



IDAHO DEPARTMENT OF  
**HEALTH & WELFARE**

**Division of Health  
Bureau of Community and Environmental Health**



# *Healthy Homes*

## **Safer Alternatives to Hazardous Household Chemicals**

### **Contents:**

- Safer Cleaning
- Safer Gardening
- Safer Pest Control
- Safer Pet Care

To make your own household cleaners and other products, you can save money and control the amount of hazardous chemicals in your home. First, you should be aware of some of the limitations or drawbacks of homemade products:

- They may take longer to clean or work effectively. You may need to let the product “sit” on the surface for longer than usual or you may have to go over a surface several times
- More “elbow grease” may be required and the product may not clean as well if a harsh product was used repeatedly prior to your homemade solution

If you decide to make your own products, use and store them safely. While the ingredients in homemade cleaners are usually safer, some are still toxic. Remember these guidelines:

- Be careful mixing chemicals. Some chemicals, such as ***chlorine bleach and ammonia, produce a toxic gas when mixed***
- Do not mix more than a month’s supply at a time. Chemical solutions may lose their effectiveness over time
- Store solutions in unused, store-bought containers. Use permanent storage containers that will be put in a permanent location. Never put them in old food containers. Chemicals may interact with residue from the original contents or the container may be mistaken for a food or beverage
- Label containers carefully. This is especially important if other people in your home clean or have access to the cleaners



### Air Fresheners/ Deodorizers

- **Air**
  - Open doors or windows
  - Use an exhaust fan when cooking
  - Sprinkle baking soda on carpets. Let set for ½ hour; vacuum
  - Set vinegar out in an open dish
  - Saturate a cotton ball with pure vanilla and place in an open dish
  - Simmer cinnamon, cloves and water in a pan\*
  - Set out potpourri in open dishes\*
  - Burn scented candles\*\*
  - Use baking soda in the cat box
  - Use baking soda in garbage cans
  
- **Carpets**
  - Mix 1 part Borax to 2 parts cornmeal; sprinkle liberally on carpet; vacuum after 1 hour
  - Sprinkle baking soda on carpet and vacuum after 1 hour
  
- **Garbage disposals**
  - Grind used lemons in the disposal
  - Pour baking soda in the disposal
  
- **Surface, hand & utensils**
  - Add a few drops of white vinegar to soapy water
  - Rub hands with the cut end of a celery stalk or a piece of lemon



\*Individuals with asthma and allergies can react strongly to scented products.

\*\*Make sure that the candlewick is lead-free.



## Cleaners

- **All purpose**
  - Mix 1 quart warm water, 1 teaspoon mild liquid dishwashing soap, 1 teaspoon Borax, and a squeeze of lemon or a dash of vinegar
  - Mix ½ cup vinegar and 1 quart of warm water
  - Dissolve baking soda in water for general cleaning
  
- **Bathroom**
  - Mix baking soda and castile soap
  - Mix ¼ cup baking soda + ½ cup white vinegar + warm water (tub & tile)
  - Paste of Borax + lemon juice (toilet bowl)
  - Scrub with a solution of ½ cup Borax in a gallon of water
  - Sprinkle baking soda around the toilet rim; scrub with toilet brush
  
- **Carpet, rug and upholstery**
  - Clean spills immediately with club soda
  - Mix 1 quart warm water, 1 teaspoon mild liquid soap, 1 teaspoon Borax, and squeeze lemon juice or a dash of vinegar; apply with a damp cloth or sponge and rub gently; wipe with a clean cloth and allow to dry\*
  - To clean red wine spills, rub a thick layer of salt on the spill; sponge up after spill has been absorbed



\*Clean carpet on a dry, sunny day with windows open to speed drying. Don't soak carpet or it may mildew. Test any shampoo first on an inconspicuous area to prevent discoloration.



Cleaners

- **Drain Cleaners**

- Use strainer on every drain and clean out regularly
- Pour boiling water down the drain once a week to keep it unclogged
- Use a plunger
- Pour a handful of baking soda and ½ cup vinegar down drain; cover drain and let set for 15 minutes; rinse with 2 quarts of boiling water
- Use a plumber's snake

- **Floors**

- Vinyl/linoleum floors
  - Combine ¼ cup Borax, or ½ cup white vinegar with 1 gallon warm water and apply with mop to remove dull, greasy film. Polish with club soda
  - To polish: mix 1 part thick, boiled starch with 1 part soap suds; rub mixture on floor then polish dry with a clean, soft, dry cloth
  - To remove old wax: pour a small amount of club soda on a section of the floor; scrub well; let soak for a few minutes and wipe clean
- Sealed wood floors
  - Mix ¼ cup white vinegar and 1 gallon water; clean floors; dry at once
  - Damp mop with a mild vegetable-based (glycerin) soap; dry at once
  - Combine 1 teaspoon of washing soda and 1 gallon of hot water; dry at once

- **Glass/window cleaners**

- Mix equal amounts of water and white vinegar in a spray bottle\*
- Mix 1 to 2 tablespoons of rubbing alcohol with 1 quart of water



\*Rub the glass/windows with rubbing alcohol prior to cleaning with chemicals. These chemicals can cause streaking without alcohol.



