Plastic House Challenge

REPORT

GREENPEACE

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Greenpeace is a network of independent campaigning organizations that uses peaceful protest and creative communication to expose global environmental problems and to promote solutions that are essential to a green and peaceful future.

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EXECUTIVE SUMMARY

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In 2025, Greenpeace USA (Greenpeace) surveyed 3,500 Americans from across all 50 states to assess the prevalence of common household items that contribute to our exposure to microplastics and plastic-associated chemicals. This report reveals our survey results and details the potential health implications from the plastics filling our homes and entering our bodies. Here's what we found:

- **A small handful of retailers and FMCG companies hold disproportionate power over how much plastic food packaging enters our kitchens and exposes us to harmful chemicals.**
- **Reusable plastics in the kitchen are widespread. Unfortunately, these shed microplastics and leach harmful chemicals into our food.**
- **Personal care products are not meeting their potential. Many refillable or plastic-free products already exist, and yet respondents reported having ten times as many personal care products packaged in plastic than refillable or plastic-free products.**
- **It's not only single-use plastic products that expose us to microplastics and plastic chemicals. Durable plastic goods like shower curtains, synthetic clothing, and carpets expose us to microplastics and plastic chemicals via offgassing and particle shedding.**

No one should have to redesign their entire home to protect their health. As long as companies continue to sell us plastic clothing and household goods, personal care products containing phthalates and PFAS, and package the overwhelming majority of food in plastic, it remains extraordinarily difficult for individuals to avoid exposure to microplastics and plastic-associated chemicals. While individuals can do their best to replace the plastics in their homes with safe alternatives when possible, we cannot solve a systemic problem with individual actions alone. More than 70% of adults in the U.S. are concerned about exposure to toxic chemicals, and five in six want government and businesses to do more to ensure chemical safety (Pew 2026).

Retailers and fast-moving consumer goods companies have the power, budget, and responsibility to use safe, nontoxic alternatives for food packaging, personal care products, and durable home goods. These companies need to be transparent about the harmful plastic in their products, work to eliminate the worst offending chemicals of concern, and invest in safe solutions. Until they do, millions of consumers will continue to be exposed to plastic-associated chemicals and microplastics without transparency, meaningful choice, or informed consent.

Lawmakers here in the United States are currently failing to protect us from harmful chemical exposure in everyday plastic products. We need robust regulation to ensure companies are disclosing the chemicals in their products, testing for safety, and working to minimize harm. At the international level, world governments are negotiating a once-in-a-generation opportunity to tackle the plastic pollution crisis with a Global Plastics Treaty. It is critical that this treaty cut plastic production, ban toxic chemicals, and catalyzes a systemic shift from throwaway plastic to reuse and refill. We can't waste this moment.

INTRODUCTION

Plastic pollution has long been understood as an environmental threat, but mounting evidence shows it's a public health crisis, too. Plastic pollution is not only the visible waste piling up on our coastlines or floating in the ocean. It's also the microscopic migration of plastic particles and chemicals into our food, air, and bodies. And it's happening right in the comfort of our homes.

"WE THINK OF PLASTIC POLLUTION AS BEING AN ENVIRONMENTAL ISSUE, BUT REALLY THE GREAT PACIFIC GARBAGE PATCH IS IN US... IT'S THE PLASTIC CHEMICALS AND MICRO- AND NANOPLASTICS (MNPS) THAT ARE IN OUR BODIES."[1]

– Jane Muncke, Internationally renowned environmental toxicologist

From the cooking utensils in our kitchens to lotions in our bathrooms and synthetic textiles in our bedrooms, plastic has become embedded in nearly every aspect of our daily lives. But plastic is not inert. Some of the chemicals used to make plastics leach out over time, with everyday interactions like washing, heating, and wear also causing the plastic itself to shed. The result? Micro and nano-plastics, along with plastic chemicals, contaminate the food we eat and the air we breathe, even in our homes.[2]

Microplastics and plastic chemicals enter our bodies through:

- Ingestion - consuming contaminated food and beverages
- Absorption - through the skin via products that contain plastic-related chemicals
- Inhalation - by breathing in airborne microplastic fibers, often shed from synthetic textiles

This is bad news for human health. Plastics are a complex combination of chemicals — many of them toxic. Of the more than 16,000 chemicals used in or present in plastics, more than a quarter of them (4,200) are highly hazardous to human and environmental health, and more than half of them (10,000) have not even been tested or assessed for hazards.[3]

