Central adiposity may blunt metabolism, worsen weight gain

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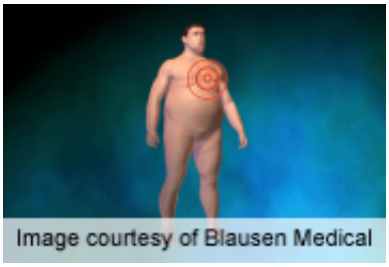

(HealthDay)—In those with body mass index (BMI) greater than 29 kg/m^2, awake and fed thermogenesis is reduced, and this change in energy balance predicts future weight gain, according to research published in the December issue of *Diabetes*.

Paolo Piaggi, M.D., of the National Institutes of Health in Phoenix, and colleagues measured whole-room 24-hour energy expenditure (EE) in 509 healthy subjects (368 Native Americans and 141 whites) who consumed a eucaloric diet, calculated awake and fed thermogenesis (AFT), then used follow-up data for 290 Native Americans to assess the association between AFT and weight change.

The researchers found that AFT accounted for approximately 10 percent of 24-hour EE and was inversely related to age and fasting glucose concentration. Energy intake was the main factor that determined AFT.

For individuals with BMI greater than 29 kg/m^2, AFT was inversely related to BMI. After accounting for covariates, the residual variance of AFT predicted future weight change, but only in those with BMI greater than 29 kg/m^2.

"AFT may influence daily energy balance, is reduced in obese individuals, and predicts future weight gain in these subjects," the authors write. "Once central adiposity develops, a blunting of AFT may occur that then contributes to further weight gain."

More information: Abstract
Full Text (subscription or payment may be required)