cataract.

At first, the cloudiness in your vision may affect only a small part of the eye's lens and you may be unaware of any vision loss. Over time, though, it may grow larger, clouding more of your lens and distorting the light passing through the lens. If not treated, cataracts may impair or cause complete loss of vision, but this is completely reversible with surgery.



Risk Factors

Over the age of 70, almost everyone has some clouding in the lens of the eye. Having heart disease or diabetes may increase your risk. Many studies suggest that exposure to ultraviolet light is associated with cataract development.

Symptoms

People with cataracts usually do not experience symptoms like pain or discomfort in the eye. Your eye will also appear normal to others, until the cataract reaches an advanced state. Advanced cataract symptoms include:

- A discolored pupil that will look gray or white to others
- Cloudy vision
- Difficulty seeing at night or while driving
- Sensitivity to glare
- Seeing “halos” around lights
- Colors that look faded or yellowed
- Double vision in the affected eye

Cataracts *continued*

Diagnosis

Whenever you experience problems with your vision, you should schedule a comprehensive eye exam with your eye care professional. During the exam, your doctor will perform tests to determine if you have a cataract. If you do, he or she will review your options with you and help you decide if surgery is the next step.

Treatment

If you are diagnosed with a cataract, your early symptoms may be improved with new glasses, brighter lighting, anti-glare sunglasses or magnifying lenses. If these changes don't help, surgery is the only effective treatment. The process is simple, virtually painless and typically has a rapid recovery time.

More than 3 million Americans undergo cataract surgery annually, making it one of the most common procedures. Your surgeon will discuss with you which intraocular lens (IOL) should be inserted during your cataract surgery. Advanced technology IOLs can even improve your vision up close, far away and in the middle.

Phacoemulsification, or “phaco”, was developed to make surgery recovery time shorter and to reduce the risks involved with larger incisions. Some surgeons are now performing an emerging technology called Femtosecond Surgery which brings image-guided computer precision to cataract surgery.

Prevention

Cataracts are not preventable. Living a healthy lifestyle is the best way to slow their development.

- Eat a healthy diet
- Wear sunglasses and a hat when you're outside
- Take antioxidant supplements (vitamins A, C & E)
- Quit smoking
- Manage diabetes and heart disease
- Avoid toxic chemicals



Macular Degeneration

It Might Be Your Genes

Macular degeneration, or age-related macular degeneration (AMD), is a leading cause of vision loss, affecting 6.5 percent of Americans 65 or older according to the National Institutes of Health. It destroys a person's sharp, central vision, which is needed to see objects clearly and to do things like reading and driving.

There are two kinds of AMD. Dry macular degeneration – the more common form of the disease – is marked by deterioration of the macula, which is in the center of the retina. Wet macular degeneration is characterized by blood vessels that grow under the retina in the back of the eye, leaking blood and fluid.

Risk Factors

Recent studies indicate about half of AMD cases seem to be genetically related. Aging also increases the risk, with the risk particularly high among whites and females. Smoking also greatly increases your risk of developing AMD.

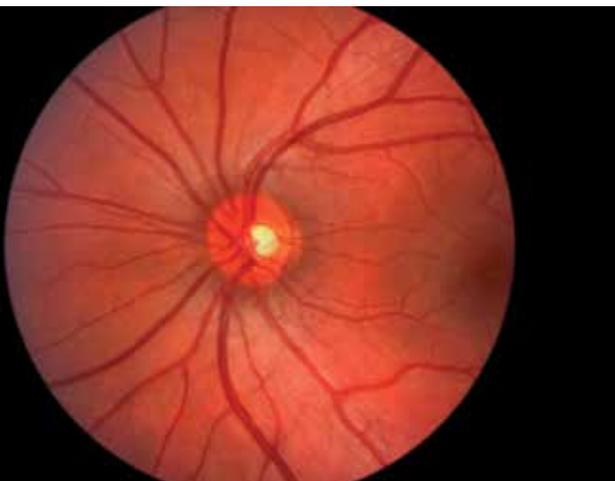
Symptoms

Macular degeneration is not painful, which may allow it to go unnoticed for some time.

Fact:

A significant number of macular degeneration cases have a genetic component.

Dry AMD: The most common early sign is blurred vision. Often this blurred vision will go away in brighter light. People may also see a small but growing blind spot in their field of vision. The vision changes for dry AMD tend to develop slowly. If only one eye is affected, the other may compensate.



Macular Degeneration *continued*

Wet AMD: The classic early symptom is that straight lines appear crooked. This results when fluid from the leaking blood vessels gathers and lifts the macula, distorting vision. A small blind spot may also appear in wet AMD, resulting in the loss of one's central vision.

