

Smoking widespread among youth with diabetes, raising heart disease risk

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Cigarette smoking is widespread among children and young adults with diabetes yet few health care providers are counseling children and young adults with diabetes to not smoke or stop smoking, according to a new report from the SEARCH Study Group, published online in the *Journal of Pediatrics*.

Children and young adults with diabetes are already at high risk for heart disease before they take up smoking but few studies have examined the association between cigarette smoking and heart disease risk factors in youth with diabetes.

Funded by the Centers for Disease Control and Prevention and the National Institute of Diabetes and Digestive Kidney Diseases, the study examined tobacco use and heart disease risk factors in a racially and ethnically diverse group of 3,466 children and young adults with diabetes aged 10 to 22 years old across the United States.

Researchers found that 10 percent of youth with [type 1 diabetes](#) and 16 percent of youth with [type 2 diabetes](#) were currently using some form of tobacco products: cigarettes, cigars or smokeless tobacco. Less than half of the youth reported that they had been counseled by their health care provider to not smoke or stop smoking.

"We found a substantial proportion of youth with diabetes are current [cigarette smokers](#), which greatly adds to their already elevated risk for heart disease," said study lead author Kristi Reynolds, PhD, MPH, a

research scientist and epidemiologist at the Kaiser Permanente Southern California Department of Research & Evaluation. "Smoking is preventable, so aggressive smoking prevention and cessation programs are needed to prevent or delay heart disease in youth with diabetes."

These findings were based on analysis of data from the SEARCH for Diabetes in Youth Study, a large multi-center study of youth diagnosed with diabetes before the age of 20 years who were enrolled by six clinical centers in California, Colorado, Hawaii, Ohio, South Carolina and Washington.

The study found the prevalence of current cigarette smoking in youth with type 1 diabetes to be 1.3 percent of 10- to 14-year-olds, 14.9 percent of 15- to 19-year-olds, and 27 percent of those 20 years and older. Among youth with type 2 diabetes, 4.4 percent of 10- to 14-year-olds were currently cigarette smokers, 12.9 percent of 15- to 19-year-olds were cigarette smokers, and 37.3 percent in youth 20 years and older were cigarette smokers.

The study also found early signs of heart disease among those using cigarette products. Youth who were past and current smokers had a higher prevalence of high triglyceride levels, high LDL cholesterol levels, low HDL cholesterol levels and more physical inactivity than non-smokers.

"Cigarette smoking is a completely preventable risk factor for cardiovascular and other diseases. While this is true for all children, it is especially true for children with diabetes because of the increased risk of cardiovascular disease in that population," said study co-author Stephen R. Daniels, MD, PhD, professor and chairman of the Department of Pediatrics at the University of Colorado School of Medicine and Pediatrician-in-Chief at The Children's Hospital in Denver.

In adults with diabetes, the risk of heart disease is greatly increased compared with adults without diabetes, and smoking may increase that risk. About 90 percent of adult smokers started smoking before age 18. Because of the already increased risk of cardiovascular disease in individuals with diabetes mellitus, the American Diabetes Association emphasizes the importance of smoking cessation for those individuals.

Provided by Kaiser Permanente

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