

Earth laughs in flowers...

- Ralph Waldo Emerson

# **Contents**

The Dangers of Household Chemicals 2	:-3
Harmful Ingredients in Household Chemicals How is the Environment Affected? What You Can Do	
Eco-Friendly Cleaning and DIY Recipes 4	-6
Eco-Friendly Pest Control and DIY Recipes 7	'-8
Eco-Friendly Gardening	. 9



# The Dangers of Household Chemicals

From electrical outlet covers to gates across stairways, parents spend time and money "child proofing" their homes. Yet common household items remain the biggest culprit for child poisonings in the U.S.: cosmetics/personal care (1st), household cleaners (2nd), and pesticides (8th) (Source: American Association of Poison Control Centers)\*.

Besides ingestion, there is also the risk of chemical burns or respiratory inhalation. Children may open containers of products meant to be handled only with gloves. Some household products release strong odors that can trigger wheezing, asthma attacks, or worse. Just because a cleaning product has a "fresh scent" or smells "clean" doesn't make it better. Remember, we shouldn't smell the air we breathe, unless there is the smell of live plants or a good home-cooked meal.

This guide provides safer alternatives (for your health and environment) to cleaning and greening your home.

#### Harmful Ingredients in Household Chemicals

#### Cleaners

- Ammonia
- Boric acid/borate\*\*
- Sulfuric acid
- Alkali
- Hydrofluoric acid
- Hypochlorites
- Phenol
- Pine oil
- Isopropanols

#### **Pesticides**

- Aluminum phosphide
- Metamsodium
- Methyl bromide
- Surfuryl fluoride
- Carbamate
- Copper
- Mercury
- Pthalimide
- Paraquat
- Organophosphates
- Arsenic
- Urea

<sup>\*</sup> Please refer to the 2014 Annual Report of the American Association of Poison Control Centers' National Poison Data System (NPDS): 32nd Annual Report (www.aapcc.org) for a full listing of chemicals.

<sup>\*\*</sup> Although environmentally safe, boric acid is harmful if ingested; please use with caution and store away from the reach of children.

#### How is the Environment Affected?



When you wash something down the drain it is sent to a wastewater treatment plant for cleaning. Water and wastewater treatment make up about 50% of our municipal energy cost. The more things that wash down the drain, unused medicines, cleaners, etc., the more difficult it is to clean the water. This results in more energy use and that contributes to air pollution, something we do not need!

Chemicals used outside of the home can also affect our environment; they run into our storm drains, local streams and eventually the Trinity River. Chemicals in the Trinity can kill aquatic life, make fish unsafe to eat, and ruin outdoor activities such as swimming and boating. Chemicals disrupt the natural balance of nutrients and minerals in our waterways thus making the water oxygen-poor and chemically altered. This can alter vegetation growth and can harm or even kill wildlife.

#### What You Can Do

Products you may have at home-borax, vinegar, baking soda, hydrogen peroxide, and lemons; can be used to make eco-friendly substitutes to traditional household chemicals, pesticides and fertilizers. They are also less hazardous to your family's health Borax, or sodium borate, is a naturally occurring mineral that has no toxic fumes and is safe for the environment (but not for kids to ingest). Borax cleans, deodorizes, disinfects, softens water, and eliminates pests. On the following pages, you will notice that borax is the main ingredient in many self-made substitutes.



### **Eco-Friendly Cleaning and DIY Recipes**

#### The benefits to making your own cleaners

- Poison prevention
- Environmental protection
- Lower cost fewer cleaners purchased
- Less waste cleaners made as needed in reusable containers
- Safer home eliminates need to store hazardous chemicals
- Knowledge you know exactly what you are handling and the quantity of the ingredients

#### **Purchase Eco-Friendly Products**

If you would rather "buy green", many products are now 'CERTIFIED' as green or eco-friendly with a green seal of approval. Help protect you and your family by researching products and labels to ensure the product you bought is really what you got.

Here are just a few groups that can help you research before you buy. Usual disclaimer: we aren't responsible for their content.