Researchers have identified at least 1,396 plastic chemicals[4] present in the human body. Several of these chemicals are known to be capable of causing cancer, infertility, neurodevelopmental disorders, and cardiovascular and metabolic diseases like obesity and type 2 diabetes.[5] Microplastics themselves have been detected in human organs, tissue, and blood, where other research shows they have the potential to damage our cells.[6] [7] [8]

PLASTIC POLLUTION IS NOT ACCIDENTAL. IT IS THE PREDICTABLE RESULT OF DECADES OF UNCHECKED PLASTIC PRODUCTION AND CORPORATE DECISIONS THAT PRIORITIZE PROFIT OVER HEALTH.

While world leaders negotiate a Global Plastics Treaty, plastic exposure is happening right now — in our homes and in our bodies. So Greenpeace set out to understand: How plastic-polluted are American homes? And which companies profit from filling them with it?

METHODOLOGY

Greenpeace designed a simple 18-question survey to examine common household plastic items associated with the most well-established health harms. We focused on the three rooms in a typical home where each primary exposure pathway is most likely to take place: ingestion in the kitchen, absorption in the bathroom, and inhalation in the bedroom. Because scientific evidence is strongest for food contact materials, most questions focused on food and beverage items.

Participants were recruited via Greenpeace email, social media, and our *Compass* magazine. In collaboration with #BreakFreeFromPlastic and Green Corps, organizers also led several in-person recruitment events to reach new participants in Texas and California. As a result, participation rates were significantly higher in those states.

A detailed description of our data analysis can be provided upon request.

Acknowledgment of Limitations

This analysis relies on self-reported data from 3,492 diverse volunteers across the United States. The submitted data represent a sample of household plastic use and cannot be assumed to be fully representative of all American households or the many ways plastic appears in daily life. Some plastic exposure pathways not captured in this report may contribute to health risks beyond those listed in this report. It is also possible that our data skew towards lower levels of plastic use than the average American household, as Greenpeace supporters may be more likely to seek out environmentally friendly materials. Responses in the data reflect plastic use reported by volunteers in regions where Greenpeace has a strong presence. However, participants represent 50 states, and the Plastic House Challenge data provide a meaningful indication of how pervasive plastic products are in American homes. The scientific studies referenced in this report have been checked and vetted by our Science Unit to ensure the highest standards of scientific integrity.

RESULTS

Plastic exposure is not abstract; it is everyday — and it's happening in the comfort of our homes. Greenpeace took a closer look at how plastics and their associated chemicals are most likely to show up where we eat, sleep, and bathe.

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KITCHEN

Across the United States, most people buy their food from a handful of national grocery chains. Much of that food is sold by a small group of fast-moving consumer goods (FMCG) corporations, and the overwhelming majority of it is sold in plastic packaging. Despite this, there is shockingly little transparency about what chemicals are used in plastic packaging. What we do know is deeply concerning. But what we don't know may be worse. Scientists have known since the 1950s that chemicals in plastic packaging and containers can migrate into the food and beverages we consume. The phenomenon is so familiar that the US Federal Food Drug and Cosmetics Act classifies food packaging chemicals as indirect food additives.[9]

MIGRATION OF CHEMICALS FROM FOOD PACKAGING INTO FOOD AND BEVERAGES IS CONSIDERED THE MAIN SOURCE OF HUMAN EXPOSURE TO CONTAMINANTS ASSOCIATED WITH PLASTIC.[10]

A Science Experiment Without Consent

Most people are unaware that the materials used to package their food may contain chemicals linked to serious health harms. Companies are placing these materials around our food every day without transparency or consumer consent, and with little or no safety testing. This is particularly concerning for vulnerable populations, including children, the elderly, and immunocompromised individuals.

ONE STUDY OF CHILDREN'S SCHOOL MEALS FOUND THAT CONCENTRATION OF PHTHALATES — A CLASS OF PLASTIC CHEMICALS ASSOCIATED WITH HORMONE DISRUPTION[11] — INCREASED BY MORE THAN 100 PERCENT AS A RESULT OF THE PLASTIC PACKAGING.[12]

The scale of exposure is staggering. In 2024, researchers detected more than 3,600 chemical substances known to be used in food contact materials (FCMs) present in human samples, including blood, urine, and breast milk.[13] Some are known endocrine disruptors. Some are known carcinogens. The vast majority, however, have never been adequately tested for safety. What we do know, however, are the conditions that increase chemical migration. Heat, time, surface-to-volume ratio, and fat or acid content significantly increase levels of chemical leaching.[14] In other words, hot food, food stored for long periods, food with high fat or acidity levels, and food with greater surface contact with plastic are more likely to absorb higher levels of chemicals from plastic packaging.

