

# First genome-wide association study (GWAS) for type 2 diabetes in youth findings

29 April 2019

Pediatric diabetes and genetic researchers with the First Genome-Wide Association Study (GWAS) for Type 2 diabetes in youth said they discovered seven genetic variants associated with the disease in young people.

The findings were presented and discussed in an endocrinology session for basic and translational research at the Pediatric Academic Society Conference (April 24—May 1 in Baltimore).

Six of the genetic variants have been associated with Type 2 diabetes in adults, and one of them seems to be novel to youth. Some of the variants were related to obesity, contributing to the risk of developing Type 2 diabetes in younger people, with the effect sizes likely larger than what is observed in adults. The genome-wide association study used data from the Progress in Diabetes Genetics in Youth (ProDiGY) Consortium, a collaboration of TODAY, SEARCH for Diabetes in Youth and T2D-GENES study groups.

"The prevalence of type 2 diabetes is increasing dramatically in youth, at ages that previously were rare or even non-existent," said one of the authors Rose Gubitosi-Klug, MD, Ph.D., of University Hospitals Rainbow Babies & Children's Hospital. "Youth onset Type 2 diabetes tends to be more aggressive than adult Type 2 [diabetes](#), and learning more about which gene variants are involved will help us find targets for potential treatments."

The study involved an analysis of 3006 cases of [youth](#) at a median age of 15.1 (+/-2.9) years of age, 62 percent female, 22 percent white, 36 percent African American, 42 percent Hispanic.

ProDiGY has established a cohort of pediatric T2D cases that serves as a valuable resource for future genetic investigations.

This paper from the ProDiGY Collaboration

involves investigators from the University of California San Francisco, University of Vermont, Wake Forest School of Medicine, Nemours/Alfred I. duPont Hospital for Children, Children's Hospital at University of Oklahoma, University Hospitals Rainbow Babies & Children's Hospital, Children's Hospital Colorado, Keck School of Medicine of USC, Ambry Genetics, Harvard Medical School/Massachusetts General Hospital, Baylor University, Children's Hospital Los Angeles, Children's Hospital of Philadelphia, Children's Hospital Pittsburgh, Joslin Diabetes Center in Boston, State University of New York, University of Texas Health Sciences Center San Antonio, St. Louis Children's Hospital, Yale University, and Columbia University.

Provided by University Hospitals Cleveland Medical Center

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