



Got Eyes?

An Informative Guide
About Eye & Vision Health

Dr. Zuraida Zainalabidin
Director of Optometry Services



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Table of Contents

Why I Wrote This Book.....4

What Are Common Eye Conditions?.....5

What is an Optometrist?.....8

Child Vision & Classroom Success.....8

Educating Consumers About Eye Health10

Reducing Your Risk of Developing Macular Degeneration.....12

Treating Glaucoma & Preventing Blindness.....13

Diabetes & Eye Health.....15

Taking Care of Your Eyesight.....16

Final Thoughts.....18

Why I Wrote This Book

Why did I choose to become an eye doctor? Sure, I like helping people with their health. However, I'm a bit squeamish with blood and I don't like either side of needles! I do enjoy helping people see more clearly, and believe it can have a profound impact on the quality of one's life which in itself is quite rewarding. Some people say that "eyes are the window to the soul," while I'm not sure I can fully vouch for that statement, eyes are oftentimes a mirror to one's health. I take great enjoyment in primary eye care, we oftentimes are the first to inform a patient that they may have a more serious health condition that should be investigated. For instance, many times people don't go see their primary care doctor for years. It is not uncommon for me to help diagnose diabetes or hypertension through an annual medical eye exam. We play an integral part in the health care delivery system. Lastly, as a woman, I like fashion and eyeglasses are oftentimes an integral part of keeping up with the latest trends. I have spent several years dedicated to becoming a specialist in the care and treatment of the eyes. My name is Dr. Zuraída Zainalabidin, my patients call me Dr. Zie and I am a founder & Director of Optometry services at Head to Toe Healthcare, PLC.

In today's fast paced environment, going to see the doctor oftentimes plays a secondary role. That is, until problems arise. I created this publication as part of my mission to help educate others about the importance of eye and vision health. I wrote it for you and your family to help you clearly understand what is happening with your eyes and to help you get a sense of the assistance that is awaiting you at an optometrist's office. Pass it on to your friends and neighbors as well. I hope it is helpful and that it answers your questions. If after reading it you think you might be helped by seeing an optometrist, I hope you consider Head to Toe Healthcare, PLC. My staff and I will do everything we can to treat your condition, help you see more clearly, and make you feel at home.

Dedicated to your health,

Dr. Zuraída Zainalabidin

What Are Common Eye Conditions?

The most common eye problems are:

Allergic Conjunctivitis is an allergic response and overreaction of the body's immune system to foreign substances known as allergens, which the body wrongly perceives as a potential threat. When the eye comes into contact with certain allergens, an allergic response can result. Plant pollens, animal dander, dust mites, mold spores, grass and ragweed, cosmetics and perfumes, skin medicines, and air pollution often cause allergies.

Blepharitis is an inflammation of the eyelid, or meibomianitis, inflammation of the oil-producing glands of the eye. Blepharitis is usually caused by *Staphylococcus* bacteria that thrive in excess oil produced by the glands of the eyelid.

Cataract is an opaque film or cloudiness that occurs in the lens within the eye. It may consist of varying size opacities and/or water vacuoles. In general, it is an alteration in the normal lens tissue that reduces its normal high degree of transparency. This, in turn, interferes with the degree and quality of light reaching the retina.

Chalazia and Styes A **chalazion** results from a blockage of one or more of the small oil-producing glands (meibomian glands) found in the upper and lower eyelids. These blockages trap the oil produced by the glands and cause a lump on the eyelid that is usually about the size of a pea. **Styes** are often confused with chalazia. Styes are infections or abscesses of an eyelid gland near an eyelash root or follicle. They generally occur nearer to the edge, or margin, of the eyelid than do chalazia, where they form a red, sore lump similar to a boil or pimple.

Computer Vision Syndrome (CVS) is the complex of eye and vision problems related to near work which are experienced during or related to computer use. CVS is characterized by visual symptoms which result from interaction with a computer display or its environment. In most cases, symptoms occur because the visual demands of the task exceed the

visual abilities of the individual to comfortably perform the task.

Conjunctivitis commonly known as **pink eye**, is an infection of the thin membrane that lines the inside of the eyelids and the white part of the eye. The three most common types of conjunctivitis are viral, bacterial, and allergic. Each requires different treatments.

