Dakota Diabetes Coalition is proud to offer this column on diabetes and related concerns every other Friday.

Dr. Johnson is a family practice doctor in Grand Forks with a special interest in diabetes -- and a special knack for writing. As a member of the Dakota Diabetes Coalition, he has generously made himself available to answer questions through our listserv. If you have comments, or questions for Dr. Johnson to address in future columns, please contact gailhand@q.com

DAKOTA DIABETES
COALITION

Visit the Coalition's website!
http://www.ndhealth.gov/diabetescoalition/

Eye disease comes with diabetes

Stress screenings, blood pressure and glucose control

Eye disease, specifically retinopathy, is a long-established complication of diabetes. There are two primary forms, non-proliferative diabetic retinopathy (NPDR) and proliferative diabetic retinopathy (PDR). The biggest threat to eyesight is PDR.

The types of retinopathy affect type 1 and type 2 patients differently:

- **Retinopathy and type 1**
  -Rare from 1 to 5 years after diagnosis
  -After 20 years with type 1 diabetes, 90% of patients will have retinopathy. Of those type 1's, **30% to 50% will have PDR**, the most threatening kind.
- **Retinopathy and type 2**
  -Not uncommon at diagnosis

-After 10 years, there is a 67% prevalence. But **just 10% of type 2s will have PDR**.

Screening critical at key times
Annual dilated eye exams by an eye care professional are a must. Nearly all forms of insurance cover these eye exams.

- In type 1, annual screening should start 5 years after diagnosis.
- In type 2, begin annual screening at diagnosis.

Since diabetic **retinopathy can advance during pregnancy**, more frequent eye exams are recommended for patients with pre-existing diabetes who get pregnant. Up to 4% of these women can have retinopathy by the end of pregnancy.

- Current American Diabetes Association recommendation:
  -Dilated eye exam at **beginning of pregnancy**
  -Repeat dilated eye exam **at least once more** in pregnancy

Counsel patients
A complaint of flashing light, loss of vision, "a shade closing," many new "floaters" or **distorted vision can signal impending retinal detachment or retinal bleeding**, and should be considered a medical **emergency**.

Blurry vision is typically NOT a symptom of retinal disease. Annual screening is recommended because retinopathy is usually silent -- persons with **retinopathy will not have symptoms until they have advanced disease**. Cataracts and glaucoma are more common in diabetes, and annual screening typically addresses these as well. Diabetic **retinopathy is strongly associated with renal disease**. One is not the cause of the other, but eye and kidney disease are related since both are microvascular problems.

Don't forget blood pressure
Prevention of retinopathy is achieved through **good blood glucose** control. The two major diabetes studies, the UKPDS for type 2 and the DCCT for type 1, showed that lower A1C's result in less incidence of diabetic retinopathy. Also, **blood pressure control** may result in lower incidence of retinopathy and is part of **overall diabetes care**.

Laser treatment can help
Laser photocoagulation can be an effective treatment for diabetic retinopathy, but it **does not reverse** pre-existing disease. Some patients with retinal bleeding or detachment will need vitrectomy, resulting in the reduction -- or even loss -- of vision. Newer medications for retinopathy are on the immediate horizon.

***

Eric L. Johnson, M.D., is a member of the Dakota Diabetes Coalition. He serves as Assistant Medical Director at Altru Diabetes Center and is an Assistant Clinical Professor in the Department of Family and Community Medicine at the University of North Dakota School of Medicine and Health Sciences.