

# Clean It!

*Safer House-  
Cleaning Methods  
that Really Work!*

*Revised - includes new tips for making  
informed choices about cleaning products.*



# 1-888-BAYWISE

You don't need harsh chemical cleaning products to clean your home. Common household products like baking soda and vinegar are good all-purpose cleaners.

There are very good reasons to make the switch - some retail household cleaning products can be hazardous to your health and the health of your family and pets. The hazards can come from chemical fumes, improper mixing of more than one product, or from children or pets ingesting the products.

In addition, some chemicals in products disposed of down the drain may end up in San Francisco Bay and the Pacific Ocean. The resulting "chemical soup" can adversely affect aquatic creatures, and contribute to the build up of toxins in the fish we eat.

By buying and using fewer potentially hazardous products in the first place, you'll create a safer place for you, your family and pets, and the environment.



**BAY AREA POLLUTION  
PREVENTION GROUP**

A Committee of Bay Area Clean Water Agencies

# What's in This Guide

This guide provides tips on safer cleaning products and methods. The recommended safer methods listed in this guide are effective.

The key to easier, safer cleaning is prevention. By preventing build-up of dirt, housecleaning will be easier. Also, you can get good results with fewer chemicals if you use the right tools and techniques - and this guide shows you how. Once you've reduced your reliance on specialty cleaning products, you can save money too, since the safer products in this guide cost less.

If you feel you need to buy a cleaning product available from retail stores, this guide offers suggestions for selecting and using those products, but we recommend trying the safer methods first.

Many retail cleaning products should not be disposed of down drains or thrown away in the garbage. The proper disposal methods are listed in this guide.

By following the recommended safe cleaning methods in this guide, you can avoid the hazards of some cleaning products, and also help protect the waters of the bay and ocean.

# Getting Started

*Switching to safer cleaning products is simple. Just incorporate the cleaning products and tools listed on the following pages into your regular household cleaning methods.*

*Here are some tips for getting started:*

- Evaluate the cleaning products you already have. Use them up, if appropriate, or follow the safe disposal methods listed in this guide.
- Get organized. Gather all of your supplies, like baking soda and vinegar. Check the *Shopping List* and *Tools* sections in this guide for other items you may need.
- Test tools, techniques, and products in a small, inconspicuous area first to see if results are satisfactory.
- If there are children or pets in your home, set up a safe, secure storage place for hazardous materials.
- Ask your school-age children to help you evaluate and select the least toxic cleaning products - it may make a good science project for them.

# Shopping List

*You can find most of these recommended safer products at your specialty grocery stores or home improvement stores. Always read the label carefully to understand the product's contents, warnings, and instructions for use.*

**Store all cleaning products out of reach of children and pets, such as in a locked cabinet, and not where food is stored!**

## Recommended Safer Products

**Baking soda** with water, makes an all-purpose cleaner.

**Borax** removes stains on toilet bowls.

**Lemons** remove greasy fingerprints on windows.

**Toothpaste** cleans silver.

**Vegetable-based liquid soap** (such as castile soap) diluted with water makes an all-purpose cleaner.

**White distilled vinegar**, diluted in water, is also a good all-purpose cleaner, and rinses and removes baking soda residue.

## Special Products

*The following are types of retail products that you might want for special cleaning jobs. However, use these products with caution as they may pose some health and safety risks, as discussed later:*

- General purpose cleaner
- Glass cleaner
- Brass or silver polish
- Toilet bowl cleaner
- Tub and tile cleaner
- Carpet spot remover
- Floor cleaner

# Cleaning Tools

- **White nylon scrubber sponge** as an abrasive tool for scrubbing surfaces. If it doesn't work, use a more abrasive tool, such as **very fine steel wool**. It's important to not scratch the surface, so always use tools with liquid, be gentle, and test for scratching.
- Old 100% cotton clothing, diapers, or towels for dusting and cleaning; or try a **microfiber cleaning cloth**
- **Toothbrush** for cleaning small crevices
- **Scrub brush** (large) with stiff bristles for cleaning tile grout
- **Rubber gloves** to protect your hands
- **Goggles** to cover your eyes
- **Plunger and snake** for clogged drains
- **Squeegee** with replaceable blades for drying mirrors, glass doors, and windows
- **Very fine steel wool** for scrubbing more resistant dirt
- **Pumice bar** for cleaning toilet bowl stains
- **Sponge mop** with attached scrub pad
- **"Handyman's" apron** or **plastic bin** to carry your tools and products around with you
- **Single-edge razor blade** or **paint scraper**