Corneal Abrasion is a an injury to the front surface of the eye. The injury can occur when a foreign objects gets in the eye, when the cornea becomes scratched, or even from rubbing the eyes too hard. The cornea is very sensitive. Depending on the location and depth of the injury, an abrasion can be quite painful and even sight threatening, resulting in permanent visual impairment.

Diabetic Retinopathy is a condition occurring in persons with diabetes, which causes progressive damage to the retina, the light sensitive lining at the back of the eye. It is a serious sight-threatening complication of diabetes. Diabetic retinopathy is the result of damage to the tiny blood vessels that nourish the retina. They leak blood and other fluids that cause swelling of retinal tissue and clouding of vision. The condition usually affects both eyes. The longer a person has diabetes, the more likely they will develop diabetic retinopathy. If left untreated, diabetic retinopathy can cause blindness.

Dry Eye is the term used to describe eyes that do not produce enough tears or that produce tears without the proper chemical composition in any of these layers. Dry eye is most often a result of the eyes' natural aging process. Most people's eyes tend to become drier as they age, but the degree of dryness varies, with some people having more problems than others. Other factors may also result in dry eye.

Floaters (and/or with Flashes) the small specks, "bugs," or clouds that you may sometimes see moving in your field of vision are called floaters. They are frequently visible when looking at a plain light background, such as a blank wall or

blue sky. Floaters are actually tiny clumps of gel or cellular debris within the vitreous, the clear, jellylike fluid that fills the inside cavity of the eye. However, when you see flashes with floaters that blurs your vision of sudden onset; a retinal tear, holes or a detachment must be ruled out within 24 hours. These signs or symptoms can be vision threatening.

Glaucoma is an eye disease in which the passages that allow fluid in the eye to drain become clogged, blocked, or narrowed. This results in fluid build up in the eye and causes increased pressure within the eye. This increased pressure compresses and damages the optic nerve which is the main carrier of visual information to the brain. Damage to it results in a loss of vision. The severity of this ocular damage depends on the amount of pressure and the duration of the compression on the optic nerve.

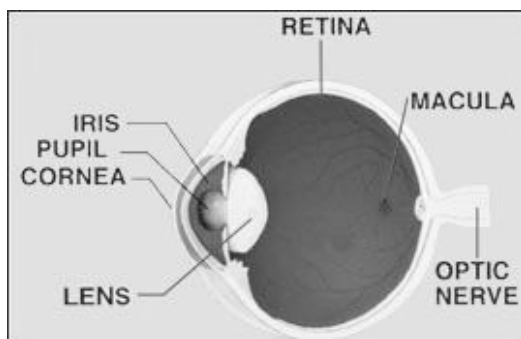
Keratoconus is a progressive thinning or “cone shaping” of the cornea that, if not treated appropriately, will result in considerable vision loss from the irregular corneal shape this condition may cause. Perforation of the cornea and scarring may occur in severe cases. Spectacles and specialty fitted contact lenses can only improve vision marginally and do not provide any therapeutic effect as keratoconus will continue to progress.

Macular Degeneration is the leading cause of central vision loss among older people. It results from changes in the macula, a portion of the retina responsible for clear, sharp vision that is located on the inside back wall of the eye. The macula is many times more sensitive than the rest of the retina; without a healthy macula, seeing detail or vivid color is not possible.



What Is an Optometrist?

Let's start at the beginning and answer the question, "**What is an Optometrist?**" **Optometrists**, also known as doctors of optometry (OD), provide most primary vision care and usually have an optical dispensary within their practice. They examine people's eyes to diagnose vision problems and eye diseases, and they test patients' visual acuity, depth and color perception, and abilities to focus and coordinate the eyes. Optometrists prescribe eyeglasses and contact lenses and provide vision therapy and low-vision rehabilitation. Optometrists analyze test results and develop a treatment plan. They prescribe eyeglasses and contact lenses to patients to aid in the diagnosis of vision problems and prescribe drugs to treat some eye diseases. Optometrists often provide pre-operative and post-operative care for patients undergoing cataract, refractive vision, and other eye surgeries. They also diagnose conditions caused by systemic diseases such as diabetes and high blood pressure, referring patients to other health practitioners as needed.