Cleaners

- **Metal cleaners/polishes**
  - Aluminum
    - 2 tablespoons cream of tartar + 1 quart hot water
  - Brass
    - Worcestershire sauce
    - Tooth paste
    - Ketchup: let set; wipe dry
  - Chrome
    - Wipe with apple cider vinegar; rinse with water; dry
    - Shine with baby oil and a soft cloth, a piece of aluminum foil (shiny side out), or newspapers (wear gloves)
  - Copper
    - Lemon juice and salt paste
    - Pour white vinegar and salt over copper and rub
  - Silver
    - Soak silver about 5 minutes in 1 quart warm water containing 1 tablespoon salt, 1 tablespoon baking soda and a piece of aluminum foil
    - Rub with toothpaste or baking soda and a soft cloth, rinse and polish dry
  
- **Mildew cleaners**
  - Scrub mildew spots with baking soda or Borax, or sponge with white vinegar
  - Scrub area with a paste of lemon juice or white vinegar and salt
  - Shower curtain: wash with ½ cup baking soda; add 1 cup white vinegar to rinse cycle

**Cleaners**

- **Oven cleaners\*** (non-self cleaning)
  - Wipe away grease and spills after preparing each meal
  - Wipe away charred spills with a nonmetallic brush
  - Scrub with a baking soda, salt and water paste\*\*
  - Sprinkle with dry baking soda and scrub with a damp cloth
  - Scour racks and burner inserts with steel wool
  - Sprinkle salt on spills while they are warm and then scrub
  - Scrub spots with a baking soda, salt and water paste
  - Mix 2 tablespoons liquid soap, 2 teaspoons Borax, and 1 quart of warm water; leave on oven for 20 minutes then scrub with steel wool
  - Dip a wet cloth in baking soda to clean glass oven doors



\*People with asthma, chronic bronchitis and other respiratory problems are particularly susceptible to fumes of strong oven cleaners.

\*\*Don't let baking soda touch wires or heating elements.



### Disinfectants

- **Washable items**
    - Wash with water and soap, Borax or washing soda\*
  - **Surface**
    - Wipe with white vinegar
    - Wash large surfaces with a solution of ½ cup Borax dissolved in one gallon of hot water
- 



### Furniture Polish

- **Finished woods**
    - To clean: Use a mild vegetable-based soap
    - To polish: Combine 1 part strained lemon juice with 2 parts vegetable or olive oil; apply; polish with a clean, soft cloth
    - 1 tablespoon lemon oil in 1 pint of mineral oil
    - Use olive oil, or beeswax and olive oil
- 



### Laundry Products

- **Bleach (non-chlorine)**
  - Use non-chlorine bleach
  - Washing soda
  - ½ cup Borax per load to whiten and brighten color
  - Reduce bleach to ½ and add ¼ to ½ cup baking soda per load



\*Arm & Hammer Washing Soda is a detergent booster and household cleaner and shouldn't be mistaken for Arm and Hammer Baking Soda.



### Laundry Products

- **Detergent**

- Basic soap
- Use a synthetic detergent without added fabric softeners or bleach
- Use products that include washing soda. Washing soda brightens fabrics and costs less than bleach
- Use washing soda or a non-phosphate concentrate

- **Fabric Softener**

- Add 1 cup of vinegar during final rinse
- Add  $\frac{1}{4}$  cup baking soda during final rinse
- To reduce “static cling” in synthetics due to tumble drying, dampen hands when folding, or else line dry clothes
- Use non-perfumed fabric softener sheets rather than liquid fabric softeners

- **Spot removers\***

- Club soda, lemon juice, or salt
- Blood: Club soda or cold water
- Chocolate: soak in cold water, rub with soap and a mild borax solution
- Coffee: soak in cold water
- Ink remover: cold water + 1 tablespoon cream of tartar + 1 tablespoon lemon juice
- Oil stain: white chalk rubbed into stain before laundering



\*Test fabric first in an inconspicuous area to avoid damage.



