

## Target Area: Reduce the Consumption of High-Energy-Dense Foods

Research shows that people eat a fairly consistent amount of food on a day-to-day basis. This finding holds true whether the amount of food contains many or few calories. Therefore, the number of calories in a particular amount or weight of food (i.e., the food's energy density) affects the total number of calories a person consumes (1). Foods with a lower energy density provide fewer calories per gram than foods with higher energy density. In general, foods with a lower energy density (e.g., fruits, vegetables, and broth-based soups) tend to be foods with either a high water content, a high fiber content, or little fat. High-energy-dense foods are often high in refined grains, added sugar and fats, and tend to be palatable, inexpensive, and convenient (2).

While the influence of dietary energy density on body weight has not been extensively investigated, several observational studies suggest that a relationship exists between consuming an energy-dense diet and obesity. For example, one cross-sectional study with a nationally representative group of adults found that normal weight individuals consumed diets that were lower in energy density than obese individuals (3). In another cross-sectional study, diets with higher energy density were predictive of higher body mass index (BMI) values and had more added fat and sugar (2). A prospective study found that consumption of high-energy-dense diets was a risk factor

for higher BMI in both men and women across five different ethnic groups (4). Analyses of cross-sectional data found that dietary energy density has been identified as a correlate of obesity, elevated fasting insulin levels, and metabolic syndrome in U.S. adults (5).

The current food supply contains a significant amount of high-energy-dense foods. Many of these are processed foods that are high in fat and/or sugar and low in nutrients. Portion sizes in this country have also increased over the past two decades in restaurants, grocery stores, and vending machines. Portion sizes for manufactured and restaurant foods in the United States appear to have increased concurrently with obesity prevalence; they began to rise in the 1970s, increased dramatically in the 1980s, and have continued to grow gradually (6). Current portion sizes of French fries, hamburgers and sodas are 2-5 times larger than when they were originally offered in fast food restaurants (7). In addition, the number of eating establishments in the United States increased by 75% between 1977 and 1991. A recent review paper concluded high-energy-dense foods are lower in cost, have high palatability, and are associated with higher energy intakes (8).

## References

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