THE 10 EYE CONDITIONS

Your Eye Doctor **MUST** Screen
For to Keep Your Eyes Healthy and to Avoid Serious Damage

By Dr. Amy M. Neal & Dr. Michael R. Neal

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ABOUT THE AUTHORS

DR. AMY M. NEAL

Dr. Amy founded Lakeside Vision and has built the practice by earning each patient’s respect and trust. She takes pride in providing comprehensive thorough care for your entire visual system. With degrees from Wilkes University and The Pennsylvania College of Optometry, Dr. Amy is specialty-trained to detect and treat eye conditions like glaucoma, cataracts, diabetic & hypertensive retinopathy, and macular degeneration. She also diagnoses, manages, and treats dry eye syndrome, amblyopia (“lazy eye”), strabismus (“eye turn”), and performs and prescribes vision therapy.

Dr. Amy was one of the first InfantSEE program eye doctors in Pennsylvania. She is one of only 15 optometrists in the country to serve as a Clinical Director for the Special Olympics Opening Eyes Program. She was awarded the prestigious Young Optometrist of the Year award from the Northeast Chapter of the Pennsylvania Optometric Association in 2007.

DR. MICHAEL R. NEAL

Dr. Mike is part owner of Lakeside Vision, along with his spouse, Dr. Amy M. Neal. They started the practice in 2008. Since then, they have built the practice by incorporating cutting edge technology with friendly, happy eye care.

He is a graduate of the University of Alberta and the Pennsylvania College of Optometry. Dr. Mike is an expert when it comes to detecting and treating eye conditions like glaucoma, cataracts, diabetic eye disease, and macular degeneration. Dr. Mike enjoys implementing technology to raise the overall quality of our vision care. He also initiated the 5-Star Patient Service program at Lakeside Vision. He is also a huge hockey fan and carries his ice skates in his car, just in case he needs them.

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INTRODUCTION

Vision is our most dominant sensory organ. Your eyes are your body's most highly developed sensory organ. A far larger part of the brain is dedicated to vision alone, more so than to hearing, taste, touch, or smell combined. We perceive up to 80% of all impressions by means of our sight. And if other senses such as taste or smell stop working, it’s the eyes that best protect us from danger.

Therefore it is important not to take your eyesight for granted. It is the one organ we think won't fail us or be affected by conditions. Yet that is really far from the truth. When vision problems develop most of us will do everything in our power to restore our eyesight back to normal. We know how precious our sight really is.

We know that taking care of your eyes is IMPORTANT. The good news is that many eye problems and conditions can be treated if they are caught early. It is our goal in this eGuide to help you attain and keep your eyesight healthy, vibrant so you will be able to see whatever comes into your experience. We founded Lakeside Vision to bring great eye care to the people of the Lake Region. We strive to make sure EVERYONE has access to the latest eye care technology. One of the things we really believe in is pediatric eye care. We bend over backwards for the children of Hawley! We do everything necessary to help children learn to read, and it’s actually something we do really well.

Children face many new challenges as they go to school and experience the world. We want to ensure that they aren’t facing additional challenges to learning from their vision issues because 80% of learning is from our vision. Our commitment to providing the best care, advice, and comfort is based on our understanding and extensive use of advanced diagnostic testing and modern treatments. By staying on top of our field with all the amazing new advances in eye care, we can ensure that we offer Hawley the best in modern eye care.

We have a state-of-the-art optometry practice at Lakeside Vision. It’s goal to keep up with the latest technology in eye care so we can evaluate your eyesight and help you keep your eyes as healthy as possible! We aim to keep your eyesight top notch for as long as possible and maybe you won’t ever have to wear glasses or contacts!
In this eGuide, we are going to walk you through the 10 eye conditions which we evaluate for in every patient that walks through the door of our practice. It’s imperative that when you see your eye doctor, he or she also performs all of these tests.

As you age, it’s very important to get your eyes checked at least once a year. If you have diabetes, high blood pressure, or other health issues and concerns, you may need to go more frequently.

When the average person goes to the eye doctor, he or she receives a vision screening, which is a short exam that can reveal a vision problem. A vision screening does not evaluate the complete health of your eyes from front to back or check for early signs of serious eye conditions.

