

Pet care can help improve adolescents' Type 1 diabetes management, pediatricians find

June 25 2015



Dr. Olga Gupta, assistant professor of pediatrics and internal medicine at UT Southwestern Medical Center, treats patients at Children's Medical Center Dallas. Credit: UT Southwestern

UT Southwestern Medical Center pediatric diabetes researchers found that incorporating routine pet care into a child's diabetes self-care plan can significantly improve monitoring of the disease, resulting in lower blood glucose levels.

"Teenagers are one of the most difficult patient populations to treat,

mainly because of the many psychosocial factors associated with that stage of life," said the study's senior author Dr. Olga Gupta, assistant professor of pediatrics and internal medicine at UT Southwestern, who treats patients at Children's Medical Center Dallas. "We learned that instructing families to associate regular pet [fish](#) care with the child's standard diabetes care significantly improved their hemoglobin A1C levels."

The study, which appears in *The Diabetes Educator*, followed the pet care and diabetes management tasks of 28 adolescents ages 10 to 17 with Type 1 diabetes mellitus.

An estimated 1.25 million American children and adults have Type 1 diabetes, in which the body fails to produce insulin needed to convert sugar and starches into energy, according to the American Diabetes Association. Type 1 diabetes accounts for approximately 5 percent of all diagnosed cases of diabetes, and is the leading cause of diabetes in children of all ages, according to the Centers for Disease Control and Prevention.

Study participants selected for the intervention group were provided a fish (*Betta splendens*), a fish bowl, instructions for caring for the fish, and recommendations to set up the fish bowl in their bedroom, if possible. They were instructed to feed their fish in the morning and in the evening, checking their own [blood glucose level](#) each time. Then, they were asked to change one-fourth of the water in the fish bowl once a week and review their own blood glucose logs with a caregiver.

"He never had the opportunity to have a pet, and if it meant helping him improve his [blood sugar](#), then I was all for it," said Jeanette Claxton, mother of 12-year-old Raymon Miles, Jr., a participant in the study. "Throughout the entire experience we owned two fish that became part of our family. The first fish was named Bob, and Raymon would feed

him, read to him, and even watch TV with him," said Claxton. "He didn't even realize that he was talking about his diabetes more and taking his blood sugar more often."

"I would recommend this approach to other families because it creates ownership not just of the fish, but ownership of your diabetes. When you own it, diabetes doesn't own you," she said.

After three months, the intervention group's A1C levels decreased 0.5 percent in comparison to their peers in the control group, who experienced a 0.8 percent increase in A1C levels. While a decrease in blood [glucose levels](#) was seen in all ages, the benefits of the behavioral intervention were more pronounced in the study's younger participants.

"The decrease was greater in the adolescents ages 10 to 13," said Gupta, Dedman Family Scholar in Clinical Care. "Children in this age group are often beginning to seek independence from their parents, and were more eager to care for the fish than some of the older adolescents."

Findings from the study also suggest the importance of parental involvement in helping the adolescents establish a routine that monitors their [blood glucose](#) levels regularly. Next steps include studying a group of adolescents for a longer period of time, as well as identifying the specific mechanisms that led to the glycemic improvement, such as type of pet, mood, conscientiousness, routine, or level of parental involvement.

Gupta's laboratory is part of the UT Southwestern Touchstone Center for Diabetes Research, a multidisciplinary research center focused on studying both basic and clinical aspects of Type 1 and Type 2 [diabetes](#).

Other researchers involved in the study include Dr. Sunita Stewart, professor of psychiatry; Dr. May Lau, assistant professor of pediatrics;

and researchers from the University of Massachusetts Medical School.

The research is supported by grants from the National Institute of Child Health and Human Development, Partnerships for Cure, and a gift from the Dedman Family.

Provided by UT Southwestern Medical Center

Citation: Pet care can help improve adolescents' Type 1 diabetes management, pediatricians find (2015, June 25) retrieved 26 April 2024 from <https://medicalxpress.com/news/2015-06-pet-adolescents-diabetes-pediatricians.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.