

## Non-Toxic Home Cleaning

Today's modern home is loaded with toxic and polluting substances designed to make domestic life easier.

The cost of these commercial, chemical-based products can be high -- long term health concerns for the family, and environmental pollution caused by their manufacture and disposal. In the US, for example, 1 in 3 people suffer from allergies, asthma, sinusitis or bronchitis (US National Center for Health Statistics). Treatment for these conditions should include reducing synthetic chemicals in the home environment.

For many home-cleaning chores, you can make your own cleaning products using the formulas listed below.

A growing number of commercial non-toxic home cleaning products are also available, as healthier and environmentally responsible alternatives. Your use of these products helps promote the growth of green businesses which are contributing to a sustainable economy.

### 1. Homemade Substitutions

There are many inexpensive, easy-to-use natural alternatives which can safely be used in place of commercial household products. Here is a list of common, environmentally safe products which can be used alone or in combination for a wealth of household applications.

- **Baking Soda** - cleans, deodorizes, softens water, scours.
- **Soap** - unscented soap in liquid form, flakes, powders or bars is biodegradable and will clean just about anything. Avoid using soaps which contain petroleum distillates.
- **Lemon** - one of the strongest food-acids, effective against most household bacteria.
- **Borax** - (sodium borate) cleans, deodorizes, disinfects, softens water, cleans wallpaper, painted walls and floors.
- **White Vinegar** - cuts grease, removes mildew, odors, some stains and wax build-up.
- **Washing Soda** - or SAL Soda is sodium carbonate decahydrate, a mineral. Washing soda cuts grease, removes stains, softens water, cleans wall, tiles, sinks and tubs. Use care, as washing soda can irritate mucous membranes. Do not use on aluminum.
- **Isopropyl Alcohol** - is an excellent disinfectant. (It has been suggested to replace this with ethanol or 100 proof alcohol in solution with water. There is some indication that isopropyl alcohol buildup contributes to illness in the body. See <http://drclark.ch/g>)
- **Cornstarch** - can be used to clean windows, polish furniture, shampoo carpets and rugs.
- **Citrus Solvent** - cleans paint brushes, oil and grease, some stains. (Citrus solvent may cause skin, lung or eye irritations for people with multiple chemical sensitivities.)

**Is Borax Safe?** Borax is considered a mild skin irritant similar to baking soda. The MSDS lists borax as a health hazard of 1, similar to salt and baking soda. A health concern with borax is with its potential to disrupt the reproductive system. Studies have not been done in humans regarding this; however, potential reproductive issues in mice are suspected from high levels of ingested borax. Use of borax for home cleaning formulas, where no borax is ingested, has not been shown to pose health hazards. Borax is a natural substance which is non-carcinogenic, does not accumulate in the body, or absorb through the skin. It is not harmful to the environment.

## 2. Formulas

Combinations of the above basic products can provide less harmful substitutions for many commercial home products. In most cases, they're also less expensive. Here are some formulas for safe, alternative home care products:

**Note:** These formulas and substitutions are offered to help minimize the use of toxic substances in your home, and reduce the environmental harm caused by the manufacture, use and disposal of toxics. Results may vary and cannot be guaranteed to be 100% safe and effective. Before applying any cleaning formulations, test in small hidden areas if possible. Always use caution with any new product in your home.

**Make sure to keep all home-made formulas well-labeled, and out of the reach of children.**

**All-Purpose Cleaner:** Mix 1/2 cup vinegar and 1/4 cup baking soda (or 2 teaspoons borax) into 1/2 gallon (2 liters) water. Store and keep. Use for removal of water deposit stains on shower stall panels, bathroom chrome fixtures, windows, bathroom mirrors, etc. Or use a citrus-based natural all-purpose cleaner.

Another alternative are microfiber cloths which lift off dirt, grease and dust without the need for cleaning chemicals, because they are formulated to penetrate and trap dirt. There are a number of different brands. A good quality cloth can last for several years.

**Air Freshener:** Commercial air fresheners mask smells and coat nasal passages to diminish the sense of smell.

- Baking soda or vinegar with lemon juice in small dishes absorbs odors around the house.
- Having houseplants helps reduce odors in the home.
- Prevent cooking odors by simmering vinegar (1 tbsp in 1 cup water) on the stove while cooking. To get such smells as fish and onion off utensils and cutting boards, wipe them with vinegar and wash in soapy water.
- Keep fresh coffee grounds on the counter.
- Grind up a slice of lemon in the garbage disposal.
- Simmer water and cinnamon or other spices on stove.
- Place bowls of fragrant dried herbs and flowers in room.

