
Which Healthy Eating Nudges Work Best?



By [Pierre Chandon](#) , INSEAD

Our framework shows how to guide consumers to choose healthier food options.

Everyone wants to make healthier eating choices. Governments, from the [United States](#), to the [United Kingdom](#), to [France](#), are focused on helping their citizens reduce the levels of obesity in their countries. Despite public campaigns like “[five a day](#)” that encourage people to eat five fruit and vegetables per day, consumers continue to make unhealthy choices.

Researchers from fields as varied as public health and marketing are studying why people keep making poor choices and how they can be “nudged” into making better ones. Nudging, according to Nobel Prize winning economist [Richard Thaler](#), is something that influences behaviours without forcing anyone’s hand. According to [his book](#) with Cass Sunstein, it is “any aspect of the choice architecture that alters people’s behaviour in a predictable way without forbidding any options or significantly changing their economic incentives”. A sugar ban or a price reduction isn’t a nudge, but a change in the environment is.

The seven healthy eating nudges of responsible food marketers

In [“Which Healthy Eating Nudges Work Best? A Meta-Analysis of Field Experiments”](#), my co-author [Romain Cadario](#) and I looked at 299 results from 96 field experiments. Our meta-analysis reviewed real-life experiments rather than lab- or online-based studies because, when it comes to food choices, there's an important gap between what people say they eat and what they actually eat. Published in *Marketing Science*, our analysis was funded directly by INSEAD and IÉSEG.

We categorised the nudges into seven types, which we grouped in three broad categories: cognitive, affective and behavioural.

Nudge Types

Cognitive Nudge

Descriptive Nutritional Labelling



Definition: Labels in supermarkets, cafeterias, and chain restaurants with calorie and nutrition facts.

Example: The shelf label or the menu board provides information about calorie, fat, sugar and salt content.

Evaluative Nutritional Labelling



Definition: Labels in supermarkets, cafeterias, and chain restaurants providing colour-coded nutrition information that easily identifies healthier foods.

Example: The shelf label or the menu board provides information about calorie and fat content and shows a green sticker if the food is healthy or a red sticker if the food is unhealthy.

Visibility Enhancement



Definition: Supermarkets, cafeterias, and chain restaurants making healthy food more visible than unhealthy food.

Example: Supermarkets place healthy food rather than unhealthy food near cash registers, while cafeterias and restaurants make healthy food more visible and easier to find on their menu than unhealthy food.

Healthy Eating Calls



Definition: Staff in supermarkets, cafeterias, and chain restaurants prodding consumers to eat more healthily.

Example: Supermarket or cafeteria cashiers or restaurant waiters ask customers if they would like to have fruits or vegetables.

Pleasure

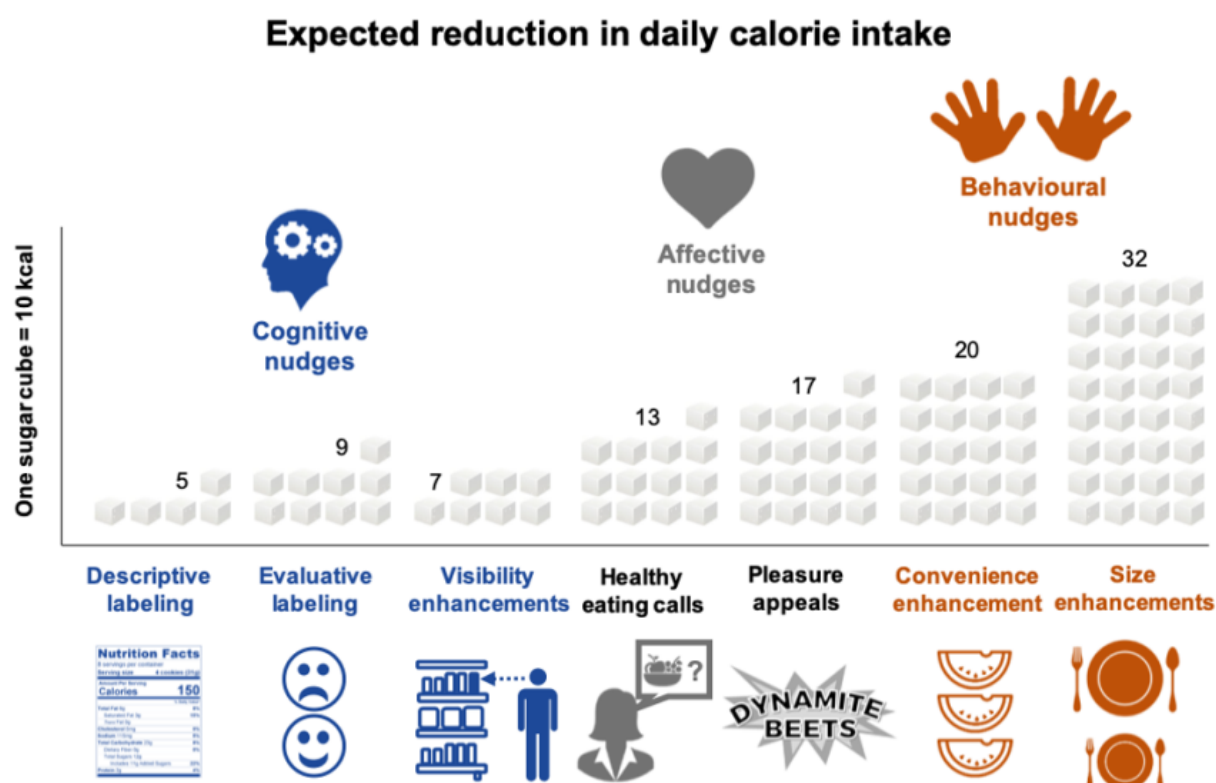
Definition: Supermarkets, cafeterias, and chain restaurants highlighting healthy food.

