

25 Reasons Why Toxins Matter

A response sheet for your Toxic Audit — you're built to absorb, the question is what.

Skin, gut lining, lungs, gills — every one of them is a semi-permeable membrane, built to let some things in and keep others out. It's the same basic mechanism whether it's your underarm absorbing an antiperspirant or a dolphin's blood-brain barrier absorbing a flame retardant. Here's why each item on your Toxic Audit made the list, matched to the same 25 questions, in the same order — with a focus on chemicals still in circulation today, not just history.

LAUNDRY & FABRIC CARE

1

Scented laundry detergent

"Fragrance" can legally represent dozens of undisclosed chemicals, and the manufacturing process itself currently generates 1,4-dioxane as an unlisted byproduct — the EPA calls it a probable human carcinogen, and it's persistent enough in waterways to still be turning up in drinking water testing today.

2

Fabric softener or dryer sheets

The quaternary ammonium compounds ("quats") that coat your fabric today rinse down the drain with every wash. Current research finds these same compounds toxic to aquatic organisms at the concentrations showing up in wastewater — the residue left on your towel and the residue reaching a river are the same chemical.

PERSONAL CARE

3

Conventional antiperspirant or deodorant

Skin is a semi-permeable membrane, porous by design — which is exactly how transdermal patches deliver medication. Aluminum compounds in antiperspirant are applied daily to underarm skin, one of the thinner, more absorptive areas of the body, which is part of why the FDA classifies antiperspirant as a drug rather than a cosmetic.

4

Conventional toothpaste

Toothpaste is absorbed through oral mucosa — a membrane thinner and more permeable than skin — multiple times a day. SLS, a foaming agent still standard in most mainstream formulas, is commonly used in laboratories specifically because it reliably irritates membrane tissue, which is why dermatology researchers use it as a positive control in skin-barrier studies.

5

Conventional shampoo or conditioner

Synthetic silicones common in conditioner don't fully biodegrade and are turning up downstream in wastewater. Sulfates, meanwhile, are surfactants that disrupt the mucous membrane covering fish gills the same way they strip your skin's oils — gills are, functionally, an external semi-permeable membrane.

6

Scented, conventional body wash

Roughly 80% of personal care products contain a synthetic musk, and these compounds are lipophilic — they dissolve into fat rather than water. That's why they've been detected in human fat, blood, and breast milk, and why the same musks are now measured in fish, mussels, and whales worldwide: fat-loving chemicals cross membranes and accumulate in fatty tissue, in bodies of any species that has some.

7

Nail polish

The nail bed sits directly beside living, absorptive skin, and mainstream polish still commonly contains one or more of formaldehyde, toluene, and dibutyl phthalate — the so-called "toxic trio" — despite how often "free-from" claims appear on labels today.

8

Chemical sunscreen

An FDA trial found common chemical UV filters absorbed into the bloodstream through skin at levels above the agency's own safety threshold, after just one day of typical use. The same filters, oxybenzone especially, are absorbed by coral at the reef — crossing the coral's own membrane and disrupting the symbiotic algae it depends on to survive, which is why it remains actively regulated in reef tourism areas today.

MAKEUP & FRAGRANCE

9

Daily makeup

PFAS — “forever chemicals” that don't break down — are common in current long-wear formulas and are absorbed through skin over hours of wear. They've now been confirmed in over 330 wildlife species worldwide, including polar bears, dolphins, and fish with no direct source of exposure except a contaminated environment.

10

Waterproof or long-wear cosmetics

A recent study found PFAS markers in most waterproof mascara, liquid lipstick, and foundation currently on shelves — usually with no PFAS listed on the ingredient label at all, on a product applied directly to the thin, permeable skin around the eyes and lips.

11

Daily perfume or cologne

Synthetic musks in perfume are absorbed transdermally with every spray, then persist in fat tissue rather than clearing the body. The same class of chemical has been measured bioaccumulating in fish, sharks, and shellfish around the world — evidence that these molecules move the same way through any membrane, human or marine.

