

USC Study Shows Belly Fat May Affect Liver Function

June 9, 2008

San Francisco, Calif., June 9, 2008—A study by the University of Southern California (USC) suggests the release of lipids from abdominal fat, which drains directly to the liver, increases overnight, providing additional insight as to how abdominal fat is associated with type 2 diabetes risk. The results of the study were presented at an oral session Monday, June 9 at the American Diabetes Association 68th Scientific Sessions held in San Francisco.

“It has been shown that people who store body fat in their abdomens are at greater risk to develop diabetes and other chronic illnesses, but why this happens has remained unclear,” says Lisa Nicole Harrison, B.S., Master’s candidate, at the Keck School of Medicine of USC and lead author on the study. “Our study found lipid release from abdominal fat was substantially elevated during the night, which may be a primary mechanism leading to insulin resistance, a strong risk factor for type 2 diabetes.”

The observed lipids drain directly to the liver, a key center of glucose and insulin metabolism, where they may accumulate as triglyceride and cause dysregulation of these important metabolic processes, Harrison says. The results highlight the importance of abdominal obesity in the pathogenesis of type 2 diabetes.

“Further studies in this area should look at the cause of overnight elevation of abdominal fat release as well as clarifying the role this plays in the development of obesity and insulin resistance,” suggests Harrison.

The study was funded by grants from the National Institutes of Health.

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Lisa N. Harrison, Maya Lottati, Cathryn M. Kolka, Isabel R. Hsu, Vahe Mooradian, Justin Dittmann, Edward Zuniga, Edgardo Paredes, Richard N. Berman, “Nocturnal Outpouring of FFA from Visceral Fat Depot.” Presented at 2:15pm. PT, Monday June 9.

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Jon R. Weiner
Executive Director,
Health Sciences Public Relations
323-442-2830
jon.weiner@usc.edu



Jennifer Chan
Media Relations Representative
323-442-3941
chanj@usc.edu



Meghan Lewit
Media Relations Representative
323-442-3576
lewit@usc.edu



Jane Brust
Associate Vice President
for Health Sciences Public Relations
& Marketing
323-442-2830
Jane.brust@usc.edu