Smokers at Greater Risk for Glucose Intolerance

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Body

Both smoking and exposure to secondhand smoke increase the risk of developing glucose intolerance, results of a prospective cohort study indicate.

People with rheumatoid arthritis smoke at higher rates than the general population, studies have shown.

Over 15 years, the development of glucose intolerance was highest among smokers (22%), followed by people who had never smoked but had secondhand smoke exposure (17%), previous smokers (14%), and those who neither smoked nor had secondhand smoke exposure (11.5%).

The study is the first to demonstrate that secondhand smoke is independently associated with a risk of developing glucose intolerance (BMJ 2006 April 7 [Epub doi.10.1136/bmj.38779.584028.55]).

In the ***Coronary Artery Risk Development in Young Adults*** (***CARDIA) study***, Dr. Thomas K. Houston of the Birmingham (Ala.) Veterans Affairs Medical Center and his associates enrolled young adults, aged 18–30, from four U.S. cities.

The cohort included 1,386 smokers, 621 previous smokers, and 2,565 individuals who had never smoked; all had normal glucose tolerance levels at baseline. The "never smokers" included 1,452 people with secondhand smoke exposure, which was validated by a serum cotinine concentration of between 1 and 15 ng/mL.

Study participants received thorough examinations at baseline and at years 2, 5, 7, 10, and 15 that assessed medical and sociodemographic information. They also were interviewed via telephone each year. By year 15, 26% of the original cohort was lost to follow-up.

After 15 years, 17% of the study population had developed glucose intolerance, defined as impaired fasting serum glucose levels-with levels greater than or equal to 100 mg/dL and less than 126 mg/dL-or diabetes, with serum glucose levels greater than or equal to 126 mg/dL.

Compared with people who had never smoked and weren't exposed to secondhand smoke, current smokers (hazard ratio of 1.65), never smokers with secondhand smoke exposure (hazard ratio of 1.35), and previous smokers (hazard ratio of 1.17) remained at increased risk for developing glucose intolerance, after adjusting for confounding variables.

Each 10-pack-year increase in smoking increased the risk of developing glucose intolerance by 18%.

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