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Craving Convenience: The Hidden Costs of Ultra-processed Foods

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Introduction

Many people have concerns and worry about processed foods. In fact, research shows that 43 percent of people in the United States have worries about processed foods, especially ultra-processed foods (UPFs). UPFs are foods that have been heavily processed using industrial methods and ingredients. Some concerns that people have about UPFs include their nutritional value, freshness, safety, where the food comes from (local vs. non-local), health impacts, environmental concerns, farming methods (organic vs. non-organic and genetically modified organisms) and ethical issues in food production. Even with these worries, UPFs provide about 58 percent of the daily calories for people in the United States. This publication will help you better understand UPFs and help you improve the quality of your diet.

What Is Food Processing?

Foods processing means that a food is changed from its original state to preserve the food and to make it safe to eat. Almost all food that is eaten today is processed in some way. There are different types of processed foods, and we can think about them based on their ingredients and how they have been processed.

The NOVA categorization for processing foods includes different categories of food based on how the food is processed. As you can see in Table 1, there are many types of foods that have been processed in different ways. Keep in mind that people can have different opinions about how certain foods are classified. For example, one person may believe a food should be classified in Group 3 while another believes a food should be classified as Group 4. Differences in opinions about classifications can even occur in important research studies about processed foods. In general, people should choose foods from groups 1–3 most of the time because these foods are usually higher in nutrients that our bodies need. Foods in group 4 are usually low in nutrients and high in calories.

Table 1. NOVA Categorization for Processing of Foods (Monteiro et al., 2019).

Group	Definition	Examples
Group 1: Unprocessed or minimally processed foods	Foods from nature with inedible parts removed	Rice, Beans and peas, potatoes, eggs, herbs and spices, yogurt, tea, coffee, and drinking water
Group 2: Processed culinary ingredients	Foods from group 1 in a different form	Vegetables oils crushed from seeds, nuts, or fruit (olive oil and other oils), butter, sugar, molasses, honey, iodized salt
Group 3: Processed foods	Foods from group 1 or 2 made by adding salt, sugar, oil or fat, or using preservation methods such as canning or bottling	Canned vegetables, salted nuts, salted fish and meats, fruits in syrup, canned fish, unpackaged breads and cheese
Group 4: Ultra-Processed Foods	Industrially manufactured food products made of several ingredients (formulations) and food substances of no or rare culinary use (industrial use ingredients)	Many ready-to-eat products, carbonated drinks, packaged snacks, chocolate, candy, ice cream, margarine, cookies, cakes, breakfast cereals, energy drinks, fruit drinks, chicken nuggets, burgers, hot dogs, sausages, instant soups, instant noodles

Ultra-processed Foods (UPFs):

Packaged foods manufactured using many ingredients (often additives and preservatives) designed for convenience and long shelf-life.

Figure 1*: Definition of ultra-processed foods.*

What Are Ultra-processed Foods?

Ultra-processed foods are foods that have been processed using methods that that go beyond simple cooking or preservation. Ultra-processed foods usually have ingredients that you wouldn't normally find in home cooking, like artificial colors, flavors, emulsifiers and stabilizers. However, these additions are regulated and are approved to be generally recognized as safe. The main goal of ultra-processing is to create foods that are easy to use, have a long shelf life, taste good and usually are low priced. UPFs usually have higher levels of sugar, salt and fat, which make them more enjoyable to eat. Ultra-processed foods include soft drinks, pre-packaged snacks, instant noodles, frozen pizzas, cake mixes, cereals, margarine, mass-produced breads, ice cream, hot dogs and packaged soup mixes.

Making UPFs usually involves many steps. First, whole foods are broken down into parts. For example, corn is turned into high fructose corn syrup. Corn, wheat and soy are common whole foods that are chemically changed to create UPFs. Later steps involve mixing these modified ingredients into other products. Then colors, flavors and other additives are added.

Nutritional Value

UPFs are usually high in calories, saturated fat, sodium and added sugars and low in nutrients our bodies need like fiber, vitamins and minerals. Nutrient density means that there is a good balance between the calories we get from a food and the nutrients (vitamins, minerals, fiber, etc.) we get from that food. Foods that give us a lot of calories but few nutrients are considered low in nutrient density. Many UPFs are low in nutrient density. Foods that do not give us a lot of calories but give us many nutrients are considered high in nutrient density. Fruits, vegetables and whole grain foods are high in nutrient density. The average diet in the United States is too high in saturated fat, sodium and added sugars and too low in nutrients that our bodies need like fiber, vitamins and minerals. Because UPFs are eaten regularly, they are believed to be a major reason why the average diet in the United States is too high in nutrients we should limit and too low in the nutrients we need.

