

Textile Industry's Health and Environmental Impacts – What Are You Wearing?

Amid today's discussion of the renewable energy crisis and the impacts of fossil fuel harvest and consumption, many people are forgetting one major industry that is fed by the oil rigs – the textile industry.

This sleeping giant is responsible for greater environmental contamination and more waste than any other industry, and due to the unawareness of the general population, its demand is ever-increasing.

The discussion surrounding carbon emissions and fuel consumption is a worthwhile one to be had, for sure, but the silence surrounding the flagrant disregard for environmental safety in the textile industry is one that has gone on long enough.

It's time to bust this can of worms wide open and acknowledge what many of us have wondered the extent of for some time – the vast and unconscionable lapse in ethics and environmental concern in the textile industry.

The Rise of Man-Made Fibers

Once upon a time, things were made with pretty simple materials, but the process was very time and labor intensive, and as the industry grew, one of the first areas it took hold in was in textiles. We went from small farmers hand-spinning wool to gigantic factories mass-producing fabrics by the ton.

As the manufacturing process expanded and was refined, modern "improvements" were made. Chemicals were added to the fabrics

to help prevent wrinkles and shrinkage. The fabrics were soaked in great vats of artificial dyes and flame retardants, and soon the factory workers had to wear masks to compensate for the health hazards associated with working with these chemicals.

Then came the advent of a petroleum-based textile that many forget is a product of the big oil industry – polyester. This cheap fiber was much more cost-effective to produce than natural fibers like wool and cotton and could be made in any color or elasticity. Its versatility quickly contributed to its rise with every major clothing and textile retailer in the world. Polyester began its reign.

The Effects on Your Health

First, let's scale things down a bit and focus on how the modern textile industry's functionality is directly affecting you. After all, there's no greater way to tug on the heartstrings of a populace and compel them to give a damn than to show them how it directly affects them, so let's engage in a little shameless emotional manipulation here.

With their convenience and cost-savings, these artificial fibers and manufacturing methods brought a host of problems that, for the most part, still remain quietly under the rug. We're surrounded by fabrics all the time, and most of us never give a second thought as to how those textiles came about or the consequences of their production.

Polyester is essentially a plastic – a petroleum-based product that's the result of a long, toxic manufacturing process. Plastics themselves have been found to cause hormonal disruption and are strongly linked to the formation of breast cancer cells¹.

The connections between health concerns and polyester and plastic are still being studied. Though polyester and plastic

are derived from the same chemical compound, the finishing process creates a much different product. However, it has been discovered that polyester emits phytoestrogens³, which are known endocrine system disruptors and, are again, strongly linked with breast cancer.

The bottom line is, we're still studying and understanding the long-term health effects of artificial fibers like polyester and the finishing processes that go into them. The textiles themselves are only the tip of the iceberg, and many printed clothes use PVC for screen printing – a compound that is considered so dangerous to human health, it's been banned from use in water supply pipes and is on its way to being regulated out of the children's toy industry⁴.

Flame retardant chemicals pose another threat entirely. Since synthetic fibers burn much more quickly than natural ones, manufacturers have taken to using a host of flame retardants decrease the flammability of these textiles. The result has certainly been effective at making products more fire safe, but the effects and health concerns linked to flame retardant chemicals are well known², and many government regulation bodies are taking a stand against their use.

...levels of the chemicals in the blood of North Americans appear to have been doubling every two to five years for the past several decades."

Acting on growing evidence that these flame retardants can accumulate in people and cause adverse health effects – interfering with hormones, reproductive systems, thyroid and metabolic function, and neurological development in infants and children – the federal government and various states have limited or banned the use of some of these chemicals, as have other countries." ~Elizabeth Grossman, Yale Environment 360

Despite this knowledge, there is no blanket ban in the U.S.

for flame retardant chemicals, and a staggering number of companies and manufacturers are still using chemical cocktails that run the gamut, from electronics to baby bedding. The result?

“Many infants are in physical contact with products treated with these chemicals 24 hours a day.”

It's a scary thought that some of our most fragile, precious lives are the ones most frequently and consistently in contact with these items, but it's the humbling truth, and it doesn't appear to be changing anytime soon.

Though legislation has been passed by a few state governments, the bottom line is that manufacturing of products drenched in these chemicals is still widespread, and the process isn't likely to change until new formulations that are safer, but still effective at slowing fires, are developed.

How Do You Avoid Flame Retardant Chemicals?

The issue with flame retardant chemicals is a challenging one. We don't want to expose ourselves and our children to chemicals that have been proven to be detrimental to our health, but in a world full of petroleum-based products that burn quickly and easily, it's essential to protect ourselves from these highly flammable materials.

Companies have done some experimenting, but ultimately, what comes back is almost always another version of the same product with many of the same health concerns. The industries argue that these chemicals are saving lives, and who can debate that when the products they are treating are so highly flammable?