Hands above hearts and brains

We collated information about the experiments and measured the effectiveness of each type of nudge using the standardised mean difference (also known as Cohen's *d*). By standardising the mean differences, we are able to compare the effectiveness of experiments using various units of measurements and foods. To get a more intuitive grasp of nudge effectiveness, we multiplied the Cohen's *d* value by the standard deviation of **537 kcal** in daily energy intake for an adult, in order to compute the daily energy equivalent.

If we look at all healthy food nudge experiments as a whole, the *d* is only 0.23 (537 kcal x .23 = 123 kcal), which isn't much of a difference. But when we separate the experiment results into cognitive, affective and behavioural groups, it's clear that some nudges are better than others.

We found that behavioural changes were more likely to be successful than cognitive or affective nudges. When it comes to nudging people towards healthier food choices, appealing to the head or the heart is not nearly as effective as giving someone a hand.



Cognitive nudges

Trying to change someone's mind may feel like an exercise in futility. Cognitive nudges provide information and trust the consumer to make better choices. But we found that the only type of experiment that didn't have a significant impact on healthy eating was providing nutritional information on its own, such as just listing a calorie count. We estimated that descriptive labelling could cut the number of calories consumed per day by about 54 kcal, or the equivalent of five sugar cubes.

Once context was added, which we call evaluative labelling – e.g. an interpretative cue like a smiley face or traffic light colours – the response was already significantly better: 91 kcal per day, about the same as nine sugar cubes.

Visibility enhancements also belong to cognitive nudges because they make the healthy option more visible by putting it right in the centre of the shelf or on the first page of the menu. It's a cognitive intervention because people are alerted to the existence of this option and it reduces the visibility of the less healthy one. This type of experiment was slightly more effective (70 kcal per day, or seven sugar cubes) than simply giving calorie and fat information, but less than when information was put into context.

Affective nudges

Appeals to the heart included nudges that make healthy food sound more exciting or direct interactions with servers who might say, for example, "Your meal doesn't really look balanced" or "Would you like a half-portion of fries?"

Healthy eating calls direct consumers to make better choices with either signs that encourage them to "make a fresh choice" or verbal encouragement from staff. The estimated calorie reduction for this type of nudges, 129 kcal per day, is about the same as 13 sugar cubes.

Pleasure appeals emphasise the taste experience of food, focusing on how it feels to eat something. Experiments used text, e.g. "twisted citrus-glazed carrots", or appealing displays or containers, such as an attractive pyramid of fruit. According to estimations, these nudges can reduce daily calorie intake by 172 kcal, or 17 sugar cubes.

Behavioural nudges

The most effective experiments tried to modify behaviours directly without necessarily changing what people think or what they want. It's not a form of persuasion because consumers are not told that they should eat more healthily or given information. In fact, behavioural nudging works best because it doesn't rely on people's collaboration or volition.

Convenience enhancements make healthier options easier to select or eat. This may mean putting healthier food options close to the front of a cafeteria, when consumers have an empty tray to fill up. Another convenience is pre-cut fruit or vegetables, such as easy-to-eat pineapple chunks on display rather than labour-intensive whole pineapples. Taken together, these nudges could cut 199 kcal per day, which corresponds to 20 sugar cubes.

Size enhancements modify either the [size](#) of containers (plates, bowls, etc.) or the portion of food on the plate. These nudges are the best way to reduce the amount of unhealthy food consumed and could cut daily calorie consumption by about 320 kcal, as much as 32 cubes of sugar.

Marketing, nudges and health

Most debates at the public policy level are about informing people; one example is labels with nutrition facts. Providing information has merit from an educational and ethical point of view. Information is of value itself. But it is only a quarter as effective as a behavioural nudge that literally takes people by the hand.

In another [paper](#), we looked at how consumers felt about different types of nudges. We found that people were poor judges of their effectiveness. Worse, approval ratings were inversely related to the actual effectiveness of the nudge. Research, not intuition, should be our guide when deciding which types of nudges to use.

Now that we know which healthy eating nudges work best, we should be ready to cheer our favourite stores or restaurants as they shift the focus of their nudges from what we know to how we feel and what we do.

Researchers can contribute to our “living” meta-analysis [here](#).

Watch Pierre Chandon's [TEDxINSEAD](#) talk on Epicurean nudges.

Find article at

About the author(s)

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About the research

"Which Healthy Eating Nudges Work Best? A Meta-Analysis of Field Experiments" is published in *Marketing Science*.