

See the future!

Your vision as you age

Oregon Family and Community Educators (FCE)

Participant packet

- Eye Care Vocabulary and Amsler Grid
- Anatomy of the Eye
- Tips for Eye Care (Lighthouse International)
- Common Vision Disorders



Eye Care Vocabulary

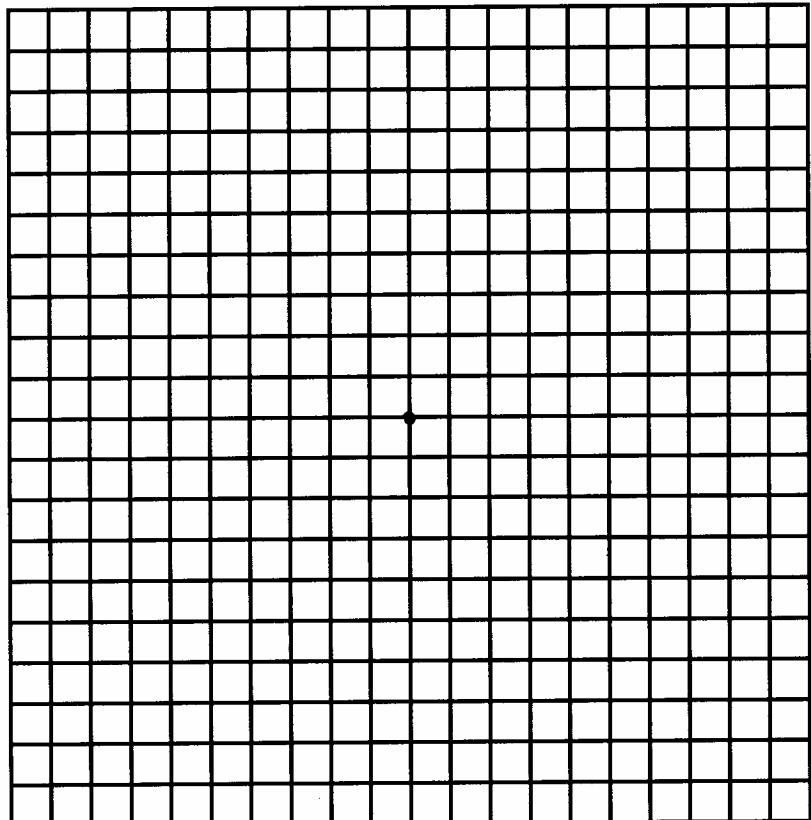
Draw a line from the word to the appropriate description.

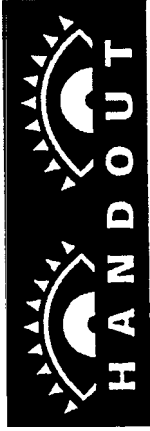
Optician	High intraocular pressure damages optic nerve, reducing vision
Optometrist	A grid of straight lines used to determine vision problems
Ophthalmologist	Prepares and fits glasses based on a prescription
Presbyopia	Determined by the amount of fluid in eyes
Macular degeneration	View to the sides when the eye is looking forward
Glaucoma	Examines eyes, checks vision, and looks for signs of disorders
Cataract	Clouding of the lens, due to protein clumps forming
Diabetic retinopathy	Method of removing eye lens with cataract by suction
Peripheral vision	Literally, "aging eyes"; loss of visual acuity
Intraocular pressure (IOP)	Blood vessels behind the retina break down and leak
Amsler grid	The center portion of the retina deteriorates
Phacoemulsification	Physician who specializes in diseases and disorders of eyes

Amsler Grid

for vision assessment.

Directions: Hold the grid 12 to 14 inches from your face. Look directly at the spot in the middle of the grid, using one eye at a time. Note any distortions, blurred spots, or missing spots on the grid.





The Anatomy of the Eye

- ◆ **Choroid (KOR-oyd)**
A layer of blood vessels that feeds the retina.
- ◆ **Cornea (KOR-nee-uh)**
The clear outer part of the eye's focusing system located at the front of the eye.
- ◆ **Eyelid**
The skin-covered structure that protects the front of the eye; limits light entering the eye;
- ◆ **Choroid**
The layer of blood vessels that feeds the retina.
- ◆ **Cornea**
The clear outer part of the eye's focusing system located at the front of the eye.
- ◆ **Eyelid**
The skin-covered structure that protects the front of the eye; limits light entering the eye;
- ◆ **Iris**
The colored part of the eye; regulates the amount of light entering the eye.
- ◆ **Lens**
The clear part of the eye behind the iris that helps to focus light on the retina. Allows the eye to focus on both far and near objects.
- ◆ **Fovea (FOH-vee-uh)**
The center of the macula; gives the sharpest vision.
- ◆ **Iris**
The colored part of the eye; regulates the amount of light entering the eye.
- ◆ **Lens**
The clear part of the eye behind the iris that helps to focus light on the retina. Allows the eye to focus on both far and near objects.