Please use this eGuide as a helpful tool to increase your knowledge of eye care so you can keep your eyes healthy especially when choosing an eye doctor. Before you see your eye doctor, find out what tests will be performed and inform the doctor of any health conditions you may have. The more you tell the doctor, the better they can monitor your eyesight and overall health. If your current eye doctor isn’t testing you for these 10 eye conditions, I’d highly recommend switching to another eye doctor. Our practice is currently accepting new patients. We are conveniently located in Hawley, PA. near the tristate area of NJ, NY, AND CT.

Not only do we have a state-of-the-art facility to test your eyesight, BUT we also have THE most progressive frames from around the world that you just can’t get anywhere else. (Currently, our favorite are our frames from Denmark!) Dr. Amy loves to find the most hip and up-to-date YET fashionable eyeglass frames that are unique and one of a kind.

Here’s our office info:
Email: greateyecare@lakesidevision.com
Phone: 570-226-1300
Location: 74 Welwood Ave #102, Hawley, PA 18428

We’d love to see you!
Enjoy this eGuide! Here’s to your amazing eyesight,

Dr. Amy M. Neal
Dr. Michael Neal
MYOPIA (NEARSIGHTEDNESS):

Myopia is more commonly referred to as nearsightedness. People with myopia can generally see close objects fairly clearly but struggle with objects further away. They generally have no problems when reading or working at a computer but will have difficulty seeing things like road signs or other far away objects.

Recent studies from the National Eye Institute suggest that up to 42% of the North American population has myopia to some degree.

Causes of Myopia:

Myopia is largely the result of your genetics and the physical size and shape of your eye. It is the result of light that focuses in front of your retina as opposed to on it. When the light reaches the retina, it is out of focus and requires correction.

If your eye is longer than the focusing power of your lens/cornea, myopia is the result.

Myopia generally stabilizes when you’re young, but it may continue to progress into adulthood, especially if left untreated.

Symptoms of Myopia:

Myopia is marked by difficulty with close vision. Kids may not recognize the signs of myopia due to personal ignorance, making it important that your child has regular eye exams.

- Difficulty focusing on objects unless very close
- Frequent squinting
- Challenges seeing items far away, such as road signs
Treatments for Myopia:

Myopia is generally managed via correct lenses (eyeglasses or contact lenses). Laser refractive surgery is another effective way to treat myopia.

Laser Refractive Surgery for Treating Myopia

Laser refractive surgery is an effective and often permanent correction for myopia. There are several versions of this type of surgery, though the most commonly known is LASIK. In effect, the laser reshapes the corneal tissue and corrects the refractive error. The procedure itself is relatively painless, with only a few days to a week of generally mild postoperative discomfort.

Hyperopia (Farsightedness)

Hyperopia is more commonly referred to as farsightedness. People with hyperopia can generally see distance objects fairly clearly but struggle with objects close up. Farsightedness is common, with approximately 25% of Americans having hyperopia of various degrees of severity.

Causes of Hyperopia:

Eye conditions that are a result of refractive errors change the way the light hits the retina. Where myopia is a result of light focusing in front of the retina, hyperopia is a result of light focusing “behind” the retina (as opposed to directly on it). People with farsightedness have shorter eyes than people with normal eyes.

Many kids are born with hyperopia but outgrow it as their eyes mature.

Symptoms of Hyperopia:

Squinting and straining to read are common indicators of farsightedness. Many people don’t notice the initial signs of farsightedness because they often develop gradually.

- Objects up close appear blurry, difficulty focusing on close-up objects
- Headaches or eye fatigue when reading or using a computer
- Moderate to severe difficulty reading
Treatments for Hyperopia:

Hyperopia is best managed via corrective lenses. Corrective lenses compensate for the refractive error, ensuring the light focuses properly on the retina.

Laser refractive surgery is also an effective way to correct hyperopia. In many cases, refractive surgery is a permanent fix for hyperopia.
Presbyopia is a progressive refractive error of the eye, gradually increasing in severity over time. All people will eventually experience some degree of presbyopia, as the condition is marked primarily by aging.

Presbyopia develops throughout your life, though its symptoms tend to become markedly more noticeable age 40 and older.

**Causes of Presbyopia:**

The exact cause of presbyopia is not completely understood at this time. However, evidence suggests that the lens in our eyes loses flexibility and becomes more rigid as we age. This makes it difficult to focus, as our focusing muscles can only exert so much force on the lens.

