

# Ethnic background may be associated with diabetes risk

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Fat and muscle mass, as potentially determined by a person's ethnic background, may contribute to diabetes risk, according to a new study accepted for publication in The Endocrine Society's *Journal of Clinical Endocrinology & Metabolism* (JCEM).

Obesity, a worldwide health concern, is associated with increased [insulin resistance](#), type 2 diabetes and cardiovascular disease. The prevalence of obesity is increasing in all populations across the globe, yet past research has found that [body fat](#) distribution varies widely among different ethnic groups. Researchers in this study investigated which ethnic groups were most likely to be at increased risk for diabetes due to higher total body fat and lower [muscle mass](#).

"We know certain ethnic backgrounds show significant differences in amounts of body fat and lean mass," said Scott Lear, PhD, of Simon Fraser University in Vancouver, Canada and lead author of the study. "What we didn't know, until now, is if these differences are related to insulin levels and insulin resistance, and therefore lead to an increased risk for diabetes. Our findings indicate they are."

In this study, researchers measured insulin levels and compared the amount of total body fat to lean mass in 828 men and women of Aboriginal, Chinese, European and South Asian origin to determine how differences in fat mass and lean mass may be related to insulin levels and insulin resistance in each group. Of the four ethnic groups studied, South Asians were found to have both higher fat mass, lower muscle mass and



greater insulin levels, placing them at increased risk for insulin resistance and diabetes.

"An individual's [ethnic background](#) may determine the amount of body fat and lean mass they have, and therefore may also be associated with diabetes risk," said Lear. "In populations at increased risk for [diabetes](#), interventions that reduce fat mass and increase muscle mass, such as caloric restriction and regular exercise should be investigated."

More information: The article, "Ethnic variation in fat and lean body mass and the association with insulin resistance," will appear in the December 2009 issue of *JCEM*.

Source: The Endocrine Society ([news](#) : [web](#))

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