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◆ **Macula (MAK-yoo-luh)**
The small sensitive area of retina that gives central vision; contains the fovea.

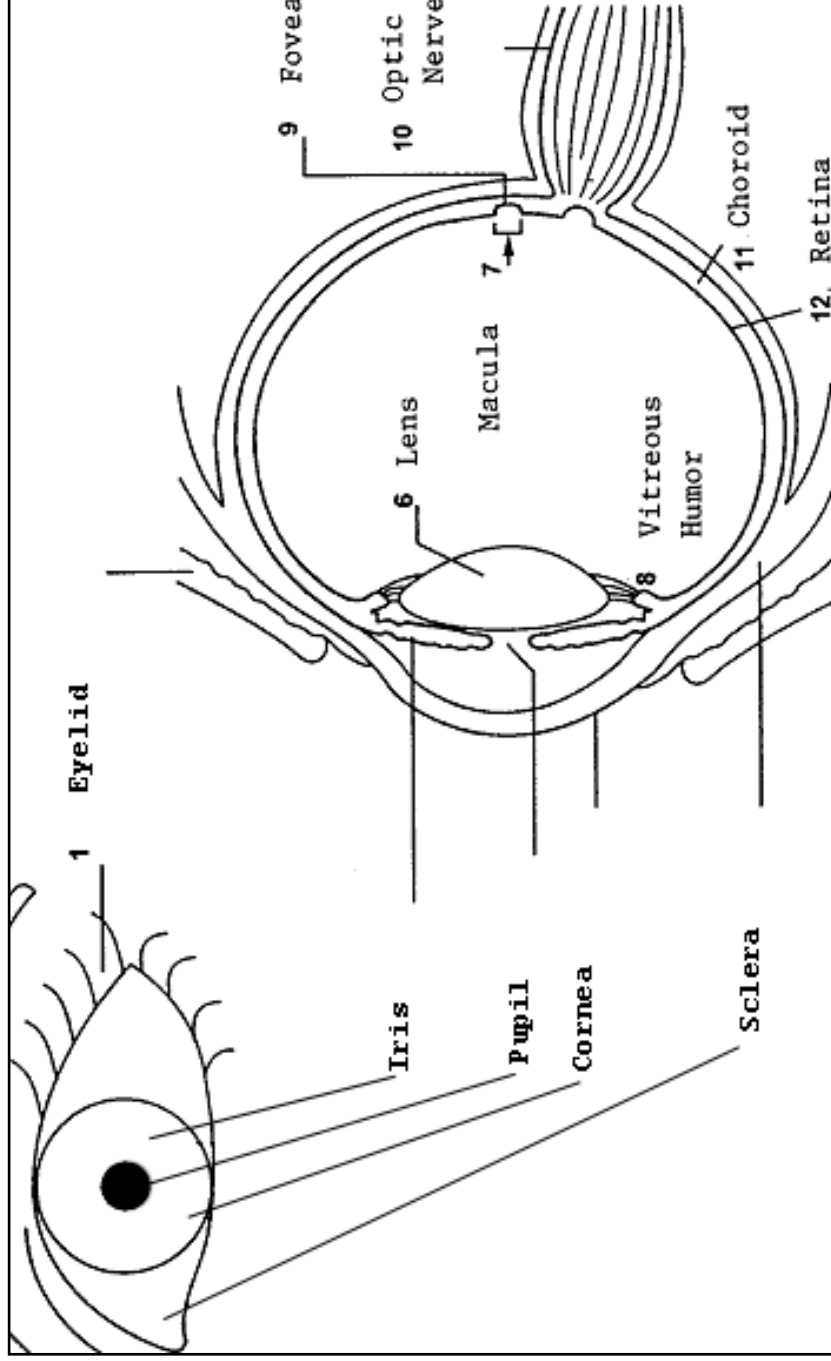
◆ **Optic nerve**
The bundle of over one million nerve fibers that carries visual messages from the retina to the brain.

◆ **Pupil**
The opening at the center of the iris. The iris adjusts the size of the pupil and controls the amount of light that can enter the eye.

◆ **Retina (RET-in-nuh)**
The light-sensitive tissue lining the back of the eyeball; sends electrical impulses to the brain.

◆ **Sclera (SKLEH-ruh)**
The tough, white outer coat of the eye.

◆ **Vitreous Humor (VIT-ree-us)**
The clear gel filling the inside of the eye.



