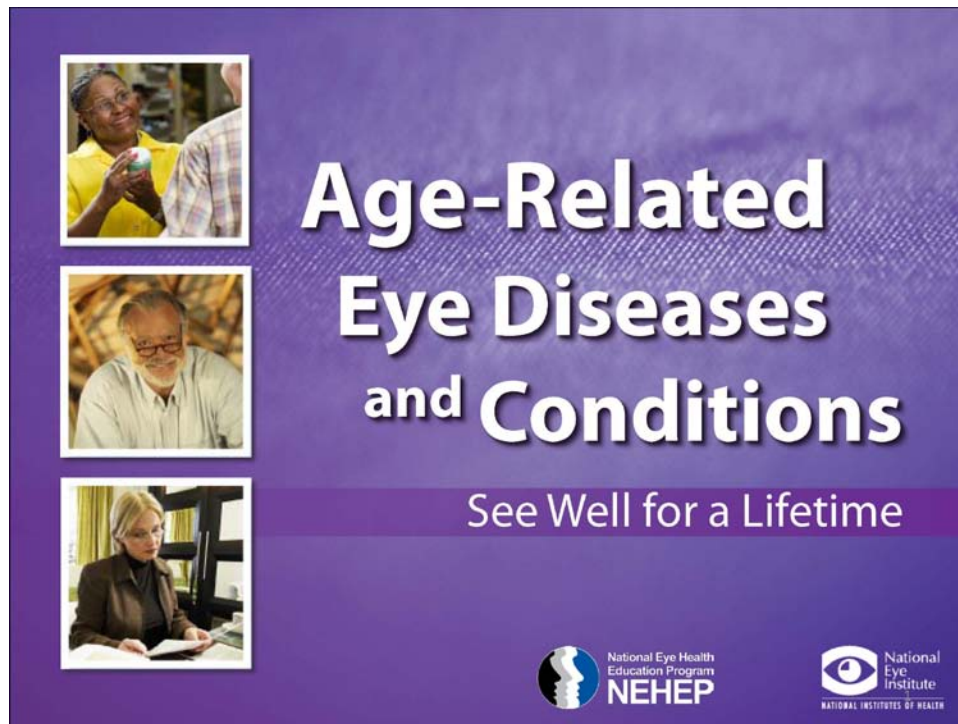


Age-Related Eye Diseases and Conditions

See Well for a Lifetime





Talking Points:

- Introduction of the speaker.
- The purpose of this presentation is to provide information on age-related eye diseases and conditions that can cause permanent vision loss or blindness and what you can do to protect your vision.
- Eye diseases often have no early warning signs, so comprehensive dilated eye exams are extremely important.
- After attending the workshop, participants will be able to do the following:
 - Identify vision changes associated with aging.
 - Explain the importance of having a comprehensive dilated eye exam.
 - Describe common age-related eye diseases and conditions.



Vision Changes

- You may notice vision changes with aging.
- Many changes are common and can often be corrected.
- As you get older, you are at higher risk of age-related eye diseases and conditions.



Talking Points:

- Many people begin to notice vision changes in their forties.
- Many changes are normal and common as you age. These changes include the following:
 - Losing focus, making it harder to focus vision up close.
 - Declining contrast and color sensitivity, making it harder to distinguish colors, such as blue from black, or where an object ends and its background begins.
 - Needing more light to see well and more time to adjust to changing levels of light (e.g., going from a room that is dark to one that is brightly lit).
- These common problems can often be corrected with glasses, contact lenses, or improved lighting.

- People can age without ever experiencing significant vision loss. But, as you get older, you are at an increased risk of developing age-related eye diseases and conditions that can lead to vision loss or blindness.
- Some of these diseases and conditions often have no early warning signs or symptoms.



Get Your Eyes Examined

- Everyone aged 50 or older should have a comprehensive dilated eye exam.
- Your eye care professional can tell you how frequently you need to have one.