# Cleaning Tips

*The more frequently you clean, the less effort it will take, because cleaning more frequently will help prevent dirt, harmful bacteria and mold from building up. In addition, frequent cleaning helps keep pests such as ants and roaches under control.*

*Consider the following tips:*

- **Frequently:** Wash dishes, clean kitchen sink, counters, and stovetops. Wipe showers after each use. Sweep or vacuum floors and carpets.
- **Regularly:** Wash hard surface floors. Dust furniture. Clean bathroom sink, bathtub, shower, and toilet.
- **Occasionally:** Wash windows. Clean refrigerator, kitchen cabinets, garbage can, and oven.
- **Immediately:** Clean up spills - the longer you leave the spill the more the spill will set and stain. Use a cloth or sponge to absorb spills on carpets, rugs, and furniture, then swab or wipe the spill with a damp cloth.
- Use the right cleaning tools and keep them in good working order.
- Don't mix cleaning products and tools - use one sponge for toilets, and another for sinks and showers.
- Wash rags, sponges, and brushes in the clothes washer once a week. Bacteria collect quickly in cleaning tools, so it's very important to wash them regularly.

Want some professional tips?

Check <http://www.cmmonline.com> and similar on-line trade publications that janitors read.

# Homemade Cleaning Products

*You can make cleaning products using basic ingredients such as baking soda and lemon juice, as discussed later in this guide.*

*When making and using safer cleaning products, keep these important points in mind:*

- Homemade products should be labeled to identify the ingredients in your mixture. **Never use food and drink containers for mixtures, as this is a common cause of accidental poisoning.**
- Mixtures should always be kept in a child-resistant container and out of reach of children and pets, such as in locked cabinets, and not where food is stored.
- Avoid using dairy products, such as mayonnaise or milk, for cleaning purposes because they may encourage bacterial growth and cause health risks.
- When using a product, test a small inconspicuous area first to see if results are satisfactory.

*Recipes for homemade cleaning products can be found in various websites and home product books listed in the Resources section (page 11).*

# Safety Tips: Selecting Products

*We encourage you to use the safer methods listed in this guide. If you already have potentially hazardous cleaning products on hand, or if you feel you must buy them for a specific purpose, follow these safety tips:*

## **Read the Label**

- Look for these words:

*Caution, Warning, or Danger*

These words are placed on product labels to alert consumers to acute toxicity of the products, “Caution” being the least toxic and “Danger” being the most toxic. However, these signal words pertain only to the **immediate** (acute) hazard of the product. In most instances, labels do not provide information about the **long-term** (chronic) hazards to humans or the environment, such as whether a product contains a chemical suspected of causing birth defects, kidney or liver damage, cancer, or lung disease.

- Avoid products with labels that say things like:
  - *Harmful or fatal if swallowed*
  - *Use only in a well-ventilated area*
  - *Flammable or combustible*
  - *Do not use near heat or flame*
  - *Do not smoke while using*
  - *Causes severe burns on contact*
  - *Can burn eyes or skin*
- Buy only the amount you need, instead of the larger, economical size. This will minimize the potential for spills as well as the potential for excess products.

# Safety Tips: Ingredients to Avoid

*Some ingredients have more risk of harming you or the environment than others and should be avoided. If you decide to use a retail product, read the labels and try to choose products that don't have the harmful chemicals shown here in this table. If that's not possible, then use **extreme care** - wear gloves and goggles, have a good supply of fresh air, and keep children, pets and other potential sources of distraction away.*

| Ingredients to Avoid  | Hazards   | Found In   | Alternatives             |
|---|---|--|--------------------------|
| NMP (n-methyl pyrrolidone)<br>Perchloroethylene<br>Petroleumnaphtha | Carcinogen, reproductive harm, central nervous system, skin-absorbing (liver, kidney) | Carpet cleaners, upholstery cleaners, metal cleaners | See pages 24 and 27      |
| Potassium hydroxide<br>Sodium hydroxide                             | Corrosive - causes blindness  | Oven cleaner, drain opener                           | See pages 20 and 21      |
| Hydrochloric acid<br>Phosphoric acid                                | Corrosive - causes blindness  | Toilet bowl cleaner                                  | See page 23              |
| Glycol ethers,<br>such as butoxyethanol                             | Skin-absorbing poison (liver, blood, kidneys)   | General purpose, glass, and floor cleaners           | See pages 16, 18, and 25 |

