

Study on fasting and dieting suggests why diets fail -- and why a weekly fast might work

March 26 2010, By Ted Boscia and Susan S. Lang

(PhysOrg.com) -- A study finds that after fasting or dieting one day, people do not overeat to compensate but gain any lost weight back. The findings have implications for why diets fail and how weekly fasting might work.

Fasting for one day does not lead to overeating the next day, or the following week, or to more than a temporary [weight loss](#), reports a new Cornell study. The findings help explain why diets fail.

When people fast or diet and then eat freely, "we found they do not increase their [food intake](#) to compensate for a day without eating," said David Levitsky, professor of nutrition and psychology, whose new study was published in the journal *Physiology and Behavior* March 22.

However, they eventually regain their weight back anyway, he said, because metabolic rate is related to [body weight](#). "Since you weigh less after [fasting](#) or dieting, your [metabolism](#) is slower, and so you regain the weight with normal eating," said Levitsky, a Stephen H. Weiss presidential fellow.

The results defy the notion that fasting or dieting leads to gorging later; they also counter the idea that people have a genetically determined set point weight.

However, the study suggests a new strategy for losing weight. Although chronic lifestyle changes (eating healthier foods and getting more

exercise) are preferable ways to lose weight, Levitsky said, a weekly fast might be another way to go.

Since it takes 10 to 14 days to recover the body tissue lost from a one-day fast, "Going without food for one day each week should produce a significant reduction in body weight over time," Levitsky said, now that we know that "fasting does not lead to overeating, and total recovery of body tissue does not occur within the week."

In his study, 22 women, divided into three groups, ate meals Mondays through Fridays at the Cornell Human Metabolic Research Unit for four weeks. During the first week, all groups ate all they wanted. Each of the following three Mondays, one group was chosen to fast, one to consume only 1,200 calories, and one to eat unrestrained. For the rest of the week, all the women were free to eat as they liked. During each session, participants were weighed, and all food consumed was measured.

For those who fasted or ate a restricted diet on Monday, body weight declined significantly the following day, though it did not change for the unrestrained eaters.

By the end of the week, the fasters and dieters had recovered their lost weight (but not all their body tissue) -- without any increase in food consumption beyond normal levels. The fact they were burning fewer calories due to their slowed metabolism accounted for the weight gain; the paper estimates that it would take 10 days for the ratio of fat, bone and muscle to return to pre-fast levels.

"The women regained their weight within a week, because weight is a sloppy measure of body tissue -- weight includes body water, gastrointestinal tract contents, glycogen content and so on," said Levitsky. "Over time, however, the loss of [body tissue](#) would accumulate and result in significant weight loss," he said.

More information: The article is available online at www.elsevier.com/locate/physbeh .

Provided by Cornell University

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