Tips for Eye Care



**LIGHTHOUSE
INTERNATIONAL**

A Lighthouse Center for Education resource

Experts at Lighthouse International, the world's leading resource on vision impairment, recommend that all people age 45 and older take the following steps for better eye health.

- Visit your eye care professional for an annual checkup, which should include tests for glaucoma and recommendations for lenses for distance viewing, intermediate viewing (such as a computer screen), and reading. If you have a family history of eye disease or systemic conditions such as diabetics or hypertension, you may need to see an eye doctor more frequently.
- Consult you eye care professional immediately if you notice any of these changes in your vision:
 - ◆ double or blurred vision
 - ◆ halos around lights
 - ◆ inability to see faces clearly
 - ◆ faded or distorted print
 - ◆ parts of letters or words are missing
 - ◆ washed out or faded colors
 - ◆ bumping into objects or difficulty judging depth perception on stairs or curbs
 - ◆ prolonged difficulty seeing when going from light to dark
 - ◆ sparks of light appearing off to the side

- ◆ car headlights appearing to have spokes radiating from a central point
 - ◆ sudden pain in one or both eyes
 - ◆ sudden appearance of "floaters"
- Take precautions to prevent accidental eye injuries. Wear protective eye gear when doing yard work, using power tools or playing sports. Wear goggles when swimming.
 - Limit your exposure to ultraviolet (UV) rays, especially if you are outside a great deal or live in a sunny climate. Wear tinted or clear lenses whose UV blocking capacity is stated on the label or manufacturer's warranty.
 - Take care of your general health and maintain a healthy diet that is low in saturated fat, sugar, and salt. Research increasingly suggests that eating foods rich in antioxidants such as the carotenoids, ascorbic acid, vitamin E, zinc and selenium can reduce the incidence of age-related eye disease.
 - If you have a condition such as glaucoma, cataracts, macular degeneration, or diabetic retinopathy, and your eye doctor says nothing more can be done with medication, surgery or corrective lenses, contact your local vision rehabilitation organization. It can help you maintain independence through low vision services, adaptive devices, and training in independent living skills.

To find a vision rehabilitation agency near you, call the Lighthouse Information and Resource Service toll-free at (800) 829-0500 (press option for "information" when you hear the voice menu) or e-mail info@lighthouse.org.

Visit us on the Web at www.lighthouse.org

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Common Vision Disorders



A person with normal vision would view a scene like this.



**Age-related macular-degeneration (AMD).
Loss of vision in the middle of vision.**



**Glaucoma. Loss of vision around
edges of field of vision.**



Cataracts. Clouding of vision.



**Diabetic retinopathy.
Darkened spots that obscure portions of vision.**

Common Vision Disorders

People of all ages may experience the following conditions.

- Myopia or nearsightedness. The cornea and lens work together to make the viewed image come into clear focus at a point in front of the retina, so what the retina receives is a blurred image of items far away.
- Hyperopia, or farsightedness, occurs when the image hasn't quite come into focus when it gets to the retina.
- Astigmatism, unevenness in the cornea, means that the image viewed is distorted, sometimes in different areas in the field of vision.

As we age, almost everyone experiences some changes in vision. This is called presbyopia, which simply means "aging eyes." These include:

- Loss in the ability to focus on things close to us
- Small print becomes more difficult to see
- It takes longer to switch focus from something close to something far away

As we age the likelihood of more serious vision problems increases with each passing decade. The four most common eye disorders of older adults are:

- Age-related macular degeneration (AMD) is the most common cause of vision loss in older adults. AMD is characterized by a blurring in the center of the field of vision due to deterioration of the macula, the center of the retina. When the macula deteriorates, it cannot receive the focused image from the cornea and lens and then transmit a clear signal to the brain for interpretation. The center of the image the person sees is blurred and darkened, and colors seem muted.
- Glaucoma is experienced as a loss of peripheral vision, which is the sight around the sides of the field of vision. Glaucoma damages the optic nerve that carries messages from the eye to the brain. A common cause of damage to the optic nerve results from increased pressure, called intraocular pressure (IOP), inside the eye. However, some people with normal levels of IOP experience optic nerve damage as a result of an injury, a tumor, inflammation, diabetes, or use of steroids.
- Cataracts are a clouding of the lens in the eye. Cataracts result when proteins in the lens of the eye clump together and harden, clouding the lens. The person with cataracts feels as if she's looking through a brown fog.
- Diabetic retinopathy is a common complication of long-term diabetes. Blood vessels in the back of the eye leak, distorting and damaging the retina so it cannot receive images projected by the cornea and lens. Laser surgery can stop some bleeding, if it not severe, but may result in the formation of scars that also might distort vision.

Some normal vision changes occur as we get older, but we should still be able to maintain healthy eyesight. The first step to eye care is a regular vision check-up with a qualified eye care professional.