Diagnosis

A comprehensive eye exam includes tests to detect macular degeneration. If your doctor sees any signs of AMD, he or she will likely take special photographs of your eyes to aid in diagnosis and treatment. Early detection of AMD is the key to slowing vision loss.

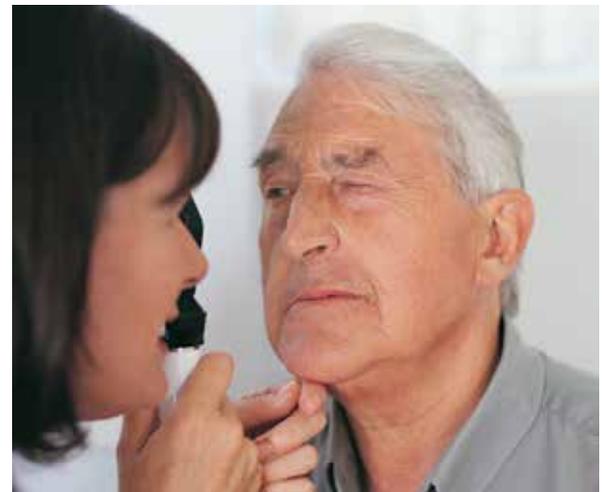
Treatment

Dry AMD: Very few treatments exist to treat dry AMD, but new drugs are being tested in clinical trials.

Wet AMD: Treatment most frequently begins with injections of drugs that reduce blood vessel growth. Photodynamic therapy (PDT) and thermal laser may be used to supplement these injections.

Prevention

Studies have shown that certain vitamins slow the progression of AMD. If you smoke and have a family history of macular degeneration, stop smoking and get a comprehensive eye exam from an ophthalmologist.



No More Tears

Dry eye is caused by a lack of tears, which are necessary for the normal lubrication of eyes and to wash away particles and foreign bodies. Some people just don't produce enough tears for healthy eyes. In other people, the tears evaporate too quickly because tear composition is not properly balanced.

Risk Factors

Women, particularly after menopause, are particularly likely to experience dry eye. People who work long hours at a computer are more likely to have dry eye, because they blink less often. Medications such as antihistamines, antidepressants and antihypertensive medications frequently make dry eye worse.



Persons with rheumatoid arthritis, diabetes and thyroid problems are more likely to have dry eye symptoms. Problems with inflammation of the eyelids, inflammation of the surfaces of the eye, or the inward or outward turning of eyelids can also cause dry eyes to develop.

Symptoms

Dry eye symptoms include burning, stinging, scratchiness, excessive irritation from the elements, discomfort from contacts and watering eyes. If the tears responsible for maintaining lubrication do not keep the eye moist enough, the eye becomes irritated. This prompts the tear glands to release a large volume, overwhelming the tear drainage system.

Fact:

Nearly 5 million Americans age 50 and over are estimated to have dry eye.

Dry Eye *continued*

Diagnosis

As part of an eye exam, your eye doctor can test to measure tear production. Newer methods of tear analysis can also evaluate the chemical composition of tears and enable the doctor to give appropriate medications to balance the tears to become more efficient in moisturizing your eye.

Treatment

Fortunately, most dry eye is easily treatable. Artificial tears, or eye drops, help lubricate and are available without prescription. Your eye doctor can also prescribe medications that help you produce more tears. Advanced artificial tears may offer optimal relief to patients in combination with prescription therapy.



Treating any inflammation of the eyelids or eye surface may also help. In more severe dry eye cases, the tear ducts can be blocked with tiny silicone or gel-like plugs – called punctal plugs – which temporarily close the small duct where tears drain from the eye. This is a simple, non-surgical in-office procedure.

Prevention

Remember to blink regularly when reading or staring at a computer screen for long periods of time. Avoid becoming dehydrated by drinking plenty of water and increasing the level of humidity in the air at work and at home. Wear sunglasses outdoors to reduce exposure to drying winds and sun.

A wide variety of common medications can cause dry eye by reducing tear production. Be sure to tell your eye doctor the names of all medications you are taking. Using nutritional supplements containing essential fatty acids may help decrease dry eye symptoms in some people.

Diabetes and Your Eyes

A Higher Risk of Eye Disease

If you have diabetes, you may face complications that can cause severe vision loss or even blindness. In fact, a person with diabetes is nearly twice as likely to get glaucoma. You should also be examined regularly for diabetic retinopathy, damage that happens to the retina's blood vessels with long-term diabetes.

