Questions answered by Environmental-Health Nurse, Karen Bowman, adapted from Grist Environmental News & Commentary (www.grist.org)

Q. **You mention swapping out household products -- what are the top five that you'd recommend getting rid of?**

A. First, ditch the drain cleaners and oven cleaners -- eww! These chemicals are very caustic and can burn the skin, cause permanent damage to the respiratory tract, and, if splashed in the eyes, cause blindness. To clean drains you can use a snake or do routine cleaning maintenance by placing one-quarter of a cup of baking soda down the drain followed by half a cup of white vinegar. Wait 10 to 15 minutes, then flush with boiling water. I learned this from my 87-year-old neighbor. The chemical reaction of a base (baking soda) and an acid (vinegar) creates a bubbling effect that can clean the drain and remove small clogs of hair, grease, etc. I have a self-cleaning oven, which is a great engineering control. If you don't have one, there are safer alternative oven-cleaning products by Seventh Generation.

Swap out that blue window cleaner for one cup white vinegar mixed in with one gallon of water. Clean the window with newspaper. Streak-free every time -- even for me, and I'm the worst window cleaner. The blue cleaner can contain ammonia, which is caustic to lungs, skin, and eyes. If you don't want to make it, I suggest Seventh Generation window cleaner.

Swap out the powdered cleaners with bleach for a baking soda, lemon, and water mixture, or Bon Ami. Still, though, be cautious when pouring any cleaning powder onto a surface. We want to reduce

the amount of particulates released into the air to reduce exposure through inhalation.

Try to cut your bleach use to minimal or none. I know, I struggle with this too. I understand bleach is a household word synonymous with "clean, sterilized, and white," but because of its "commonness," people overuse it and do not treat it with the respect it deserves. It's very toxic to human and environmental health; I've treated many people for sodium hypochlorite (bleach) exposure. Health and safety measures should be taken for the use of bleach in the workplace; insist employees wear a respirator, safety face shield, rubber gloves, and apron. Mix small amounts using a dilution of 1 to 100, which will still clean and sterilize effectively. For home laundry, you can use a non-chlorine bleach. Seventh Generation's non-chlorine bleach, all-purpose cleaner, and toilet cleaner remove stains pretty well. If you want to sanitize, use isopropyl alcohol 70 percent or a good soap. Murphy's soap is great, nontoxic to the lungs and skin, and smells clean and fresh. Dr. Bronner's soap is another stock item in my house.

Do we need to have our houses smell like "meadow mist," "evening at the beach," or "springtime in the Rockies?" No. It would be nice to have fresh, clean air every so often, but I don't think we need a fake chemical smell in the house. Research is now showing that household air can be more contaminated with environmental toxicants than outside air, from PBDE-contaminated house dust and fumes from carpets, paint, cleaners, etc. Periodically open the house up for an hour or so. Also, make sure plenty of sunlight gets in. UV light kills bacteria, which can also create funky smells. I think it's good for the spirit too! If you must have some "smelly smell," try organic essential oils like lavender, lemon, or rosemary. Ask others first though -- just

because they're organic essential oils doesn't mean people can't be sensitive to them.

I think it is critical to remember that even though cleaning alternatives may be green or made with common household items, you still need to protect yourself from exposure. Wear protective eyewear and gloves. Because I have severe asthma, I sometimes wear a dust mask or N-95 respirator when using powders, or use a squirty bottle. Please, read instructions on store-bought products thoroughly, and know what to do in case of emergency. Know your poison control telephone number too.

Q. **You say that the majority of chemicals have little to no human- or environmental-health data. Are there any organizations or programs out there to gather the appropriate data and make it available to the public? -- Sarah Bronstein, Seattle, Wash.**

A. There are over 86,000 chemicals on the market now. When the Toxic Substance Control Act was established in the early 1970s, they grandfathered in over 80,000 chemicals so they weren't tested for human- and environmental-health effects. From 2,000 to 3,000 new chemicals come onto the market every year. NIOSH certainly has *some* data on the health effects of *some* chemical exposures; the Centers for Disease Control and the Occupational Safety and Health Department should also provide some data. The U.S. EPA might be a resource, along with local departments of ecology and health. And, of course, environmental-health advocacy groups like the Environmental Working Group, U.S. Public Interest Research Group, Washington

Toxics Coalition, and the Collaborative on Health and the Environment are excellent sources of information.

You have to kind of piece together the little data we have. Remember, we haven't studied how synergy or multiple exposures play on human health, and we just now understand that death isn't necessarily the worst end point either. Chronic diseases like asthma, cancer, autism, Alzheimer's, and other neurobehavioral diseases are rapidly increasing. Washington state has the highest breast cancer rates in the United States and also the highest rates of multiple sclerosis in the world. We've got to be diligent in pushing for a chemical policy that phases out the highly toxic, highly persistent, and highly accumulative chemicals first, supports green chemistry research, confirms chemicals are safe to humans and the environment prior to release, and provides better data on chemicals already in the environment. We can do this. We've got to, for a healthier tomorrow and to save our most precious resource -- our children.

For the full list of Questions and Answers by Karen Bowman, visit http://www.grist.org/comments/interactivist/2007/03/19/bowman/index1.html?source=gristlist