# Shorter Life Expectancy Seen in Children With Type 2 Diabetes

If the rate of type 2 diabetes continues on its present trend, children affected by the disease may not live longer than their parents.

**BY LAURA SUAREZ, MANAGING EDITOR**

As the rate of obesity and type 2 diabetes increases in the United States, so does the related rate of mortality. In fact, the presence of type 2 diabetes before the age of 15 years may decrease life expectancy by 27 years. The existence of type 2 diabetes in those between the ages of 15 and 19 years may decrease life expectancy by 23 years.[1]

During a presentation at the 2005 Annual Scientific Meeting of the American Podiatric Medical Association, Jeffrey A. Ross, MD, DPM, said that in order to make a lasting impact on the health of this country, practitioners should take an active role in promoting healthy lifestyle programs.

"How can we as a profession do something about the life expectancy of children with type 2 diabetes and bring about change in our society? I suggest getting involved in your community," said Dr. Ross, assistant clinical professor at Baylor College of Medicine. "Get involved with your school districts. Volunteer for boards, whether it's local or state, and I assure you that we can make a lasting impact on the progression of type 2 diabetes in this nation."

## INCREASE OF PATIENTS WITH DIABETES

Over the next 20 years, practitioners may see anywhere from a 30% to 50% increase in the number of patients who have type 2 diabetes, Dr. Ross said. Those physicians who have been practicing for fewer than 10 years may experience the most dramatic increase in patients with diabetes.

A major contributor of type 2 diabetes is the epidemic of obesity that is sweeping our nation, Dr. Ross said. A trend toward behavior modification may curb the effects of both diseases. There are several local, state and national programs that promote healthier behaviors. These include Boston's Planet Health program, CATCH in Texas and the national VERB campaign.

## PLANET HEALTH

Developed in conjunction with the National Institutes of Health and designed by associates of the Harvard University Prevention Research Center, Planet Health provides physical activity and nutrition lessons to middle school students.[2] The program was first implemented in 10 public middle schools across Boston, and was later adopted by six Boston inner-city schools. The program is now being used by the US Department of Education's Physical Education for Progress.

The children involved in Planet Health have reduced the amount of television they watch, and the obesity rate of girls in the program has declined by 1.9%.[3] The Planet Health program has received national and international attention, as 2,000 copies of the program have been purchased in 48 states and 20 countries.

"In the schools, it has been proven that 30 minutes a day of exercise will decrease obesity by at least 5%," Dr. Ross said. "If you increase [exercise] to 60 minutes a day, obesity can then be cut back by at least 10%."

## CATCH

The Coordinated Approach To Child Health (CATCH) is a Texas initiative that promotes physical activity and healthy eating habits among elementary school children.[4] Four components – Eat Smart, Classroom Curriculum, Physical Education and Family Program – guide children in adopting a healthy lifestyle to prevent chronic illnesses such as obesity and diabetes. The 10-year-old CATCH program is currently the largest school-based health initiative in the United States.

"School nutrition specialists work with kids from grades 3 to 5, and physical education instructors and psychologists work toward behavior modification," Dr. Ross said. "The program brings parents in to talk about nutrition, family exercise and getting these kids more involved and more active."

## CDC STUDY ON DIABETES REFLECTS GROWING DIABETES EPIDEMIC

Newly released statistics from the Centers for Disease Control and Prevention (CDC) illustrate that diabetes has risen over 14% in the last 2 years. The CDC estimates that 20.8 million Americans – 7% of the US population – have diabetes, up from 18.2 million in 2003. Nearly a third of these Americans are undiagnosed.

According to a news release from American Diabetes Association (ADA), these numbers highlight the growing diabetes epidemic in the United States and reinforce the need for increased research and prevention. The CDC's report also demonstrates the need for Americans with diabetes to have access to affordable and adequate health care.

"This study confirms what we already know: diabetes is one of this country's most prolific and deadly diseases," said Robert A. Rizza, MD, president of the ADA, in the news release. "Diabetes touches all of us in some way, which is why we must continue to work together to find a cure for diabetes and to improve the lives of the nearly 21 million Americans affected by diabetes."