# Resources

Check the following websites and books for homemade cleaning remedies, and for additional information about the safety of retail cleaning products and the ingredients they contain:

| <b>HOMEMADE<br/>CLEANING<br/>PRODUCTS</b> |  |
|---|--|
| <b>CHEMICAL SAFETY</b>                    |  |
|   | <p><i>Clean and Green</i>, by Annie Berthold-Bond, 1994. Ceres Press.</p> <p><i>Clean House, Clean Planet</i>, by Karen Logan, 1997. Simon and Schuster Pocket Books.</p> <p><i>Home Safe Home</i>, Debra Lynn Dadd, 1997. Tarcher/Putnam (Putnam Publishing Group), 1997.</p> <p><a href="http://es.epa.gov/new/contacts/newsletters/shopping.html">http://es.epa.gov/new/contacts/newsletters/shopping.html</a></p> <p><i>The Safe Shopper's Bible</i>, David Steinman and Samuel Epstein, MD, 1995. Macmillan</p> <p><a href="http://www.herc.org">www.herc.org</a> Scroll down to "Make the connection..." for homemade products</p> <p><i>The Green Guide</i> - <a href="http://www.thegreenguide.com/Macmillan">http://www.thegreenguide.com/Macmillan</a></p> <p><i>Janitorial Pollution Prevention Project</i> - <a href="http://www.westp2net.org/janitorial/jp4.htm">http://www.westp2net.org/janitorial/jp4.htm</a></p> <p><i>Cleaning and Maintenance Management</i> - <a href="http://www.cmmonline.com">http://www.cmmonline.com</a></p> <p><i>Green Seal</i> - <a href="http://www.greenseal.org/recommendations/CGR=GPCleaners.pdf">http://www.greenseal.org/recommendations/CGR=GPCleaners.pdf</a></p> <p><i>Washington Toxics Coalition</i> - <a href="http://www.watoxics.org">http://www.watoxics.org</a></p> <p><i>City and County of San Francisco</i> - <a href="http://www.sfgov.org/sfenvironment/aboutus/toxics/epp/index.htm">http://www.sfgov.org/sfenvironment/aboutus/toxics/epp/index.htm</a></p> <p><i>Material Safety Data Sheets resource</i>: <a href="http://www.ilpi.com/msdsment/aboutus/toxics/epp/index.htm">http://www.ilpi.com/msdsment/aboutus/toxics/epp/index.htm</a></p> |

# Safety Tips: At Home and After Use

*When using any cleaning product, be sensible about protecting yourself from harmful effects of chemicals. Even the "safer" products discussed in this guide can irritate your skin and burn your eyes if you're not careful.*

## At Home

- Request the Material Safety Data Sheet (MSDS) by calling the (800) customer service number on the label, or check the internet for MSDS information (<http://www.ilpi.com/msds/>).
- Use only the prescribed amount - more is **not** always better.
- Use products in well-ventilated areas. Breathing too much of products such as chlorine, drain cleaner, oven cleaner, or solvents can irritate the skin, lungs, eyes, and/or cause dizziness.
- Keep children and pets away from where you are cleaning to avoid distraction.
- Don't clean and cook at the same time to avoid contamination.
- Wear protective clothing, gloves and goggles. When finished, remove protective clothing and wash separately from regular clothing.
- Use **extreme care** when using toxic or caustic products. Follow the safety precautions printed on the label without exception, particularly with respect to the use of protective clothing, gloves, and goggles and maintaining good ventilation.
- **Never mix products containing chlorine bleach with those containing ammonia or acid. These mixtures create a lethal poisonous gas.**

## After Use

- Keep lid tightly closed. If a child-resistant lid is provided, use it.
- Keep products in original container so you know what they are.
- Store products out of reach of children and pets, such as in a locked cabinet, and not where food is stored.
- **Dispose of chemicals at your local Household Hazardous Waste Facility**, even though the label instructions may dictate throwing the product into the trash. See pages 13 through 15 for more information.
- Never dump chemicals down storm drains or catch basins.

# Safe Disposal

Despite what some product labels say, many household products, including paints, motor oil, garden products, and certain cleaning products, should not be disposed of down sinks, toilets, floor drains, or discarded in the garbage. Some household products contain toxic pollutants which, when disposed of in indoor drains, pass through the treatment plants and end up in San Francisco Bay and the Pacific Ocean, harming fish and wildlife. Throwing away household products in the garbage can harm garbage collectors, and, once in the landfill, may eventually contaminate groundwater and the atmosphere, and poison wildlife.

