

Diabetes Update

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November is Diabetes Awareness Month, and in the eye health community, that awareness is focused on diabetic retinopathy. The National Diabetes Information Clearinghouse reports diabetes is the leading cause of new diagnoses of blindness in Americans ages 20 to 74. Between 40 to 45 percent of all diabetics will suffer from diabetic retinopathy to some degree.

Diabetes is a progressive disease characterized by high levels of blood sugar (glucose) resulting from the body's inability to produce or use insulin. Low vision and blindness, due to diabetic retinopathy, are just two serious complications. Others include heart disease, stroke, hypertension, kidney disease and nerve disease, which can lead to amputation. Currently, the Centers for Disease Control and Prevention estimates there are nearly 26 million people with diabetes, and an additional 79 million with pre-diabetes, putting them at high risk for developing type 2 diabetes.

Type 1 diabetes, once known as juvenile diabetes or insulin dependent diabetes, is a chronic condition in which the pancreas produces little or no insulin. Insulin is a hormone needed to convert sugar (glucose) into energy. Despite active research, Type 1 diabetes has no cure. But advances in blood sugar monitoring and insulin delivery have simplified the daily routine of managing Type 1 diabetes.

Type 2 diabetes, also called adult-onset diabetes, makes up 90 to 95 percent of all cases. As it progresses, the body gradually loses its ability to produce insulin or doesn't recognize and process the insulin correctly. This is known as insulin resistance. For some diabetics, Type 2 diabetes can be controlled by diet and exercise. For others, medication and/or insulin are required. In both Type 1 and 2 diabetes, proper treatment and following a doctor's plan of care is essential to living a long, healthy lifestyle.

Diabetic retinopathy is an eye disease resulting from diabetes. Because of elevated blood sugar levels, diabetic retinopathy damages small blood vessels lining the retina at the back of the eye, impairing vision. The negative effects on activities such as reading, driving, working and many other tasks often taken for granted can be overwhelming. The damage can affect central and peripheral vision, including the ability of the eyes to focus and work together, depth and color perception and contrast sensitivity. Because of the elevated levels, the lenses can swell and provide another cause of blurred vision. The impact on quality of life due to vision loss determines an increased role for researchers and educators to address people who have diabetes.

Statistics from the American Diabetes Association reveal that the total cost (direct and indirect) of diabetes in the United States in 2007 was \$174 billion. Direct medical costs were \$116 billion and indirect costs were \$58 billion due to disability, work loss and premature mortality. Patients with diabetes, who are at high risk for developing diabetic retinopathy, should be targeted as a primary audience for education, counseling and early referral for low vision rehabilitation.

Diabetes education has long been cited as a cornerstone of effective diabetes care. A recent survey of US healthcare professionals, known as the Diabetes Attitudes, Wishes, and Needs (DAWN) Study, identified 5 key goals that need to be accomplished to improve diabetic outcomes. They are: reduce barriers to effective therapy, promote effective self-management, improve psychosocial care for

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persons with diabetes, enhance communication between healthcare providers and people with diabetes, and promote communication and coordination between healthcare providers.

The DAWN study confirmed what many healthcare professionals and people with diabetes have known for many years: diabetes causes multiple psychosocial problems, these issues can be barriers to achieving adequate blood sugar levels control and self-management behaviors, and our current healthcare systems are inadequately equipped to handle a chronic illness like diabetes. It is important that these issues be addressed, both individually and collectively, by healthcare professionals, patients, policy makers, and insurance payers if we wish to have an impact on diabetes care.