

RESEARCH

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# Meal planning is associated with food variety, diet quality and body weight status in a large sample of French adults

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## Abstract

**Background:** Meal planning could be a potential tool to offset time scarcity and therefore encourage home meal preparation, which has been linked with an improved diet quality. However, to date, meal planning has received little attention in the scientific literature. The aim of our cross-sectional study was to investigate the association between meal planning and diet quality, including adherence to nutritional guidelines and food variety, as well as weight status.

**Methods:** Meal planning, i.e. planning ahead the foods that will be eaten for the next few days, was assessed in 40,554 participants of the web-based observational NutriNet-Santé study. Dietary measurements included intakes of energy, nutrients, food groups, and adherence to the French nutritional guidelines (mPNNS-GS) estimated through repeated 24-h dietary records. A food variety score was also calculated using Food Frequency Questionnaire. Weight and height were self-reported. Association between meal planning and dietary intakes were assessed using ANCOVAs, while associations with quartiles of mPNNS-GS scores, quartiles of food variety score and weight status categories (overweight, obesity) were evaluated using logistic regression models.

**Results:** A total of 57% of the participants declared to plan meals at least occasionally. Meal planners were more likely to have a higher mPNNS-GS (OR quartile 4 vs. 1 = 1.13, 95% CI: [1.07–1.20]), higher overall food variety (OR quartile 4 vs. 1 = 1.25, 95% CI: [1.18–1.32]). In women, meal planning was associated with lower odds of being overweight (OR = 0.92 [0.87–0.98]) and obese (OR = 0.79 [0.73–0.86]). In men, the association was significant for obesity only (OR = 0.81 [0.69–0.94]).

**Conclusions:** Meal planning was associated with a healthier diet and less obesity. Although no causality can be inferred from the reported associations, these data suggest that meal planning could potentially be relevant for obesity prevention.

**Keywords:** Meal planning, Diet quality, Food variety, Overweight, Cross-sectional study

## Background

In industrialized countries, eating habits and cooking practices have considerably changed. First, time devoted to cooking has decreased: in the United States, it has been reduced from 1:63 hour per day in 1965–1966 to 58 min in 2006–2007 [1]. Additionally, the source of food consumed

has changed: people consume less food prepared at home, whereas foods prepared away from home represent an increasing part of the diet [2–4].

In light of this observation, a number of studies have evaluated the potential impact of food prepared away from home on dietary quality, as well as weight status. These studies highlighted that the consumption of food prepared away from home is associated with a lower quality diet [5–8] and a higher body mass index [9–11], whereas benefits have been attributed to home-prepared food [2, 12–14]. More

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# Guide To Good Food Chapter 11 Planning Meals Terms And

**Yi-Tong Ma**



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