

## Diabetes and Your Eyes

### WHAT IS DIABETIC RETINOPATHY?

Diabetic retinopathy is eye disease that damages the small blood vessels in the retina. The retina is the tissue that lines the back of the eye. It is the part of the eye that collects the information you see and sends it to your brain. Often there are no symptoms of retinopathy like changes in your eye sight, and there is no pain. But if you don't treat it, you could lose some or all of your vision.

There are two types of retinopathy:

- **nonproliferative.** This is damage to the retina with bleeding, fluid buildup, and swelling of the blood vessels. It is an early stage of eye disease.
- **proliferative.** This is when fragile new blood vessels grow along the retina and in the clear gel that lies in front of the retina. This is the most advanced stage of eye disease.

### HOW CAN DIABETES HURT MY EYES?

High blood glucose (sugar) levels can damage the tiny blood vessels in your eyes. High blood pressure can also damage these blood vessels. Damaged vessels break and bleed, and keep the retina from working well.

### HOW DO I KNOW IF I HAVE EYE PROBLEMS?

The best way to see if you have eye problems is to have an eye doctor check your eyes. You can have eye damage even if your vision is fine. It has nothing to do with needing glasses. Regular checkups with an eye doctor can detect eye disease early and prevent blindness.

### CAN DIABETES CAUSE OTHER EYE PROBLEMS?

Some eye problems are more common in people with diabetes:

- Glaucoma is an increase in fluid pressure inside the eye. If untreated, it leads to vision loss.
- Cataract is a clouding of the eye's lens.
- Retinal detachment occurs when the retina is lifted or pulled from its normal position.

Symptoms are:

- a sudden or gradual increase in the number of floaters in your field of vision
- light flashes in the eye
- a sudden change in vision like a shade pulled over one eye

If not treated right away, retinal detachment can cause permanent vision loss. If you have symptoms of a retinal detachment, see an eye doctor right away.

## WHAT CAN I DO TO PROTECT MY EYES?

You can protect your vision by keeping your A1C and blood pressure in your target range.

### A1C

Your A1C, sometimes reported as estimated average glucose (eAG), tells your average blood glucose for the past 2 to 3 months. The higher your A1C, the higher your chances for diabetes problems. If your number is higher than 7% (eAG of 154 mg/dl), you may need a change in your diabetes treatment plan. Talk with your health care team.

### Blood Pressure

High blood pressure damages your blood vessels. This raises your chances for eye problems as well as for stroke, heart and kidney problems.

Blood pressure is shown by two numbers, like 140/80. This is read as 140 over 80. The first number is the pressure when the heart pushes blood through the body. The second number is the pressure when the heart rests. Goal blood pressure for most people with diabetes is to have the first number less than 140 and the second number less than 80. Have your blood pressure checked at every diabetes visit. If your blood pressure numbers aren't on target, work with your health care team to reach your target.

## WHAT ARE THE TREATMENTS FOR PROLIFERATIVE RETINOPATHY?

When the blood vessels in your eyes are leaking blood, your doctor may suggest laser surgery to stop the leaks and preserve eye sight. Laser surgery uses tiny beams of light to seal off the leaking blood vessels.

### Staying safe during retinopathy treatment

If the blood vessels in your eyes are leaking blood or you need laser surgery, certain physical activities or movements can make it worse. Because of this, you may need to adjust your fitness plan to avoid bouncing or quick movements. You may also need to limit activities that cause you to strain or hold your breath such as lifting a small child or a bag of heavy groceries. Talk with your eye doctor about what is safe for you.

## IF I HAVE DAMAGE TO MY EYES COULD ANYTHING ELSE BE DAMAGED?

The same type of tiny blood vessels that feed your eyes also feed your kidneys. These tiny vessels can be damaged by untreated high blood glucose and high blood pressure. If you have damage to your eyes, you may have damage to your kidneys as well. You can prevent further damage to your kidneys and eyes by reaching your blood glucose and blood pressure targets. Healthful eating, physical activity, and medicines can all help you reach your targets.