

Teens' diabetes management supported by family problem-solving

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(Medical Xpress)—A clinic-based program for adolescents with type 1 diabetes and their families helped the teens develop the healthy behaviors needed to control their blood sugar levels, researchers at the National Institutes of Health have found.

The researchers found that 12- to 15-year-olds benefited from a two-year program of three to four meetings each year with parents and a health advisor to discuss shared responsibilities, goals and strategies for solving diabetes management problems that arose.

"Adolescence can be difficult for families—even without the complex challenge of taking care of diabetes," said first author Tonja R. Nansel, Ph.D., of the Prevention Research Branch of the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), the institute that conducted the study. "Our study found that meeting with a health advisor during regular diabetes clinic visits could help families put together strategies for dealing with diabetes, to better manage the changes that occur as children take on more responsibility for their day-to-day [diabetes care](#)."

Dr. Nansel collaborated on the study with NICHD colleagues Ronald J. Iannotti, Ph.D., and Aiyi Liu, Ph.D.

Their findings were published online in *Pediatrics*.

Type 1 diabetes develops when the body's immune system destroys the

insulin-producing [beta cells](#) of the pancreas. Insulin is a hormone that enables cells to use the [sugar glucose](#) for energy. Type 1 diabetes usually strikes children and young adults, who need several [insulin injections](#) a day or an [insulin pump](#) to survive. People with this type of diabetes must balance the amount of food they consume with their insulin dose, to prevent their [blood sugar](#) levels from climbing too high or dropping too low. Over time, high [blood sugar levels](#) can have a number of serious health effects, including blindness, [kidney disease](#) and heart disease. An extreme drop in blood sugar can be fatal.

Many adolescents have difficulty managing their diabetes. Hormonal changes may affect insulin levels. Moreover, adolescents may find it difficult to adhere to their daily treatment plan.

When caring for their diabetes, adults often follow the patterns they established in adolescence, Dr. Nansel explained. If they fail to learn how to care for the disease properly during this time, they may develop poor habits that increase the chances for health problems later on.

In the study, the researchers evaluated WE-CAN Manage Diabetes, a two-year behavioral intervention program they developed. The study included about 300 preteens and young adolescents with [type 1 diabetes](#) (ages 9 to 15) and their families. Half the families received the WE-CAN intervention and half received standard care.

Standard care consisted of regular visits with their diabetes care physician. In addition to the physician visits, the WE-CAN program included meetings in which the health advisor discussed with the family any difficulties they were having with the child's [diabetes management](#) or areas they would like to improve. The health advisor then helped the families work out a plan for solving the problems. For example, in their sessions with the health advisor, young people with diabetes and their families frequently set goals such as checking blood sugar more often or

eating more healthfully.

At each visit, researchers also recorded hemoglobin A1C (HbA1C) measurements, a standard indicator of a person's long-term blood sugar control. (Information on the [A1C test](#) is available from the NIH's National Institute of Diabetes, Digestive and Kidney Diseases.)

At the study's conclusion, the 12- to 15-year-olds in the intervention group had markedly better HbA1c levels than those who received standard care. The intervention did not appear to improve blood sugar control among 9- to 11-year-olds.

"The approach appears to be better suited for the behavioral issues that the older kids were facing," said Dr. Nansel. "The findings show us that the children who needed it most are the ones for whom this approach worked."

The National Diabetes Education Program—a joint program of NIH and the Centers for Disease Control and Prevention—has resources to help children with [diabetes](#) and their families and schools take steps to better the children's health. Find resources for youth at ndep.nih.gov/teens/index.aspx and a guide for school personnel at ndep.nih.gov/media/youth_schoolguide.pdf.

Provided by National Institutes of Health

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