

NEWS

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MEDICAL BRIEFING ON DIABETES RESEARCH

Dr. Timothy Lyons, University of Oklahoma Health Sciences Center Professor and Chief, Diabetes and Endocrinology presents diabetes research information

OKLAHOMA CITY – May 5, 2006 – Dr. Timothy Lyons, University of Oklahoma Health Sciences Center Professor and Chief, Diabetes and Endocrinology spoke to families living with diabetes about the research his team is conducting at the OUHSC.

Dr. Lyons started his presentation by giving a brief overview of diabetes research and his background. Dr. Lyons was one of the original researchers on the Diabetes Control and Complications Trial (DCCT), which was a clinical study conducted from 1984 to 1993 by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). The DCCT is the largest, most comprehensive study of Type 1 diabetes ever conducted; it involved 1,441 volunteers with diabetes at 28 medical centers in the United States and Canada. The study compared the effects of two treatment regimens—standard therapy and intensive control—on the complications of diabetes. Volunteers were randomly assigned to each treatment group.

The study showed that keeping blood glucose levels as close to normal as possible slows the onset and progression of eye, kidney, and nerve diseases caused by diabetes. In fact, it demonstrated that any sustained lowering of blood glucose helps, even if the person has a history of poor control.

Dr. Lyons explained that this study was the first to demonstrate the importance of intensive blood glucose monitoring and the effects it has on patients. He further stated that 95% of the patients in the DCCT are still under follow-up, a remarkably high proportion considering the study began in 1984. The purpose of the follow-up is to determine if the period of intensive blood glucose monitoring would impact future complications, especially atherosclerosis (hardening of the arteries that causes heart attacks and strokes). The researchers found that those who had been in the standard therapy group had a two-fold increase in vascular complications.

Dr. Lyons also discussed some of his recent research including a study that he has done with women, who have type 1 diabetes, that become pregnant. Dr. Lyons stated that a study of this nature is desirable in that you can watch for complications from beginning to end in nine months versus other prospective complications studies that last for a decade or longer.

Pre-eclampsia (PE) is a complication of pregnancy characterized by new onset of high blood pressure, leakage of protein into the urine, and fluid retention (edema) occurring after the 20th week of gestation. PE is life threatening to both mother and fetus; if not addressed it may lead to eclampsia (seizures), uncontrolled high blood pressure, and brain hemorrhage. There is no cure other than pre-term delivery. The study confirmed that 20% of pregnant women with type 1 developed PE while only 4% of the pregnant women who do not have type 1 diabetes developed PE, and will be the first study to follow women from beginning to end of pregnancy, thereby allowing predictive factors for PE to be identified. This work, which was funded by JDRF, is ongoing and results are expected this year.

Dr. Lyons also discussed the epidemic of diabetes, particularly type 2 diabetes, in our nation and our state. He emphasized the need for improved lifestyle habits to address the public health problem we are facing. Dr. Lyons discussed the impact that the developing Oklahoma Diabetes Center will have on Oklahomans with diabetes and how it will fulfill an unmet need in our state.

Some of the warning signs of type 1 diabetes are as follows: extreme thirst, frequent urination, drowsiness, sugar in urine, sudden vision changes, increased appetite, sudden weight loss and heavy breathing. Serious symptoms that require serious medical intervention are a seizure and loss of consciousness.

JDRF, the leading charitable funder and advocate of juvenile (type 1) diabetes research worldwide, was founded in 1970 by the parents of children with juvenile diabetes – a disease which strikes children suddenly, makes them insulin-dependent for life, and carries the constant threat of devastating complications. Since inception, JDRF has provided more than \$900 million in direct funding to diabetes research. In a typical year, 80 percent of JDRF's expenditures directly support research and research-related education. JDRF's mission is constant: to find a cure for diabetes and its complications through the support of research. For more information, visit the JDRF Web site at www.jdrf.org or call (405) 810-0070.

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