GreenSeal.org

GreenerChoices.org





WomensVoices.org



and, of course, GreenDallas.net!



# **Do-It-Yourself Cleaning Recipes**



**Bleach Substitute:** Use hydrogen peroxide and baking soda in your laundry instead of bleach. It'll get your whites whiter.

Carpet Freshener: Combine 1 cup crushed dried herbs like lavender or rosemary with 1 teaspoon ground cloves. You can also use 1 teaspoon ground cinnamon and 2 teaspoons baking soda. Shake to blend. Sprinkle over carpet. Let sit 1 hour. Vacuum.

Carpet Stain Remover: Pour 1-2 teaspoons cornstarch onto fresh spill. Salt works as well. Let rest. Vacuum. Remember, like dissolves like: use white vinegar or white wine to remove red wine.

Clothing Starch: Combine 2-3 teaspoons cornstarch and 1 cup water in spray bottle. Shake well. Add essence oils for fragrance. Spray on clothes. Iron as usual.

**Drain Clearing:** Sprinkle baking soda down the drain followed by 1 cup white vinegar. Repeat if necessary. Flush with hot water.

Glass Cleaner: Combine one part vinegar and one part water. Save paper-towels by using old newspaper for a streak and lint free shine!

**Kitchen Disposal Freshener**: Drop a few lemon wedges in disposal. Turn on the disposal -- with or without running water.

Microwave Freshener: Squeeze lemon juice into bowl. Add 2 teaspoons water and a splash of vinegar. Place in microwave. Set timer for 2 minutes. Be careful when removing bowl. Wipe clean.

Mold Remover: Saturate sponge with full strength vinegar or hydrogen peroxide. Scrub mold area. You can also add borax. Rinse.

Oven Cleaner: Mix equal parts salt, baking soda and water. Wipe away grease before using cleaner. Apply paste. Let stand for 5 minutes. Wipe away.

Have a tip you'd like to share?

Send your ideas to GreenDallas@DallasCityHall.com







Oil Drips: First, get that drip fixed! Many times a new washer around the fill plug is all it needs--ask your mechanic to replace it at your next oil change. There are a number of ecofriendly oil absorbents on the market-a quick websearch will help you find one. In the meantime, use kitty litter or sawdust to absorb the oil, sweep into a dustpan, and dispose of it safely and in accordance with city codes.

Rust Remover: Sprinkle salt on rusted area. Squeeze lime juice over salt. Let sit 3 hours. Wipe.

**Silver Cleaner:** Rub silver with toothpaste. Wipe tarnish. Rinse.

Toilet Bowl Cleaner: Combine 1 cup borax with 1/4 cup vinegar or lemon juice to make a paste. Apply to inside of toilet bowl. Let sit 1-2 hours. Scrub.

Wall and Wallpaper Cleaner: Dissolve 1/4 cup borax in 1 gallon hot water. Stir to blend. Wipe wall with cloth.

Wood Floor Polish: Mix 1/2 cup vinegar and 1/2 cup vegetable oil. Rub onto floor. Buff with a clean, dry cloth.

Air Fresheners: (although not a cleaning product) Make your own floral or herbal sachet and place on your dash board and throughout the home. Placement near air vents will help to spread the natural aromas throughout the area. Place dried flower petals, herbs or spices in an oil burner and heat with a candle.

Visit *MotherEarthLiving.com* for more tips on how to *green* your home!

# **Eco-Friendly Pest Control and DIY Recipes**

Fire ants, fleas, chiggers, and mites...all pests no one wants around. Did you know that only 3% of the bugs in your yard are actually considered pests? The other 97% are beneficial insects that help control the "pests". The problem: a pesticide doesn't care who is good and who is a pest. Pesticide applied to your lawn will kill the pests above ground, but then the trouble starts when they migrate down and start killing the worms and beneficial bacteria below ground which help keep your lawn healthy.

Bugs eat bugs. Birds eat bugs. Poison one member of the food chain and the natural balance of life in your yard is disrupted.

One final thought, poisoning is a matter of dosage. If a little can kill a bug, how much can our bodies handle?