There are two stages of **diabetic retinopathy**. The early stage is nonproliferative diabetic retinopathy, where blood vessels in the retina begin to leak. If the leakage results in accumulation of fluid in the retina, blurring of the vision can occur.

In the later stage, proliferative diabetic retinopathy, the blood vessels in the retina close, and abnormal blood vessels grow in their place. This can lead to vision loss, as well as detachment of the retina and even glaucoma.

Risk Factors

African American, Latinos and Native Americans are at particularly high risk of developing diabetic retinopathy because they are more likely to have diabetes.

Symptoms

Many people with early diabetic retinopathy have no symptoms. As diabetic retinopathy progresses, symptoms include blurred vision, floaters or shadows and missing areas of vision.

Diagnosis: A comprehensive eye exam is the only way to detect diabetic retinopathy in its early stages, before symptoms develop. In monitoring the disease, there are various tests that can help your eye doctor monitor the progression of the disease.

Fact:
Diabetic retinopathy is the leading cause of blindness among working age Americans.

Diabetes and Your Eyes *continued*

Treatment

Treatment does not usually reverse damage that has already occurred, but it will keep the disease from getting worse.

Panretinal Photocoagulation (PRP) – Patients with proliferative diabetic retinopathy are often treated with PRP. It is usually performed in an office setting, with anesthetic applied to the eye. Laser treatment can prevent blood vessels from leaking into the vitreous, which can impair sight.

Vitrectomy is laser surgery used when there is bleeding into the eye. It is performed in an operating room on an outpatient basis. An operating microscope and small surgical instruments are used to examine the inside of the eye and remove blood and scar tissue. A laser may be used to prevent further bleeding and abnormal blood vessel growth.

Injections — Increasingly injections of the same medications used to treat wet AMD are used to treat proliferative diabetic retinopathy.



Prevention

Since the early stages of the disease have no symptoms, everyone with diabetes should have annual eye exams. Closely monitoring blood sugar, blood pressure and cholesterol is important when preventing diabetic retinopathy.

Droopy Eyelids

Look Younger. See Better.

Do you look tired all the time from “drooping” eyelids or puffy bags under your eyes? Are eye creams not working anymore? Droopy eyelids can not only create an aging look but can also cause vision problems. Both the upper and lower eyelids can be rejuvenated, using revision surgery, or blepharoplasty.

Risk Factors

Aging skin and the effects of gravity are the primary causes of droopy eyelids. Some people have eyelids that sag more than others, due to the shape of their eyes.

Treatment

Blepharoplasty – usually performed on an outpatient basis – reduces the drooping eyelid tissue, improving the appearance of the eyelid, and producing a rejuvenated and more alert appearance.

In some cases, blepharoplasty is performed to improve vision.

Fact:
Blepharoplasty can help improve vision in some aging eyes.

The surgeon will make an incision along the natural fold of the upper eyelid and remove excess skin as well as some muscles and fat beneath the skin. The incision is closed with tiny stitches that will leave a fairly invisible scar. Afterward, the patient is monitored in a recovery room for a short time before being released.



Guidelines for Eyes Over 40

Because many diseases of the aging eye have no symptoms until they have progressed significantly, it is important to have a baseline eye exam at age 40. You and your eye doctor can decide how frequently you should be examined after that, based on your health status, lifestyle, environmental exposure and genetic factors.

While tests will vary based on your doctor and your medical history, most comprehensive eye exams include the following:

- Visual acuity to assess the sharpness of your vision, usually using the “Big E” or Snellen chart.
- Visual fields test, to determine if you have blind spots or peripheral vision issues.
- Cover test, which can identify strabismus or binocular vision problems.
- Retinoscopy, autorefractor or aberrometer, to approximate your eyeglass prescription.
- Refraction, to fine-tune the final eyeglass prescription using a phoropter.
- Slit lamp exam to detect common eye diseases and conditions. This instrument allows your doctor to examine the structure of your eye to assess its health.
- Glaucoma test, known as tonometry, measures the pressure within your eye.
- Dilation of the pupil and ophthalmoscopy to examine the optic nerve, retina and blood vessels.

Many people don't get eye exams until they're experiencing vision loss



Talk to your eye doctor or go to www.YourSightMatters.com to learn more about eye disease and what to expect in a comprehensive eye exam.

YourSightMatters.com

Powered by eye care professionals committed to preserving and restoring vision.

Your Sight Matters is a coalition representing over 300 ophthalmologists and optometrists, and the nurses and staffs of 50 surgery centers, who care for eyes across the United States every day.

For more information regarding vision health, please visit YourSightMatters.com.