The solution is simple. We need to stop using highly flammable textiles in the first place. It all comes full circle back to

petroleum-based products, and that's where the majority of the issues lie. By sourcing products made from natural fibers, which burn much more slowly, we avoid the need for flame retardant chemicals.

We're Poisoning Our Planet for Fabrics

It sounds sensationalist, but that's as simple and cut and dried as it gets. The textile industry is responsible for a whopping 20% of industrial water pollution⁷, with many of the compounds being permanent fixtures in our world's water supply. Cancer-causing endocrine disruptors and synthetic chemical compounds that won't ever break down are now a part of our water supply, and there's little hope of changing that.

Aside from the chemical cocktails that frequently pollute our water supply, there is a massive energy input needed for modern man-made textiles and a tremendous amount of waste in those industries. Most synthetic fibers are direct products of the petroleum industry, where a tremendous amount of energy is needed just to harvest the raw materials, let alone convert it to fabric.

The process of turning petroleum into polyester is a nasty one. Factory workers, many of them children, often experience horrible work conditions and face a host of health issues. The superheating of the materials needed to create polyester is horribly energy-intensive, and the by-products are known to cause lasting, long-term, and often debilitating health effects.

Textile Safety and Sustainability –

Even Natural Fibers Aren't Exempt

Despite the stunning array of health and environmental concerns associated with man-made fibers and their chemical processes, it's only fair to shed light on another issue that's similarly troubling – the impacts of conventional agriculture on the natural fiber industry.

It's an unfortunate fact that the cotton industry accounts for 6.8% of worldwide pesticide use and 16% of insecticide use, despite being grown on only 2.5% of the world's agricultural lands⁵. Conventional cotton farming methods are far from sustainable. And the worst part? Those chemicals are in your clothes.

The health risks associated with the use of pesticides for humans is well-known and documented with the primary concerns being for neurological issues, endocrine system disruption, respiratory problems, and even cancer⁶.

Healthy Alternatives to Toxic Textiles

In a market so rampantly saturated with the use of pesticides, the best thing you can do for your health and safety is to source organic cotton and wool products whenever possible. Organic cotton is grown without the use of synthetic pesticides and is typically grown in areas with greater regulation for worker safety – not factories and child-labor powered institutions.

Wool is a fantastic material as well that is often produced by small farmers, so purchasing it is a great way to support them. Organic mattresses often use a combination of organic wool and organic cotton. Natural latex options are a great way to avoid polyesters in furniture and mattresses, and there are

even some manufactured foam products that are made without the use of nasty chemicals like formaldehyde and parabens. Of course, organic cotton and wool are also a great choice for mattresses, pillows, and furniture cushions.

Take a good hard look around your home, and you'll see that petroleum-based products dominate our lives. From plastics to polyesters, these products seem unavoidable, but the health effects and environmental concerns are too far-reaching to overlook.

It's time to start making better product selections. Get started with the area of your home where your skin makes the most contact with synthetic fibers every day – your bed. Natural mattresses are a crucial stepping stone to putting your foot down and saying no to the toxic, unsustainable practices of the textile industry.

OEKO-TEX: The Easy Way to Spot Safe Materials

If you're buying lots of manufactured items like baby toys, bedding, and equipment, OEKO-TEX maintains a fabulous standard for vetting products and materials for safety compliance. This third-party testing system consists of an international group of scientists and laboratories who offer their certifications to products meeting their stringent standards and objective test criteria.

There is no data manipulation, no conflict of interest – just the information you need to make an informed purchase decision. If a product has met their standards for testing, they won't be quiet about it. Look for the label or a mention of this certification in product descriptions.

It gets pretty technical, but if you'd like to take a look for yourself, dive into the OEKO-TEX guidelines [here](#). Now we

recommend you clean out your closet and check out *Holistic Guide to Healing the Endocrine System*, and make sure you're sleeping on a nontoxic mattress like the ones below.

Related Products:

- Green Lifestyle Market – Home

Recommended Reading:

- *Detox Cheap and Easy Without Fasting – Recipes Included*
- *How Himalayan Salt Lamps Work*
- *Why your Couch is Killing You*
- *Animal Textiles*
- *Hemp*
- *Corporations, Our Health, and a History of Failed Technologies*

Sources:

- *What is the connection between chemicals and breast cancer?* – Tufts Journal
- *Are Flame Retardants Safe? Growing Evidence Says 'No'* – YaleEnvironment 360
- *Is polyester upholstery fabric bad for our health?* – Doctor Healthy
- *Is your T-shirt toxic?* – Green Living
- *The risks of cotton farming* – Organic Cotton
- *Effects of Pesticides on Human Health* – Toxipedia
- *Sustainability of textiles* – Retail Forum for Sustainability