Anatomy of the eye

Child Vision & Classroom Success

Good vision is critical for many classroom tasks - from reading books or seeing the board to viewing a computer screen. Without healthy vision, students can face unnecessary challenges not only in the classroom, but also to their mental, physical, social and emotional well being. Ten million school children in America have vision conditions that can negatively affect learning abilities. Many parents rely on vision screenings in school to check for eye problems, but that isn't enough. Com-

prehensive eye exams are necessary to detect problems that a simple screening can miss.

Relying on school vision screenings isn't enough, as most schools do not have the right equipment and tools to detect visual related problems; other than nearsightedness, farsightedness, and sometimes astigmatism.

A comprehensive eye examination for students is one of the most important "to-dos" as children head back to school, and yet it is often overlooked. Without an eye exam, many children will suffer from undetected vision problems, and some may even be misdiagnosed as having a learning disorder.

Undetected improper eye function can lead to headaches, fatigue and other eyestrain problems. Parents should be aware of symptoms that may indicate that a child has a vision or visual processing problem. Be sure to tell an optometrist if a child frequently:

- Loses his or her place while reading;
- Avoids close work;
- Holds reading material closer than normal;
- Tends to rub his or her eyes;
- Has headaches;
- Turns or tilts head to use one eye only;
- Makes frequent reversals when reading or writing;
- Uses finger to maintain place when reading;
- Omits or confuses small words when reading;
- Consistently performs below potential.

Early detection and treatment provide the very best opportunity to treat and correct vision problems. Good vision doesn't just happen. A child's brain learns how to use eyes to see, just like it learns how to use legs to walk or mouth to form words. The longer a vision problem goes undiagnosed and untreated, the more a child's brain has to overcompensate to live with the vision problem, instead of developing and learning normally. AOA (American Optometric Association) has launched a nation-

wide InfantSee program to promote comprehensive eye exams for infants, starting at 6 months old.

Educating Consumers About Eye Health

Regular, comprehensive eye exams are an important part of overall vision protection

Too many Americans are not paying enough attention to their eyesight and overall eye health. Most Americans –wear contact lenses, eye-glasses or both. However, only a small percentage have visited an eye doctor or eye care specialist within the past two years.

Since many eye and vision problems have no obvious signs or symptoms, people often are unaware that a problem exists. Early diagnosis and treatment of eye and vision problems are important to maintain good vision and eye health and, when possible, prevent vision loss. Every adult should have a comprehensive eye exam annually, but it's even more important for people who already use corrective lenses. Too often we see people who have put off eye exams because they assume they just need a different lens prescription, when they really have a more serious problem. With eye diseases and disorders, as with most health issues, early detection and treatment are often the keys to avoiding permanent problems.

Most Americans are unaware that comprehensive eye exams can detect more than just vision problems. Comprehensive eye exams can diagnose diseases and conditions that include hypertension, brain tumors, cancer, cardiovascular diseases, and multiple sclerosis.

Aging Eyes

Baby boomers need to pay particular attention to eye problems. It's a fact of life that vision changes as you age, but these changes don't have to compromise a person's lifestyle.

Health problems in other parts of the body can affect vision as well. Individuals with diabetes or hypertension (high blood pressure), or people

taking certain medications that have eye-related side effects are at greater risk for developing vision problems.

Therefore, regular comprehensive eye exams are especially important later in life, when more people develop these types of chronic conditions and begin taking medications more frequently. Unfortunately, some people over 60 experience loss of sight beyond the normal age-related vision changes. The good news is that many of the risks of age-related eye diseases can be treated. The bad news is that without treatment, some eye diseases result in blindness. Macular degeneration, glaucoma and diabetic retinopathy are age-related eye health conditions that can lead to permanent vision loss.

Rehabilitative services can give people with conditions such as low vision the assistance and resources needed to regain their independence and to help preserve remaining vision. A doctor of optometry can develop a rehabilitation program to help people with low vision live and work more effectively, efficiently and safely. Treatment options commonly include spectacle-mounted magnifiers, miniature hand-held or spectacle-mounted telescopes, and video magnification devices that enlarge reading materials on a video display monitor.

