Keeping your eyes healthy when you have diabetes

Oregon Diabetes Resource Bank
Handouts to help people with diabetes

If you have diabetes, here are things you need to know:

Having diabetes makes some eye problems more likely. These eye problems *can be serious* and can even lead to blindness.

There may be no symptoms at first. Eye problems can develop slowly. Often there are no symptoms to warn you until the damage is severe.

You can help prevent eye problems. Just because you have diabetes does not mean that you will automatically get eye problems. Here are ways to help keep your eyes healthy:

- **Get a "dilated eye exam" every year.** This exam is the best way to catch eye problems at an early stage, when treatment can work better. (A dilated eye exam is different from having a checkup for eyeglasses or contact lenses. Page 6 of this handout tells you more.)
- **Do your best to keep your blood glucose (blood sugar) at a healthy level.**
- **Do your best to keep your blood pressure at a healthy level.**

If you have eye problems, they can be treated. The kind of treatment you need depends on what kind of eye problem you have. It's best to find and treat eye problems as soon as you can. Without treatment, your vision could get worse or you could become blind.

This handout tells about eye problems and how to help prevent them.

What are the parts of the eye?

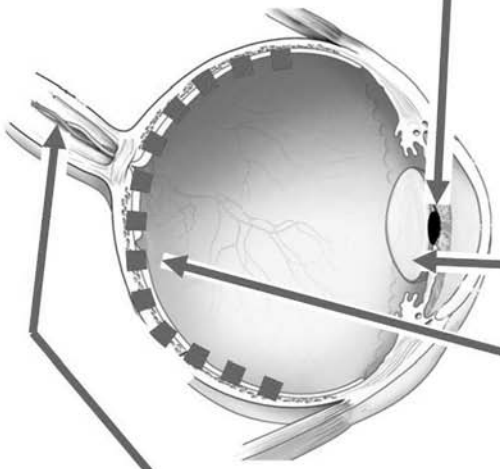
This handout tells about three kinds of eye problems. Since each problem affects a different part of the eye, we start by showing you the main parts of the eye.

This drawing of a woman shows a **side view** of one of her eyes.

The picture below is *also* a side view of an eye. It shows a **close-up side view of the entire eye,** including parts of the eye that are inside the head.

Pupil The pupil is at the front of your eye. It looks like a black circle in the center of your eye. Light comes into your eye through your pupil.

Lens The lens of your eye is right behind the pupil. Light comes through the lens and the lens helps focus what you see.



Retina ("Retina" is pronounced "RET-tin-uh.") The retina is a layer of nerves at the back of your eye. It senses the light that comes into your eye. In this picture, the retina is marked with a line that looks like this: ■ ■ ■ ▮

Optic nerve "Optic" is pronounced "OPP – tick" and it means "eye." The optic nerve is the main nerve of your eye. It is at the back of your eye. It carries the signals to your brain that allow you to see.

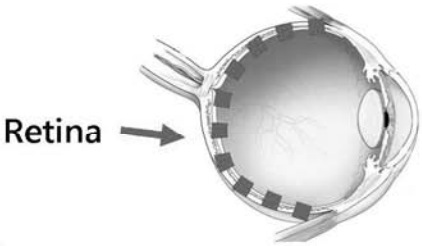
What eye problems are a concern when you have diabetes?

This handout tells you about three types of eye problems that can result from having high blood glucose:

- The first is called "**diabetic retinopathy**." ("Retinopathy" is pronounced "ret-tin-AH-path-ee.") As you can tell from its name, diabetic retinopathy is mainly a problem for people with diabetes.
- The other two eye problems are **cataracts** and **glaucoma.** These eye problems are a special concern for people with diabetes. (People who do *not* have diabetes can also get cataracts and glaucoma.)

What is "diabetic retinopathy"?

Diabetic retinopathy is the *most common* eye problem for people with diabetes. It involves **damage to the blood vessels in the retina.**



- Sometimes the blood vessels swell and leak fluid. Sometimes abnormal new blood vessels grow on top of the retina.
- These changes in the blood vessels in the retina can lead to vision loss or blindness. To see how having diabetic retinopathy can affect vision, compare the two pictures below:

1

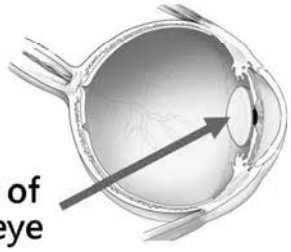
Here is how two boys look to a person who has normal vision:

2

Here is how the *same boys* look to a person who has diabetic retinopathy:

What are "cataracts"?

