

Diabetes and Prediabetes - Youth

DESCRIPTION

The types of diabetes among youth are similar to those in adults, but psychosocial issues can complicate treatment. Type 1 (peripheral insulin resistance) is one of the most common chronic childhood diseases, occurring in 1 in 350 children by age 18. It typically manifests between age 4 to 6 years and between 10 to 14 years. Type 2 (varying degrees of insulin resistance and inadequate insulin secretion) has been increasing in frequency in parallel with the increase in obesity. It typically manifests between age 15 to 19 years.¹ About 40 percent of children who have type 2 diabetes have no signs or symptoms and are diagnosed during routine physical exams. Symptoms of type 2 diabetes in children include the following: Increased thirst and frequent urination (excess sugar in bloodstream pulls fluid from tissues); weight loss (without sugar supplies, muscle tissues and fat stores shrink); fatigue (lack of sugar in the cells result in tiredness and lethargy); blurred vision (fluid may be pulled from eyes making focus difficult); slow-healing sores or frequent infections). Pre-diabetes is defined as impaired glucose regulation resulting in glucose levels that are too high to be normal but do not meet criteria for diabetes. Diabetes can affect nearly every major organ in the body and complications may be disabling or life-threatening, including: high blood pressure, high cholesterol, heart disease, stroke, liver disease, kidney disease, blindness and amputation.²

HOW WE ARE DOING

In 2013, 1.1 percent of 5th graders, 1.3 percent of 8th and 9th graders, and 1 percent of 11th graders in Ramsey County reported being diagnosed with diabetes. These levels compare to Minnesota rates of 1 percent across all grade levels. For pre-diabetes, Ramsey County has rates of 1.2 percent among 5th graders, 1.6 percent among 8th graders, 2.2 percent among 9th graders, and 2 percent among 11th graders. These levels compare to Minnesota rates of 1 percent across all grade levels for a diagnosis of pre-diabetes. Since 2013, the Minnesota Student Survey asks questions about general chronic conditions instead of specific diseases such as diabetes.³

DISPARITIES

Nationally, the death rate among African-American children due to diabetes was approximately twice as high as those of white and Hispanic children during 2000-2014.⁴ Diabetes occurs most often in American Indians (15.1 percent) followed by 12.7 percent of non-Hispanic blacks, 12.1 percent of Hispanics, 8.0 percent of Asian-Americans, and 7.4 percent of non-Hispanic whites.⁵

RISK FACTORS

Youth at risk include those who are overweight or have any two of the following: family history of type 2 diabetes; maternal history of diabetes; signs of insulin resistance; or race/ethnicity of American Indian, African-American, Asian, Pacific Islander or Hispanic.¹

WHAT RAMSEY COUNTY GOVERNMENT IS DOING

The Statewide Health Improvement Partnership (SHIP) work has become an integral part of Saint Paul- Ramsey County Public Health's efforts to help combat and prevent chronic disease among youth. There are numerous school yard garden programs, farm to school strategies, and smarter lunchroom strategies being implemented by all five county school

Information to note

- Diabetes is one of the most common chronic childhood diseases, occurring in 1 in 350 children by age 18.
- Among Ramsey County 9th graders, 2.2% have been diagnosed with pre-diabetes and 1.3% have been diagnosed with diabetes.

¹ Diabetes in Children and Adolescents. Merck Web site. <http://www.merckmanuals.com/professional/pediatrics/endocrine-disorders-in-children/diabetes-in-children-and-adolescents>. Accessed April 2018.

² Type 2 diabetes in children. Mayo Clinic Web site. <https://www.mayoclinic.org/diseases-conditions/type-2-diabetes-in-children/symptoms-causes/syc-20355318>. Accessed April 2018.

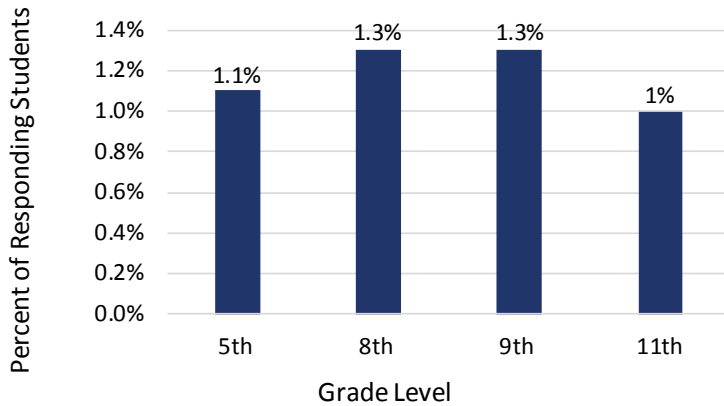
³ Minnesota Department of Health. Minnesota Student Survey 2013. <http://www.health.state.mn.us/divs/chs/mss/>. Accessed April 2018.

⁴ Disparities in Diabetes Deaths Among Children and Adolescents — United States, 2000–2014. Centers for Disease Control and Prevention Web site. <https://www.cdc.gov/mmwr/volumes/66/wr/mm6619a4.htm>. Accessed December 5, 2017.

⁵ American Diabetes Association. Statistics About Diabetes. <http://www.diabetes.org/diabetes-basics/statistics/>. Accessed April 2018.

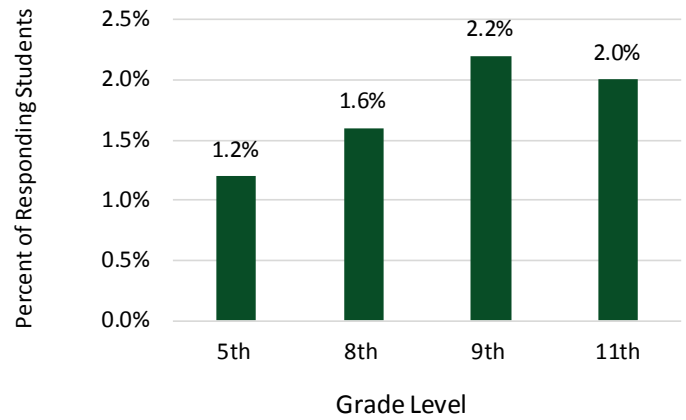
districts using SHIP funds. Along with addressing healthy eating strategies SHIP also funds active living and active school day initiatives so schools can increase the amount of movement that students receive before, during and after school hours, including expanding Safe Routes to School. Additionally, Ramsey County is becoming a breastfeeding friendly health department, which encourages breastfeeding, which reduces the risk of obesity and diabetes in children. Healthy eating and physical activity are vital to preventing and addressing chronic disease.

Students Diagnosed with Diabetes, Ramsey County, 2013



Source: Minnesota Department of Health. Minnesota Student Survey 2013.

Students Diagnosed with Pre-Diabetes, Ramsey County, 2013



Source: Minnesota Department of Health. Minnesota Student Survey 2013.