



# The Wellness Family

Dr. Greeley Keeps You Informed

## Laundry Chemicals

The skin is our largest organ and extremely absorbent. The chemicals that we use when laundering our clothing may easily be absorbed into our bodies through our skin. However, while this may seem obvious, what many don't know is that we may be inhaling chemicals as well. How we care for our clothing may genuinely be affecting our health.

### Detergents

The average family washes about 80 pounds of laundry a week – or 35 billion loads of laundry per year. This equates to 17.5 billion cups of laundry detergent being used each year.

A University of Washington (UW) study of top-selling laundry products found that they gave off at least one chemical regulated as toxic or hazardous under federal laws, but none of the chemicals were listed on the label. The reason being that some chemicals are actually a byproduct rather than an ingredient and so don't have to be listed. For instance, 1,4-dioxane, a solvent, which the Environmental Protection Agency considers to be a probable carcinogen, has been found to be toxic to the brain, central nervous system, kidneys, liver and respiratory system.

Anne Steinemann, a UW professor of civil and environmental engineering and public affairs, said that people were telling her that the scent from laundry products vented outdoors was making them sick, so she wanted to know what in the product could be causing this effect. "I was surprised by both the number and potential toxicity of the chemicals that were found," she said.

The greater issue seems to be that companies are touting "hypoallergenic" or "for sensitive skin" when, truthfully, there isn't much to be promoting. For instance, a 2011 study showed that the chemical 1,4-dioxane was found in higher levels in Tide's Free and Gentle hypoallergenic products than in regular Tide. Since then, in 2013, as a result of the efforts of Women's Voices for the Earth, the makers of Tide have agreed to greatly reduce this chemical in its laundry products.

This is just one example, granted a serious one, but 1,4-dioxane is not the only chemical found in the average laundry detergent. Some other chemicals include: sodium lauryl sulfate (SLS), sodium laureth sulfate (SLES), nonylphenol ethoxylate (NPE), quaternium-15 (also known as formaldehyde), diethanolamine, linear alkyl benzene sulfonates (LAS), phosphates and ethylene diamine tetraacetic acid (EDTA). These have all been found to be toxic. Some causing skin and eye irritation or liver problems; others toxic to nerves or potential hormone disruptors; still others causing respiratory issues and various potential health issues.

### Laundry Detergent Pods

We all love "convenient", but when does the danger outweigh the convenience? A new study published in JAMA Ophthalmology found that after plastic-coated laundry detergent pods were introduced in 2012, chemical eye burns in children 3 to 4 years old increased more than 30 times over a four-year period, with pods accounting for 26% of these eye injuries.

"Most occurred when children punctured or broke a pod and the detergent squirted into their eye, or it got on their hands and they rubbed their eyes," according to R. Sterling Haring, D.O., M.P.H. of Johns Hopkins Center for Injury Research and Prevention, and lead author of the study. The detergent in the pods is of higher concentration making it more dangerous. Haring adds, "If the cornea is burned badly enough, it can scar, which is unlikely to heal and that can lead to long-term vision loss."



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### Stain Removers

Consumer Reports recently studied stain removers to determine the best and most effective product and reported that most were not effective at all. Their study showed that Resolve Laundry did best at removing stains. The Environmental Working Group's Guide to Healthy Cleaning gives this product an F.

The EWG website says Resolve Laundry (Spray 'n' Wash) earned this score because it "may contain ingredients with potential for developmental/ endocrine/ reproductive effects; acute aquatic toxicity; respiratory effects". It also notes that their ingredient disclosure is poor. Known ingredients that cause the biggest concern include sodium borate, sodium polyacrylate and methylisothiazolinone.

The common chemicals found in the average stain removers are: 2-Butoxyethanol, Quaternium-15, Linear alkylbenzyl

sulfonates (C10-16), Disodium distyrylbiphenyl disulfonate, Sodium hypochlorite (chlorine bleach), Methylisothiazolinone (MIT), Sodium borate and Ammonium Hydroxide. These chemicals may irritate skin, eyes or respiratory systems.

### **Fabric Softeners and Dryer Sheets**

Designed to free clothing of both wrinkles and static cling, fabric softeners contain chemicals and fragrances that can cause skin and respiratory irritations according to the Environmental Working Group.

Conventional fabric softeners cover your clothes in a fine layer of lubrication, which can indeed soften the fabrics and leave them static cling-free, but the smell of which is masked by fragrances. The problem is that these chemicals are not only on clothing but also sheets, pillow cases and towels.

A study by Consumer Reports found that dryer sheets are actually less effective than liquid fabric softeners; however, they both contain their share of chemicals. The average fabric softener contains alpha-terpineol, benzyl alcohol, camphor, chloroform, ethanol, ethyl acetate, linalool and pentane.

In addition to these chemicals we must consider the concerns found with fragrances. Many companies and healthcare offices are becoming fragrance-free zones due to the increase of people developing fragrance sensitivities. There is no way to know for sure what role fabric softeners and dryer sheets have played in this recent increase.

### **In Summary**

All these chemicals are part of how we're supposed to be "cleaning" our laundry but there's more to the story. First, let's consider that only 5% of all chemicals used in the production of detergents and other cleaning supplies have been tested to see how they're affecting the human reproductive system.

Additionally, when we consider that we're not only absorbing these chemicals through our skin but also inhaling them, it

stands to reason that these chemicals may be triggering asthma attacks or causing other respiratory illnesses as well.

### **Greener Laundry**

The only way to avoid exposure to these toxins is to be more conscious in our efforts to clean our clothing. The first step would be to look for the safest alternatives. There are two websites that provide this information. The first is from the Environmental Working Group: [www.ewg.org/guides/cleaners](http://www.ewg.org/guides/cleaners); the second is from the Environmental Protection Agency, [epa.gov/saferchoice](http://epa.gov/saferchoice).

Whole Foods Market also offers an on-shelf resource at [wholefoodsmarket.com/mission-values/environmental-stewardship/eco-scale/rating-system](http://wholefoodsmarket.com/mission-values/environmental-stewardship/eco-scale/rating-system) which provides a rating system of laundry detergents and other cleaning products provided at their store.

The most important steps to protect your family from these chemicals is to consider a few tips. Read the labels. Look especially for the words "Does not contain..." because manufacturers are not yet required to list the ingredients in their products, but green companies will proudly advertise what is not in their products.

Also, consider making your own detergents. The following website offers a recipe for detergent as well as links to fabric softeners, dishwasher detergent, dish soap and wool dryer balls: [www.diynatural.com/homemade-laundry-detergent-soap](http://www.diynatural.com/homemade-laundry-detergent-soap).

Finally, remember that a little online research will typically provide some great "green" options. For instance, consider the following recommendation from [simpleliving.com](http://simpleliving.com) for underarm stains. Combine one part castile soap and two parts hydrogen peroxide. Apply to stains, and let sit. After an hour, rinse the clothing in cold water and run through the washing machine. For other stains they suggest going to the following website for ideas: [cleaninginstitute.org/clean\\_living/stain\\_removal\\_chart.aspx](http://cleaninginstitute.org/clean_living/stain_removal_chart.aspx)



*Dear Patient,  
Dr. Greeley is dedicated to providing you with the absolute best in family wellness care. So take a moment today to discuss with your Family Wellness Chiropractor any concerns you may have regarding your family's overall health and wellness.*

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