

Could your favorite foods be robbing you of your health?

Does your grocery list consist of Cheez-Its, Chex Mix, Kellogg's cereal and snacks, Little Debbie desserts, Lunchables or Reese's candy? If you answered yes, then sadly your grocery cart could be killing you! These fan-favorites, along with many other processed foods, contain the synthetic antioxidant tBHQ, even if it is not specified on the ingredients label.



The synthetic preservative tert-Butylhydroquinone, commonly known as tBHQ, prevents foods from oxidizing and becoming rotten. It is commonly used in to extend the shelf-life of processed breakfast foods, cereal based snacks, frozen meals, microwave popcorn, and vegetable oils.

While one may think it is beneficial to prolong the life of our favorite foods, regular consumption may lead to toxicity. Previous [research](#) has linked tBHQ exposure with ADHD, asthma, allergic reactions, [reduced immunity levels](#) and carcinogenic effects.

These adverse effects have led Japan, the United Kingdom, and other European countries to ban tBHQ use. However, in the United States the FDA has declared it is safe for human consumption, under the regulation that the tBHQ concentration does not exceed 0.2% of oils and fats in the food product and the average daily intake does not exceed 0.7 milligrams per kilogram of body weight.

While the FDA's regulated level may seem relatively low, people with highly-processed diets are actually at extreme risk for exceeding the recommended daily intake value, consequently increasing their risk for developing the adverse effects described above.

The current challenges of both the COVID-19 pandemic and the obesity epidemic in the United States have highlighted just how essential it is to have a healthy immune system. One [study](#) found that people with obesity were 113% more likely than people of healthy weight to be hospitalized, 73% more likely to end up in the ICU, and 48% more likely to die from SARS-CoV-2. The study concluded that these increases were due to impaired immunity and chronic inflammation, two adverse health effects linked to tBHQ exposure. Additionally, researchers at [Michigan State University](#) have found that tBHQ could hinder flu vaccines, suggesting that tBHQ could also hinder COVID-19 vaccines but more research will need to be conducted.

Our high-speed lifestyles have demanded a quick solution to fulfilling our hunger and sweet cravings. As people are constantly on the go, grabbing a frozen meal out of the freezer and popping it in the microwave for a couple of minutes has become the norm. Processed foods have even taken over our desserts! Let's face it, most of us can agree that pulling a pre-packed Little Debbie brownie from the cupboard is much more convenient than hand baking your own. But the ease of ready-to-eat and ready-to-heat foods increases our exposure to tBHQ.



In addition to pure ease, [research](#) has speculated that the ingredients in these ultra-processed foods are increasing consumer's cravings, causing them to overeat and purchase more. A [study](#) conducted by Tufts University found that in 2018 ultra-processed foods accounted for 67% of total caloric intake in children and adolescents. If over two-thirds of

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people's diet is made up of ultra-processed foods, then it is extremely possible that their daily intake of tBHQ is over the acceptable daily intake.

In a 1999 evaluation by the [World's Health Organization](#), the average daily tBHQ intake was 1.2 mg/kg body weight for those who eat high fat diets, which is 180% the acceptable daily intake. With our current society being exposed to a greater variety of ultra-processed foods than in 1999, it is very likely that much of the population is exceeding the acceptable daily intake, thus increasing their risk of developing adverse effects.

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Burger
\$0.99



Salad
\$4.99

Additionally, the need to provide food at an affordable cost to the world's ever-expanding population has allowed the ultra-processed food industry to essentially take over our diet. Even if people want to eat healthy and avoid highly processed foods, it is often difficult to do so because of social and economic barriers. Ultra-processed foods are cheaper than minimally processed foods, such as fresh fruits and vegetables, whole grains, nuts, and meats, thus allowing the ultra-processed food industry to target low-income and minority groups who have no other option than to buy whatever is cheapest.

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It is clear that even though the FDA has approved the use of tBHQ in the American diet, many research studies have drawn associations between tBHQ and adverse health outcomes. With ultra-processed foods being a huge part of the average American diet, it is highly plausible that the average American is consuming a larger intake of tBHQ than what has been deemed as acceptable.

In an ideal world, the new research around tBHQ toxicity would force the FDA to recall its recommendation, however, policy reform will take time. For now some steps you can take to protect yourself and your family are (1) limit your ultra-processed food intake by eating more 'whole' foods and (2) read the ingredients labels before purchasing processed foods. If you are unsure if your favorite foods and snacks contain tBHQ and other harmful ingredients, do some research! The Environmental Working Group's (EWG) [Food Score](#) database can help consumers find products made with healthy alternatives.