THE WAY WE COMMONLY PREPARE, STORE, AND CONSUME FOOD TODAY OFTEN MAXIMIZES CHEMICAL EXPOSURE.

In addition to chemical migration from food packaging, scientists have confirmed that microplastics themselves are present in the food we eat. While the full long-term health impact of ingesting microplastics is still under investigation, there is already ample cause for concern. Many of the chemicals in plastics are known to be hazardous to human health. Plastic chemicals include phthalates, per- and polyfluoroalkyl substances (PFAS, often referred to as 'forever chemicals'), bisphenols, and benzotriazoles. Exposure to these chemicals has beenlinked to a range of health effects, such as hormone disruption, certain forms of cancer, reproductive harm, metabolic changes, obesity, premature births, neurological disorders, and learning disabilities. Notably, the United Nations Environment Programme (UNEP) has identified phthalates and bisphenols as chemicals of major concern due to their high toxicity and potential to migrate or be released from plastics.[15]

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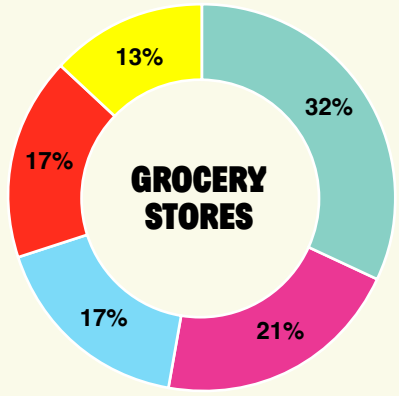
WHERE AMERICANS BUY THEIR FOOD

Top 5 retailers where Plastic House Challenge participants reported shopping for groceries.



- Walmart
- Costco
- Kroger's
- Trader Joe's
- Farmers market

70% of Plastic House Challenge participants reported purchasing groceries from the nation's top 3 leading grocery stores: Walmart, Costco, and Kroger. These answers reflect a representative US sample, as these three retailers dominate the grocery retail market - Walmart holds 21.2% market share, Kroger holds 8.6% and Costco holds 8.5% as reported in 2025 (Statistica 2026).

Retailers Racking Up Plastics

A small number of retailers exert enormous influence over the U.S. grocery landscape. Their purchasing decisions shape which products are stocked, how those products are packaged, and which chemicals enter our homes and bodies.

But some of the nation's biggest retailers and FMCG companies to date have failed to meaningfully disclose, reduce, or fully eliminate chemicals of concern in plastic food packaging. Public sustainability reporting from leading US chains Walmart, Kroger, and Costco focuses extensively on recyclability and increasing recycled content, [16] [17] [18] metrics that do little to address chemical exposure. Recyclability does not equal safety. A recyclable or recycled package can still contain chemicals linked to hormone disruption, cancer, or reproductive harm. Increasing recycled content does not remove these substances from circulation; in some cases, it can introduce additional chemicals.

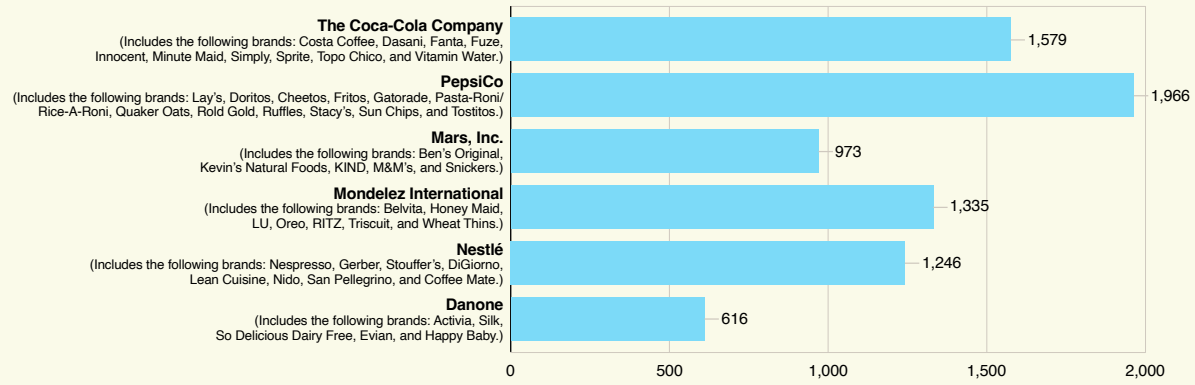
For example, Trader Joe's earned a failing grade in Toxic-Free Future's most recent Retailer Report Card for failing to publicly document progress on reducing chemicals of high concern (CHCs). Although the company committed in 2018 to reduce plastic packaging, including BPA and BPS, nonylphenol ethoxylates, PFAS, polystyrene, styrene, and phthalates, it has not disclosed progress on implementation since.

