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Asian Indians at greater risk for type 2 diabetes and cardiovascular disease, researchers find

DALLAS – June 16, 2004 – Asian Indian men are at an increased risk for type 2 diabetes and cardiovascular disease, whether overweight or not, because their bodies metabolize fat like people who are obese, according to researchers at UT Southwestern Medical Center at Dallas.

When people take in more calories than needed, extra calories are stored in adipose (fatty) tissue, causing the adipose tissue to either overproduce or underproduce certain substances called cytokines, such as leptin and adiponectin.

Such abnormal production levels typically are seen in individuals who are overweight or obese, and can result in insulin resistance and an associated risk for diabetes and cardiovascular disease. However, this same abnormal metabolism process also can occur in nondiabetic, healthy men native to the subcontinent of India, even in the absence of excessive body fat or abdominal obesity, the UT Southwestern researchers discovered. Their findings are published in the June 4 issue of *The Journal of Clinical Endocrinology & Metabolism.*

In the study, the researchers compared 79 lean Asian Indian men to 61 similarly built Caucasian males. More than half of the Asian Indians showed abnormal production levels of cytokines, compared to less than 25 percent of their white counterparts.

“We looked at healthy South Asian men who were not overweight, yet had all the complications of being fat,” said Dr. Nicola Abate, assistant professor of internal medicine in the Center for Human Nutrition and the study’s lead author. “Even a mild increase in their weight could translate into major problems for them.

“What we’re learning from the Asian Indian population can be extrapolated to other ethnic groups,” Dr. Abate said. “We think there is a certain percentage of the population of any ethnic group that is not obese, but metabolically behaves as though it is.”

In addition to studying Asian Indians who live in the United States, UT Southwestern researchers are participating with scientists from the Diabetes Specialties Centre and Madras Diabetes Research Foundation in Chennai, India, in a similar study.

“We suspect there is a genetic reason for these findings, but environmental factors may play a role as well,” Dr. Abate said. “To further clarify this, we are collaborating with a medical institution in India on a parallel study.”

Understanding what happens in the adipose tissue of individuals who are insulin-resistant could eventually lead to helping prevent such prevalent medical problems as diabetes and cardiovascular disease.

“Although one can hope that our population would learn to control obesity, this is probably not going to happen,” Dr. Abate said. “Therefore it makes sense to identify groups with the highest risks and concentrate on helping them prevent these diseases.”

Other researchers involved in the study were senior author Dr. Scott Grundy, director of the Center for Human Nutrition; Dr. Manisha Chandalia, assistant professor of internal medicine; and Dr. Peter Snell, associate professor of internal medicine.

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