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Diabetes is the leading cause of blindness among working-age adults in the United States. According to recent studies funded by the National Eye Institute (NEI), diabetic retinopathy, one of the most common and debilitating complications of diabetes, increased by 3.7 million new cases over the last decade. Approximately 7.7 million Americans are now affected by diabetic retinopathy. Even more alarming, the rate is projected to climb to 11 million by 2030. People with diabetes are also at greater risk for cataracts, which is a clouding of the eye lens, and glaucoma, which damages the optic nerve. But diabetic retinopathy is by far the most common sight-threatening condition among people with diabetes and is the leading cause of blindness in adults aged 20 to 74 years.

In its early stages, diabetic retinopathy has no symptoms. The disease begins to damage the small blood vessels in the retina, the light-sensing layer of tissue in the back of the eye, causing them to leak fluid and blood. As the disease progresses, blood vessels become blocked and rupture or new vessels grow on the retina, leading to permanent and sometimes profound vision loss.

Fortunately, there are effective treatments to help prevent vision loss from diabetic eye disease, but early detection and timely treatment are critically important. During American Diabetes Month this November, the National Eye Institute, a part of the National Institutes of Health, encourages people with diabetes to take steps to prevent complications of diabetes. In addition to controlling blood glucose and blood pressure through healthy eating, adequate exercise, and medication, people with diabetes should have annual dilated eye exams to identify early signs of diabetic retinopathy and other diabetic eye disease. Comprehensive dilated eye exams allow eye care professionals to monitor the eye, including the retina, for signs of disease. Ninety percent of diabetes-related blindness is preventable through early detection, timely treatment, and appropriate follow-up care.

NEI currently dedicates about 40 million dollars in research funding each year to better understand, prevent, and treat diabetic retinopathy.

The NEI Diabetic Retinopathy Clinical Research Network (DRCR.net) is a collaboration of more than 300 physicians at more than 100 clinical sites across the United States. Since 2002, DRCR.net has coordinated 18 clinical studies investigating treatments for various diabetes-related conditions, including a condition that causes central vision loss called macular

edema.

A 2010 DRCR.net study of people with diabetic macular edema, a consequence of diabetic retinopathy where fluid accumulates on the retina, showed that about 50 percent of participants treated with eye injections of the drug Lucentis combined with conventional laser treatment had dramatic improvements in vision, compared to about 30 percent of participants who received laser treatment alone. This is the first new treatment for diabetic eye disease in 25 years. Based on these findings, the U.S. Food and Drug Administration approved Lucentis for the treatment of diabetic macular edema.

The Action to Control Cardiovascular Risk in Diabetes Eye Study, sponsored in part by the NEI, showed that intensive control of blood glucose and blood lipids, including cholesterol, slows the progression of diabetic retinopathy.

Through its National Eye Health Education Program (NEHEP), NEI provides free English and Spanish language resources to educate and increase awareness about diabetic eye disease. During American Diabetes Month, NEHEP will expand its year-round efforts in educating people with diabetes about the importance of early detection, with special emphasis on populations at higher risk of vision loss including African Americans, Hispanics/Latinos, American Indians, and Alaska Natives with diabetes.

In addition to using traditional and social media outlets to reach people with diabetes, NEHEP is also encouraging health professionals to refer patients with diabetes for annual dilated eye exams. NEHEP is providing community-based organizations and community health workers with culturally appropriate resources and teaching tools to educate people with diabetes about the lack of early warning signs associated with diabetic eye disease and how important it is to make annual eye exams a routine part of diabetes self-management.

To learn more about NEHEP resources and to obtain materials, visit http://www.nei.nih.gov/nehep .

To help a friend or family member learn more about diabetic eye disease, get tips on finding an eye care professional or find organizations that may be able to provide financial assistance for eye care, visit http://www.nei.nih.gov/diabetes