**We encourage you to dispose of your household hazardous waste safely and conveniently through your local Household Hazardous Waste Facility. Call these numbers below to find out facility operation hours or collection event locations and times in your area:**

|   |                |
|---|----------------|
| Alameda County . . . . .                | (800) 606-6066 |
| Contra Costa County                     |                |
| Central County . . . . .                | (800) 646-1431 |
| East County . . . . .                   | (925) 756-1900 |
| West County . . . . .                   | (888) 412-4400 |
| Marin County . . . . .                  | (415) 485-6806 |
| Novato residents only . . . . .         | (415) 892-7344 |
| Napa County . . . . .                   | (800) 984-9661 |
| San Francisco City and County . . . . . | (415) 330-1425 |
| San Mateo County . . . . .              | (650) 363-4718 |
| Santa Clara County . . . . .            | (408) 299-7300 |
| Palo Alto residents only . . . . .      | (650) 496-6980 |
| Solano County . . . . .                 | (707) 421-6765 |
| Sonoma County . . . . .                 | (707) 565-3375 |
| Santa Rosa, Sebastopol                  |                |
| Rohnert Park, and Cotati . . . . .      | (707) 543-3369 |

**Disposing of chemical products at the Household Hazardous Waste Facility helps prevent water pollution. Call 1-(888)-BAYWISE for additional water pollution prevention information in your area.**

# Disposal Guidelines for Household Hazardous Waste Facilities

*Follow these important guidelines when using the Household Hazardous Waste services:*

- Guidance about what to bring to the Household Hazardous Waste Facility is on the next page. See *Drain and Garbage Can's and Can'ts*.
- Do not transport more than 5 gallons or 50 pounds of hazardous waste in your vehicle. State law prohibits transportation of larger amounts without a license.
- Do not mix products.
- Keep all chemicals in their original container. If the original container is not available, then label the container with its ingredients.
- Make sure lids are sealed tightly.
- Prevent leakage. Pack containers in plastic or newspapers and put them into a larger container that can hold the product if a leak occurs.
- These items cannot be accepted at the local facilities: radioactive materials (such as smoke alarms), explosives, reactives, and pressurized gas cylinders over 20 pounds.

**Business owners** with hazardous waste may call the telephone numbers listed on Page 13 and ask for information on Very Small Quantity Generator disposal.

# Drain and Garbage Can's and Can'ts

*When in doubt about how to dispose of a product, call your local Household Hazardous Waste Collection Facility.*

## **What *Can* Go Down the Drain**

- Homemade cleaning products are safe to dispose down the drain without risk of chemical, physical, or biological harm to plumbing and wastewater treatment processes.

## **What *Can* Go in the Garbage**

- Any empty container (5 gallons or less in capacity) that has no continuous flow of liquid - it's both empty and dry - is safe to dispose in the garbage.

## **What *Can Not* Go Down the Drain or in the Garbage**

*The following should not be disposed down the drain or put in the trash. Containers of unwanted products should be taken to the Household Hazardous Waste Collection Facility:*

- Cleaning products (e.g., products with words like "toxic", "corrosive", "flammable", or "ignitable" mentioned on the label)
- Automotive products (e.g., motor oil, antifreeze, brake fluids)
- Garden supplies (e.g., pesticides, herbicides, fungicides)
- Paints and solvents (e.g., latex and oil-based paints, thinners, strippers) - Do not clean oil-based paintbrushes in the sink
- Art and hobby supplies (e.g., glues, photographic chemicals, paints)
- Medical waste, expired or unwanted medications, and hypodermic needles

# ALL-PURPOSE CLEANERS



*All-purpose cleaners can be used for counters, cabinets, stovetops, and other general areas. You may not need all of the specialized cleaners on the market. You can make cleaners on your own, or purchase safe retail cleaners.*

## Safer Methods

- Add 1/4 to 1 teaspoon of vegetable-based dishwashing soap or other liquid soap (such as castile soap) to 8 ounces of water in a spray bottle and clean with a wet sponge or cloth. Wipe dry.
- Make a solution of 9 parts warm water to 1 part white vinegar. Wipe with sponge or soft cloth. Make a stronger solution for tougher jobs.
- Sprinkle baking soda or mix baking soda with water and scrub with a wet sponge. If the baking soda leaves a residue, rinse with cold water and dilute vinegar. Dry with a cloth.
- For stains on counters, squeeze fresh lemon juice, let sit for 45 minutes, sprinkle baking soda, and rub with sponge or soft cloth.
- Look for retail all-purpose cleaning products that are not hazardous. For example, use products with d-limonene (caution if you are allergic to citrus), amine oxide or methyl soyate - use with care (keep out of your eyes - wear goggles).