It is important to remember that not all UPFs are the same. There are some nutrient-dense food products that are classified as an UPF. For instance, vegetarian meat substitutes are ultra-processed foods, but many of them have less saturated fat, sodium and cholesterol than regular meat. For some people who follow a vegetarian diet, the ease of finding these items in local stores may be more important than the fact that they are classified as an UPF.

The Effects of Ultra-Processed Foods

The increased amount of ultra-processed foods that we eat has been linked to many health problems. Ultra-processed foods often replace healthier options, which means people may not get enough vitamins, minerals and fiber and get too much salt, sugar and saturated fats. This can increase the risk of serious health issues.

How May UPFs Affect Our Health?

Research on the effects of ultra-processed foods on our health is still growing. Some studies show mixed results about how UPFs impact health. However, as people have eaten more ultra-processed foods, obesity and related health issues also have increased. The 2025–2030 Dietary Guidelines Scientific Advisory Committee suggests that diets high in UPFs are linked to a higher risk of being overweight and having obesity for youth, adolescents and adults. However, there is not enough evidence yet to fully understand the relationship between UPF and overweight and obesity in pregnant women, new mothers, babies and children under 2 years.

Some research suggests that eating more UPFs can lead to higher chances of heart disease and even death. Studies world-wide have found that eating UPFs may be linked to problems like insulin resistance, metabolic syndrome, digestive issues, rising obesity rates, high blood pressure and high cholesterol. There is also some evidence that UPFs can trigger intestinal diseases because they may harm the healthy bacteria in our gut. Eating UPFs regularly can cause inflammation in the body over time.



Figure 2*: Key terms found on a product's ingredient list that may indicate an ultra-processed food item.*

Check the Food Label to Identify Ultra-processed Foods and Make Decisions

You can check the Nutrition Facts label and the ingredient list on food packages to understand the nutrient content of the product and to quickly check if a food is ultra-processed.

First, look at the Nutrition Facts label, check the number of calories for each serving. Is the serving size reasonable for the calories? Pay attention to the amount of fat, sugar (especially added sugar) and sodium per serving. If these are higher than 20 percent of the daily value, the food might be considered an ultra-processed food.

Next, look at the ingredient list. Shorter lists usually mean fewer ingredients and less processing. However, watch out for key terms like natural flavors, emulsifiers and hydrogenated oils, as these can indicate that a food is a UPF. Figure 3 includes some terms that may tell you that a food is an ultra-processed food item.

Sometimes, the cost and convenience of a food might be more important than how the food is processed. You can still use the Nutrition Facts label to choose the options that are lower in saturated fat, sodium and added sugars and higher in nutrients like dietary fiber, vitamins and minerals.



Figure 2*: 2,000 calorie diet with foods that are low in nutrient density vs. a 2,000 calorie diet with foods that are high in nutrient density.*

Choose Nutritious Foods Most of the Time

Most people in the United States have too much saturated fat, sodium and added sugars in their diet and not enough of the nutrients that our bodies need like fiber, vitamins and minerals. UPFs make up a large part of people's diets in the United States, so choosing fewer UPFs and more foods that are high in nutrient density can help us get more nutrients in our diet and less saturated fat, sodium and added sugars.

For example, if someone eats a 2,000-calorie diet and only chooses convenience foods, they will not get many nutrients from their food choices. If someone eats a 2,000-calorie diet that replaces UPFs with nutrient dense foods, they get more nutrients for the same number of calories. It's like getting more bang for your buck! With the same number of calories, you can give your body the nutrients it needs for our best health! (Figure 2).

How Can You Reduce the Amount of Ultra-processed Foods in Your Diet?

UPFs are usually high in calories and low in nutrients, and eating too many UPFs is associated with health risks. Replacing UPFs with more nutritious options can help us improve our health and our diets! The tips below can help you reduce UPFs in your diet:

- Choose whole, unprocessed foods like fruits, vegetables, whole grains and lean proteins most of the time. These foods can help you increase the quality of your diet.
- Make small changes that add up. For example, choose plain yogurt with fresh or frozen fruit and nuts over flavored yogurt with store-bought toppings. Plain yogurt with fruit and nuts is usually less processed than flavored yogurt with toppings.
- Think about the UPFs you eat regularly. Identify ways to replace those foods with a less processed option one at a time.
- Remember balance is key. Balance minimally processed foods with UPFs as you choose your meals and snacks. For example, choose minimally processed foods for breakfast and lunch and include some convenience items for dinner and snacks. Or choose minimally processed foods for breakfast and dinner and include some convenience options for lunch. Find a routine that works best for your schedule.
- Create a meal plan for meals that you will prepare at home. Preparing more meals at home is a great way to reduce the number of UPFs in our diet.



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