Talking Points:

- Everyone aged 50 or older should have a comprehensive dilated eye exam.
 - Do this, even if you aren't experiencing any vision problems.
 - Comprehensive dilated eye exams can help detect age-related eye diseases in their early stages.
 - Early detection and treatment can help save your sight.
- Your eye care professional can tell you how frequently you will need to have one based on your specific eye health needs.
 - An eye care professional is an *ophthalmologist* or *optometrist*.
 - An *ophthalmologist* is a medical doctor who specializes in eye health and eye care. Ophthalmologists are specially trained to provide the full spectrum of eye

care, from prescribing glasses and contact lenses to performing complex and delicate eye surgery.

- An *optometrist* is the primary healthcare professional for the eye. Optometrists examine, diagnose, treat, and manage diseases, injuries, and disorders of the visual system, the eye, and associated structures. They also identify related systemic conditions affecting the eye.



What Is a Comprehensive Dilated Eye Exam?



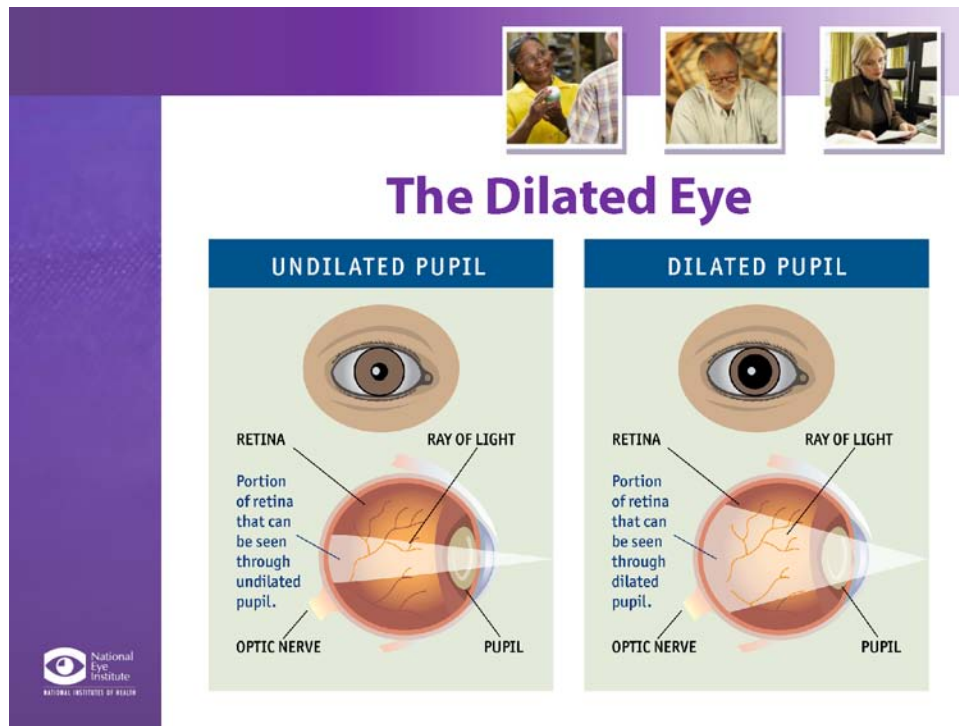
Talking Points:

- A comprehensive dilated eye exam is not the same eye exam you get for glasses or contact lenses.
- Only an eye care professional can perform a comprehensive dilated eye exam.
- It is a painless procedure that involves the following:*

 - Placing drops in the eyes to dilate, or widen, the pupils (the round opening in the center of the eye).
 - The eye care professional will use a special magnifying lens to examine the retina (the light-sensitive tissue at the back of the eye) and optic nerve (the bundle of fibers that sends signals from the retina to the brain) for signs of disease.
 - This exam is important because it can help your eye care professional determine if your eyes are healthy or if you have any vision problems.


**Presenter Tip: Ask the audience to raise their hands if they have had a dilated eye exam in the past year.*

Slide 5




Talking Points:

- This illustration shows you how much more of the back of the eye can be seen when the eyes are dilated.
- Medicare will pay for a dilated eye exam for people with diabetes. It will also pay for dilated eye exams for detecting glaucoma if you have diabetes, have a family history of glaucoma, are African American and aged 50 or older, or are Hispanic and aged 65 or older.