Common Misconceptions and Other Findings

Americans continue to value their ability to see. Nutrition is one promising means of protecting the eyes. However, most are unaware of what to eat to help their eyes. Only a small percentage of us are aware that spinach is the best food for one's eye health. Almost half of Americans believe the misconception that carrots are best for their eye health. Lutein and zeaxanthin, found in dark green leafy vegetables including spinach, help to protect against cataracts and age-related macular degeneration.



Reducing Your Risk of Developing Age-Related Macular Degeneration

AMD occurs when the central area of the retina responsible for clear vision, the macula, is damaged. This results in a loss of central vision in the eye, which is needed for reading and close work. Color vision and distance vision are also affected. There are two types of macular degeneration: "dry" or atrophic, and "wet" or exudative.

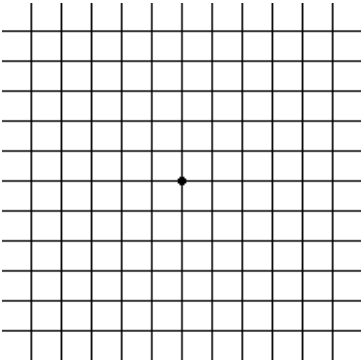
The exact cause of macular degeneration is unknown but it may be related to aging, hereditary factors, smoking and exposure to high levels of ultraviolet radiation and blue light, both found in sunlight. Your lifestyle can play a role in reducing your risk of developing AMD and other eye diseases. Individuals should:

- eat a low-fat balanced diet rich in green, leafy vegetables, or ask their optometrist about dietary supplements;
- wear sunglasses that block 99 to 100 percent of ultraviolet radiation;
- keep blood pressure under control;
- avoid smoking.

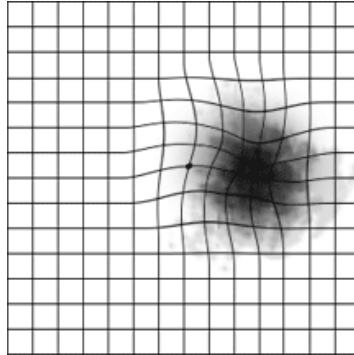
People should also be alert for the symptoms of the wet form of macular degeneration and seek professional help immediately if they notice:

- a sudden loss of the ability to see clearly;
 - a gradual change in color vision;
 - distorted vision, such as wavy lines that should be straight;
- a dark or empty area appearing in the center of vision.

AMD is a "preventable" disease if appropriate healthy habits are adapted at an early enough stage. Even if you are diagnosed with AMD, there are possible means to slow down the progression.



This is a normal Amsler grid.



This is how an Amsler grid might look to someone with AMD.

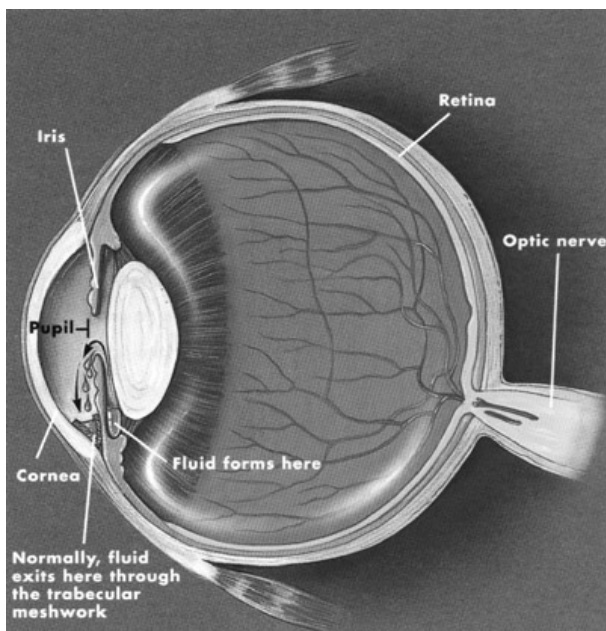
Treating Glaucoma and Preventing Blindness

Comprehensive eye exams for early diagnosis and treatment of Glaucoma

Glaucoma is the "silent blindness disease" because it can sneak up on your vision without symptoms—is one of the leading causes of blindness in the United States. Glaucoma is not an old age disease, however, it most often occurs in people over age 40. People who are very near-sighted, diabetic or who have a family history of glaucoma are also at high risk for the disease.