**Bathroom mold:** Mold in bathroom tile grout is a common problem and can be a health concern. Mix one part hydrogen peroxide (3%) with two parts water in a spray bottle and spray on areas with mold. Wait at least one hour before rinsing or using shower.

**Carpet stains:** Mix equal parts white vinegar and water in a spray bottle. Spray directly on stain, let sit for several minutes, and clean with a brush or sponge using warm soapy water.

For fresh grease spots, sprinkle corn starch onto spot and wait 15 - 30 minutes before vacuuming.

For a heavy duty carpet cleaner, mix 1/4 cup each of salt, borax and vinegar. Rub paste into carpet and leave for a few hours. Vacuum.

**Chopping block cleaner:** Rub a slice of lemon across a chopping block to disinfect the surface. For tougher stains, squeeze some of the lemon juice onto the spot and let sit for 10 minutes, then wipe.

**Coffee and tea stains:** Stains in cups can be removed by applying vinegar to a sponge and wiping. To clean a teakettle or coffee maker, add 2 cups water and 1/4 cup vinegar; bring to a boil. Let cool, wipe with a clean cloth and rinse thoroughly with water.

**Deodorize:**

- Plastic food storage containers - soak overnight in warm water and baking soda
- In-sink garbage disposal units - grind up lemon or orange peel in the unit
- Carpets - sprinkle baking soda several hours before vacuuming
- Garage, basements - set a sliced onion on a plate in center of room for 12 - 24 hours

**Dishwasher Soap:** Mix equal parts of borax and washing soda, but increase the washing soda if your water is hard.

If you want to use a commercial dishwashing soap, try CitraDish or Nellie's All-Natural dishwasher powder, which contain no bleach or phosphates.

**Dishwashing Soap:** Commercial low-phosphate detergents are not themselves harmful, but phosphates nourish algae which use up oxygen in waterways. A detergent substitution is to use liquid soap. Add 2 or 3 tablespoons of vinegar to the warm, soapy water for tough jobs. Or use a citrus-based natural dish soap.

**Disinfectant:** Mix 2 teaspoons borax, 4 tablespoons vinegar and 3 cups hot water. For stronger cleaning power add 1/4 teaspoon liquid castile soap. Wipe on with dampened cloth or use non-aerosol spray bottle. (This is not an antibacterial formula. The average kitchen or bathroom does not require antibacterial cleaners.)

To disinfect kitchen sponges, put them in the dishwasher when running a load.

**Drain Cleaner:** For light drain cleaning, mix 1/2 cup salt in 4 liters water, heat (but not to a boil) and pour down the drain. For stronger cleaning, pour about 1/2 cup baking soda down the drain, then 1/2 cup vinegar. The resulting chemical reaction can break fatty acids down into soap and glycerine, allowing the clog to wash down the drain. After 15 minutes, pour in boiling water to clear residue.

Caution: only use this method with metal plumbing. Plastic pipes can melt if excess boiling water is used. Also, do not use this method after trying a commercial drain opener--the vinegar can react with the drain opener to create dangerous fumes.

A commercial alternative is to use CitraDrain Build-Up Remover which uses natural enzymes to safely eliminate grease, oil, soap residue and more to keep pipes flowing properly.

**Fabric softener:** To reduce static cling, dampen your hands, then shake out your clothes as you remove them from the drier. Line-drying clothing is another alternative.

#### **Floor Cleaner and Polish:**

- **vinyl and linoleum:** mix 1 cup vinegar and a few drops of baby oil in 1 gallon warm water. For tough jobs, add 1/4 cup borax. Use sparingly on linoleum.
- **wood:** apply a thin coat of 1:1 vegetable oil and vinegar and rub in well.
- **painted wood:** mix 1 teaspoon washing soda into 1 gallon (4L) hot water.
- **brick and stone tiles:** mix 1 cup white vinegar in 1 gallon (4L) water; rinse with clear water.

Most floor surfaces can be easily cleaned using a solution of vinegar and water. For damp-mopping wood floors: mix equal amounts of white distilled vinegar and water. Add 15 drops of pure peppermint oil; shake to mix.