Although the prevalence of diabetes has continued to rise, federal funding for diabetes research has not kept pace with the increase. These programs help those currently suffering from diabetes better control and manage the disease and also help those at risk for diabetes prevent or delay its onset.

The ADA has been a strong advocate for efforts that help to ensure that Americans with diabetes have access to health care that enables them to properly manage and control the disease. Having access to preventative care, more intensive diabetes management, and diabetes tools helps prevent the serious complications associated with diabetes, while simultaneously saving the US health care system billions of dollars in long-term costs.

"The facts tell the story of the severity of diabetes," said Lawrence T. Smith, chair of the board of the ADA, in a news release. "With an increased commitment to diabetes research and prevention, fewer and fewer Americans will develop diabetes. With improved health care, the 21 million Americans with diabetes can better manage and control this chronic condition." ■

### VERB

This national program was launched by the Centers for Disease Control and Prevention (CDC) in 2002 to reduce the impact of diabetes on the US population and economy.[5] In its 3-year existence, VERB has focused on encouraging tweens (children aged 9 to 13 years) to increase and maintain physical activity. The program lists options for physical activity and aids in creating opportunities for regular physical activity.

According to a telephone survey conducted first in 2002 and repeated in 2003, VERB provoked a 34% increase in physical activity among approximately 8.6 million US children. A total of 6,000 youth and parents were polled for the survey.

"The results of this evaluation are impressive and substantiate that the VERB campaign has surpassed expectations and is responsible for improving physical activity levels among youth," said CDC Director Julie L. Gerberding, MD, MPH, in a news release. "Our national, multicultural efforts are helping young people to realize that physical activity is fun, cool and can be a part of everyday life. This is critical to reducing the epidemic of overweight among today's youth."

Some reference has been made that the youth of this generation are categorized as "generation O," where the O stands for obesity, Dr. Ross said. In 1999, the CDC estimated that 15% of America's youth (children aged 6 to 18 years) were overweight and 15% of youth had type 2 diabetes. These members of generation O have a 70% chance of staying overweight through adulthood.[1]

Statistics from the CDC show that approximately 20 million US residents by 2010 and 45 to 50 million by 2050 will develop type 2 diabetes, Dr. Ross said. This epidemic is noticeable in all ethnicities: A non-Hispanic white child born in 2000 has a 30% chance of developing type 2 diabetes, and a child with African-American, Latino-American, Asian-American or Native-American heritage has a 50% chance of developing diabetes.[6]

"Children have to change [their behavior]," Dr. Ross said. "They have to be reinforced, they have to be motivated, and they have to reduce the amount of television they watch." ■

*Jeffrey A. Ross, DPM, MD is an assistant clinical professor, Baylor College of Medicine, Houston, Texas. He can be reached at jeffross@bcm.tmc.edu.*

1. Ross JA. Obesity, Type 2 Diabetes, and Exercise in Children and Adolescents. Presented at the 2005 Annual Scientific Meeting of the American Podiatric Medical Association. August 4-7, 2005. Orlando.
2.Planet Health for Obesity Reduction in School Children—Readily Accepted and Cost-Effective. Available at: www.cdc.gov/prc/interventions/adoptable/planet_health.htm. Accessed October 26, 2005.
3. Gortmaker SL, Peterson K, Wiecha J, et al. Reducing obesity via a school-based interdisciplinary intervention among youth: Planet Health. *Archives of Pediatrics and Adolescent Medicine.* 1999;153:409-418.
4.Coordinated Approach to Child Health. Available at: www.sph.uth.tmc.edu/catch/. Accessed October 26, 2005.
5. National Campaign to Get Kids Physically Active is Working.Available at: www.cdc.gov/od/oc/media/pressrel/r040217.htm. Accessed October 26, 2005.
6. Venkat Narayan KM. Presented at the 63rd American Diabetes Association Meeting and Scientific Sessions. New Orleans. June 13-17, 2003.