When we are young, the lens is more flexible and less rigid. Focusing on objects both near and far is much easier due to the flexibility of the lens. Even if we have some type of minor refractive issue such as astigmatism or myopia, we can often compensate for this issue by using our focusing muscles to slightly reshape the lens in order to bring images into focus.

With presbyopia, the gradual thickening of the lens combined with a loss in flexibility makes compensating for the refractive error more challenging.

**Symptoms of Presbyopia:**

Presbyopia is a gradual refractive issue. The changes occur slowly, over the span of months and years. Reading becomes more difficult, as does focusing on nearby objects and working at a computer.

- When your “arms are too short”
- Difficulty focusing or remaining focused on nearby objects
- Difficulty reading
- Eye fatigue or headaches after reading, working at a computer, or doing other close-up work
- Having to adjust your work area to provide more light, move objects of interest further away in order to better focus
• Squinting frequently, especially when reading

Causes of Presbyopia:

Presbyopia cannot be “cured” due to the way it progresses: the aging of the eye’s lens and surrounding focusing muscles means that it will always progress.

However, there are numerous ways to treat and manage presbyopia effectively. It’s important to note that due to presbyopia progression that you will need to check in with your eye doctor annually to ensure that your management plan is still doing its job.

Managing Presbyopia with Corrective Lenses: Eyeglasses & Contact Lenses

The most common correction for presbyopia is eyeglasses. Bifocal or progressive lenses are the most popular lens used to manage presbyopia. Many people use reading glasses as opposed to wearing a pair of glasses all day. Reading glasses will magnify the image, making it easier to read without having to strain to focus.

Contact lenses are also commonly used as a way to manage the developing symptoms of presbyopia. Like eyeglasses, contact lenses do not cure presbyopia- they simply correct the refractive error, enabling you to see clearer and with less effort.

Surgical Options for Correcting Presbyopia

There are numerous surgical options for treating presbyopia undergoing clinical trials. These surgeries include laser refractive surgery as well as replacement of the inflexible lens with an artificial intraocular lens.

Although there are a few surgical options available, surgical treatment of presbyopia is generally not recommended at this time. Most surgical options are not permanent; therefore, they may need to be repeated in the future.
Blepharitis is a big word for inflammation of the eyelids. This condition is a common cause of tired, sore, red eyes and eyelids, and crusty eyelashes.

**Causes of Blepharitis:**

It can be caused from dry eyes or eyelid infections. People will often have blepharitis and dry eyes at the same time which makes it confusing to determine which occurred first.

**The symptoms include:**

- Burning or stinging eyes
- Crusty debris at the base of the eyelashes
- Irritated watery eyes
- Itchy eyelids
- Red eyes

You may have one or all of these symptoms depending on the severity of the blepharitis, and you may even lose eyelashes.

This is a common cause of contact lens discomfort for some people.

**Treatments for Blepharitis:**

Blepharitis typically is a chronic condition, meaning it can come back frequently and be a recurring problem.

We can determine if you have this condition and prescribe an appropriate treatment such as eye drops, ointments and special eyelids scrubs.

The best way to avoid blepharitis or keep it from coming back is to clean your eyelids daily to prevent the buildup of bacteria on the eyelid margin. A number of non-prescription lid scrub products are available, or you can use the eyelid hygiene techniques described below.

Eyelid hygiene regimen: wash your hands, use a clean washcloth that has been soaked in warm water and place over your closed eyes for several minutes.
We do not recommend using diluted baby shampoo on your eyelids.

Your doctor may recommend nutritional supplements like omega-3 fatty acids to help keep your eyes moist and comfortable.

If you develop blepharitis while wearing contact lenses, you should discontinue wearing your contacts until the blepharitis has been successfully treated. Wearing contacts when you have eyelid inflammation can result in bacteria and other debris sticking to your contact lenses and causing pink eye or more serious eye conditions.

After your blepharitis has been successfully treated, you can resume wearing contacts. If you currently wear extended wear contact lenses, consider switching to daily disposable contacts, which have a lower risk of blepharitis-related problems.
Dry eye is the result of your body not being able to properly lubricate your eyes. This is due to either your eye not producing enough tears or the tears that are produced by your eye are low quality. Dry eye can be intermittent or persistent, and its symptoms are similar to those of allergic conjunctivitis, eye allergies or blepharitis.