**Furniture Polish:** For varnished wood, add a few drops of lemon oil into a 1/2 cup warm water. Mix well and spray onto a soft cotton cloth. Cloth should only be slightly damp. Wipe furniture with the cloth, and finish by wiping once more using a dry soft cotton cloth. Or use CitraWood, a natural wood polish.

For unvarnished wood, mix two tsps each of olive oil and lemon juice and apply a small amount to a soft cotton cloth. Wring the cloth to spread the mixture further into the material and apply to the furniture using wide strokes. This helps distribute the oil evenly.

**Laundry Detergent:** Mix 1 cup Ivory soap (or Fels Naptha soap), 1/2 cup washing soda and 1/2 cup borax. Use 1 tbsp for light loads; 2 tbsp for heavy loads. Commercial natural, biodegradable laundry detergents are also now available online and in select stores.

**Lime Deposits:** You can reduce lime deposits in your teakettle by putting in 1/2 cup (125ml) white vinegar and 2 cups water, and gently boiling for a few minutes. Rinse well with fresh water while kettle is still warm.

To remove lime scale on bathroom fixtures, squeeze lemon juice onto affected areas and let sit for several minutes before wiping clean with a wet cloth.

Marks on walls and painted surfaces: Many ink spots, pencil, crayon or marker spots can be cleaned from painted surfaces using baking soda applied to a damp sponge. Rub gently, then wipe and rinse.

### **Metal Cleaners and Polishes:**

- **aluminum:** using a soft cloth, clean with a solution of cream of tartar and water.
- **brass or bronze:** polish with a soft cloth dipped in lemon and baking-soda solution, or vinegar and salt solution. Another method is to apply a dab of ketchup on a soft cloth and rub over tarnished spots.
- **chrome:** polish with baby oil, vinegar, or aluminum foil shiny side out.
- **copper:** soak a cotton rag in a pot of boiling water with 1 tablespoon salt and 1 cup white vinegar. Apply to copper while hot; let cool, then wipe clean. For tougher jobs, sprinkle baking soda or lemon juice on a soft cloth, then wipe. For copper cookware, sprinkle a lemon wedge with salt, then scrub. A simpler method is to apply a dab of ketchup on a soft cloth and rub over tarnished spots.
- **gold:** clean with toothpaste, or a paste of salt, vinegar, and flour.
- **silver:** line a pan with aluminum foil and fill with water; add a teaspoon each of baking soda and salt. Bring to a boil and immerse silver. Polish with soft cloth.
- **stainless steel:** clean with a cloth dampened with undiluted white vinegar, or olive oil. For stainless cookware, mix 4 tbs baking soda in 1 qt water, and apply using a soft cloth. Wipe dry using a clean cloth. For stainless steel sinks, pour some club soda on an absorbent cloth to clean, then wipe dry using a clean cloth.

**Mold and Mildew:** Use white vinegar or lemon juice full strength. Apply with a sponge or scrubby.

**Mothballs:** The common mothball is made of paradichlorobenzene, which is harmful to liver and kidneys. Cedar chips in a cheesecloth square, or cedar oil in an absorbent cloth will repel moths. The cedar should be 'aromatic cedar', also referred to as juniper in some areas. Cedar chips are available at many craft supply stores, or make your own using a plane and a block of cedar from the lumberyard.

Homemade moth-repelling sachets can also be made with lavender, rosemary, vetiver and rose petals.

Dried lemon peels are also a natural moth deterrent - simply toss into clothes chest, or tie in cheesecloth and hang in the closet.

**Oil and Grease Spots:** For small spills on the garage floor, add baking soda and scrub with wet brush. Or use CitraSolv nontoxic degreaser.

**Oven Cleaner:** Moisten oven surfaces with sponge and water. Use 3/4cup baking soda, 1/4cup salt and 1/4cup water to make a thick paste, and spread throughout oven interior. (avoid bare metal and any openings) Let sit overnight. Remove with spatula and wipe clean. Rub gently with fine steel wool for tough spots. Or use Arm & Hammer Oven Cleaner, declared nontoxic by Consumers Union.

**Paint Brush Cleaner:** Non-toxic, citrus oil based solvents are now available commercially under several brand names. Citra-Solve is one brand. This works well for cleaning brushes of oil-based paints. Paint brushes and rollers used for an on-going project can be saved overnight, or even up to a week, without cleaning at all. Simply wrap the brush or roller snugly in a plastic bag, such as a used bread or produce bag. Squeeze out air pockets and store away from light. The paint won't dry because air can't get to it. Simply unwrap the brush or roller the next day and continue with the job.

