

All Diets Work For Those Who Adhere To The Regimen

Jan. 5, 2005 — Adherence to diet for one year, not the specific diet plan, is the most important determinant of weight loss and reduction of cardiovascular risk, according to the results of a randomized trial published in the Jan. 5 issue of *JAMA*. When comparing Atkins, Ornish, Weight Watchers, and Zone diets, the editorialist recommends the "low fad" approach.

"The scarcity of data addressing the health effects of popular diets is an important public health concern, especially since patients and physicians are interested in using popular diets as individualized eating strategies for disease prevention," write Michael L. Dansinger, MD, from the Division of Endocrinology, Diabetes, and Metabolism, Boston, Massachusetts, and colleagues. "Some plans minimize carbohydrate intake without fat restriction (eg, Atkins diet), many modulate macronutrient balance and glycemic load (eg, Zone diet), and others restrict fat (eg, Ornish diet)."

At a single, academic medical center in Boston, Massachusetts, 160 overweight or obese adults were enrolled starting July 18, 2000, and randomized to the Atkins, Zone, Weight Watchers (calorie restriction), or Ornish diet until Jan. 24, 2002. Age range was 22 to 72 years, mean body mass index (BMI) was 35 kg/m² (range, 27-42 kg/m²), and all participants had known hypertension, dyslipidemia, or fasting hyperglycemia.

After two months of maximum effort, participants controlled their degree of adherence to the diet. Primary outcomes were changes in baseline weight and cardiac risk factors at one year, and dietary adherence rates based on self-report. Study completion rates were 21 (53%) of 40 for Atkins, 26 (65%) of 40 for Zone, 26 (65%) of 40 for Weight Watchers, and 20 (50%) of 40 for Ornish. Participants who discontinued the study were assumed to have no change from baseline.

At one year, mean weight loss was between 2.1 and 3.2 kg (4-7 lbs). Study completers had greater effects. In each group, approximately 25% of the initial participants maintained a one-year weight reduction of more than 5% of initial body weight, and approximately 10% of participants lost more than 10% of body weight.

At one year, each group had a reduction in low-density lipoprotein (LDL)/high-density lipoprotein (HDL) cholesterol ratio by approximately 10% (all $P < .05$), with no significant effects on blood pressure or glucose.

The amount of weight loss was associated with the self-reported level of dietary adherence, but not with diet type. For each diet, decreasing levels of total/HDL cholesterol, C-reactive protein, and insulin were significantly associated with weight loss, but there was no significant difference between diets.

"Each popular diet modestly reduced body weight and several cardiac risk factors at one year," the authors write. "Overall dietary adherence rates were low, although increased adherence was associated with greater weight loss and cardiac risk factor reductions for each diet group."

Study limitations include inability to identify a "best diet," relatively high rate of attrition, limited ability to exclude long-term safety risks or occasional dangerous adverse effects, and subjective measurements of dietary intake and adherence.

"One way to improve dietary adherence rates in clinical practice may be to use a broad spectrum of diet options, to better match individual patient food preferences, lifestyles, and cardiovascular risk profiles," the authors conclude. "Our findings challenge the concept that one type of diet is best for everybody and that alternative diets can be disregarded. Likewise, our findings do not support the notion that very low carbohydrate diets are better than standard diets, despite recent evidence to the contrary."

The General Clinical Research Center via the National Center for Research Resources of the National Institutes of Health, the U.S. Department of Agriculture, and the Boston Obesity Nutrition Research Center supported this study.

In an accompanying editorial, Robert H. Eckel, MD, from the University of Colorado at Denver and Health Sciences Center in Aurora, Denver, notes that there is insufficient knowledge about mechanisms for recidivism in obesity.

"It seems plausible that for maintenance of reduced body mass, the right diet needs to be matched with the right patient," Dr. Eckel writes. "Physicians and other health care professions should teach obese patients that both quality and quantity of the diet are important, and that sustained weight loss may well be possible with the addition of physical activity and behavioral change strategies to a modest but persistent caloric restriction — the 'Low Fad' approach."

JAMA. 2005;293:43-53, 96-97