Retailers have both the power and responsibility to choose safer materials, eliminate chemicals of concern, and invest in non-toxic, reusable systems. Until they do, millions of consumers will continue to be exposed to plastic-associated chemicals and microplastics without transparency, meaningful choice, or informed consent.

FMCG COMPANIES

The Top Companies Filling Our Cupboards

100% OF PARTICIPANTS REPORTED THEIR KITCHENS CONTAINED FOOD/BEVERAGE PRODUCTS FROM AT LEAST ONE OF THESE SIX MULTINATIONAL CORPORATIONS: THE COCA-COLA COMPANY, PEPSICO, MARS INC, MONDELEZ INTERNATIONAL, NESTLÉ, AND DANONE.



Big Brands Driving Plastic Packaging

These fast-moving consumer goods (FMCG) corporations dominate the global food and beverage market. Their packaging decisions influence supply chains, shape material demand, and determine what surrounds our food and impacts our health. Big brands continue to rely heavily on single-use plastic packaging. Similarly to retailers, their public sustainability commitments center largely around recyclability and recycling content,[19] with little focus on reducing packaging or the hazardous chemicals they contain. In fact, major brands including Coca-Cola, Unilever, and Nestlé have scaled back, delayed, or retracted previously announced targets related to reducing single-use packaging.[20]

Independent third-party testing has detected hazardous chemicals in plastic packaging produced by major brands. For example, a 2024 investigation by *Consumer Reports* found phthalates in plastic Coca-Cola bottles at concentrations of 6,167 nanograms per serving, while no levels of these chemicals have been found safe for food.[21] A separate study by Defend Our Health detected antimony, a substance anticipated to be a human carcinogen, in every single PET beverage bottle it tested.[22]

"Every beverage tested had some level of cancer-causing antimony; forty percent had antimony levels that exceeded the level set by California for its Public Health Goal for drinking water. Six of the twenty samples were Coca-Cola brand products. Follow-up testing detected antimony in all eight Coca-Cola brand beverage bottles tested."

PACKAGED IN PLASTIC

ON AVERAGE, PARTICIPANTS REPORTED THAT 55% OF THE FOOD AND BEVERAGE ITEMS IN THEIR KITCHEN ARE PACKAGED IN PLASTIC.

Why This Matters

Food packaging is widely recognized by scientists as one of the most significant sources of human exposure to plastic-associated chemicals, including PFAS, phthalates, and bisphenols.[23] Yet, transparency around these chemicals is strikingly limited. Regulations requiring disclosure of substances used in food packaging are essentially nonexistent, and public reporting is rare. Only about 6% of known plastic chemicals are regulated at the international level, with additional national regulations covering roughly 1,000 substances — leaving the vast majority unregulated.[24]

RECYCLED PLASTIC CLAIMS

80% OF PARTICIPANTS REPORTED HAVING AT LEAST ONE ITEM IN THEIR KITCHEN ADVERTISED AS PACKAGED IN RECYCLED PLASTIC. THE FOOD BRANDS MOST FREQUENTLY IDENTIFIED INCLUDED COCA-COLA, HELLMAN'S, PEPSI, AND DASANI.

Why This Matters

Many companies promote recycled content as evidence of sustainability leadership. But recycled plastic does nothing to address chemical safety — and in some cases, it may introduce additional risks. Plastics are complex mixtures of thousands of chemicals. When plastic is recycled, those chemicals do not disappear. Instead, they can persist through multiple life cycles. Research has found that recycled plastics can contain higher concentrations of legacy contaminants, including flame retardants, benzene-related compounds, brominated and chlorinated dioxins, and other endocrine-disrupting substances that alter the body's natural hormone levels.[25]

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REUSED PLASTIC

48% OF PARTICIPANTS REPORTED THAT THEIR REUSABLE FOOD AND BEVERAGE STORAGE CONTAINERS ARE MADE PRIMARILY OUT OF PLASTIC.