Dry eye isn’t always curable, but it can always be managed so that the symptoms are mild at worst. It is important to note that successful management of dry eye is contingent on you following the treatment plan as directed by your eye doctor.

Causes of Dry Eye:

There are numerous known causes and risk factors associated with dry eye ranging from environmental, to behavioral, or medically induced. These include:

- Aging
- Medications including antihistamines, decongestants, antidepressants, acne medication, birth control, and many others
- Prior eye injury or eye surgery, including laser vision correction
- Wind, smoke, dry air, and other environmental variables
- Long periods of working at a computer
- Wearing contact lenses
- Hormonal changes as a result of menopause or certain medications
- Eating a poor quality diet
- Thyroid disease
- Autoimmune condition (Such as Lupus, Rheumatoid arthritis, Sjogren’s syndrome/triad)
Symptoms of Dry Eye:

- Eye fatigue
- Eye pain
- Red eyes
- Watery eyes
- Blurry, hazy vision
- A sandy, grainy/gritty feeling, as if something is in the eye
- Difficulty wearing contact lenses
- A stinging, burning sensation in the eye
- Eye discharge (stringy)

Treatments for Dry Eye:

Depending on the cause, there are numerous treatments for dry eye. These treatments include medication, artificial tears (lubrication), or physical treatments such as punctal occlusion.

- **Glasses:** An eyeglass frame will correct a person's vision and protect the eyes at the same time.

- **Medication:** The most common over the counter medication is an omega-3 supplement. There are currently only 2 prescription medications available to treat dry eye - Restasis and Xiidra. It can take several months of continued use for effects to reach their maximum.

- **Artificial Tears:** Artificial tears come in a variety of thicknesses and are used to provide lubrication to the eye. These may need to be applied multiple times per day, and the relief they provide is only temporary. Thicker versions of artificial tears may cause temporary blurring of vision; therefore, they are best to use before you go to sleep.

- **Physical Treatments:** Blocking the drainage canal of the eye is an effective way of forcing tears to stay on the eye longer, providing better lubrication and relief from dry eye symptoms. These are called punctal plugs. Punctal plugs are generally not felt by the patient, are made from silicone or collagen, and can be temporary or permanent treatment of dry eye.

- **Corneal Bandages:** Biologic corneal bandage devices placed on the cornea can reduce inflammation and simultaneously promote regenerative healing of the ocular surface.
Cataracts are the most common cause of vision loss over age 40, and worldwide it is the primary cause of blindness. More than 30 million Americans will have cataracts by the year 2020.

Cataracts tend to develop gradually, with symptoms slow to appear and intensify. The risk for developing cataracts increases significantly with age. Lifestyle factors, such as exposure to sun, also impacts cataract development.

There are three main types of cataracts:

- **Subcapsular cataract** – The cataract forms at the back of the lens. Steroidal medications significantly increase the risk of developing this type of cataract.

- **Nuclear cataract** – These cataracts form in the nucleus of the lens. These are most commonly associated with aging.

- **Cortical cataract** – White, spoke-like opaque artifacts appear in your vision. This cataract occurs in the lens cortex.

**Causes of Cataracts:**

The eye’s lens is made up of water and protein. The protein is arranged so that it is translucent. As we age, the configuration of the protein changes; it slumps together, obscuring vision. This is the beginning of a cataract.

The exact cause of cataracts is still unknown. However, research has found that many risk factors influence cataract development. These include:

- UV radiation from sunlight (tanning beds and other artificial sources also contribute)

- Medical concerns, such as diabetes and obesity

- Lifestyle factors, such as smoking

- Long-term use of corticosteroid medications

- Family history/genetics

- High blood pressure
Treatments for Cataracts:

Currently, the only FDA-approved treatment for cataracts is cataract surgery. This surgery is relatively routine and quite safe, with millions of procedures being performed in the United States every year.

Alternative, non-invasive treatments are currently being developed and tested. However, they are not available for general use at this time.

We highly recommend annual eye examinations, and you may need to come in more frequently as you get older. If you have other health conditions such as diabetes or high blood pressure, they can affect your eyesight in a negative way. Early detection is the key, so schedule your annual eye examination now.