Eye Diseases and Conditions

- Age-related macular degeneration (AMD)
- Cataract
- Diabetic eye disease
- Glaucoma
- Dry eye
- Low vision




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Talking Points:


- The most common age-related eye diseases and conditions can lead to vision loss or blindness, if they are left untreated.
- These diseases and conditions include the following:
 - Age-related macular degeneration (AMD)
[Pronunciation: MACK-you-luhr Dee-jen-er-RAY-shun]
 - Cataract
[Pronunciation: KAT-uh-rakt]
 - Diabetic Eye Disease
 - Glaucoma
[Pronunciation: Glaw-KO-muh]
 - Dry Eye
 - Low Vision

- The following information is provided for these eye diseases and conditions:
 - Who is at higher risk.
 - Symptoms.
 - Treatment options.
 - What you can do to prevent these eye diseases and conditions and/or slow down their progression.



Age-Related Macular Degeneration (AMD)

- What is it?
 - Common among people aged 60 or older.
 - Can damage the macula, which is needed for sharp, detailed central vision.



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Talking Points:

- Age-related macular degeneration [Pronunciation: MACK-you-luhr Dee-jen-er-RAY-shun], also commonly referred to as AMD, is the number one cause of blindness in older adults.
- What is AMD?
 - AMD can damage the eye's macula (small, sensitive area located in the center of the retina).
 - The macula is needed for sharp, central vision, and for seeing objects clearly.
 - There are two forms: Dry AMD and Wet AMD.
 - In Dry AMD, cells in the macula slowly break down and can cause blurry central vision.
 - In Wet AMD, abnormal blood vessels start to grow and can leak. This causes vision loss.

Slide 8

(continued from previous slide)



- Who is at higher risk?
 - The greatest risk factor is age.
 - Other risk factors
 - Smoking.
 - Family history.
 - Obesity.
 - Race. Caucasians are more likely to lose vision from AMD.




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Talking Points:

- Who is at higher risk?
 - The greatest risk factor is age.
 - Other risk factors include the following:
 - Smoking.
 - Family history.
 - Obesity.
 - Race. Caucasians are more likely to lose vision from AMD.

Slide 9




Age-Related Macular Degeneration (AMD)




Normal vision

Same scene as viewed by a person with AMD




Talking Points:

This image shows what vision looks like for a person with advanced AMD.



AMD

- Symptoms
 - No pain.
 - Blurred vision.
 - Drusen (can only be seen by an eye care professional).




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Talking Points:


- Symptoms
 - There is no pain with AMD.
 - Some symptoms include blurry vision or straight lines that may appear crooked.
- An early sign is drusen. Drusen are yellow deposits under the retina (the light-sensitive tissue at the back of the eye) that can only be seen by your eye care professional during a comprehensive dilated eye exam.
 - If you notice any sudden changes in your central vision, visit your eye care professional.

Slide 11

(continued from previous slide)



- **Treatment options**
 - Age-Related Eye Disease Study (AREDS) special vitamins/minerals supplement formulation.
 - Laser surgery.
 - Eye injections.
 - Photodynamic therapy.




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Talking Points:


- Treatment Options
 - The National Eye Institute's Age-Related Eye Disease Study found that a specific high-dose formulation of vitamins A, C, and E; and the minerals zinc and copper can significantly reduce the progression of advanced AMD for people with early signs of the disease. You can talk to your eye care professional or healthcare provider about how to get this formulation.

- Other treatment options for AMD include the following:
 - Laser surgery, which involves aiming an intense beam of light at the new blood vessels in your eyes to destroy them.
 - Injections of special drugs into the eye that decrease fluid leakage.
 - Photodynamic therapy, which involves a special drug that is injected into your arm and attaches to new blood vessels in your eyes. The drug is activated by a special light and slows down vision loss by getting rid of the new blood vessels.
- Your eye care professional can tell you what is best for you, depending on what form of AMD you have.



