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Frequent Ultraprocessed Food Consumption Raises Mortality Risks, Especially in Women

Analysis by Dr. Joseph Mercola | December 06, 2024

STORY AT-A-GLANCE

- A recent study of 27,670 participants found that ultraprocessed foods increase mortality risk, especially in women
- Higher ultraprocessed food consumption was linked to poor cholesterol profiles, showing reduced HDL (good cholesterol) and increased VLDL (bad cholesterol), particularly in older women
- Studies found people consuming most ultraprocessed foods had 11% higher cardiovascular disease risk, 16% higher coronary heart disease risk and 4% higher stroke risk
- Research identified 25 adverse health outcomes from ultraprocessed food consumption, including respiratory diseases, kidney problems, mental health issues, and diabetes among adults and children
- Linoleic acid (LA) in seed oils, a common ingredient in ultraprocessed foods, is particularly harmful; ideally, reduce your intake to 5 grams a day or less

Ultraprocessed foods have now become a major part of the modern diet, not just in the U.S., but worldwide. According to recent studies, these foods now constitute 50% to 60% of the daily energy intake among high-income countries, and low- and middle-income countries will soon follow suit.[1]

But if you look past their attractive packaging and "enjoyable" flavors — qualities that are intentionally given to these foods to make them more marketable and appealing to consumers — you'll see that these convenient, mass-produced foods are putting your health in jeopardy.

Over the past few years, there's been a growing number of studies about ultraprocessed foods and how they are responsible for the increase in chronic health concerns today. A recent Swedish study[2] joins this list, providing compelling evidence that ultraprocessed foods increase all-cause mortality, especially among women.

Ultraprocessed Foods Increases Risk of All-Cause Mortality, Study Finds

The October 2024 study, published in the Clinical Nutrition journal,[3] aimed to understand the molecular impact of consuming ultraprocessed food and how they affect mortality. The researchers used data from the Malmö Diet and Cancer (MDC) cohort study, which began in 1991, and involved 27,670 participants.

The participants were asked to keep a food diary, recording their daily meals for a week, and were interviewed as well about their diet. Their blood samples were also collected and analyzed. According to an article in News Medical:

> *"Dietary item analyses identified that UPFs comprised 13.4% of the cohort's total food intake. Participants with higher UPF intake were more likely to be female, older, never smokers, and low alcohol consumers."*[4]

After analyzing their blood results, the researchers found that higher intake of ultraprocessed foods was associated with "unfavorable lipid profiles," including reduced high-density lipoprotein (HDL, or "good cholesterol") and increased very low-density lipoprotein (VLDL or "bad cholesterol").[5]

These findings demonstrate the nonlinear positive associations between ultraprocessed food consumption and all-cause, premature and cause-specific mortality from

cardiovascular disease, cancer and respiratory disease. A stronger link was seen in female and older participants, compared to male participants. The study authors report:[6]

> *"UPFs are often high in sodium, fat, added sugar and energy, but low in fiber, vitamins and micronutrients, which explains our findings. In addition, some commonly used food additives (e.g., emulsifiers and artificial sweeteners) in UPF, newly generated compounds during UPF manufacturing (e.g., acrylamide), and contaminants migrated from food packaging (e.g., bisphenol A) may also contribute to the adverse health effects of UPFs."*

Understanding Ultraprocessed Foods

In the featured study, the primary subgroups that make up the participants' processed food intake include starchy foods and breakfast cereals (26%), beverages (23.3%), sugary products (18.4%), sauces and fats (15.5%), and meat and fish (13.6%). These are all classified as "NOVA 4 foods."

What are NOVA 4 foods? To put it simply, most foods, even meats, undergo plenty of processing. Because there's a significant number of processed foods out there, experts need a set of criteria that will help distinguish which foods are classified as ultraprocessed and which ones are simply processed.

