

## Is There an Ideal Diet?

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Diet is both a noun and a verb. As a noun, it relates to patterns of food intake as well as a special course of food, such as a diabetic diet. As a verb, it refers to restricting the amount and/or the type of food. The paper by Shively et al. (1) in this issue of *Obesity* is relevant to both meanings and raises the question of whether there is an ideal diet in either of these contexts. Dieting, as a verb, comes to light at the beginning of each year, as people wishing to lose weight seek out the latest dietary advice about how to do this. Despite the fact that last year's diet "didn't work," there is renewed enthusiasm for this year's diet, even in the face of this "false hope syndrome" (2). This year's list of the 41 best diets ranked by US News and World Report was published on January 2, 2019 (3). From this list, the experts ranked the following three diets at the top of the list: the Mediterranean diet (4), the Dietary Approaches to Stop Hypertension (DASH) diet (5), and the flexitarian diet (6), which is a vegetarian diet with occasional intake of meat.

To answer the question of whether there is an ideal diet, individuals need criteria against which to make that judgment. As health professionals, the focus is on diets that have "clinical evidence of effectiveness" in producing weight loss, but more importantly, benefits to the individual through improved health in the broadest sense. The Mediterranean diet (4), the DASH diet (5), and the flexitarian diet (6) all have "clinical" trial data behind them, and the first two have been widely recognized as good diets for many years.

The manuscript by Shively et al. (1), using a nonhuman primate, provides additional insights on the value of the Mediterranean diet. After a baseline period, nonhuman primates were matched and assigned to eat either a Western-style diet focusing on meat and fat with a poly-saturated/saturated fat ratio of 14.8/1 or a Mediterranean-style diet including protein primarily from vegetables and a lower poly-saturated/saturated fat ratio of 2.9/1. The animals consuming the Western diet gained more weight, had impaired insulin tolerance, and had higher triglycerides and higher levels of liver fat than animals consuming the Mediterranean diet (1). During the first 6 weeks, the animals on the

Mediterranean diet had no rise in food intake compared with a significant rise in those on the Western diet.

This important study by skilled investigators provides additional support to the value of a Mediterranean diet. Their interpretation of the change in food intake might have an alternative explanation to the one offered by the authors (1). Another experimental study (7) comparing animals that do and do not gain weight consuming a high-fat diet found that, when provided with the higher fat diet, those resistant to becoming fat on this diet initially increased and then reduced their food intake, indicating the presence of a system for recognizing the change in fat in the diet. A potential signal for that adaptation is a gene called regulator of G-protein signaling 4 (*RGS4*), which is abnormal in human obesity as well as in animal obesity (7). It would be worth testing this hypothesis in the model used by Shively et al. (1).

Finally, this study presents evidence-based support for the Mediterranean diet that is often lacking with other diets. **O**

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