AMD


- What can you do?
 - Eat a healthy diet
 - Don't smoke, or stop smoking
 - Maintain normal blood pressure
 - Maintain a healthy weight
 - Exercise



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Talking Points:

- Lifestyle practices can play a role in reducing the risk of developing AMD, such as the following:
 - Eating a healthy diet—high in green, leafy vegetables and fish high in Omega-3 fatty acids.
 - Not smoking or stopping smoking.
 - Maintaining normal blood pressure.
 - Maintaining a healthy weight.
 - Exercising.



Cataract

- What is it?
 - Clouding of the eye's lens that causes loss of vision.



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Talking Points:

- What is it?
 - A cataract [Pronunciation: KAT-uh-rakt] is a clouding of the lens inside the eye. It cannot spread from one eye to the other.
 - Over time, the cataract may grow larger and cloud more of the lens, making it harder to see.
 - A cataract can occur in one or both eyes.

Slide 14

(continued from previous slide)




- Who is at higher risk?
 - Most cataract are related to aging
 - Other risk factors
 - Diabetes
 - Smoking
 - Exposure to sunlight




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Talking Points:

- Who is at higher risk?
 - Most cataract are related to aging.
 - Other risk factors include the following:
 - Having diabetes
 - Smoking
 - Prolonged exposure to sunlight




Cataract



Normal vision


Same scene as viewed by a person with cataract



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Talking Points:

This image shows what vision is like for a person with cataract.



Cataract

- Symptoms
 - Cloudy or blurred vision.
 - Colors that may not appear as bright as they once did.
 - Glare.
 - Poor night vision.




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Talking Points:


- Symptoms
 - Cloudy or blurred vision.
 - Colors may not appear as bright as they once did.
 - Light from the sun or lamps may appear too bright.
 - At night, light from oncoming headlights causes more glare than before.

Slide 17

(continued from previous slide)



- Treatment options
 - Glasses
 - Better lighting
 - Surgery



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Talking Points:

- Treatment Options
 - Symptoms of early cataract may be improved with new eyeglasses, better lighting, anti-glare sunglasses, or magnifying lenses. If these do not help, surgery is the only other effective treatment.
 - Cataract surgery*
 - Is one of the most common surgeries performed in the United States.
 - Involves removing the cloudy lens and replacing the lens with an artificial one.
 - Some people with cataract may never need surgery.
 - Many are able to postpone the surgery for years.

**Presenter Tip: Ask audience members to raise their hand if they or anyone they know has had a cataract or cataract surgery.*



Cataract


- What can you do?
 - Eat a healthy diet.
 - Wear sunglasses and a brimmed hat when outdoors.
 - Don't smoke.



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Talking Points:

- Lifestyle practices can play a role in reducing the risk of developing cataract, such as the following:
 - Eating a healthy diet high in green, leafy vegetables; fruit; and other food with antioxidants.
 - Wearing sunglasses and a brimmed hat when outdoors.
 - Not smoking or stopping smoking.



Diabetic Eye Disease

- What is it?
 - A group of eye problems associated with diabetes.
 - Diabetic retinopathy is a leading cause of vision loss and blindness.




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Talking Points:


- What is it?
 - A group of eye problems that people with diabetes may face as a complication of the disease. These include diabetic retinopathy [Pronunciation: Die-uh-BET-ick Ret-n-OP-uh-thee], glaucoma [Pronunciation: Glaw-KO-muh], and cataract.
 - Diabetic retinopathy is a leading cause of vision loss and blindness.
 - It occurs when diabetes damages the tiny blood vessels inside the retina.
 - A healthy retina is necessary for good vision.

Slide 20

(continued from previous slide)




- Who is at higher risk?
 - People with diabetes.
 - The longer someone has diabetes, the more likely it is he or she will get diabetic retinopathy.




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Talking Points:

- Who is at higher risk?
 - All people with diabetes are at risk of getting diabetic eye disease.
 - The longer someone has diabetes, the more likely it is he or she will get diabetic retinopathy.