Reusable ≠ Not Risk-Free

While reusable plastic containers may reduce waste, they can increase chemical exposure. Plastic containers can shed micro- and nanoplastics and leach additives into food over time. This process can intensify with repeated use, dishwasher wear, and when foods are fatty or acidic. Healthy reuse systems must go beyond being designed for durability. They must be demonstrably non-toxic and designed to prevent chemical migration.

HOT PLASTIC CONTAINERS

ON AVERAGE, RESPONDENTS REPORTED INGESTING HOT FOOD OR DRINK FROM A PLASTIC CONTAINER TWICE A WEEK.

Note: Includes reusable plastic storage containers (e.g. Tupperware), takeout foam containers (e.g. Styrofoam), to-go cups, and ready meals labeled for microwave heating.

Why This Matters

Heat accelerates the migration of chemicals from plastic packaging into food and beverages. Studies have shown that heating plastic, particularly in the microwave, can increase the release of harmful chemicals, such as phthalates and bisphenol A (BPA), along with micro- and nanoplastic particles.[26] A newly released Greenpeace International report summarized the scientific evidence that microwaving 'ready meals' wrapped in plastic can release hundreds of thousands of micro- and nanoplastic particles along with a cocktail of toxic chemicals directly into food.[27] Research has found that a single plastic or plastic-lined disposable coffee cup can shed anywhere from hundreds to millions of microplastic particles when filled with hot liquid.[28]

Plastic packaging is optimized for convenience and cost, not chemical safety. Companies that market foods intended to be heated in plastic cannot ignore the well-established science on heat-driven migration. It is time for manufacturers and retailers to phase out plastic packaging for heat applications and invest in safer, non-toxic alternatives.

CUTTING BOARDS

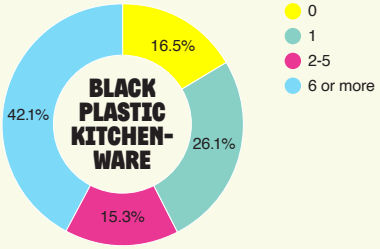
60% OF PARTICIPANTS REPORTED USING PLASTIC CUTTING BOARDS.

Why This Matters

Research has found that plastic cutting boards can shed large quantities of microplastic particles during normal use, potentially contributing millions of plastic particles per year to household food environments.[29] While packaging choices are largely controlled by major retailers and FMCG corporations, switching from plastic cutting boards to wood or glass is an easy step individuals can take to reduce preventable exposure at home.

BLACK KITCHENWARE

ON AVERAGE, RESPONDENTS REPORTED OWNING TWO BLACK PLASTIC COOKING UTENSILS.



Why This Matters

Recent research has raised concerns that some black plastic kitchen utensils may be manufactured using recycled electronic waste (e-waste), potentially introducing legacy contaminants, including flame retardants, into food-contact materials.[30] Certain flame retardants are associated with neurotoxicity, hormone disruption, fertility challenges, increased risk of cancer, and harm to the brain and nervous system. Exposure risks increase when these utensils are exposed to heat during cooking.

These findings point to a broader problem: recycled plastic streams can carry hazardous legacy chemicals that have no place in our kitchens, our food, or our bodies.

BATHROOM

PERSONAL CARE IN PLASTIC

© Daniel Müller / Greenpeace

REFILLABLE OR PLASTIC FREE PERSONAL CARE

ON AVERAGE, RESPONDENTS REPORTED THAT 60% OF THEIR PERSONAL CARE PRODUCTS ARE PACKAGED IN PLASTIC... WHILE ONLY 6% OF PARTICIPANTS REPORTED USING PERSONAL CARE PRODUCTS SOLD IN REFILLABLE OR PLASTIC-FREE PACKAGING. THESE ITEMS WERE REPORTEDLY MADE BY DR. BRONNER'S, DOVE, BLUELAND, CERAVE, AND COLGATE.

