Teenage obesity linked to increased risk of MS

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Teenage women who are obese may be more than twice as likely to develop multiple sclerosis (MS) as adults compared to female teens who are not obese, according to a study published in the November 10, 2009, print issue of *Neurology*, the medical journal of the American Academy of Neurology.

The research involved 238,371women from the Nurses' Health Study and Nurses' Health Study II who were 25 to 55 years old. The women answered a questionnaire about their health behavior and medical information every two years. Over the course of 40 years, 593 developed MS.

Participants reported their weight and height at age 18. Scientists then calculated their body mass index (BMI). The women were also asked to choose one of nine body silhouettes, ranging from very thin to extremely obese, to describe their body size at five, 10 and 20 years old.

The study found that women who had a BMI of 30 or larger at age 18 had more than twice the risk of developing MS compared to those with a BMI between 18.5 and 20.9. A woman with a BMI of 25 to 29.9 kilograms per meter squared was considered overweight whereas a woman who was considered obese had a BMI of 30 or more kilograms per meter squared. The disease risk among women who were overweight but not obese at age 18 was only somewhat increased. The results were the same after accounting for smoking status and physical activity level.

Women who had a larger body size at 20 years of age, represented by the use of silhouettes in the study, also had twice the risk of MS compared to women who reported a thinner body size. Larger body sizes at ages 5 and 10 were not associated with MS risk.

"Our results suggest that weight during adolescence, rather than childhood or adulthood, is critical in determining the risk of MS," said study author Kassandra Munger, ScD, of Harvard School of Public Health in Boston. "Teaching and practicing obesity prevention from the start, but especially during teenage years, may be an important step in reducing the risk of MS later in life for women."

Munger said there are two possible explanations why obesity may affect MS risk. Higher levels of vitamin D in the body are thought to reduce disease risk. People who are obese tend to have lower vitamin D levels compared to people who are not obese. In addition, fatty tissue produces substances that affect the immune system and certain types of cell activities that are thought to be associated with MS.

Source: American Academy of Neurology (news : web)