At our practice, we use the ultimate early detection systems that are currently available, including the same one used by NASA on the Space Station!

- Prior eye injury or surgery
- Certain types of medications
- Hormone replacement therapy
Glaucoma is a complicated, progressive eye condition, often referred to as the “silent thief of sight”. It is characterized by its lack of symptoms until vision damage has already occurred. It’s the #1 or #2 leading cause of blindness worldwide depending on the country. We take Glaucoma extremely seriously at Lakeside Vision.

The fluid inside our eyes, known as aqueous humor, flows out of the eye via a mesh-like channel. Glaucoma is usually the result of this channel becoming blocked or the fluid building up quicker than it drains. Other times, it’s a result of the eye producing too much fluid. The fluids builds up in the eye, increasing the pressure inside. The optic nerve is not meant to handle pressure of this magnitude and ends up damaged, leading to irreversible vision loss.

If you are experiencing high pressure in your eyes, don’t worry. It is not always a sign of glaucoma, though you should schedule an eye exam as you may be at risk. Like many things in life, it is better to be safe than sorry.

Risk Factors for Developing Glaucoma

The following increase your risk factor for developing glaucoma:

- Family medical history
- Diabetes
- Myopia or hyperopia
- Age (40 years and older, with risk increasing significantly after the age of 60)

Symptoms of Glaucoma:

Glaucoma can steal your vision gradually without any warning signs. The key point here is that you will NEVER know that you have glaucoma by changes to your vision. We have had patients who have lost over 90% of their vision absolutely argue with us that anything is wrong at all. That’s what makes it so dangerous. When the signs do show, the signs of glaucoma are:

- High eye pressure
Treatments for Glaucoma:

There are several options available for treating glaucoma. The type and stage of your glaucoma will determine the treatment prescribed by your eye doctor:

- Prescription eye drops
- Prescription oral medication (pills)
- Trabeculoplasty (Laser Surgery) - A laser is used to subtly change the way your eye drains fluid. This allows the eye’s drainage system to function properly, reducing IOP (intraocular pressure).
- Trabeculectomy (Conventional Eye Surgery) - A new opening is created in the eye to allow excess fluid to drain. IOP is lowered and pressure is taken off of the optic nerve.
- Shunt surgery, can be combined with cataract surgery

If you are concerned about your risk of developing glaucoma, schedule an eye exam with Lakeside Vision. We are lucky to have the absolute best clinical instrumentation ever created to diagnose and treat glaucoma.

We would be happy to provide a comprehensive exam, answer all of our questions, and if applicable, walk you through which course of treatment is right for you.
Age-related macular degeneration (ARMD) is a common eye condition and is a leading cause of vision loss in people age 50 and older. It targets the macula, the part of the eye responsible for central vision, and can vary in how it impacts people. Some people may experience slow, gradual vision loss while others may experience more rapid or asymmetrical vision loss.

The result of ARMD are large blind spots in your central vision. ARMD rarely leaves you completely blind, but as the blind spots in your field of view are significant, it can have a dramatic impact on your life. For example, if you’re having a conversation with a person standing near you, the person can appear to have no head - their head is replace by a big, black spot.

ARMD is generally diagnosed with a comprehensive dilated eye exam. As with most eye diseases, early diagnosis and management is more likely to prolong your quality of vision.

There are two types of ARMD: dry (non-neovascular) and wet (neovascular). The dry form of ARMD is much more common than the wet variety, making up about 90% of cases. ARMD’s onset is slow and painless, with its onset being marked by the gradual appearance of increasingly dark areas in your central field of view.

- **Non-Neovascular (Dry) ARMD** – Small yellow deposits called drusen form on your macula. This drusen impairs your vision and tends to increase in size and quantity as the disease progresses. This reduces the number of light-sensitive cells in your macula, forming a blind spot in your central vision.

- **Neovascular (Wet) ARMD** – Drusen is also a part of wet ARMD. In wet ARMD, blood vessels begin to form under the macula and leak blood (and other fluids) into the eye. This can cause scarring and further damage to the macula. As with dry ARMD, blind spots are an eventual outcome of its progression.
Causes of Macular Degeneration:

The exact cause of ARMD is not yet known as research is ongoing. However, studies at major institutions suggest that genetics may play a role in the development of ARMD. Risk factors, such as smoking, obesity, and exposure to UV rays (sunlight) are also known to facilitate the development of ARMD.