Diabetic Retinopathy



Normal vision

Same scene as viewed by a person with diabetic retinopathy



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Talking Points:

This image shows what vision is like for someone with advanced diabetic retinopathy.



Diabetic Eye Disease

- Symptoms
 - No early warning signs or symptoms
- Early detection and timely treatment can reduce the risk of vision loss.
- Treatment options
 - Laser treatment
 - Surgery



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Talking Points:

- Symptoms
 - There are often no early warning signs or symptoms of diabetic eye disease.
 - Sometimes, however, blurred or blocked vision may occur.
 - If you have diabetes, don't wait for symptoms before having a comprehensive dilated eye exam.
- If disease is detected early, timely treatment and appropriate follow-up care can reduce the risk of vision loss or blindness by up to 90 percent.

- There are treatment options for diabetic eye disease.
 - Laser surgery and appropriate follow-up care can reduce the risk of blindness, but often it cannot restore vision that has already been lost.
 - Other treatments may include injections into your eye or surgery.




Diabetic Eye Disease

- What can you do?
 - Control your ABCs - A1C, blood pressure, and cholesterol.
 - Take your medications as directed.
 - Maintain a healthy weight.
 - Exercise.
 - Don't smoke.
 - Have a dilated eye exam at least once a year.




Talking Points:

- How can the risk of vision loss be reduced?
 - People with diabetes who practice good blood sugar control may delay the onset or progression of diabetic eye disease. So, be sure to control your ABCs (A1C, blood pressure, cholesterol).
 - Take your medications as prescribed by your doctor.
 - Reach and maintain a healthy weight.
 - Add more physical activity to your daily routine.
 - Don't smoke, or stop smoking.
- If you have diabetes, be sure to have a comprehensive dilated eye exam at least once a year to detect diabetic eye disease in its early stages.
- Medicare will pay for a dilated eye exam for people with diabetes.



Glaucoma

- What is it?
 - A group of eye diseases that can damage the optic nerve in the eye.
 - Glaucoma can develop in one or both eyes.
 - Primary open-angle glaucoma is the most common form.




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Talking Points:


- What is it?
 - Glaucoma is a group of eye diseases that can damage the optic nerve in the eye.
 - It is usually associated with elevated pressure in the eye, but the effect of the pressure can vary from person to person.
 - Glaucoma can develop in one or both eyes.
 - It affects your peripheral, or side, vision.
 - If untreated, vision loss or blindness may occur.
 - Primary open-angle glaucoma is the most common form.

Slide 25

(continued from previous slide)




- **Who is at higher risk?**
 - African Americans over age 40.
 - Everyone over the age of 60, especially Mexican Americans.
 - People with a family history of glaucoma.




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Talking Points:

- Who is at higher risk?
 - Anyone can develop glaucoma.
 - People who are at a higher risk include the following:
 - African Americans over age 40.
 - Everyone over the age of 60, especially Mexican Americans.
 - People with a family history of glaucoma.




Glaucoma




Normal vision

Same scene as viewed by a person with glaucoma




Talking Points:

This image shows what vision is like for someone with advanced glaucoma.



Glaucoma

- Symptoms
 - No early warning signs or symptoms
 - No pain
 - Loss of side vision
- Treatment options
 - Medications, usually eye drops
 - Laser or conventional surgery



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Talking Points:

- Symptoms
 - There are no early warning signs or symptoms.
 - There is no pain.
 - As the disease progresses, a person with glaucoma may notice that it is difficult to see objects to the side while objects in front may still be seen clearly.
 - Left untreated, straight-ahead vision may decrease until no vision remains.
- Treatment Options
 - The most common treatment options are medications, usually eye drops. It is very important to take medications as directed.

- Laser surgery or conventional surgery is sometimes used to help relieve pressure by allowing fluid to drain from the eye.
- Although glaucoma cannot be cured, it can usually be controlled through early detection and timely treatment.



Glaucoma

- What can you do?
 - People at higher risk should get a comprehensive dilated eye exam every one to two years or as instructed by your eye care professional.



