Divergence in popular diets relative to diets consumed by Americans, and implications for diet selection.

CONTEXT: Given the seemingly disparate nature of popular weight-loss diets (WLDs), consumers may have a difficult time choosing one. We hypothesized that because most of these diets differ greatly from the way most Americans spontaneously eat, the choice of a WLD may be less critical than the decision to adopt any WLD.

OBJECTIVE: To assess the degree of similarity among several popular WLDs and that between average diets of Americans and the WLDs as a whole.

DESIGN: One-day menus were randomly selected or constructed from 16 popular diet books (resulting in 17 distinct diets). Usual dietary intakes of individuals were derived from the Continuing Survey of Food Intakes by Individuals (CSFII) 1994-96, 1998.

MAIN OUTCOME MEASURES: Euclidean distances, based on 12 dietary variables, were calculated among the popular WLDs, as well as between the WLDs and intakes from the CSFII.

RESULTS: Euclidean distances among the WLDs ranged from 1.99 to 15.24, with a mean of 6.12 +/- 2.83. Mean distance between individuals' intakes from the CSFII and the closest WLD was 3.63 +/- 1.24, while the mean distance between individuals' intakes and the farthest WLD was 10.58 +/- 1.10. Mean distance between individuals' intakes and the WLDs considered together was 6.04 +/- 1.10.

CONCLUSIONS: While the mean Euclidean distances between individuals' intakes and
popular WLDs demonstrated meaningful differences, the differences among the WLDs were slightly greater and, in multivariate space, surrounded the diets consumed by Americans. This may have implications for the selection of a WLD in persons seeking to lose weight.