



HEALTH NEWS

Overlooked Chemicals in Food May Threaten Your Health

New research raises alarm over chemical migration from food packaging and processing equipment.

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Scientists are sounding the alarm on what they call an overlooked threat to public health: synthetic chemicals from packaging and processing equipment contaminating the food supply—particularly ultra-processed items—and potentially fueling a rise in chronic health conditions.

A comprehensive review article recently published in [Nature Medicine](#) highlights some of the most prevalent types and sources of synthetic chemical contaminants in food: chemicals known as food contact chemicals (FCCs), which may contribute to chronic health conditions, including endocrine disruption, reproductive issues, and increased cancer risks.

Why Food Contact Chemical Contamination Goes Unnoticed

The widespread nature of FCC contamination may have escaped public attention because these chemicals migrate invisibly into food through routine processes we usually consider safe.

Unlike visible food safety concerns such as bacterial contamination or spoilage, FCCs transfer silently from materials that come into contact with food through four key routes, as identified by the researchers: transportation, processing, packaging, and preparation.

Transportation introduces FCCs through storage containers and tubing systems used to move food products. During this stage, chemicals from container coatings and transport equipment can leach into foods—especially when exposed to temperature changes or extended contact periods.

Food processing—the industrial transformation of raw ingredients into finished products—exposes foods to machinery, conveyor systems, and processing equipment that contain various synthetic materials. The high temperatures and mechanical processes involved in manufacturing can accelerate chemical migration from these surfaces.

Plastic food packaging represents a significant source of contamination, as it involves prolonged direct contact between synthetic materials and food products.

Food preparation, which differs from processing because it involves the final steps before consumption, often includes heating. Higher temperatures lead to increased migration, the researchers noted.

All FCCs that migrate into food or drinks are important because people will likely ingest them, the authors wrote.

The study identified how specific harmful substances migrate through these pathways. Bisphenol A diglycidyl ether—a known endocrine disruptor and potential carcinogen—transfers from the coatings of metal food storage containers during transportation and storage.

Phthalates migrate from polyvinyl chloride tubing into milk during processing and transport. Even cleaning agents used to disinfect storage and transport containers can leave residues that end up in food.

Fast food products face particularly high contamination levels because they encounter multiple packaging types throughout the production and service chain, including disposable containers, wrappers, and serving material, said Bryan Quoc Le, a food scientist and principal food consultant at Mendocino Food Consulting, in an interview with The Epoch Times.

Serious Health Risks From FCC Exposure

The health implications of FCC exposure extend far beyond minor concerns, with research linking these chemicals to severe chronic conditions that affect millions of people, according to the study.

Phthalates in food packaging pose significant reproductive health risks, with certain types linked to preterm birth. Early delivery in turn increases the risk of developing chronic conditions later in life, including kidney disease and diabetes.

Di(2-ethylhexyl)phthalate (DEHP)—a man-made chemical used as a plasticizer—demonstrates particularly concerning effects in adults, with studies associating exposure with obesity and diabetes. Some evidence shows a 40 to 69 percent probability that DEHP exposure directly causes these conditions.

Perfluorooctanoic acid—another common food contact chemical—carries even more severe risks. The International Agency for Research on Cancer has classified it as carcinogenic to humans, meaning it definitively causes cancer in people exposed to sufficient levels.

Bisphenols, including the well-known bisphenol A (BPA), function as endocrine disruptors, interfering with the body's hormone systems. This disruption can affect reproductive health, metabolism, and development, particularly in children and pregnant women.

Alternatives such as bio-based coatings, perfluoroalkyl and polyfluoroalkyl substances (PFAS)-free barriers, and safer plasticizers are currently available, but they come with trade-offs in cost, performance, and shelf life, said Vineet Dubey, a Los Angeles environmental attorney who focuses on consumer safety issues, in an interview with The Epoch Times.

“As always, change will take time and requires the buy-in of food companies, which have already invested in technology, factories, and industrial farm-to-table systems that package food the ‘old’ way,” he said.

Ultra-Processed Foods—The Highest Risk Category

Ultra-processed foods face the greatest contamination risk because of their complex manufacturing processes and extensive packaging requirements, according to the recent study.

These products include breakfast cereals and bars, ready-made frozen meals, processed meats such as chicken nuggets, energy drinks with significant added sugar, packaged bread, sodas, snacks such as cookies and chips, candy, and condiments such as ketchup and mayonnaise, Dr. Mia Kazanjian, a board certified radiologist at Norwalk Radiology Consultants, who was not involved in the study, told The Epoch Times.

“These are the foods that are exposed to these chemicals most during the packaging, processing, and storage,” she said.

Protecting Yourself From Food Contact Chemicals

Despite the widespread nature of FCC contamination, people can take practical steps to reduce their exposure and protect their health.

Dietary Changes

Health experts recommend reducing the consumption of ultra-processed foods when possible. Instead, prioritize fresh, whole foods that require minimal processing and packaging.

When purchasing packaged foods, choose products with minimal packaging or packaging made from safer materials. Glass and stainless steel containers pose significantly lower risks than plastic alternatives because they are less likely to leach harmful chemicals into food.

Storage Solutions

Replace plastic food storage containers with glass or stainless steel alternatives. These materials resist chemical migration better.

Avoid heating food in plastic containers, as elevated temperatures accelerate chemical migration from plastic into food. Transfer food to glass or ceramic containers before microwaving or heating.

Preparation Practices

Use wooden, glass, or stainless steel utensils and cutting boards instead of plastic alternatives when possible. Plastic cutting boards can contain hundreds of chemicals.

Choose fresh ingredients over packaged alternatives when possible, and prepare meals at home rather than relying on heavily packaged convenience foods.

Call to Action

Kazanjian expressed hope that in the foreseeable future, our food system can be redesigned to minimize the use of potentially hazardous synthetic chemicals.

“It starts with more widespread awareness,” she said, adding that the more people know about this, the more advocacy there will be, and the more movement we will have toward a safer food supply—but it will take time.

“But certain things can be done in short order,” Kazanjian added. “For example, we need more advanced testing to pick up on all the chemicals in these products. Then we need food companies to avoid using them and invest in safer alternatives.”

Lead study author Jane Muncke emphasizes the need for a “holistic” approach to policymaking that integrates considerations of planetary and human health, including FCCs and their effects.

Recent regulatory action provides some hope. In 2022, the U.S. [Food and Drug Administration](#) revoked authorizations for 23 phthalates in food contact use and limited use to nine compounds. The U.S.

Environmental Protection Agency now requires manufacturers and

processors of Di-n-pentyl phthalate, a specific phthalate, to notify the agency before starting or resuming new uses.

According to Muncke, all food packaging, processing equipment, and other food contact materials require adequate safety testing regarding migrating food contact chemicals and microplastics using modern testing methods.

Quoc Le said, “The more we learn about this topic, the clearer it becomes that there is a real problem, which may explain many health problems that exist today—especially those that are severe and undiagnosed in some individuals.”

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George Citroner reports on health and medicine, covering topics that include cancer, infectious diseases, and neurodegenerative conditions. He was awarded the Media Orthopaedic Reporting Excellence (MORE) award in 2020 for a story on osteoporosis risk in men.

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