Treatment for Macular Degeneration:

Research has shown that certain lifestyle factors; specifically, cessation of smoking and leading a healthy lifestyle can have a positive influence on ARMD’s development. Recent studies have shown that a diet rich in antioxidants, omega-3 fatty acids, and zinc can also slow the progression of ARMD.

Currently, there are no FDA-approved treatments for dry ARMD. Wet ARMD can be treated with medication designed to stop the development of abnormal blood vessels.

Our practice recommends a special oral supplement that is formulated to slow the progression of this disease.
Hypertension (high blood pressure) can cause damage to the blood vessels in the retina, the area at the back of the eye where images focus. The retina is the layer of tissue at the back of the eye that works like the film in a camera. It plays such an important part in a person’s vision that any damage to it is considered serious.

This eye condition is known as hypertensive retinopathy. The damage can be serious if your hypertension is not treated.

We measure blood pressure on all our patients. We have discovered hypertension in patients as young as 16.

High blood pressure will also put you at risk of developing a number of health conditions, including those that affect the heart, brain, kidneys, arteries, and the eyes.

**Causes of Hypertensive Retinopathy:**

If you have high blood pressure, this can lead to the narrowing of the tiny, delicate vessels that supply blood to the retina. This damage can lead to the loss of clarity in your vision. The higher your blood pressure and the longer it has been elevated, the higher the risk of damage. Other factors can also contribute to hypertensive retinopathy including diabetes, high cholesterol and smoking. All of these issues can increase the risk of damage and, potentially, cause vision loss.

**Symptoms of Hypertensive Retinopathy:**

Unfortunately, if you are suffering with hypertensive retinopathy, you may not know it as the symptoms aren’t always obvious. However, there are a few signals that may indicate you are suffering from the condition:

- Double vision or dimmer-than-usual vision
- Headaches
- Visual disturbances or sudden vision loss
- Anxiety and agitation
All of these signs must be dealt with immediately

**Treatment for Hypertensive Retinopathy:**

The only way to treat hypertensive retinopathy is to control your blood pressure and ensure that it doesn’t become too high.

**Diagnosing Hypertensive Retinopathy:**

We will use an instrument known a fundus camera to check for any sign that the blood vessels in the eye have narrowed, or whether there are signs of fluid leaking from the blood vessels. They will assess the degree of damage. The severity of hypertensive retinopathy varies. Diagnosis is provided in ‘stages’:

**Grade 1.** At the minimum level, there may be no obvious symptoms, and the narrowing of your arteries can be barely detectable.

**Grade 2.** The narrowing of your arteries is detectable. You may also be experiencing visual irregularities.

**Grade 3.** There may be a number of changes in the blood vessels, leakage from the blood vessels and swelling elsewhere in the retina.

**Grade 4.** At this level, the hypertensive retinopathy may include swelling of the optic nerve and the center of the retina, the macula. This can cause vision loss.

The retina will usually recover if the blood pressure can be controlled, but a grade 4 level of retinopathy is likely to involve permanent damage to the optic nerve or macula. Severe (grade 4) sufferers of retinopathy may also have other health issues such as heart and kidney problems and are at a greater risk of having a stroke. If you suffer from high blood pressure and notice any signs of vision loss or headaches, urgent medical attention is required.

If you suffer from high blood pressure, this can be a chronic medical condition. Take steps to control your blood pressure. This will include following a healthy diet, exercise, and possibly taking medication. If you suffer from high blood pressure and have any symptoms that could indicate it is affecting your eyesight, see your eye doctor immediately.

We are also here to help, if you have any questions or any issues, we’re happy to consult or set up an appointment to create a treatment plan for you.
Diabetic retinopathy is the leading cause of blindness among people living with diabetes. It is part of a group of conditions described as diabetic eye condition. This grouping also includes diabetic macular edema (DME), cataracts, and glaucoma. However, in most cases, when someone says “diabetic eye condition” they are referring to diabetic retinopathy or DME.

Of those people with Diabetes, nearly fifty percent of them have some form of diabetic eye condition. Of this fifty percent, only half are aware of this developing condition.

About 1 in 20 people with diabetes have proliferative retinopathy. The main hallmark of proliferative retinopathy is significant vision loss and legal blindness.

