

Ultraprocessed foods make you fat!

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Not surprisingly, for the first time a study has formally demonstrated that people who eat ultraprocessed foods consume more calories and rapidly accumulate excess weight.

This study represents a major advance in our understanding of the factors responsible for the epidemic of obesity which is currently unfolding around the world. One of the debates in this field has gone around in a circle for several decades: on one hand, some accuse fat of promoting excess weight due to its caloric density being twice as high as that of sugars or proteins. On the other hand, there are those who believe that a low-carbohydrate diet (low-carb) is the key to losing weight or to maintaining a healthy weight and that it is primarily the increase in insulin (provoked by the sugar) which promotes the accumulation of fat.

However, the studies which have compared the effects of low-carb and low-fat diets on body weight have not succeeded in establishing the superiority of one or the other of these approaches. In the short term (3 to 6 months), people who adopt a low-carb diet succeed in losing slightly more weight than do those on low-fat diets, but these losses become similar over time and are not so sufficiently large as to have significant clinical effects. This was recently confirmed by a large study showing that it is the decreased daily caloric intake which leads to weight loss, and that this loss can result from a reduction in sugars or in fats¹.

EATING HABITS

The most important modification of our eating habits over the past few decades resulted from the arrival on the market of a very large number of ultraprocessed foods of high caloric density. While they practically did not exist 50 years ago, these foods currently provide over half of the calories consumed by the population², an increase in consumption which coincides with the meteoric rise in the number of overweight people over this same time period.

A causal link between the results of overconsuming ultraprocessed foods and excess weight was established for the first time in a very important study performed by the team of Dr. Kevin Hall³. In this randomized clinical study, the researchers recruited young individuals (31 years of age) in good health but slightly overweight (BMI of 27) who were willing to spend 28 consecutive days secluded in the laboratories of the NIH (for financial compensation). During the first 14 days each participant consumed three meals daily comprised of ultraprocessed foods (commercial cereals for breakfast, muffins, white bread, flavoured yogurt, fruit juice, deli meats, chips and jam) or else of foods which were minimally processed (fresh fruits and vegetables, eggs, fish, poultry, whole grains and nuts). For the remaining 14 days, the participants who had been submitted to the ultraprocessed diet were switched to the less processed diet, and vice versa. In all cases, the meals were designed to be equivalent in terms of calories, energetic density, fats, sugar and salt, and the subjects



were instructed to eat all that they wished to consume in the 60 minutes following each meal presentation.

SURPLUS CALORIES

The results were quite straightforward: by meticulously analyzing all of the consumed food, the researchers concluded that the participants who were submitted to the ultraprocessed diet consumed on average 508 extra kcal each day, compared to those who consumed the slightly processed diet. This is an enormous difference and this increase in caloric intake had an obvious effect on body weight, producing an increase of nearly 1 kg each over two weeks, compared to a loss of 1 kg in those who had consumed the less processed foods. The reasons why people consume more when exposed to ultraprocessed foods remains to be clearly established, but an analysis of various hormones involved in the control of appetite showed that blood levels of the hormone PYY (which diminishes appetite) were increased in individuals who ate the slightly transformed foods whereas the levels of ghrelin (which stimulates appetite) were diminished. It is thus possible that the consumption of ultraprocessed foods disturbs the mechanisms involved in satiety, which then promotes the overconsumption of food.

The message from this clinical study is thus quite clear: rather than preoccupy ourselves with the quantities of sugar and fat in our diet, the best way to prevent the development of obesity is far simpler: we must limit the consumption of ultraprocessed foods.

- (1) Gardner, CD et al. Effect of low-fat vs low-carbohydrate diet on 12-month weight loss in overweight adults and the association with genotype pattern or insulin secretion: the DIETFITS randomized clinical trial. *JAMA* 2018; 319: 667-679.
- (2) Moubarac, JC. Ultra-processed foods in Canada: consumption, impact on diet quality and policy implications. Montréal: TRANSNUT, University of Montreal; December 2017.
- (3) Hall, KD et al. Ultra-processed diets cause excess calorie intake and weight gain: an inpatient randomized controlled trial of *ad libitum* food intake. *Cell Metabolism*. 2019; 30(1):226