



# ASSURE<sup>®</sup> BRILLIANCE

COMPREHENSIVE SERVICE & SUPPORT PROGRAM

## *Diabetes requires keeping an eye on eye health*



With diabetes, there is a risk for adult-onset visual loss and blindness. It is important that individuals with type 1 or 2 diabetes receive an annual dilated retinal eye examination in order to preserve their eyesight. The exam involves placing drops in the eyes to get a better view of the retina (back of the eyes); the procedure is painless. Because of light sensitivity after the exam, individuals must wear sunglasses until the pupils have returned to normal size.<sup>1</sup>

Diabetes is a known contributor of diabetic retinopathy, glaucoma and cataracts. Diabetic retinopathy—which generally occurs in both eyes—is the most common eye disease amongst persons with diabetes, especially those with type 1. The cause of the condition results from damage done to the small blood vessels found in the retina.<sup>2,3</sup>

### Stages of diabetic retinopathy

There are four stages of diabetic retinopathy:

#### 1. Mild nonproliferative

Microaneurysms (swelling of the tiny blood vessels in the retina) occur.<sup>3</sup> In the earliest stages, small red or white spots appear on the retina, which are visible on an eye exam.<sup>2</sup>

#### 2. Moderate nonproliferative

The disease continues to progress and the retina becomes blocked by some of its vessels that are used to nourish the area.<sup>3</sup>

#### 3. Severe nonproliferative

Additional blood vessels become blocked, creating a limited blood supply to the retina. The areas that become deprived of the blood supply continue to send signals to the body to create more blood vessels needed for nourishment.<sup>3</sup>

#### 4. Proliferative

Growth of new blood vessels continue due to the demand of the retina for continued nourishment. Unfortunately, the new blood vessels are fragile and poorly developed. The blood vessels themselves are asymptomatic and do not cause visual loss; however, if the blood vessels leak, vision loss and even blindness can occur.<sup>3</sup> A cough or sneeze is all it takes for the blood vessel to rupture.<sup>2</sup>

### Preventing retinopathy

**To prevent diabetic retinopathy, it is imperative that persons with diabetes manage and control their blood sugars, blood pressure and cholesterol levels.<sup>3</sup>**

Laser surgery is often used to treat the eye during the proliferative stage; however, there are other treatment options including a *vitrectomy*. A vitrectomy is used to remove blood from the center of the eye (vitreous gel) that is caused by severe bleeding or hemorrhaging.<sup>3</sup> Other treatments include injections of anti-VEGF (vascular endothelial growth factor) medicine or steroids into the affected eye, which can help to shrink new blood vessels during the proliferative stage.<sup>4</sup>

### Summary

It is critical that individuals with diabetes have an annual dilated retinal eye examination in order to evaluate/diagnose diabetic retinopathy or other eye diseases in their earliest stage.

An appointment with an optometrist or ophthalmologist who is trained to diagnose and treat eye diseases is recommended.<sup>5</sup>

## References

- 1 Joslin Diabetes Center. Annual Eye Exam. [www.joslin.org/info/annualeyexam.html](http://www.joslin.org/info/annualeyexam.html). Accessed October 10, 2014.
- 2 Diabetes Self-Management. What to Expect at Your Eye Exam. [www.diabetesselfmanagement.com/articles/eyes-and-vision/what-to-expect-at-your-eye-exam/1](http://www.diabetesselfmanagement.com/articles/eyes-and-vision/what-to-expect-at-your-eye-exam/1). Accessed October 10, 2014.
- 3 National Eye Institute. Facts About Diabetic Retinopathy. [www.nei.nih.gov/health/diabetic/retinopathy.asp](http://www.nei.nih.gov/health/diabetic/retinopathy.asp). Accessed October 10, 2014.
- 4 WebMD. Diabetic Retinopathy – Treatment Overview. [www.webmd.com/diabetes/tc/diabetic-retinopathy-treatment-overview](http://www.webmd.com/diabetes/tc/diabetic-retinopathy-treatment-overview). Accessed October 10, 2014.
- 5 Medline Plus. Diabetes Eye Exams. [www.nlm.nih.gov/medlineplus/ency/patientinstructions/000323.htm](http://www.nlm.nih.gov/medlineplus/ency/patientinstructions/000323.htm). Accessed October 10, 2014.