Diabetic retinopathy has two main impacts: macular swelling and changes to the blood vessel network that supplies the retina. Macular swelling is referred to as diabetic macular edema (explained below).

There are four stages of diabetic retinopathy:

1. **Mild nonproliferative retinopathy** – In this stage, micro aneurysms in the retinal blood cells leak fluid into the retina. This can cause blurry/hazy vision.
2. **Moderate nonproliferative retinopathy** – In this stage, blood vessels begin to swell and change. This impairs their ability to properly transport blood to the retina.
3. **Severe nonproliferative retinopathy** – In this stage, most blood vessels in the retina are damaged or blocked. This causes a shortage in the blood supply to the retina, causing the retina to release growth factors and promote the development of new blood vessels.
4. **Proliferative diabetic retinopathy (PDR)** – New blood vessels are forming, growing inside the retina and vitreous gel. However, these blood vessels are weak and quickly die, leaving behind scar tissue. This scar tissue can contribute to retinal detachment, resulting in permanent vision loss.
Treatments are available to help manage diabetic retinopathy.

Vision loss due to diabetic retinopathy is generally permanent, meaning that detection and management of the condition is imperative. By preventing its progression, visual acuity and quality of life can be preserved.

Lifestyle factors are also important in managing retinopathy. Keeping your blood sugar levels in check via diet, exercise, medications, proper lifestyle choices, and seeing your primary physician regularly can reduce the development of retinopathy and DME.

We specialize in treating patients with diabetes. The equipment we use are cutting edge and will specifically help you if you’re affected with diabetes. Early detection as we’ve said earlier is really the only way you can stay ahead of having any issues with your eyesight.

When you are a patient in our practice, we set you up with a personalized annual plan of how best to manage your diabetes and what to watch out for in your eyesight. We want to help you and your eyes stay healthy and have good vision throughout your life. And that will only happen if you manage it correctly and schedule regular appointments.

Because diabetes and vision are directly correlated, we will keep your primary care physician and endocrinologist informed with communication of our findings.

We offer a special package if you have diabetes and we want to partner with you to walk you through this disease and help you have great vision. If you’re interested, please reach out to us, we’re here to help.
Thyroid eye disease may occur in patients who already know they have thyroid disease, or sometimes it’s the first problem that brings the person to the doctor’s office.

**Causes of Thyroid Eye Disease:**

The cause of thyroid disease is an autoimmune condition, an imbalance in the immune system. The immune system normally protects our bodies from foreign invaders such as bacteria or viruses and protects us from abnormal cells such as cancer. In thyroid eye disease, the immune system sets off an abnormal reaction to the muscles and fatty tissue around the eyes. Although many patients with thyroid eye disease will have abnormal blood tests for thyroid hormone levels, there are some people who get the eye symptoms even though the hormone levels are normal.

**Symptoms of Thyroid Eye Disease:**

- dry eyes
- watery eyes
- red eyes
- bulging eyes
- a “stare”
- double vision
- difficulty closing the eyes
- problems with vision

If you are newly diagnosed with thyroid eye disease, your primary care physician may ask you to see an endocrinologist or internist to check your hormone levels. The doctor may recommend ablation of the overactive thyroid gland or taking oral thyroid medication when the gland is underactive. While it is important that hormone levels are kept as close to normal as possible, this will not guarantee that a patient will not develop thyroid eye disease.
Treatments for Thyroid Eye Disease:

Thyroid eye disease can affect many different parts of the eye and surrounding tissues. Inflamed lacrimal glands may cause wet eyes or dry eyes, and these can both happen in the same patient at different times. Lubrication with eye drops or ointment can help to soothe this irritation. The abnormal immune reaction causes swelling in the tissues of the eyelids and orbit which can make the eyelids look puffy or as if the person has “baggy” eyelids. This can also create a sensation of pressure around the eyes. The swelling can be surgically altered to bring the lids back to a more normal shape.

The muscles in the eyelids tighten and pull the upper lid up and the lower lid down. This creates a startled look with too much of the whites of the eyes showing. This also can be surgically improved. The muscles that control eye movements may be increased in size by the swelling. This can create problems with double vision and focusing. Prism glasses may be helpful, and this can also be improved by surgically moving the eye muscles.