Talking Points:

- People at higher risk should get a comprehensive dilated eye exam every one to two years or as instructed by your eye care professional.
- Detecting the disease in its early stages and complying with treatment is the best thing you can do to protect your sight.
- Medicare will pay for dilated eye exams to detect glaucoma if you have diabetes, have a family history of glaucoma, are African American and aged 50 or older, or are Hispanic and aged 65 or older.



Dry Eye

- What is it?
 - The eye does not produce tears properly.
 - Tears evaporate too quickly.
 - Inflammation of the surface of the eye may occur along with dry eye.




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Talking Points:


- What is it?
 - Dry eye occurs when the eye does not produce tears properly or when the tears evaporate too quickly.
 - If left untreated, this condition can lead to pain, ulcers, or scars on the cornea (the clear dome-shaped outer surface that covers the eye in front of the iris—the colored part of the eye), and some loss of vision.
 - Dry eye can make it more difficult to perform some activities, such as using a computer or reading for an extended period of time.
 - Dry eye can decrease tolerance for dry environments, such as the air inside an airplane.
 - It can be a temporary or chronic (ongoing) condition.

Slide 30

(continued from previous slide)




- **Who is at higher risk?**
 - Women often experience dry eye more than men.
 - Dry eye can occur at any age.
 - Older adults frequently experience dryness of the eyes.



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Talking Points:

- Who is at higher risk?
 - Women suffer more often from dry eye. Dry eye is more common after menopause.
 - Dry eye can occur at any age and may be more common with the use of certain medications.
 - Older adults frequently experience dryness of the eyes.



Dry Eye

- Symptoms
 - Stinging or burning of the eye.
 - Feeling as if sand or grit is in the eye.
 - Episodes of excess tears following dry eye periods.
 - A stringy discharge from the eye.
 - Pain and redness of the eye.
 - Episodes of blurred vision.




Talking Points:


- Dry eye has many symptoms, such as the following:
 - Stinging or burning of the eye.
 - Feeling as if sand or grit is in the eye.
 - Episodes of excess tears following dry eye periods.
 - A stringy discharge from the eye.
 - Pain and redness of the eye.
 - Episodes of blurred vision.

Slide 32

(continued from previous slide)



- **Symptoms**
 - Heavy eyelids.
 - Decreased tearing or inability to shed tears when crying.
 - Uncomfortable contact lenses.
 - Decreased tolerance to any activity that requires prolonged visual attention.
 - Eye fatigue.




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Talking Points:


- Other symptoms include the following:
 - Heavy eyelids.
 - Decreased tearing or inability to shed tears when crying.
 - Uncomfortable contact lenses.
 - Decreased tolerance to reading, working on the computer, or any activity that requires prolonged visual attention.
 - Eye fatigue.

Slide 33

(continued from previous slide)



- **Treatment options**
 - Using artificial tears, prescription eye drops, gels, gel inserts, and ointments.
 - Wearing glasses or sunglasses.
 - Getting punctal plugs.



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Talking Points:

- Some treatment options for dry eye include the following:
 - Using artificial tears, prescription eye drops, gels, gel inserts, and ointments—available over the counter—as the first line of therapy. Talk to your eye care professional or pharmacist about what would be the best option.
 - Wearing glasses or sunglasses that fit close to the face, such as wrap-around shades or ones that have side shields.
 - Getting punctal plugs. The eye care professional inserts little plugs into the drainage holes where tears drain from eyes into the nose. But this is not a permanent treatment option.
- Talk to your eye care professional about other treatment options if symptoms remain.




Dry Eye

- What can you do?
 - Use an air cleaner to filter dust
 - Avoid dry conditions
 - Use lubricating eye drops
 - Visit an eye care professional




Talking Points:

- Things you can do to help yourself:
 - Use an air cleaner to filter dust and other particles when indoors to help prevent dry eyes. A humidifier also may help by adding moisture to the air.
 - Avoid dry conditions and allow your eyes to rest when performing activities that require you to use them for long periods of time. Use lubricating eye drops while performing these tasks.
- If symptoms continue, visit an eye care professional. He/she can determine if other treatments are necessary to avoid permanent damage to your eyes.