About 2/3s of Americans believe that glaucoma is curable. In reality, the disease cannot be prevented, although it is treatable if caught in the early stages.

Glaucoma is an eye disease in which the internal pressure in your eyes increases enough to damage nerve fibers in your optic nerve and cause vision loss. The most common type of glaucoma develops gradually and painlessly, without symptoms. A rarer type occurs rapidly, and its



symptoms may include blurred vision, loss of side vision, seeing colored rings around lights, and pain or redness in the eyes.

Since vision lost to glaucoma cannot be restored, regular, comprehensive eye examinations are important for people at risk. A comprehensive optometric medical eye examination includes a tonometry test to measure pressure in the eyes; a dilated fundus examination to examine the inside of the eyes and optic nerves; and a visual field test to check for changes in central and side vision.

Treatment for glaucoma includes prescription eye drops and medicines to lower pressure in the eyes. In some cases, laser treatment or surgery may be effective in reducing pressure.

Glaucoma cannot be prevented, but if diagnosed and treated early, we can slow down the progression of vision loss. Losing your sight can be devastating, so there is no substitute for doing all you can to maintain your eye health through regular exams. Please remember that glau-

coma is a “silent blindness disease”, once one realizes vision loss, glaucoma has been ongoing for likely 5 years or more, before it causes symptoms. Thus, annual comprehensive medical eye exams are critical for glaucoma detection!

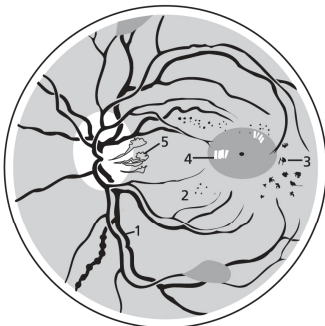
Diabetes and Eye Health

Diabetes: A Top Cause of Blindness among Adults

More than 21 million Americans have diabetes, and perhaps of even greater concern, more than 6 million Americans are *unaware* that they have the disease. In many cases, optometrists are the initial medical professionals that detect diabetes through a comprehensive medical eye exam.

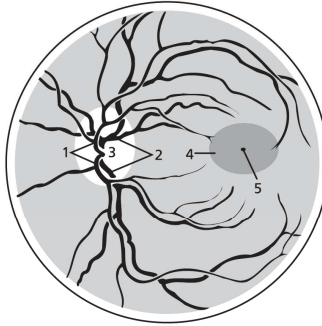
Optometrists can serve as the first line of detection for diabetes, since the eye is the only place on the body that blood vessels can be seen without having to look through the skin. All individuals with known diabetes need to have *dilated* eye exams each year; despite the fact that only four out of ten Americans recognize that diabetic patients should have their vision checked *annually*.

Diabetic retinopathy



- 1 Blood vessels dilate and weaken
- 2 Blood vessels leak tiny amounts of blood
- 3 Heavy bleeding
- 4 Fat and cholesterol deposits
- 5 New abnormal blood vessels form

Normal retina and optic nerve



- 1 Small branch of an artery
- 2 Tiny blood vessels
- 3 Start of the optic nerve
- 4 Back of the eye
- 5 Centre of the retina

It is especially important for individuals who are at high risk for diabetes to visit an eye doctor regularly for dilated eye exams.

Early detection is critical in maintaining healthy vision. Additionally, several factors influence whether someone with diabetes develops diabetic retinopathy. These include controlling blood sugar and blood pressure levels, the length of time with diabetes, race and family history. Be sure to see an optometrist if your vision becomes blurry; you have trouble reading signs or books; experience double vision; feel pressure in your eyes; encounter straight lines appearing indistinct; or your side vision is limited.

Taking Care of Your Eyesight

Misconceptions still surround eye health

Bad habits are hard to break when it comes to eye health. Americans are continuing to practice poor eye care – despite the fact that they view their eyesight as their most valued sense. Most Americans take their vision for granted!

The majority of people would rate eyesight as the sense they most worry about losing, yet these same people knowingly engage in behaviors that could be harmful to their eyes and vision, including poor contact-lens hygiene and avoiding eye exams.