The symptoms of redness, irritation, pressure and double vision are treated with lubrication, anti-inflammatory medications and prisms for the double vision, and will require some time to stabilize before your doctor will recommend surgical intervention. Typically, the active or inflammatory stage of thyroid eye disease lasts one to three years. During this time, your doctor will avoid surgically treating these symptoms because the tissues are constantly changing, and the results will not be stable. However, there are some problems that are dangerous to your vision, and these require more immediate treatment.

Because the eye is pushed forward, and because the eyelids are pulled open by the muscles, you may have difficulty closing your eyelids. This can lead to a corneal ulcer, which causes scarring and permanent loss of the vision. Immediate treatment is necessary. The corneal ulcer would cause redness of the eye, pain and usually decrease in vision. You should seek immediate attention from your doctor for these problems. A second danger to vision occurs when swollen tissues compress the optic nerve. The optic nerve functions as an extension cord between the eye and the brain to carry the message of vision. When the nerve is compressed, color vision is abnormal, lights may seem dimmer than usual, and the sharpness of the vision decreases. These changes may be reversed with treatment and could also progress to permanent loss of vision. Tell your doctor immediately if you are experiencing any of these symptoms.

The treatment options for vision-threatening problems in thyroid eye disease include corticosteroids or other anti-inflammatory medications, radiation and surgery. A combination of these may be necessary to protect vision. Most people with thyroid eye disease do not get corneal ulcers or optic neuropathy, but it is important to understand the symptoms, so you know when to seek help.
The bottom line is we want you to take your eye health seriously. Any one of these conditions can be detrimental to your vision. As Optometrists, we have many years of experience and have helped thousands of our patients be able to see and have healthy vibrant vision. We are dedicated to your eye health and with our state of the art and advanced tools, we can ensure your high quality of health for years to come.

Remember, as we stated earlier in this eGuide, your eye doctor in the local mall will give you a basic eye exam and they won’t detect your eye health like we can with our advanced technology. Note: We give you THE most thorough advanced eye exam of anyone in the tri-state area. This is VERY important if you suffer from diabetes, high blood pressure, or any other health issues.

Here are some of the advanced and state of the art tools we use to preserve and protect your eyesight:

**The Spectralis OCT** allows us to detect conditions like glaucoma and diabetic retinopathy faster and easier than before. It is non-invasive and gives us precise data so we can prevent any vision loss. This is the same instrument that NASA uses on the space station. Drs. Amy and Mike were trained on this instrument by the same person who trained the astronauts themselves.

**The Zeiss Matrix** is an easy simple way to determine your peripheral vision and also detects eye conditions before vision loss occurs. It’s easier than other peripheral vision testers and only takes 5 minutes per eye. Other instruments take up to 20.

We have over 15 different instruments in our practice that we use to diagnose and treat eye disease.

There are other very important screenings that no other optometrist will give you, but you can be sure Lakeside Vision will:

1. **Screen Peripheral vision:** OPTOS wide field retinal scan takes a picture of your retina. Checks for retinal detachment are typically $39 but we give it away for free because we want you to have the best possible eye exam.

2. **Glaucoma risk analysis:** same instrument NASA uses on the space station.

3. **3D image scan of your macula:** which is the size of a pinhead. 100% of your detail vision comes from that area.
4. **Pictures of your center retina:** This is how we determine if you suffer from eye disease caused by high blood pressure and/or diabetes.

5. **Blood pressure screening**

When it comes to providing you and your family great eyecare and health, the doctors and the staff at Lakeside Vision have worked hard to create a unique approach. Your eye appointment experience will be professional, inviting and informative. Our goal is to build long-term relationships making you a part of our eye care community.

We are not your stuffy old eyecare office, or the eye care chain in the local shopping mall. Our hope is that after reading this report, you will take your eye health more seriously. Plus, you will now be aware of the 10 most important conditions that your next eye doctor needs to perform on your eyes.

The Doctors and our professional staff at Lakeside Vision truly do care about your eyesight and your eye evaluation experience.

Please email or call us with any questions. We are here to help.

And, if you want to come by and see us, we'll give you a special savings. When you make your eye appointment, we'll give you a $10 savings on your next pair of eyeglasses, even if you have insurance! That’s how committed we are to our patients.

Wishing you all the best,

Dr. Amy M. Neal & Dr. Michael Neal

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