Personal care products and cosmetics are predominantly packaged in plastic. But in many cases, the product formulations themselves also contain intentionally added chemicals commonly associated with plastics, such as phthalates and PFAS, which can enter the body directly through skin absorption[31]. For example, phthalates, a very common ingredient in perfumes, cleansers, shampoos, and other cosmetics[32] are known endocrine disruptors, meaning they can interfere with normal hormone function. Research has linked phthalate exposure to impaired fertility and sperm quality, premature birth, endometriosis, early puberty, metabolic disorders, obesity, cardiovascular disease, certain cancers, neurodevelopmental effects, and altered immune function.[33]

In the bathroom, plastic exposure goes beyond packaging. It is often embedded in the products we apply to our skin every day.

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Why This Matters

The personal care sector highlights both the scale of the problem and the possibility of change. Plastic-free and refillable alternatives already exist, yet they remain the exception rather than the norm. Several companies are piloting reuse and refill models, demonstrating that safer, lower-waste systems are both technically and commercially feasible. Reducing plastic exposure in personal care will require companies to redesign packaging, eliminate hazardous chemicals from formulations, and invest in reuse systems that minimize both waste and chemical risk.

Solutions Spotlight: Champions of Change

This small but growing group of businesses is helping to pave the way to a plastic-free personal care sector. Their efforts demonstrate that the barriers do not lie in innovation, but in prioritization and scale. Learn more about Champions of Change, the business leaders supporting a strong Global Plastics Treaty.

FRAGRANCES

ON AVERAGE, RESPONDENTS REPORTED THAT BETWEEN THREE AND FOUR OF THEIR PERSONAL CARE PRODUCTS CONTAIN FRAGRANCES.

Why This Matters

Fragrance in cosmetics and personal care products often includes phthalates, a class of chemicals commonly used in plastics that are known endocrine disruptors. For example, diethyl phthalate (DEP) is commonly used as a solvent in soaps and other fragrance-filled cosmetics.[34]

Ingredient disclosure requirements for cosmetics are limited, and "fragrance' can be listed as a single additive without disclosure of its chemical components. As a result, consumers may be exposed to endocrine-disrupting chemicals without disclosure or consent.

Research shows that women, particularly women of color, are at greater risk of exposure to endocrine-disrupting and plastic-related chemicals from beauty products. Exposure during sensitive life stages, such as pregnancy, can lead to serious health effects, including reproductive complications, impaired neurodevelopment, and increased risk of cancer.[35]

SHOWER CURTAINS

57% OF PARTICIPANTS REPORTED HAVING A PLASTIC SHOWER CURTAIN.

Why This Matters

Common household items are often made with plastics containing hazardous, carcinogenic monomers and additives, including polyurethanes, polystyrene, and polyvinyl chloride (PVC). Many plastic shower curtains, for example, are made from PVC. When heated and exposed to moisture, as in a hot shower, PVC can release a cocktail of chemicals, including phthalates and volatile organic compounds (VOCs) that are associated with respiratory irritation, liver toxicity, nervous system effects, and reproductive harm.[36]

Common Carcinogenic-Linked Plastics Hiding In Our House

Polyurethanes: commonly found in flexible furniture foam filling, bedding, and carpet backing
Polyvinyl chloride: commonly found in pipes, packaging, and shower curtains
Polystyrene: commonly found in food packaging, hard plastic, and common household products[37]

© Fred Dott / Greenpeace

BEDROOM

We spend up to 90% of our lives indoors, often surrounded by plastic-based materials that shed microplastics into the air we breathe. The average household generates about 44 pounds of indoor dust each year. Researchers estimate that roughly one-third of that indoor dust, or 13 pounds, consists of microplastics.[38] Studies have found that indoor air can contain significantly higher concentrations of airborne microplastics than outdoor air. **One study found concentrations of indoor airborne microfibres (microplastics from synthetic fibers) to be 60 times higher than outdoors.**[39] Studies also suggest that exposure through inhalation is considerably higher than through ingestion.[40]

Many of these particles are synthetic microfibers that have shed from clothing, carpets, bedding, and upholstered furniture. Emerging research links chronic inhalation of micro- and nano-plastics to inflammation, oxidative stress, chronic bronchitis, lung disorders, autoimmune disease, hormone disruption, and the onset of cancer.[41] [42]

Microplastics have been detected in human lungs, blood, and organs, and some studies suggest they may cross the placental barrier, with potential consequences for fetal development.[43]

INDOOR EXPOSURE TO PLASTIC IS NOT OCCASIONAL; IT IS CONSTANT.