To provide more insight into this, a team of Brazilian researchers came up with the NOVA classification system (derived from the Portuguese "Nova classificação," meaning "new classification") which groups processed foods based on their extent of processing. Here's a summary of the NOVA categories:[7]

- **NOVA 1 (Unprocessed or minimally processed foods) —** These are edible plant and animal products (whole foods) that are minimally modified or preserved to improve their shelf life and ease of preparation.
- **NOVA 2 (Processed culinary ingredients) —** They undergo grinding, refining and pressing. Honey, salt, sugar, butter and vegetable oils fall under this category.

- **NOVA 3 (Processed foods) —** These are made by combining NOVA 1 and 2 — Group 2 foods are added to Group 1 foods to enhance their "durability and sensory qualities."
- **NOVA 4 (Ultraprocessed foods and drinks) —** They contain little to no Group 1 components and are industrial formulations that use unusual additives outside of Group 2. These foods are mass-produced and highly processed for high palatability.

NOVA 4 foods, or ultraprocessed foods, are designed to have a long shelf life, even without refrigeration, and cannot be reproduced at home. If you check their label, you'll see they usually have more than five artificial ingredients — most of which you are unable to pronounce.

The featured study isn't the first one to highlight the damaging effects of ultraprocessed foods. As the researchers noted, "Since 2019, emerging cohort studies … have shown positive associations between UPF intake and all-cause mortality."[8] Below, we'll discuss two more papers, also recently published, detailing the adverse effects of these foods.

Ultraprocessed Foods Increase Your Risk of Cardiovascular Disease

The featured study above mentions cardiovascular disease mortality as one of the risk factors associated with ultraprocessed foods; an earlier study corroborates this effect. Published in The Lancet,[9] the research looked at three prospective cohort studies to determine the association between ultraprocessed foods and heart conditions, namely cardiovascular disease (CVD), coronary heart disease (CHD) and stroke.

The cohort studies involved 75,735 participants who were health workers. Two studies were composed of female nurses, while the other was composed of male health professionals. The researchers assessed the food intake of the participants every two to four years, along with their health outcomes. They found that the people who ate the most ultraprocessed foods had an 11% higher risk of CVD, a 16% higher risk of CHD and a 4% higher risk of stroke.[10]

What's more, the researchers corroborated their findings by conducting a systematic review and meta-analysis of publications and cohort studies from other countries. They found that participants who consumed high amounts of ultraprocessed foods had 17% higher CVD risk, 23% higher CHD risk and 9% higher stroke risk. According to the authors:

> *"Typical UPF (e.g., sugar-sweetened beverages, processed meats, fast foods) are energy-dense and high in added sugars, saturated fats and sodium, established CVD risk factors.*
>
> *Albeit not focused on food processing, a large body of literature has consistently associated sugar-sweetened beverages and processed meats with CVD, similarly for artificially sweetened beverages. Compounds introduced into UPF during production and packaging may also elevate CVD risk."*[11]

The study authors also pointed out that the type of ultraprocessed food affects how great the risk is — artificially sweetened beverages and processed meats were particularly harmful, while savory snacks and yogurt or desserts made with dairy had lower risks.

25 Adverse Health Outcomes Associated with Ultraprocessed Foods

Taking it up another notch, authors of a June 2024 study[12] reviewed existing meta-analyses and publications involving ultraprocessed food consumption, covering a wide time period — from the inception of these foods up until 2023. The results were startling, as they showed that ultraprocessed foods were associated with 25 different negative health outcomes among adults, children and adolescents.

Some of these, like heart disease and diabetes, are similar to the results seen in the two studies mentioned above. However, they also noted other unique conditions linked to these foods. These include respiratory diseases, kidney, liver or gastrointestinal diseases, mental health problems and more.[13]

The researchers also explained some of the mechanisms of action as to why these adverse effects occur, which are mostly related to the processing methods and added artificial ingredients used. For instance:[14]

- Additives like tartrazine and carmine (E–120) used in ultraprocessed foods induce proinflammatory cytokines and hypersensitivity reactions, which lead to wheezing and asthma symptoms.
- The altered food structure of ultraprocessed foods makes them more hyperglycemic than minimally and moderately processed foods.
- Ultraprocessed foods are engineered to have "supernormal appetitive properties" that leads to unhealthy dietary habits, such as overeating and high-energy intake.
- One mice study[15] found that carrageenan, an additive commonly used in these foods, leads to elevated fasting blood glucose and insulin resistance.
- Aspartame, an artificial sweetener used in these foods and beverages, inhibits the synthesis and release of neurotransmitters that are important in preventing the development of depression.

