

The trickier math of weight loss

By ACSH Staff — August 29, 2011

Losing weight may not be as simple as just cutting a prescribed number of calories, finds a new study published in *The Lancet*. Led by Dr. Kevin D. Hall of the National Institute of Diabetes and Digestive and Kidney Diseases in Bethesda, the new research [finds](#) [1] that the standard weight-loss rule that one pound is equal to 3,500 calories is actually flawed. The rule fails to take into account that one's metabolism responds dynamically to changes in diet and body composition: as you lose weight, your fat-burning metabolism tends to slow down. Consequently, weight loss slows too.

While some people are told that reducing their daily caloric intake by 500 calories will allow them to lose one pound per week (or 52 pounds in one year), Dr. Hall says that, realistically, this will actually result in a reduction of 50 pounds over the course of three years or more, due to the metabolic slowdown noted above. This is the theory of diminishing returns, says ACSH's Dr. Ruth Kava. People will inevitably hit a weight-loss plateau, at which point they either have to increase the number of calories they burn or make further cuts in their caloric intake eating a set number of fewer calories per day will work only up to a certain point.

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[1] <http://www.tripdatabase.com/doc/1247724-Weight-Loss-from-Cutting-Calories-Less-than-Expected--CME-CE-#content>