## Higher Risk Methods

- Products with butoxyethanol, or similar solvents will work, but use the products with these chemicals with **extreme care**. Wear gloves and goggles, and have lots of fresh air.

## Prevention

- Clean up spills immediately.
- Clean counters and stovetops daily.

*Be careful using abrasive cleansers on any surface - especially plastic, glass, porcelain, wood, painted surfaces, or stainless steel - they may scratch the surface and/or remove the finish.*

# SCOURING CLEANSERS



*Some retail scouring cleansers contain silica or chlorine bleach. Silica can be dangerous if inhaled. Mixing cleansers containing chlorine bleach with other products containing acids or ammonia can create a poisonous gas. You can make effective scouring cleansers yourself or purchase retail products without silica or chlorine.*

## **Safer Methods**

- Sprinkle baking soda or make a paste with baking soda and a small amount of liquid soap. Scrub with a damp white nylon scrubbing pad, soft cloth, sponge, or very fine steel wool. Test before using to make sure you don't scratch the surface. Rinse with vinegar if necessary. Dry with a cloth.
- Retail scouring cleansers are available that do not contain silica or chlorine.

## **Higher Risk Methods**

- Use of retail scouring cleansers that contain silica or chlorine.

## **Prevention**

- Cleaning regularly helps to prevent build-up of grime.

*Be careful using abrasive cleansers on any surface - especially plastic, glass, or porcelain, wood, painted surfaces, or stainless steel - they may scratch the surface and/or remove the finish.*

# GLASS CLEANER



*Glass cleaners range from mild detergents to heavy-duty products with strong solvents. Some retail products are mists or aerosols, which are unhealthy to breathe. For aerosols, you end up paying extra just for the propellants. Water, as well as dilute vinegar, is just as effective, if not better, than most retail glass cleaners on the market.*

## Safer Methods

- For routine window cleaning, apply water with a soft cloth, squeegee dry, and rub with newspaper for a streak-free window (wear gloves to prevent ink from blackening hands).
- If the windows are really dirty, mix 1/4-cup vinegar with water in a quart spray bottle. Use a white nylon scrubbing pad for stubborn dirt.
- To remove greasy fingerprints, put 1-tablespoon reconstituted (or strained fresh) lemon juice with warm water in a quart spray bottle.
- Try products containing amine oxide, mild detergents, vinegar, or similar lower toxicity ingredients. (Keep out of your eyes - wear goggles).

## Higher Risk Methods

- For removing heavy grease or oil, products with butoxyethanol or alcohol may be effective. If you opt to use these, use **extreme care** because the ingredients can absorb through your skin, and then harm your blood, liver, and kidneys.

## Prevention

- Streaking is often a sign that the window cleaning product is too strong. Try adding a little water.
- Do not clean windows in direct sunlight as this can also cause streaking.
- Did you know that there are glass window products that repel dirt? Search the web for 'self-cleaning glass'.

# KITCHEN CLEANERS



*You can do most kitchen cleaning with a mild cleaner/disinfectant containing less than 0.2% quaternary ammonium chloride. To remove stubborn countertop rings or spots, use a mild scouring cleanser.*

## Safer Methods

- Homemade glass cleaner or general purpose cleaner works well on chrome, porcelain, stainless steel, and other kitchen surfaces.
- Use liquid kitchen cleaners containing amine oxide, mild detergents, or methyl soyate.
- To disinfect, use products with 0.2% quaternary ammonium chloride in either a towel or trigger spray bottle.

## Higher Risk Methods

- Use a silica scouring powder with bleach - place the powder onto a wet rag and take care to not inhale the dust. Be careful using silica powder on plastic, wood, paint, or stainless steel. The silica may scratch the surface or remove the finish.
- For removing heavy grease or oil, products with **butoxyethanol** or alcohol may be effective. If you opt to use these, use **extreme care** because the ingredients can absorb through your skin, and then harm your blood, liver, and kidneys.

## Prevention

- Cleaning regularly prevents grime build-up.
- Install a plastic or glass backsplash around your stove and food preparation counters.



*Most retail oven cleaners contain sodium hydroxide, or lye, one of the most dangerous substances for household use. Sodium hydroxide mists can blind you, burn your nose and mouth, and damage your lungs.*

### Safer Methods

- For lightly soiled ovens, make a thick paste with water and baking soda. Scrub well with a white nylon scrubbing pad. If the oven is greasy, add a small amount of liquid soap.
- To remove spots, use very fine steel wool. A wet cleaning pumice bar can be used to remove the toughest spots. Be careful not to scratch the surface.