SYNTHETIC CLOTHING

RESPONDENTS REPORTED THAT 40% OF THEIR CLOTHES ARE MADE FROM SYNTHETIC TEXTILES. (POLYESTER, SPANDEX, NYLON, ETC)

© Fred Dott / Greenpeace

SYNTHETIC BEDDING

RESPONDENTS REPORTED THAT 35% OF THEIR BEDDING IS MADE FROM SYNTHETIC TEXTILES. (EX. MICROFIBER SHEETS, FLEECE BLANKETS, POLYESTER MATERIAL, DOWN ALTERNATIVE)

Why This Matters

Synthetic textiles used in clothing, bedding, and furniture are a major and growing source of airborne microplastics. Globally, an estimated 60% of clothing and 70% of household textiles are made from synthetic fibers such as polyester, nylon, and acrylic.[44] When manufactured, worn, or washed, these materials shed plastic microfibers into the air we breathe that then make their way to the water we drink and the food we eat.[45] In addition, many textiles labeled as stain- or water-resistant have been found to contain PFAS and other hazardous chemicals. One study found that 72% of tested stain-resistant textile products contained detectable levels of PFAS.[46] Reliance on synthetic textiles not only ties supply chains to fossil fuels, it also turns our clothes and homes into silent pathways for chemical exposure.

SYNTHETIC CARPETING

53% OF PARTICIPANTS REPORTED HAVING SYNTHETIC CARPETING.

Why This Matters

Wall-to-tall carpeting is most commonly made of synthetic materials. Area rugs are also often composed of synthetic fibers. Like clothing and bedding, synthetic rugs and carpets shed microfibers into indoor air. **In fact, carpets have been estimated to double the number of microplastic fibers in the home.**[47] For households with infants and young children, who spend more time on the floor and have higher breathing rates relative to body size, this exposure may be particularly concerning.

CONCLUSION

Plastic exposure in modern life is pervasive. From the food we eat and the water we drink, to the products we apply to our skin and the air we breathe indoors, microplastics and plastic-associated chemicals enter our bodies through ingestion, inhalation, and absorption. As long as companies continue to sell plastic clothing and household goods, plastic chemical–infused personal care products, and package the overwhelming majority of food in plastic, it remains extraordinarily difficult for individuals to avoid exposure. Certain populations, including infants, young children, pregnant people, older adults, and immunocompromised individuals, may face heightened vulnerability to the health effects associated with micro- and nanoplastics and plastic-associated chemicals.

What You Can Do, While We Push for Change

These results give us a small snapshot of Americans' household exposure to toxic plastics across all fifty states. So what can you do? No one should have to redesign their entire home to protect their health. As long as companies continue to sell us plastic clothing and household goods, personal care products containing phthalates and PFAS, and package the overwhelming majority of food in plastic, it remains extraordinarily difficult for individuals to avoid exposure. The responsibility to eliminate plastic chemicals of concern lies with corporations and regulators. While that larger fight continues, here are a few small steps individuals can take that may help reduce exposure:

- Choose fresh, unwrapped foods when available.
- Avoid heating food in plastic containers.
- Replace plastic cooking utensils, food storage containers, and cutting boards with safe materials like wood, glass, ceramic, or stainless steel.
- Choose fragrance-free personal care products sold in refillable or plastic-free packaging. Be mindful of phthalates and PFAS in the ingredients list.
- Swap your plastic shower curtain for a cloth one.
- Dust, sweep, and vacuum regularly. Open the windows to circulate fresh air.
- Opt for natural fibres like cotton, wool, or linen for the textiles in your home.

It is up to major FMCG companies and retailers to disclose the chemicals in their plastic products, eliminate chemicals of concern, and transition to safer materials and reuse systems. While individuals can take small actions today to replace some household plastic items with existing safe alternatives, we cannot solve a systemic problem with individual actions alone.

Companies need to be transparent about the harmful plastic chemicals in their products, work to eliminate the worst offending chemicals of concern, and invest in safe solutions. Regulators must hold companies accountable by strengthening national laws that protect people from harmful chemicals, as well as supporting international efforts to negotiate a strong Global Plastic Treaty treaty that significantly cuts plastic production, bans toxic chemicals, and catalyzes the shift from throwaway plastic to reuse and refill.

The burden of proof should not fall on consumers. Until the industry can demonstrate that the materials used in food packaging and consumer products are safe for long-term human exposure, the precautionary principle must apply. We deserve products that do not compromise our health in our homes, and companies that prioritize people over plastic.

© Isabelle Povey / Greenpeace

ENDNOTES

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