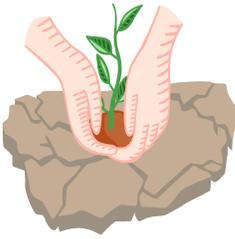
### Laundry Products

- **Spot Removers\***

- Perspiration: Baking soda
- Rust: lemon juice + salt + sunlight
- Scorch: grated onion
- Fruit stains: soak in cold water 30 minutes; rub soap into remaining stain; bleach with lemon juice and sunlight if needed
- Grease: apply paste of cornstarch or baking soda and water; let dry then brush off
- Lipstick: rub with cold cream or shortening to dissolve color; rinse area with solution of washing soda and warm water to remove grease
- Butter, coffee, gravy and chocolate stains: immediately sponge up or scrape off as much as possible. Dab with a cloth dampened with a solution of 1 teaspoon white vinegar and 1 quart cold water
- Set-in stains: try a dab of full-strength white vinegar
- Pre-soak: Make a paste of washing soda & water; apply to spots



\*Test fabric first in an inconspicuous area to avoid damage.



## Gardening

- **Fertilizer**
  - Compost
  - Liquid seaweed
  - Fish meal liquid
  - Rock minerals
  - Green sand
  
- **Pests**
  - General pest control:
    - Try mixing water with either crushed garlic, chili (hot pepper) or onion
    - Neem oil
    - Beneficial insects
    - Companion planting
    - Crop rotation
  - Aphids: Spray plants with water 3 times weekly; swab with cotton balls saturated with alcohol
  - Japanese Beetle: mix 1 cup water; ¼ cup sugar; 1 mashed banana; 1 package yeast and set out in jug where Beetles gather
  - Insects on plants: mild solution of soap and water sprayed on plants; swab with cotton balls saturated with alcohol
  - Mosquitoes: burn citronella candles
  - Nematodes: plant marigolds
  - Slug/snails: onion and marigold plants; dish of flat beer
  
- **Weeds**
  - Mulch to prevent weeds
  - Pour boiling water into cracks and near buildings to help kill weeds
  - Pull by hand
  - Pour white vinegar on weeds



Pest Control

- **Integrated Pest Management Principles:**
  - Non-chemical prevention of pest populations using such methods as sanitation and exclusion
  - Selecting the least hazardous methods and materials effective for control of targeted pests
  - Precision targeting of pesticides to areas not contacted by or accessible to children and pets
  - Application of pesticides as a last resort
  
- **Sanitation**
  - Store food in air tight containers
  - Empty trash cans daily
  - Food containers and soda cans should be taken outside immediately
  - Keep kitchen counters clear of food
  - Clean greasy spills immediately
  - Limit eating to kitchen or dining room; clean/vacuum up crumbs
  
- **Exclusion**
  - Weather-strip around doors and windows
  - Caulk all potential entryways with a silicone caulking compound
  - Place screens on windows and doors
  - All plumbing should be in good repair
  
- **Ants**
  - Red chili powder at entry point
  - Ammonia sprayed on trail\*
  - Equal parts powdered sugar and Borax sprinkled in places where they crawl\*
  - Boric acid spread liberally around points of entry\*



\*Keep boric acid, Borax and ammonia away from areas accessible by children and pets.



## Pest Control

- **Flies**
  - Well watered pot of basil
  - Fly paper
  - Fly traps
  - Fly swatter
- **Head Lice**
  - Saturate head with salad oil; use nit comb (LiceMeister comb)
  - Long or curly hair: LiceBGone enzyme shampoo
- **Hornets/Wasps/Yellow Jackets**
  - Remove nests (professional only)
  - Sticky traps
  - Baited traps
- **Moths**
  - Cedar chips, dried tansy, or dried lavender in cotton sachets
- **Roaches**
  - Boric acid sprinkled along edges\*
  - Sticky traps
- **Rodents**
  - Snap traps
  - Multi-catch traps
  - Single catch live traps
  - Glue board traps



\*Keep boric acid, Borax and ammonia away from areas accessible by children and pets.



- **House & Yard**

- Flea & tick repellent: scatter pine needles, fennel, rye or rosemary on pet's bed
- Vacuum rugs, floor cracks and furniture every two to three days
- Use cedar-filled pet beds with removable covers
- Use sticky paper flea traps
- In yard, use beneficial nematodes-tiny worms that infect and kill flea larvae

- **Skin Care**

- Feed pet brewer's yeast, vitamin B, flaxseed oil or garlic tablets
- Use a flea comb
- Bathe pet weekly
- Dogs: slice two lemons and pour nearly boiling water over the lemons, let soak overnight; strain the liquid and pour into a spray bottle; spray dog liberally; massage into coat
- Cats: make a solution of one ounce pennyroyal oil with 18 ounces of water; sponge solution on cat; massage into coat\*
- Skin that is irritated from scratching and flea bites can be soothed by applying aloe vera
- Use herb-based collars. Herbs won't kill fleas but will repel them



\*Be sure to dilute pennyroyal-it can be toxic to pets if not diluted.



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