Fresh paint odors can be reduced by placing a small dish of white vinegar in the room.

**Rust Remover:** Sprinkle a little salt on the rust, squeeze a lime over the salt until it is well soaked. Leave the mixture on for 2 - 3 hours. Use leftover rind to scrub residue.

**Scouring Powder:** For top of stove, refrigerator and other such surfaces that should not be scratched, use baking soda. Apply baking soda directly with a damp sponge.

**Shoe Polish:** Olive oil with a few drops of lemon juice can be applied to shoes with a thick cotton or terry rag. Leave for a few minutes; wipe and buff with a clean, dry rag.

**Stickers on walls:** Our children covered the inside of their room doors with stickers. Now they are grown, but the stickers remained. To remove, sponge vinegar over them several times, and wait 15 minutes, then rub off the stickers. This also works for price tags (stickers) on tools, etc.

**Toilet Bowl Cleaner:** Mix 1/4 cup baking soda and 1 cup vinegar, pour into basin and let it set for a few minutes. Scrub with brush and rinse. A mixture of borax (2 parts) and lemon juice (one part) will also work.

**Tub and Tile Cleaner:** For simple cleaning, rub in baking soda with a damp sponge and rinse with fresh water. For tougher jobs, wipe surfaces with vinegar first and follow with baking soda as a scouring powder. (Vinegar can break down tile grout, so use sparingly.)

**Wallpaper Remover:** Mix equal parts of white vinegar and hot water, apply with sponge over the old wallpaper to soften the adhesive. Peel of the lifting paper and reapply the mixture to stubborn patches. Open the room windows or use a fan to dissipate the pungent vinegar smell.

**Water Rings on Wood:** Water rings on a wooden table or counter are the result of moisture that is trapped under the topcoat, but not the finish. Try applying toothpaste or mayonnaise to a damp cloth and rub into the ring. Be careful not to run too vigorously so as not to mar the finish. Once the ring is removed, buff the entire wood surface.

**Window Cleaner:** Mix 2 teaspoons of white vinegar with 1 liter (qt) warm water. Use crumpled newspaper or cotton cloth to clean. Only use the black and white newspapers, not the colored ones. Don't clean windows if the sun is on them, or if they are warm, or streaks will show on drying. Be sure to follow the recipe, because using too strong a solution of vinegar will etch the glass and eventually cloud it. The All-Purpose Cleaner (above) also works well on windows, or you can buy CitraClear natural window and glass cleaner

### 3. Healthy Home Cleaning Habits

#### Exchange Indoor Air

Many modern homes are so tight there's little new air coming in. Open the windows from time to time or run any installed exhaust fans. In cold weather, the most efficient way to exchange room air is to open the room wide - windows and doors, and let fresh air in quickly for about 5 minutes. The furnishings in the room, and the walls, act as 'heat sinks', and by exchanging air quickly, this heat is retained.

#### Minimize Dust

Remove clutter which collects dust, such as old newspapers and magazines. Try to initiate a 'no-shoes-indoors' policy. If you're building or remodelling a home, consider a central vacuum system; this eliminates the fine dust which portable vacuum cleaners recirculate.

#### Use Cellulose Sponges

Most household sponges are made of polyester or plastic which are slow to break down in landfills, and many are treated with triclosan, a chemical that can produce chloroform (a suspected carcinogen) when it interacts with the chlorine found in tap water. Instead try cellulose sponges, available at natural foods stores, which are biodegradable and will soak up spills faster since they're naturally more absorbent. For general household cleaning, try [Skoy Eco-Cleaning Cloths](#). These cleaning cloths are non-toxic, extremely absorbent (15x paper towels), reusable, and biodegradable.

#### Keep Bedrooms Clean

Most time at home is spent in the bedrooms. Keep pets out of these rooms, especially if they spend time outdoors.

#### Use Gentle Cleaning Products

Of the various commercial home cleaning products, drain cleaners, toilet bowl cleaners and oven cleaners are the most toxic. Use the formulas described above or purchase 'green' commercial alternatives. Avoid products containing ammonia or chlorine, or petroleum-based chemicals; these contribute to respiratory irritation, headaches and other complaints.

#### Clean from the Top Down:

When house cleaning, save the floor or carpet for last. Clean window blinds and shelves first and then work downwards. Allow time for the dust to settle before vacuuming.