

Our vision is for each Wisconsin resident to have healthy vision at every stage of life.

DIABETES AND YOUR EYES

Diabetes is a disease that can develop when glucose levels in your blood (also known as blood sugar) are too high. Diabetes can cause changes in your vision that range from blurry vision to permanent vision loss. The best way to prevent vision loss from diabetes if by receiving **a dilated eye exam every year with your eye doctor.**

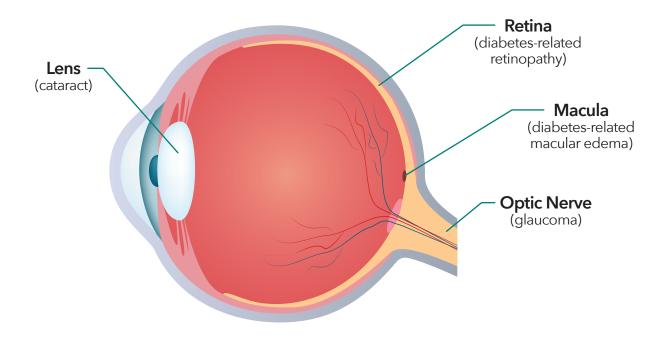
Risk Factors of Diabetes

- Adults ages 45 and older
- Family history of diabetes
- High blood pressure
- Overweight/obesity
- Having excess weight
- Certain populations such as African Americans, Hispanics/Latinos, American Indians, Asian Americans, and Pacific Islanders have a higher chance of developing diabetes



Anatomy of the Eye

Diabetes affects the entire health of your eye. Diabetes-related eye disease mainly affects the retina (back of the eye), but can also affect the lens, optic nerve, and drainage system of your eye. Diabetes-related eye disease can make it hard to read, see signs, drive at night, and can lead to permanent vision loss.





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DIABETES-RELATED EYE DISEASES:

Diabetes-Related Retinopathy



Normal Vision

Diabetes-Related Retinopathy

Diabetes-Related Retinopathy occurs when small blood vessels leak and bleed in the **retina**. The **retina** is located at the back of the eye and helps you see clearly. Diabetes-related retinopathy is the leading cause of blindness in American adults. Diabetes-related retinopathy is often treated through frequent injectable drugs to maintain the health of the **retina** over time.

Diabetes-Related Macular Edema



Normal Vision

Diabetes-Related Macular Edema

Diabetes-Related Macular Edema occurs when small blood vessels in the center of the **retina (the macula)** become leaky and cause the **macula** to swell. Swelling can cause blurry vision, changes in color vision, or permanent vision loss. Diabetes-related macular edema is often treated with laser treatments or steroid injections to decrease swelling in the eye.

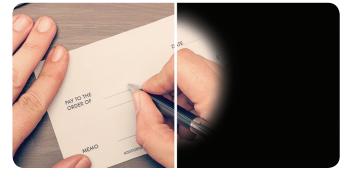
Glaucoma



Normal Vision

Cataract

Cataract is the clouding of the eyes **lens**. This can cause your vision to become blurry and colors to appear dull. Generally, cataracts can be treated with surgery. Besides aging, diabetes is the most common risk factor for cataracts.



Normal Vision

Glaucoma

Glaucoma, "the silent thief of sight," develops when there is too much pressure in the eye, damaging the **optic nerve**. Vision loss typically starts without any noticeable symptoms. If left untreated, glaucoma can lead to permanent vision loss. Once vision is lost to glaucoma it cannot be reversed. Medications and surgery may slow the disease development and progression.

Cataract



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DIABETES-RELATED RETINOPATHY

Diabetes-related retinopathy affects **1 in 4** people living with diabetes. It is the number one cause of blindness in American adults. It occurs when small blood vessels leak in the retina. The retina is located at the back of the eye and helps you see clearly. **To avoid vision loss from diabetes-related retinopathy, it is highly recommended people with diabetes received a dilated eye exam every year.**



Symptoms of Diabetes-Related Retinopathy

- Sudden increase in eye floaters (spots or dark cobweb-like strands that appear to float in your field of vision)
- Blurry vision
- Sudden loss of vision in one eye
- Poor color vision
- Poor night vision
- Halos around lights
- Seeing flashing lights

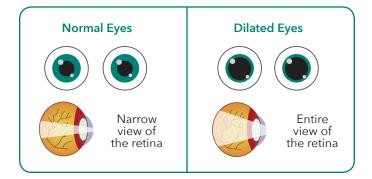
Contact your eye doctor right away if you experience any of these symptoms.











Dilated Eye Exams

A **dilated** eye exam is key for people with diabetes. Dilation of the eyes is done with eye drops to widen the front of the eye, called the pupil. Dilating the pupils allows your eye doctor to see the entire back of your eye. With dilation, your eye doctor can check the retina (back of the eye), the macula (central vision), and the entire health of the eye to ensure its healthy.

How to Manage your Diabetes and Keep Your Eyes Healthy



Visit your eye doctor every year for a dilated eye exam



Have an A1C of 7 or below, or at a level your eye doctor recommends



Quit smoking, work with a healthcare provider on a plan to quit



Take your medications as prescribed



ADULT'S VISION THE PROBLEM:

DIABETES: A RISING VISION HEALTH EPIDEMIC

DIABETES-RELATED A1C RETINOPATHY HE LEADING CAUSE IS T ${\sf R}$ AND VISUAL IMPAIRMENT AMONG WORKING-AGE ADULTS IN THE U.S.

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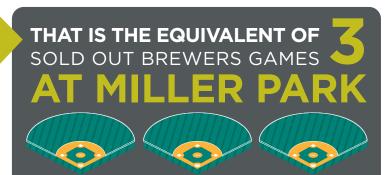
HEALTHY RETINA



DIABETES-RELATED RETINOPATHY

APPROXIMATELY 1 IN 3 ADULTS WITH DIABETES AGE 40 & OLDER ALREADY SHOW SOME SIGNS OF IABETES-RELATED RETINOPATH

ESTIMATED SCONS HAVE DIABETES AND DO NOT KNOW IT



Sources

Sources Gregg EW, Zhuo X, Cheng YJ, Albright AL, Narayan KM, Thompson TJ. Trends in lifetime risk and years of life lost due to diabetes in the USA, 1985-2011: a modelling study. Lancet Diabetes Endocrinol. 2014 Nov; 2(11):867-74.Epub 2014 Aug 12. Behavioral Risk Factor Surveillance System (BRFSS), 2014. Centers for Diseases Control and Prevention. National Diabetes Statistics Report: Estimates of Diabetes and Its Burden in the United States, 2014. Atlanta, GA: U.S. Department of Health and Human Services; 2014. National Eye Institute. (2015). Facts About Diabetic Eye Disease: Points to Remember. Retrieved from: https://nei.nih.gov/health/diabetic/retinopathy National Institute of Diabetes and Digestive and Kidney Diseases. (2017). Diabetic Eye Disease: How Common is Diabetic Eye Disease? Retrieved from: https://www.niddk.nih. gov/health-information/diabetes/overview/preventing-problems/diabetic-eye-disease National Survey of Children's Health, 2017-2012 Survey. Wisconsin Interactive Statistics on Health (WISH), 2014 Population Module. Wisconsin Department of Health Services. (2018). Diabetes Facts and Figures: Quick Facts. Retrieved from: https://www.dhs.wisconsin.gov/diabetes/facts.htm