So how can you make your yard a retreat without getting bitten by bugs? Try these homemade recipes!

#### **Do-It-Yourself Pesticide Recipes**

Fire ants: Pyrethrins. A derivative of chrysanthemums, pyrethrins are a natural pesticide that instantly kills insects - including bees and butterflies so be careful! Mix the proper dosage into water and simply pour onto the mound to eliminate the nest. Dust around the house with the powder and sprinkle with water and it will act as a barrier. Remember ants and termites HATE each other. Killing one may invite the other. Pyrethroids are synthetic and do not easily break down in the environment.

Chiggers/fleas/mites: Cedar. Cedar is one of nature's multitaskers. It's a pesticide that wards away pests just by its smell. Use cedar mulch in flower beds to hold in moisture AND to ward off garden pests. Farm and

feed stores carry a yard product which is cedar sawdust wrapped in clay. Spread it on your lawn and garden to keep the pests out of the grass and make

barefoot play time a lot more enjoyable! Spray a mixture of cedar and citrus oils around the patio before a

backyard party and enjoy hours of pest-free fun!

7

Mosquitoes: The official "pest" of Texas! The number one defense against this flying menace is prevention! Mosquitoes lay their eggs in still waters and mushy soils. Make sure there is no standing water in or around your home and that your sprinkler isn't creating a mosquito haven!



Look for objects that have areas where water can pool and keep them turned so water drains. Have a pond or a fountain area? Mosquito Dunks, which look like little brown sawdust donuts can be placed in the pond or fountain to kill the larvae before they mature. Another option is to add a pumping system that keeps the water moving so that the mosquitoes cannot land and lay eggs.

#### Don't Get Bit!

There are numerous products available that can be sprayed on, clipped on, or rubbed on to repel insects. They contain or mimic chemicals which insects know to be toxic. Remember, if it is harmful to them, it may also be harmful to you. Children have even less defense against poisons due to the higher dosage-to-body-weight ratio.

Many natural products are made from essential oils of common items like clove, rosemary, citronella and cedar. These natural oils repel insects without exposing you to a petro-chemical. Planting these in your garden also helps keep pests away so that you can enjoy a barbecue or quiet time on your patio while letting nature do what nature does -- keep things in balance! Ahhh...better.



### **Eco-Friendly Gardening**

Can you pronounce the chemicals found on the side of your favorite fertilizer? While it may be convenient to open that easy-close bag and spread pounds of chemicals onto the lawn or garden in the hopes of having a lush, amazing yard and garden -- it's just not ecofriendly, or healthy. And shouldn't that be the point? When you dump artificial chemicals on your yard you harm the ecosystem, change the chemistry of the soil, and potentially expose you and your family to harm. Do it right the first time and be safe.

Life operates in balance. Bacteria and earthworms in the soil break down dead material and keep the soil healthy. Moles burrow to eat grubs and other root eating larvae. When you dump non-organic fertilizers on the lawn, it changes the chemistry of the soil forcing all of these beneficial life-forms out, leaving your lawn open to raiding parties of pests.

Use natural products to help fertilize and keep your yard and garden healthy. Compost! Vegetable scraps and lawn/garden clippings make great compost. Compost pet waste separately, always!

- Combine one part nitrogen (anything "fresh" or "green") with three parts carbon (anything "dried" or "brown").
- Turn the pile often to aerate and add water to keep it a little moist as needed.
- Use it all over your yard and garden. Also, use natural chemicals to fortify the good stuff in your yard.



Horticultural molasses and compost tea make great fertilizer. They feed the bacteria and worms that produce the beneficial, natural fertilizers which keep your yard looking great. Worms also aerate the soil as they burrow, helping to break up that hard clay. Fish emulsion is a great way to fertilize trees. Vinegar helps increase soil acidity to make blooms vibrant!

Visit DallasCountyMasterGardeners.org for more gardening tips.



City of Dallas Publication No. 1516:52 For additional copies or for more information, contact:

City of Dallas
Office of Environmental Quality
1500 Marilla Street, 7AN
Dallas TX 75201
214-670-1200
greendallas@dallascityhall.com