### Higher Risk Methods

- Retail oven cleaners are available that are non-caustic and do not contain lye. Avoid products with the word "Danger" on the label.
- Tackle burned-on spots with a plastic scraper. Next, use a silica scouring powder without bleach. Place this powder on a scrubbing pad, scour the oven surface, and then thoroughly rinse. Take care to not inhale the dust.
- Products with butoxyethanol or other glycol ether can remove heavy grease. Use **extreme care** because these ingredients absorb through skin, and may harm your blood, liver, and kidneys.
- Avoid cleaners with sodium hydroxide or ammonium hydroxide, particularly in aerosol form. These chemicals can burn your skin or blind you. Inhaling these chemicals can irritate your windpipe.

### Prevention

- Preventing spills is the easiest and safest way to keep your oven clean - catch drips by placing aluminum foil or a metal tray underneath.
- Spills are easier to clean up if they are attacked before getting baked on.
- Clean the oven regularly.

# D R A I N S



*Prevention is the key to keeping drains from becoming plugged. It is easier and more sensible than waiting for a crisis, and much safer than using chemical drain openers.*

## Safer Methods

- For clogged drains, use a plunger or snake. Before using a plunger, be sure there is water standing over drain. To get an airtight fit, apply petroleum jelly on rim. Push and pull vigorously. When using a snake, first remove all strainers or cross bars. Gently rotate snake and when resistance is felt, withdraw material carefully.
- For roots in pipes, contact a plumber or root removal specialist to mechanically remove the roots.

## Higher Risk Methods

- Drain openers can quickly blind you or cause other serious injury. Avoid products with sodium hydroxide, which can burn and blind you. Use **extreme care** if you decide to use these products, and be sure to wear goggles.

## Prevention

- Put a strainer or filter in all drains.
- Never pour any type of grease down your drains because it can congeal to the plumbing.
- When cooking, drain grease directly into a can or jar and chill in the refrigerator. Once the grease has solidified, toss the containerized grease in the trash.
- Scrape or wipe grease and food scraps from dishes into the garbage before washing dishes.
- Avoid using the garbage disposal. Food scraps often contain grease, which can congeal to the plumbing after passing through the garbage disposal.
- Use an enzyme-based "build-up remover" to break down grease and prevent clogs from forming. (These products are not designed to clear a blocked drain.)
- Once a week, put a handful of baking soda down the drain followed by hot water.
- Woody vegetation should be planted away from sewer lines to prevent blockages from roots.

# BATHROOMS



*Bathroom cleaners are designed especially to deal with soap scum and mildew on tubs, tiles, and showers. Many retail bathroom cleaners are also disinfectants, which temporarily kill germs on surfaces. Use the mildest product that meets your personal standards.*

## Safer Methods

- To clean the sink, shower, tub, and tile grout, soak with diluted liquid soap, and then sprinkle with baking soda, and scrub with a white nylon scrubbing pad and rinse. Use a stiff toothbrush or scrub brush for tiles. Rinse any residue with dilute vinegar and cold water.
- To clean mold from surfaces, use a mixture of 1-teaspoon of borax in a quart of hot water in a spray bottle. Wipe with a damp cloth or sponge.
- To remove soap scum from glass shower doors, soak surfaces with diluted liquid soap and scrub with a white nylon scrubbing pad. For serious soap scum, use very fine steel wool. Rinse with cold water and, if necessary, add vinegar to rinse.
- To disinfect, use products with 0.2% quaternary ammonium chloride.

## Higher Risk Methods

- Select a product that is made specifically to handle water spots, soap scum, and mildew. Avoid products with alcohol or glycol ether (e.g., butoxyethanol) unless the area is well-ventilated.
- Bathroom cleaners with bleach, acid, or caustic can quickly blind you or cause other serious harm. Avoid products with these ingredients if you can; otherwise use them with **extreme care**.

## Prevention

- Bacteria, mildew, and mold generally cannot live without dampness, so keep surfaces dry by frequent wiping (use a squeegee in the shower) and keeping the bathroom well-ventilated.
- Clean the bathroom frequently.