Cataracts **affect the lens of your eye,** making the things you look at seem **blurry.**



- The **lens** is at the front of your eye. It focuses light on your retina.
- Usually the lens of your eye is clear, but if you have a cataract, the lens turns cloudy.
- When the lens turns cloudy, it makes your vision blurry. To see how having cataracts can affect vision, compare the two pictures below:

1

Here is how two boys look to a person who has <u>normal vision</u>:

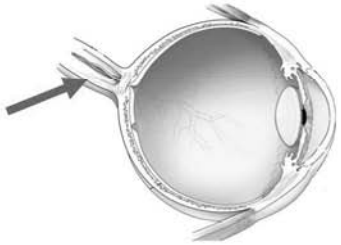
2

Here is how the *same boys* look to a person who has <u>cataracts</u>:

- To help you see clearly again, cataracts can be removed by surgery.
- Anyone can get cataracts. But **if you have diabetes, you are more likely to get cataracts at a younger age**.

What is "glaucoma"?

When you have glaucoma, **pressure builds up inside your eye and damages the optic nerve.**



- The optic nerve carries signals to the brain that help you to see. When your optic nerve gets damaged, it causes vision loss. To see what the vision loss from glaucoma is like, compare the two pictures below:

1

Here is how two boys look to a person who has normal vision:

2

Here is how the *same boys* look to a person who has glaucoma:

- At first, the vision loss from glaucoma is just from the sides of your eyes, as shown in photo #2 above. But if you have glaucoma and it is not treated, it can lead to blindness.
- If you get regular eye exams, it is easy to catch glaucoma at an early stage. When you find glaucoma early, it's usually easy to treat.
- Anyone can get glaucoma. But **people who have diabetes are nearly twice as likely to get glaucoma** as other adults.

Help keep your eyes healthy!

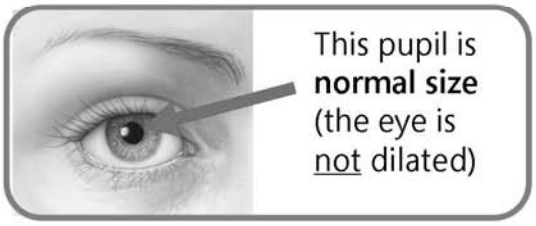
Don't let eye problems take your vision away.

The rest of this handout tells you what you can do to help keep your eyes healthy.

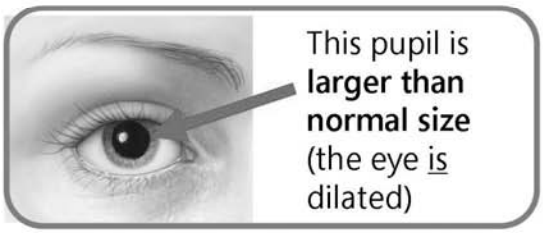
To help find eye problems at an early stage, get a "dilated eye exam" at least once a year

- A dilated eye exam **checks for damage to the blood vessels in your eyes**. It's best to find damage to blood vessels at an early stage when treatment can work better.
- **This exam is <u>not</u> the same as the eye checkup you get for glasses or contact lenses**. Instead, it's a special type of eye exam for people with diabetes that lets your doctor get a good look at the blood vessels in your eyes.
- When you have a dilated eye exam, you will be given **eye drops to "dilate your eyes."**
- "Dilate" means to get bigger. As shown in the pictures below, the eye drops make your pupils get bigger (the pupil is the dark center of your eye).

This woman is getting eye drops to <u>dilate</u> her eyes.



This pupil is **normal size** (the eye is <u>not</u> dilated)



This pupil is **larger than normal size** (the eye <u>is</u> dilated)

When your pupils get larger, **your eye doctor can get a much better view of the inside of your eyes**. This makes it easier to check for possible damage to blood vessels in your eyes.

How often should you get a dilated eye exam?

- **If you have no symptoms, get a dilated eye exam once a year**

  Even if you see just fine and your eyes seem fine, you could have some damage in your eyes.

  Eye problems can develop slowly. You may not notice any symptoms until the damage is already serious.

  So be sure to get a dilated eye exam at least once a year. This exam is the best way to catch eye problems at an early stage when treatment will work better.

- **If you notice symptoms, get a dilated eye exam right away**

  If you feel that something is changing or seems wrong with your eyes, make an appointment for a dilated eye exam.

  Signs of possible eye problems could include blurry vision or if you have trouble when you are reading. You may also notice things such as rings around lights, dark spots, or flashing lights.

Do your best to keep your blood glucose (blood sugar) as close to normal as you can

When your blood glucose stays too high for a long time, it can cause serious damage to your body. This damage can include eye disease.

Controlling your blood glucose is the best way to keep your eyes healthy. Talk with your health care team about your blood glucose numbers and ask what numbers you should aim for. They can help you find a way to keep your blood glucose under control.

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Illustrations are adapted from images provided by the National Eye Institute, U.S. National Institutes of Health.