PFAS IN YOUR YOGA PANTS

An Overview of the health risks associated with Clothing (especially women's workout attire)

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PFAS Health Risks

PFAS, industrial compounds that linger in the body and environment, are linked to health risks like cancer. Testing from consumer health blog Mamavation found **PFAS** in popular brands of yoga pants. Exposure to **PFAS** in clothing may be low level, but it's not clear what the risks may be over time.

<u>CDC/ATSDR</u> Agency for Toxic Substances and Disease Registry (ATSDR) – CDC recognizes that exposure to high levels of **PFAS** may impact the immune system.

A National Toxicology Program review found that exposure to perfluorooctanoic acid (*PFOA*) and perfluorooctane sulfonate (*PFOS*) is an immune hazard to humans based on a high level of evidence that *PFOA* and *PFOS* suppressed the antibody response from animals and a moderate level of evidence from studies in humans (*NTP*, 2016).

PFAS Are Widely Used, Long Lasting Chemicals, Components Of Which Break Down Very Slowly Over Time

- Because of their widespread use and their persistence in the environment, many **PFAS** are found in the blood of people and animals all over the world and are present at low levels in a variety of food products and in the environment.
- **PFAS** are found in water, air, fish, and soil at locations across the nation and the globe.
- Scientific studies have shown that exposure to some **PFAS** in the environment may be linked to harmful health effects in humans and animals.

<u>Reference</u>

Brands With PFAS Indicators

The testing—done from the crotch area of the pants—was conducted by an **EPAcertified lab** and flagged any clothing that had more than 10 parts per million (ppm) fluorine.

The Ten Yoga Pants Brands That Had PFAS Indicators

- Athleta Girl Chit Chat Shorts 17 parts per million (ppm) organic fluorine
- **Boody Motivate 3/4 High Waist Tights Black** 17 parts per million (ppm) organic fluorine [updated 3/23
- Gaiam High Rise Waist Yoga Pants Performance Compression Workout
 Leggings 15 parts per million (ppm) organic fluorine
- *Knix Hightouch High Rise Leggings* 19 parts per million (ppm) organic fluorine
- Lululemon Align Highrise Pant 32 parts per million (ppm) total fluorine. (Lululemon Align High Rise Short with Pockets 8" was non-detect.) We've decided to place this brand here because we detected fluorine in the first pair.
- LulaRoe Leggings 284 parts per million (ppm) organic fluorine
- Old Navy Athletic Pants 17 parts per million (ppm) organic fluorine
- **OYA Femtech Apparel Yoga Pants** 10 parts per million (ppm) organic fluorine [updated 3/23]
- Vuori Elevation Performance Black Camo Athletic Leggings 23 parts per million (ppm) organic fluorine
- Yogalicious "Lux" High Waist Side Pocket Capri 10 parts per million (ppm) organic fluorine

9,000+ PFAS "Forever Chemicals" Are Impossible to Test For Directly

Because there are over 9,000 of these **PFAS** "forever chemicals" and testing is only available for about a couple dozen, it's impossible to test for them all directly. This was a real big problem for the composting industry when ascertaining whether food packaging was safe to be certified as "compostable" for the gardens of consumers.

They devised a plan to test instead for fluorine, which is the chemical all **PFAS** chemicals have in common. Testing for fluorine and finding it at certain levels can indicate whether **PFAS** was "intentionally added" or not and how much is inside.

Lululemon Activewear Pants

In June of 2021, an EPA-certified laboratory conducted tests of Total Fluorine by Oxygen Flask Combustion and Ion-Selective Electrode on *Lululemon Athletic Pants*. The Level of Detection was 10 ppm.

The *Lululemon* pants were purchased in May of 2021 and the packaging was not opened. The contents inside were only handled by the laboratory, so these were not MY athletic pants, but a replica of something I have.

Lululemon Activewear Pants Results: 32 parts per million (ppm) fluorine detected

So what does this mean? In the world of food packaging, they would say this is not "intentionally added" but a possible point of contamination. What type of **PFAS** are they using? We don't know. There are 9,000 or more of these chemicals and it's impossible for us to find out. But because **Lululemon** was found with contamination high enough to be detected, we cannot recommend this brand.

Why PFAS Chemicals Are Problematic Around Your Vagina

PFAS chemicals, otherwise known as per- and polyfluoroalkyl substances (**PFAS**), have been dubbed "forever chemicals" because of their staying power.

These chemicals are extremely problematic to human health and the environment because they are persistent, meaning they build up and don't go away.

They resist degradation in the environment and they remain in our bodies for YEARS after exposure, sometimes decades.

"The fact that this is a preventable exposure that accumulates in the body, and young child-bearing-age women are being exposed has impacts not only for those who use this underwear, but also potentially for their future children because these compounds stay in our bodies for years!" says Hannah Gardener "These underwear with 'forever chemicals' have environmental implications from production to being washed in our washing machines all the way to the end of their life cycle in landfills."

Researchers are also very concerned about dermal contact of **PFAS** and are worried that the health outcomes may be similar to ingestion. Therefore, it's important to avoid **PFAS** as much as possible around the vaginal area and any other area because it builds up in the body.

In other words, they are not quickly excreted from our bodies like other hormonedisrupting environmental contaminants. And that staying power has become a very big deal in food packaging, water...and now fabrics.

<u>Dark Waters</u> is a true story about **PFAS** chemicals contaminating small-town America starring Mark Ruffalo, Anne Hathaway, and Tim Robbins. This short trailer will give you a quick understanding of what is happening around the United States to our water supply. And it's quite serious.

Quick Solution?

Other than replacing your whole Workout Wardrobe?



Enviremware — an innovative spray aimed at keeping your clothes and body safe from environmental pollutants. Naturally formulated.

Enviremware was designed with patent-pending technology aimed to protect you from the dangers posed by:

- 5G technology
- EMF radiation
- Pollutants
- Heavy Metals
- Harmful Microbes (Viruses, Bacteria, Parasites and Fungi)

Enviremware comes in a handy for travelling – 2 Ounce spray bottle.

Ingredients:

- 1. RO/DI Reverse osmosis/Delonized Water (more information <u>HERE</u>)
- 2. Proprietary Orthosilicic Acid Shungite Blend
- 3. Vitamin C (Ascorbic Acid)
- 4. Potassium Sorbate (Preservative)

References:

- https://pubmed.ncbi.nlm.nih.gov/37262408/
- https://www.epa.gov/pfas/pfas-explained
- https://pubs.acs.org/doi/10.1021/acs.estlett.2c00502
- <u>https://www.businessinsider.in/science/health/news/some-yoga-pants-contain-toxic-</u> <u>chemicals-linked-to-cancer-report-says/articleshow/89102384.cms</u>
- https://ntp.niehs.nih.gov/whatwestudy/assessments/noncancer/completed/pfoa

REFERENCE: NTP (National Toxicology Program). 2016. Monograph on Immunotoxicity Associated with Exposure to Perfluorooctanoic acid (PFOA) and Perfluorooctane Sulfonate (PFOS) https://ntp.niehs.nih.gov/ntp/ohat/pfoa_pfos/pfoa_pfosmonograph_508.pdf

Medical Disclaimer



The information provided is for educational purposes only and is not intended as medical advice or a substitute for the medical advice of a physician or other qualified health care professionals. This information is not to be used for selfdiagnosis.

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