

'Thrifty phenotype' leads to less weight loss in obese

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(HealthDay)—For obese individuals, energy expenditure during fasting and response to overfeeding predict weight loss in response to caloric restriction, according to a study published in the August issue of *Diabetes*.

Martin Reinhardt, M.D., from the National Institutes of Health in Phoenix, and colleagues analyzed whether [obese individuals](#) with a thrifty phenotype (i.e., greater reductions in 24-hour energy expenditure during [fasting](#) and smaller increases with overfeeding) lose less weight during caloric restriction. Twenty-four-hour energy expenditure responses to fasting and 200 percent overfeeding were assessed during a

weight-maintaining period in a whole-room indirect calorimeter. Volunteers underwent six weeks of caloric restriction (50 percent). The daily energy deficit was calculated during caloric restriction, accounting for energy intake and waste, energy expenditure, and daily activity.

The researchers found that more weight loss over six weeks was predicted by a smaller reduction in 24-hour energy expenditure during fasting and a larger response to overfeeding. This persisted even after accounting for age, sex, race, and baseline weight, as well as greater rate of energy deficit accumulation.

"The success of dietary weight loss efforts is influenced by the energy expenditure response to caloric restriction," the authors write. "Greater decreases in energy expenditure during [caloric restriction](#) predict less weight loss, indicating the presence of thrifty and spendthrift phenotypes in obese humans."

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