A Calorie Is a Calorie When it Comes to Weight Loss

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NEW ORLEANS — Calorie restriction, rather than the carbohydrate or fat content or the glycemic index of the diet, is of paramount importance in losing weight, Ernst J. Schaefer, M.D., said at the annual scientific sessions of the American Heart Association.

"There's a lot of controversy out there about the kind of diet that one should eat for weight loss and whether calories from one food are different than calories from another food. Everybody's always looking for some sort of a magic bullet. But our controlled feeding study clearly indicates that a fat calorie and a carbohydrate calorie and a protein calorie are equivalent when it comes to weight loss—or weight gain," said Dr. Schaefer, professor of nutrition science and policy at Tufts University, Boston.

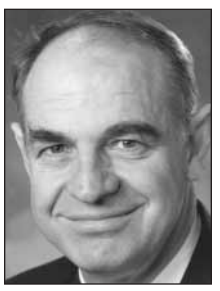
He presented a National Institutes of Health–sponsored study designed to test the hypothesis that a low-fat and/or low–glycemic-index diet would have more favorable effects on weight loss, cardiovascular risk profile, and glucose metabolism than a moderate-fat and/or high–glycemic-index diet.

For the most part, the hypothesis was not borne out, said Dr. Schaefer, also chief of the lipid metabolism laboratory and senior scientist at the Jean Mayer USDA Human Nutrition Research Center on Aging.

The study involved 80 obese men and women with a mean body mass index of 34 kg/m^2. All were placed for 5 weeks on an average American diet at about 35 calories/kg per day for weight maintenance and then randomized to one of four weight-loss diets. One test diet contained 15% of calories as fat, another had 30% calories as fat, a third had a glycemic index of 85, and another had a glycemic index of 45.

All four study diets were heart healthy, containing 15% of calories as protein, 5% saturated fat, and identical amounts of fiber and cholesterol.

These were weight-loss diets in which caloric intake was restricted by one-third, compared with that in the first 5 weeks of the study, although the participants could receive more food if they requested it. They stayed on the weight-loss regimens for 12 weeks, then continued on the same diets for 5 more weeks, but in quantities designed to maintain their new body weight.



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DR. SCHAEFER

At the end of the 22-week controlled feeding period, all four diets had resulted in similar weight loss of 6%-8% of baseline body weight, or a mean of about 17 pounds. The reductions in LDL-cholesterol levels were similar across all four study groups, too—11%-12%. Fasting blood glucose was reduced by 4%-5% in all groups as well.

The only significant difference between the diets was that the low–glycemic-index diet and the moderate-fat diet each lowered plasma insulin levels by 22%-25%, which was two to three times more than the other diets. That could be important for long-term reduction in cardiovascular risk, although much more work on that score needs to be done, Dr. Schaefer said.

AHA President-elect Robert H. Eckel, M.D., was quick to add that clinicians shouldn't attach any significance to the insulin findings.

"Insulin levels are not to be measured by practicing physicians. This is research, and insulin assays have not been standardized. So the insulin level is irrelevant to the practice of medicine," stressed Dr. Eckel, professor of medicine at the University of Colorado, Denver.

His own studies suggest that low insulin levels following weight loss by insulin-sensitive patients aren't necessarily a good thing, as they were predictive of weight regain, he added.

Dr. Schaefer observed that nutrition research has shown a dichotomy between what's important for achieving weight loss and what's heart healthy. For weight loss, caloric restriction and physical exercise are critical. "But for preventing heart disease, it's animal fat and sugar as well, I believe, that are atherogenic. Those are the culprits." ■