# TOILET BOWLS



*You may not need a special cleaner just for the toilet. Baking soda or a non-chlorine scouring powder should do the job. Toilet bowls generally don't stay germ-free for long no matter what you use.*

## Safer Methods

- To clean, scrub with baking soda and/or liquid soap, or non-chlorine scouring powder.
- To remove stains, pour 1/4- cup of borax into bowl and let sit for at least 30 minutes or overnight. Scrub bowl well and then flush.
- To remove mineral deposits, scrub with bar of cleaning pumice. (Test for scratching before cleaning.)
- To clean exterior toilet area, spray with liquid soap diluted in water. Check under toilet tank and all crevices. Dry with a cloth. For heavy dirt, see *Scouring Cleansers* (page 17).

## Higher Risk Methods

- Toilet cleaners with bleach, acid, or caustic chemicals can quickly blind you. Use **extreme care** when using these products.
- Many retail toilet bowl cleaners are strong acids that can burn skin and eye tissue. Only use acid products if your toilet has hard water scale or other tough deposits you want to remove. Take **extreme care** with such chemicals, and **be sure not to mix one type of product with another.**

## Prevention

- Clean the toilet frequently, perhaps weekly or more. The bowl won't stay germ-free for long. Frequent, thorough cleaning is the key.
- Consider a non-bleach tank insert if you don't have time for regular cleaning.

# CARPETS



*Carpets need step-wise cleaning: frequent vacuuming, spot cleaning for spills, and occasional steam cleaning for removing deeper soil and dust. This approach is good for upholstery, too.*

## Safer Methods

- Vacuuming - Dirt accumulates just inside doorways, next to furnace cold air returns, and in closed rooms. Spend extra time vacuuming these areas.
- Spills - Wipe up quickly before the stain becomes permanent. Use a dry rag or paper towel to soak up the spill. The next step depends on what was spilled:
  - using water on a rag may remove the rest of the stain;
  - tackle oil or grease with your general purpose cleaner;
  - use a cleaner and odor remover from a pet store for pet messes;
  - use cleaners specialized to neutralize and dissolve catsup, mustard, coffee and similar foods.

## Higher Risk Methods

- Steam Cleaning - Most steam cleaning chemicals are only moderately toxic. However, it's still important to keep these products off your skin, out of your eyes, and away from children and pets.
- Check your carpet manufacturer's website for a spot remover that will match what was spilled, and won't harm the carpet. **Many spot removers are very toxic, so use them with extreme care.**
- Avoid spot removers with **perchloroethylene**. This chemical is a carcinogen and there is no way to effectively protect yourself. If you have any products with perchlorethylene, make a point to bring it to your Household Hazardous Waste Facility.

## Prevention

- Prevent dirt from being tracked into the house by placing mats in doorways.
- Vacuum frequently.



*Floor care products include dust mop sprays, liquid cleaners, and finish restorers. Many of these chemicals have significant health and environmental impacts, and should be used sparingly and with **extreme care**.*

### **Safer Methods**

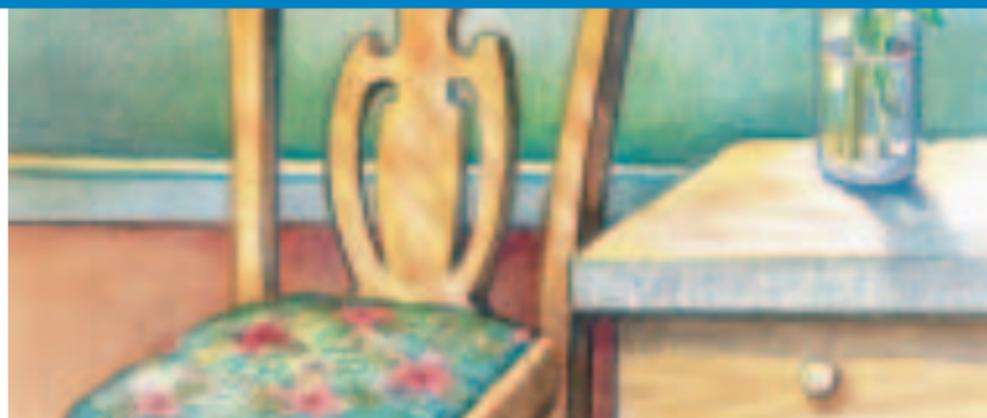
- Mop with a dilute vinegar solution. Use a stronger solution for tougher jobs.
- To cut grease on vinyl floors, dilute with a small amount of liquid soap with water. Mop then rinse with dilute vinegar solution.
- Damp mop sealed wood floors with vinegar and water. Dry immediately with a cloth.
- To remove black heel marks on floors, rub with a pencil or typewriter eraser.