Low Vision

- What is it?
 - A visual impairment that is not corrected by standard eyeglasses, contact lenses, medication, or surgery.
 - It interferes with the ability to perform everyday activities.




Talking Points:


- Left untreated, many eye diseases and conditions can lead to low vision.
- Low vision is a visual impairment that is not corrected by standard eyeglasses, contact lenses, medication, or surgery and that interferes with the ability to perform everyday activities.
 - Even with regular glasses, contact lenses, medicine, or surgery, people with low vision find everyday tasks difficult to do, such as the following:
 - Reading the mail
 - Shopping
 - Cooking
 - Watching TV
 - Writing
 - Driving

Slide 36

(continued from previous slide)



- Who is at higher risk?
 - People with eye disease.
 - Some people develop vision loss after eye injuries or from birth defects.



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Talking Points:

- Who is at higher risk?
 - All people with vision-threatening eye disease.
 - Some people develop vision loss after eye injuries or from birth defects.



Low Vision

- Treatment options
 - Vision rehabilitation.
- What can you do?
 - See a specialist in low vision.
 - Talk to your eye care professional about vision rehabilitation.
 - Use low vision devices.



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Talking Points:

- Treatment Options
 - Vision rehabilitation services can offer information about devices and services to help people adapt to vision loss and maintain their independence.
- If you are diagnosed with low vision, see a specialist in low vision.
- Talk to your eye care professional about vision rehabilitation.
- In vision rehabilitation, you can learn how to use the following assistive devices:
 - Telescopic lens.
 - Hand-held magnifier.
 - Special software for computers.

- Non-optical aids, such as talking watches or the proper use of lighting.
- There is help for people who have low vision and it is possible to maintain your independence.



Clinical Trials

- Talk to your eye care professional about participating in a clinical trial.
- To learn more about clinical trials, visit www.nei.nih.gov



Talking Points:

- If you are diagnosed with an eye disease or condition, talk to your eye care professional about treatment options, including participating in a clinical trial.
- Clinical trials involve medical research with people. The National Eye Institute (NEI) conducts or supports clinical trials to find new ways to treat or prevent eye disease and vision loss.
- Clinical trials in vision research have led to new medicines and surgeries that have saved or improved sight for thousands of people. To learn more about NEI clinical trials, visit <http://www.nei.nih.gov>



Review

- As you age, you are at higher risk of age-related eye diseases and conditions.
- Have a comprehensive dilated eye exam to detect eye diseases in their early stages.
- Questions?



Talking Points:

- Let's recap what we've learned today and what you can do to have healthy vision:*
 - As you age, you are at higher risk of age-related eye diseases and conditions.
 - A comprehensive dilated eye exam can detect eye diseases in their early stages.
 - Early detection and treatment can prevent vision loss and blindness from eye disease.
 - Visit your eye care professional for a comprehensive dilated eye exam and talk with him/her about your risk of eye disease.
 - Your eye care professional will tell you how often you need to have a comprehensive dilated eye exam.

- I am happy to answer any questions you have, but please know that only your eye care professional can directly answer any specific medical questions.
- On behalf of the National Eye Institute (NEI) and (name of your organization), thank you for attending this workshop. Please be sure to visit the NEI Website or call NEI for more information. You can also contact me or visit our website at _____ for more information.

**Presenter Tip: You may want to ask the audience to list the most common age-related eye diseases and explain how they affect vision.*



Where To Get More Information

National Eye Institute (NEI)

For more information, visit

www.nei.nih.gov/agingeye

Or call NEI at 301-496-5248



Talking Points:

- The National Eye Institute, part of the National Institutes of Health, conducts and supports research to help prevent and treat eye diseases and other vision disorders.
- If you use the Internet, here is a website for more information on eye health.
 - NEI's Website offers scientifically accurate and unbiased information related to eye diseases and disorders and vision research.
 - NEI's Healthy Eyes Website provides tips and information on keeping your eyes healthy and your vision at its best.
- If you don't have a computer or surf the Internet, you can call NEI and get information, as well.