

Cleaner cleaners in the home

By **Jill Hahn**/ Special To The Tab

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The eye-watering smell of chlorine. The tang of ammonia. It's great to come home to a clean house. Breathe deep. Or maybe you'd better not.

Cleaning products are among the most hazardous chemicals in your home. And because the chemicals found in cleaners are not as easily dispersed indoors as outdoors, a 5-year EPA study found concentrations of 20 toxic compounds to be as much as 200 times higher inside homes and offices than outdoors.

Then there's the environmental impact.

Take chlorine bleach, that ever-popular cleaning product. There's a reason why bleach is great at killing mold and bacteria: it's toxic. Its fumes are a respiratory irritant. And when bleach, also known as sodium hypochlorite, runs down the drain, it can react with other chemicals to form toxic or carcinogenic chlorinated organic compounds, including chlorofluorocarbons which damage Earth's ozone layer.

Sodium hypochlorite is just one of a buffet of toxic chemicals you bring into your home with your cleaning supplies. Glance at a few Material Safety Data Sheets that the Occupational Health and Safety Administration requires companies to publish: Formula 409 Cleaner Degreaser: "Reports have associated [exposure to ethylene glycol monobutyl ether with] blood and bone marrow damage..." Lysol Brand Basin Tub & Tile Cleaner: "This product contains [diethylene glycol monobutyl ether] which... has been reported to cause liver, kidney, spleen, thymus and blood effects in laboratory animals when exposed to high levels..." Parsons Ammonia All Purpose Cleaner: "Mild inhalation of ammonia vapors may cause irritation of the nose and throat with coughing and sneezing. A more severe exposure may cause ... labored breathing, and pulmonary edema."

Not good.

But if you don't snort the ammonia, or bathe in the Lysol, are these chemicals really a problem? Research shows that they can be. Volatile organic compounds (VOCs), such as xylene, ketones, and aldehydes, are found in many aerosol products and air fresheners. In one study, babies less than six months old in homes where air fresheners were used on most days had 30 percent more ear infections than those exposed less than once a week.

So what is the conscientious homemaker to do? The first thing you need to do is retrain your nose. Your house doesn't have to smell like a chemistry experiment in order to be clean enough. Before the golden age of synthetic chemicals arrived in the mid-twentieth century, people didn't have access to such miracles of modern science as Fantastik with Scrubbing Bubbles. Instead, they used a handful of simple yet effective substances, such as soap (not detergent, which is usually petroleum-based), vinegar, baking soda, borax, alcohol, and cornstarch to deodorize, polish, disinfect, scrub, remove stains, and wash clothes. These ingredients are still available, and still effective.

And maybe we need to redefine “clean enough.” We’ve become germ-phobic, with consequences that, paradoxically, may be endangering our health. The Centers for Disease Control have shown that antibacterials such as triclosan and benzalkonium chloride, which have proliferated in household products recently, are resulting in an increase in bacteria resistant not only to those antibacterials but to antibiotics such as penicillins and cephalosporins as well. This is particularly troubling considering that, according to Stuart B. Levy of Tufts University School of Medicine, no current data demonstrate any health benefits from having antibacterial-containing cleansers in a healthy household.

In addition, evidence is mounting that people who have been raised in an environment overly protective against microorganisms may suffer from an increased frequency of allergies, asthma, and eczema.

So when you’re buying your next batch of household cleaners, what should you look out for?

First, avoid products labeled “antibacterial.” For those instances when you really need to disinfect (you’ve just spilled icky chicken water all over your countertop and you’re worried about salmonella), bleach, alcohol, or peroxide will kill those germs without selecting for resistant bacteria.

Don’t buy products with bleach added. If you want chlorine bleach in the house, buy a small bottle and use it sparingly, only when something less toxic won’t work. Otherwise, look for oxygen-based bleach.

Examine labels, and if a product has a VOC concentration higher than 10% of its weight, put it back.

Choose products with a phosphates concentration of 0.5% or less (phosphates aren’t a threat to your immediate health, but they wreak havoc on the health of the waterways near your house). Even if you alternate use of a low-phosphate product with use of a conventional cleaner, it’s an improvement.

Which is a rule to live by. Small steps count. If you succeed in reducing, rather than eliminating, your dependence on toxic chemicals in the home, you’re still doing yourself, your family, and the environment a big favor. And who knows, someday you may find that the fresh, orangey smell of citrus oil means a clean house, and the smell of chlorine only reminds you of a swimming pool.

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