

Tips for Green Leaders

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FREDERICK COUNTY



Natural Household Cleaners



Cleaning Made Safe and Healthy



Conventional cleaners contain some of the most dangerous chemicals found in the home, but these chemicals are not always listed on the labels. Many cleaners contain known carcinogens (cancer-causing substances) and endocrine disruptors (cause reproductive disorders), and some emit large doses of VOCs (volatile organic compounds) that contribute to smog.

The healthiest and most environmentally-friendly products are vegetable-derived, perhaps with some mineral content. The least environmentally-friendly products are entirely petroleum-derived, do not readily

biodegrade, and contain highly toxic or carcinogenic components. In the middle are products that are petroleum based but less toxic, as well as cleaners that contain both plant and petroleum components.

When possible, use non-toxic products to clean your home. Many of these products are just as effective as their toxic counterparts. Better yet, they are safer to use, and less expensive. One way to ensure you are using safe cleaners is to make your own using natural ingredients.

Basic ingredients for homemade cleaners:

- **Baking Soda** (sodium bicarbonate) works as a deodorizer, mild abrasive, and stain remover. It is non-toxic to humans, inexpensive, and versatile.
- **White, distilled vinegar** (acetic acid) is a powerful deodorizer that repels grease, helps prevent mold and mildew, and dissolves soap film and mineral deposits.
- **Borax** cleans, deodorizes, disinfects, and softens water. Borax can usually be found with laundry products in grocery stores.
- **Castile soap** dissolves oils that bind dirt to surfaces. Made from vegetable sources rather than petroleum, castile soap biodegrades quickly and comes from renewable resources.
- **Essential oils** can provide a pleasant smell and make a dirty job more enjoyable.



Resources:

Cleaning Recipe Websites:

- **Boulder County Recycling webpage**
ecocycle.org/hazwaste/ecofriendly-cleaning
- **Earth Easy, Solutions for Sustainable Living**
eartheasy.com/live_nontoxic_solutions.htm
- **National Ag Safety Database**
tinyurl.com/6fn2fge

Cleaning Recipe Books:

- **Clean House, Clean Planet**
by Karen Logan,
ISBN: 9780671535957
- **The Green Kitchen Handbook**
by Annie Berthold-Bon,
ISBN: 0060951869
- **Home Safe Home**
by Debra Dadd-Redalia,
ISBN: 9780882821139

References:

- **National Institutes of Health, National Library of Medicine, Household Products Database**
hpd.nlm.nih.gov/products.htm
Search the database for household products to find out what is in them and their potential health effects.
- **The Consumer Union Guide to Environmental Labels**
www.eco-labels.org
Defines terms used in advertising and on labels, such as "earth smart" and "biodegradable," and explains product regulations.

To Clean or Deodorize... Try...

Windows and mirrors	Club soda or 2 tsp white vinegar in 1 liter warm water
Tubs, sinks, and toilet	½ cup vinegar and ¼ cup baking soda in ½ gallon water
Sink and tub drains	¼ cup baking soda and 1 cup vinegar; let mixture sit in toilet for a few minutes, then scrub and rinse.
Laundry	1 cup ivory soap, ½ cup washing soda, and ½ cup borax; use 1 tbsp for light loads and 2 for heavy loads
Mildew and mold	½ cup vinegar and ½ cup borax in warm water; apply with sponge or spray bottle
Ceramic tiles	¼ cup vinegar in ½ gallon hot water
Carpet	Sprinkle carpet with baking soda or borax. Allow to sit ½ hour and vacuum up.
Air	Set out a dish of vinegar or baking soda mixed with lemon juice, set out bowls of dried herbs or flowers, or buy fragrant house plants

Environmental Impacts of Conventional Cleaners



Algal blooms often occur as a result of phosphate pollution.

Phosphates are minerals that act as water softeners. They can be very effective cleaners, but are also harmful to the environment in large quantities. When cleaning products are washed down the drain, phosphates enter waterways and cause rapid algae growth, decreasing water clarity and lowering dissolved oxygen. Many states have banned phosphates from laundry detergent and other cleaning products, but automatic dishwasher detergents are usually exempt from these restrictions.

The key ingredients in many cleaners are the detergents themselves, called surfactants. Most surfactants are petroleum based. Petroleum is a limited resource and its extraction often results in pollution and habitat destruction.

Responsible use of bleach means minimal use. Chlorine combines with organic materials in the environment to create dangerous chlorinated organic compounds that are harmful to people and wildlife. Use bleach only if absolutely required.

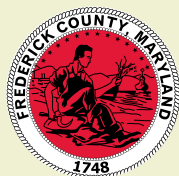
It is important to determine the life cycle of a product before purchase. Ask questions about the manufacturing process, packaging, shipping, performance, and resource recovery. The answers will help to determine if the product is environmentally friendly.

To Disinfect or not to Disinfect?

Many households rely on disinfectants like chlorine bleach to stop the spread of disease. However, the use of disinfectants poses some serious problems. A product can only be advertised as a disinfectant in the U.S. if it is registered as a pesticide with the EPA. Like some pesticides, disinfectants can be dangerous for our health, increasing the risk of asthma and acting as endocrine disruptors (which cause reproductive disorders) in some cases. Their production can also be harmful to the environment. But, perhaps most importantly, disinfectants may actually do the opposite of that which we intend. They may increase our likelihood of getting sick for two reasons. 1) Being exposed to some germs helps the immune system learn to fight off disease. 2) Strong disinfectants that kill 99.9% of germs leave behind the strongest 0.1% of germs. This repeated selection of disinfectant-resistant germs creates superbugs that humans can no longer control.

Disinfectant Alternatives:

- Undiluted vinegar
- Soap and hot water
- Cleaners containing essential oils
- UV sterilizing rod
- Botanical disinfectants
- To learn more, visit: tinyurl.com/ctt9nph



The Tips for Green Leaders in Frederick County is a public outreach component of the Frederick County Office of Sustainability and Environmental Resources' Green Homes Challenge (GHC) and the Monocacy & Catoctin Watershed Alliance (MCWA). For more information about the GHC or MCWA, please visit: www.FrederickCountyMD.gov/GreenHomes or www.watershed-alliance.com/. Or, call the GHC Program Coordinator at 301.600.7414 or MCWA Coordinator at 301.600.1741.