The authors concluded:

> *"Our umbrella review and updated meta-analyses identified 25 adverse health outcomes associated with higher UPF consumption. Of these, renal function decline, and wheezing in children and adolescents were convincingly associated with higher UPF consumption.*
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> *These findings suggest that dietary patterns with low consumption of UPFs, which include higher consumption of minimally processed foods such as whole grains, fruits, vegetables, eggs, meat, milk, etc. may render broad public health benefits."*[16]

The Most Toxic Ingredient in Ultraprocessed Foods, More Destructive Than Synthetic Additives

Many of the studies above highlight the detrimental effects brought on by the additives and artificial ingredients used in manufacturing ultraprocessed foods. Every time you ingest these foods, you are exposing yourself to synthetic flavorings, genetically engineered compounds, contaminants like pesticides and endocrine-disrupting chemicals like bisphenol A (BPA).

However, there is one particular ingredient that is prevalent in these foods and causes the greatest harm. It's none other than the omega-6 fat **linoleic acid (LA)**. LA is abundant in seed oils, which are used in copious amounts when making these ultraprocessed foods. Around 50% or more of the overall calories in processed foods comes from seed oils.[17,18]

Linoleic acid (LA) is a polyunsaturated fat, characterized by multiple double bonds that make it chemically unstable and susceptible to oxidation, especially in the presence of reactive oxygen species (ROS) produced during cellular energy production.

This oxidative stress can lead to the formation of advanced lipoxidation end-products (ALEs), which contribute to cellular damage by generating free radicals. These free radicals harm cell membranes, mitochondria, proteins, and DNA, impairing overall cellular function.

Inside your body, LA also breaks down into oxidized LA metabolites (OXLAMs), harmful metabolites with a profoundly negative impact on your health. Together, ALEs and OXLAMs end up causing mitochondrial dysfunction — a hallmark of most all chronic diseases.

LA also has a very long half-life inside your body, which is why it's more pernicious to your health than sugar. It's half-life is around 600 to 680 days, or nearly two years. This means it will take you about six years to replace 95% of the LA in your body with healthy fats. This is why I recommend keeping your LA intake low as possible.

To do this, you need to purge all ultraprocessed foods, seed oils and nuts from your diet. Ideally you should only get 5 grams of LA per day, but if you can lower it to 2 grams, that would be even better, and much closer to the LA intake of our ancestors. Restricting

your intake of monounsaturated fatty acids (MUFAs), like olive oil and macadamia nuts, is also recommended due to their oleic acid content, which is nearly as bad for your health as LA.

Clean Up Your Diet by Choosing Whole, Unprocessed Foods

The sooner you eliminate ultraprocessed foods from your life, the better your chances of avoiding the health problems mentioned above. If you're like most people, these foods now make up a significant portion of your diet, which is why eliminating them from your life can be quite overwhelming.

Starting slow is a good idea — for example, swap out processed chips and cookies for healthier snacks, like fruit slices or vegetable sticks. Get rid of all the sugary beverages like soda in your home and choose pure water or fruit juice instead.

The trick is to think of it as an opportunity for you to profit from every mealtime. Not only will choosing whole foods help you avoid the dangers of ultraprocessed foods, but doing so will also nourish and sustain your health.

If you need additional guidance in making healthier meal choices (or improving your overall health, generally speaking), I encourage you to sign up for the Mercola Dynamic Health Coach app. This innovative platform will assist you in reaching your unique, personalized goals and will provide real-time feedback on your progress. It will also give meal ideas and recommendations based on your health data. This revolutionary app is coming soon, so stay tuned for more announcements.

Sources and References

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