Habits that can be the most harmful to eyes are not widely understood. Smoking cigarettes and eye-rubbing can be harmful. Additionally drinking alcohol, and drinking caffeine are both considered potentially detrimental to eye health.

Contact Lens Hygiene

Contact lens safety and hygiene is another area of concern. Among people who wear contact lenses, most admit to practicing poor contact lens hygiene on a regular basis, including showering, swimming and sleeping in contacts not approved for overnight wear, as well as wearing contacts longer than the suggested timeframe.

Contact lenses are among the safest forms of vision correction when patients comply with the care and wearing instructions provided by their eye doctor. Because lenses are so comfortable, it's easy for people to get careless. However, the consequences may be dangerous, and failure to follow proper contact lens hygiene could damage eyes.

A simple, often overlooked, step is replacing the contact lens case. In fact, only a third who wear contact lenses change their case every one to three months; and many never change their lens case at all.

Contact lens wearers should:

Always wash your hands before handling contact lenses.

Carefully and regularly clean contact lenses, as directed by your optometrist. Rub the contact lenses with fingers and rinse thoroughly before soaking lenses overnight, using enough multipurpose solution to completely cover each lens.

Store lenses in the proper case, and replace the case at least every three months. Clean the case after each use, and keep it open and dry between cleanings.

Use only products recommended by your optometrist to clean and disinfect your lenses. Saline solution and rewetting drops are not designed to disinfect lenses.

Always use fresh solution to clean and store contact lenses. Never re-use old solution. Contact lens solution must be replaced, according to the manufacturer's recommendations, even if the lenses are not used daily.

Replace lenses on the schedule prescribed by your optometrist.

Remove contact lenses before swimming or entering a hot tub.

See your optometrist for regular lens and eye examinations.

All contact lens wearers *must* have a pair of eyeglasses to give your eyes rest from extended contact lens wear.

Regular Visits to the Eye Doctor

Frequent optometric examinations are a critical part of a person's preventive health care routine. Many eye and vision conditions present no obvious symptoms. Therefore, individuals are often unaware that a

problem exists. Early diagnosis and treatment are important for maintaining good vision and preventing permanent vision loss.

Final Thoughts

I hope the information in this publication has been helpful to you. My purpose for sharing it with you is to give you the information you need to take the appropriate actions to care for your eyes and vision. I hope it helps you understand eye conditions your loved ones may be experiencing. I also wrote it to help you see that Optometrists are appropriately trained to treat a myriad of ocular conditions. I would like to acknowledge that some contents of this booklet are from the American Optometric Association.

I know that making an appointment to see a doctor isn't always the easiest thing to do, but with knowledge and understanding you can see that we can offer you many treatments that can greatly improve the quality of your life.

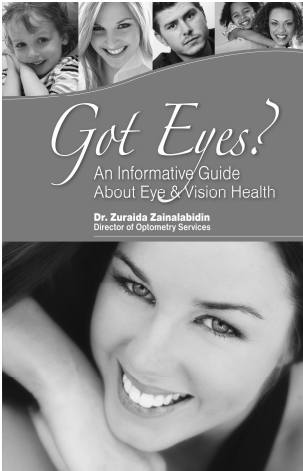
Dedicated to Your Health,

Zuraida Zainalabidin, OD



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Got EYES? An Informative Guide to Eye and Vision Health



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About the Author



Dr. Zuraida Zainalabidin is a founder & Director of Optometry services at Head to Toe Healthcare, PLC. She earned her undergraduate degree in Psychology from the University of Michigan and, during her final year, acted as an Optometry Tech at the national optometry chain, Lenscrafters. After finding her interest in optometry, she completed required scientific courses at DePaul University in Chicago and then undertook her four-year optometry college course work at Illinois College of Optometry. Upon graduation, she continued working with Lenscrafters as an optometrist in Chicago. Originally from Malaysia, she migrated to Arizona for warmth and a more relaxed atmosphere.

Head to Toe Healthcare, PLC's Mission Statement

To deliver Advanced Eye & Foot care in a friendly, relaxed, and professional environment. To ensure our patrons are well informed, with an end goal of improved health and quality of life.

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