HOME AMBIANCE

12

Conventional (paraffin) candles

Paraffin is a petroleum byproduct, and burning it currently releases fine soot and volatile compounds like benzene and toluene directly into indoor air. Lungs are one of the body's largest semi-permeable membrane surfaces — built to absorb oxygen efficiently, which means they absorb airborne pollutants just as efficiently.

13

Plug-in air fresheners or scented sprays

Some air freshener chemicals work by dulling your olfactory nerves rather than removing anything from the air, while phthalates in the same products are inhaled continuously through the lungs' thin membrane lining — a route of absorption that bypasses skin entirely and reaches the bloodstream fast.

KITCHEN

14

Conventional (fragranced) dish soap

The same undisclosed fragrance chemicals found throughout personal care rinse directly down the kitchen drain with every wash, entering wastewater in a more concentrated, more frequent stream than most other household products.

15

Conventional dishwasher detergent

Modern formulas still rely on synthetic surfactants and fragrance that municipal water treatment isn't fully designed to filter out — today's residual concern has shifted from the phosphates of decades past to these harder-to-remove modern additives.

16

Nonstick (Teflon-style) cookware

PTFE coatings are still standard in most nonstick cookware sold today, and PFAS compounds from this chemical family are now detectable in the blood of virtually every person tested — and in polar bears, tigers, and fish on every continent except Antarctica.

17

Storing or microwaving food in plastic

Heat accelerates the transfer of microplastics and plasticizers from container to food. Microplastics small enough to cross biological barriers have now been found in every human placenta tested in recent studies, and separately, throughout marine food chains — the same particle, crossing the same kind of barrier, in both.

CLEANING

18 Bleach

Mixed with an ammonia-based cleaner, bleach currently produces toxic chloramine gas; mixed with an acid — even vinegar — it can release chlorine gas. Both are absorbed through the lungs' membrane on contact, which is what makes the reaction dangerous within seconds, not just over repeated exposure.

19 Disinfecting wipes

The quats in most wipes today are effective against microbes specifically because they disrupt membranes — the same mechanism that makes them a measured aquatic toxicant once they're rinsed down a drain. And most wipes only work at all if the surface stays visibly wet for the full labeled contact time, often one to four minutes.

20 Antibacterial hand soap or surface spray

Triclosan is still legally allowed in antibacterial sprays, wipes, and some toothpaste today, even though its use in rinse-off soap was restricted in 2016. It's currently detectable in U.S. waterways and accumulates in the tissue of fish living downstream of treatment plants.

21 Ammonia-based glass cleaner

Ammonia fumes are absorbed through the lungs immediately on inhalation, which is exactly why combining this everyday product with bleach — something easy to do without thinking during one cleaning session — remains a common poisoning risk today.

HOUSEHOLD MATERIALS

22 Vinyl (PVC) shower curtain

A new PVC curtain currently releases over 100 volatile organic compounds into bathroom air over its first month, a process hot, humid showers accelerate — inhaled directly through the lungs in an enclosed space with poor ventilation.

23 Foam furniture or a mattress

TDCPP, a chlorinated flame retardant still commonly used in furniture foam today, is absorbed through skin contact and dust inhalation, and has been measured in dolphins at concentrations high enough to cross the blood-brain barrier — a membrane the body usually protects most tightly.

24 Handling paper receipts often

BPA in thermal receipt paper is still legal and standard today, and it transfers directly through skin on contact — no eating or drinking required. BPA is also currently detectable in waterways and in the tissue of fish living in them.

FEMININE HYGIENE

25 Conventional (non-organic) tampons or pads

Vaginal tissue is one of the most absorptive membranes in the human body, which is why recent independent testing has found PFAS and other chemicals in many mainstream products still sold nationwide today. Only one state currently restricts this by law — everywhere else, it's a matter of reading the label yourself.

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