### **Higher Risk Methods**

- Aerosol sprays help your dry mop pick up more dust. However, these sprays contain solvents that affect your nervous system. Try to use pre-treated mops and mopping towels instead of aerosols.
- Wet mopping products come in concentrated forms that require diluting with water. Most concentrates can harm your eyes and skin, so wear protective gloves and goggles.
- Floor finish restorers often contain ingredients that cause reproductive harm and other problems. Hire a professional for deep maintenance work. Otherwise, use **extreme care**, and follow precautions listed on the MSDS.

### **Prevention**

- Sweep or vacuum floors frequently to eliminate the need for using chemicals.
- Scrub floors regularly.
- Use area rugs to protect the floor.
- Prevent dirt from being tracked into the house by placing foot mats at doorways.



*Rather than adding another special-purpose cleaner to the clutter under your sink, it's far less expensive to use a rag or sponge moistened with water and a little all-purpose cleaner or even a plain damp rag to clean your finished furniture. Before using any product, test a small inconspicuous area first to see if results are satisfactory.*

## **Safer Methods**

- To dust, wipe along the grain with a soft cloth.
- To clean most spills and fingerprints, rub with a soft cloth, lightly moistened with water. Buff immediately with a soft dry cloth.
- For dirtier surfaces, moisten a soft cloth with a small amount of liquid soap or all-purpose cleaner diluted in water. Buff immediately with a soft dry cloth.
- Antiques and teak furniture may require special care - consult an expert.

## **Prevention**

- Dust frequently - regular dusting helps to prevent dirt from accumulating.

# METAL POLISHES



*Retail metal cleaners and polishes can vary widely in the hazards they pose. Try the safer methods listed below. Use a soft cloth.*

## Safer Methods

- For copper and brass, saturate a sponge or soft cloth with vinegar or lemon juice, sprinkle salt on sponge and rub. Rinse thoroughly and dry, otherwise it will corrode rapidly.
- For silver, rub gently with toothpaste. Rinse with warm water, then dry with a soft cloth.
- For chrome, wipe with dilute vinegar. Rinse with water, then dry. To clean oily stains on chrome, wipe with a small amount of liquid soap first, followed by dilute vinegar. Polish with dry cloth.
- For stainless steel, mix baking soda with water and clean. You can also add a small amount of liquid soap. Rinse with dilute vinegar, buff with a dry cloth. Mineral deposits in tea kettles can be dissolved by soaking in a dilute vinegar solution.

## Higher Risk Methods

- For copper, brass, and silver use a product with ammonia or a mild acid. Rinse thoroughly and dry, otherwise the surface will tarnish rapidly. Wear protective gloves and eye covering, and be sure the room is well-ventilated.
- Avoid metal cleaners with toxic ingredients such as **perchloroethylene** (dry cleaning fluid), petroleum naphtha, or NMP because their fumes have the potential for cancer or reproductive harm and there is no way to effectively protect yourself.

**Perchloroethylene** is particularly toxic. If you have any products with **perchloroethylene**, make a point to bring it to your Household Hazardous Waste Facility.

## Prevention

- Store silver behind glass, in cloth or plastic bags, or plastic wrap. Do not wrap silver with rubber bands because they can discolor the silver.

# Thanks

The San Francisco Bay Area Pollution Prevention Group (BAPPG) has developed this guide to provide information on safer cleaning methods and less hazardous cleaning products for the home. Our goal is to reduce the amount of toxic pollutants discharged into sewer systems and disposed of in the garbage. Any mention of individual products, vendors, or technologies does not constitute an endorsement by the San Francisco BAPPG.

The San Francisco BAPPG would like to thank Thomas Barron, technical advisor for this revision, and the following agency representatives for valuable input: Gail Glen, City of Sunnyvale; Stephanie Hughes, City of Palo Alto; Bonnie Lowe, Central Contra Costa Sanitary District; Gina Purin, Marin Countywide Stormwater Pollution Prevention Program, Barbara Ruff, Fairfield-Suisun Sewer District; Gayle Tupper, East Bay Municipal Utility District, and Karl Bruskotter, City of Santa Monica. Also thank you to Rebecca Bauen, Women's Action to Gain Economic Security.

We would also like to thank the following contributors for the original *Clean It!* guide: City and County of San Francisco Public Utilities Commission, Water Pollution Prevention Program and the Hazardous Waste Management Program; Phillip Dickey, Washington Toxics Coalition; Gina Ryerson, professional low toxic housecleaner; Brian Johnson, City of Santa Monica; and Pamela Hodgins.

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