Exercise stimulates adiponectin, raises HDL levels

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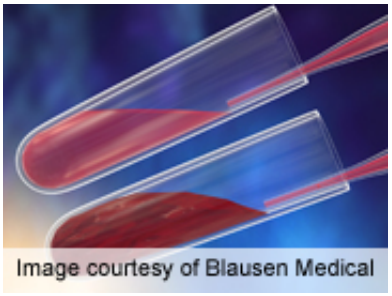

Intensive lifestyle intervention for weight loss significantly improves high-density lipoprotein cholesterol levels in overweight and obese individuals with type 2 diabetes, which is partially mediated by stimulation of adiponectin production, according to a study published online Sept. 5 in the *Journal of Lipid Research*.

(HealthDay)—Intensive lifestyle intervention for weight loss (ILI) significantly improves high-density lipoprotein cholesterol (HDL-C) levels in overweight and obese individuals with type 2 diabetes, which is partially mediated by stimulation of adiponectin production, according to a study published online Sept. 5 in the *Journal of Lipid Research*.

L. Maria Belalcazar, M.D., of the University of Texas Medical Branch in Galveston, and colleagues conducted the Look AHEAD study involving 1,397 overweight and obese adults with type 2 diabetes mellitus to determine whether ILI would alter adiponectin and potentially mediate the increase in low HDL-C compared with standard diabetes support and

education (DSE).

The researchers found that ILI correlated with a significant increase in baseline HDL-C and adiponectin, by 9.7 and 11.9 percent, respectively, compared with the 1.3 and 0.2 percent increases achieved with standard DSE. Adiponectin changes were significantly associated with HDL-C changes, even after adjustment for potentially confounding variables. The improvement in HDL-C achieved with ILI was attributed to changes in both high molecular weight (HMW) and non-HMW-adiponectin.

"In summary, we report that, when compared to usual care, ILI exerted important changes on HMW-adiponectin and non-HMW-adiponectin levels, and that their combined effect, easily assessed by measuring total adipnectin change, may partially mediate the increases in HDL-C with ILI, independently of changes in triglyceride, weight, fitness and glucose control," the authors write. "Our findings suggest an active role for adipose tissue function in the modulation of HDL metabolism."

More information: Abstract
Full Text

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