

deliciousliving | green guide



Peter Gilham's

NATURAL



VITALITY.

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Ready, set, green

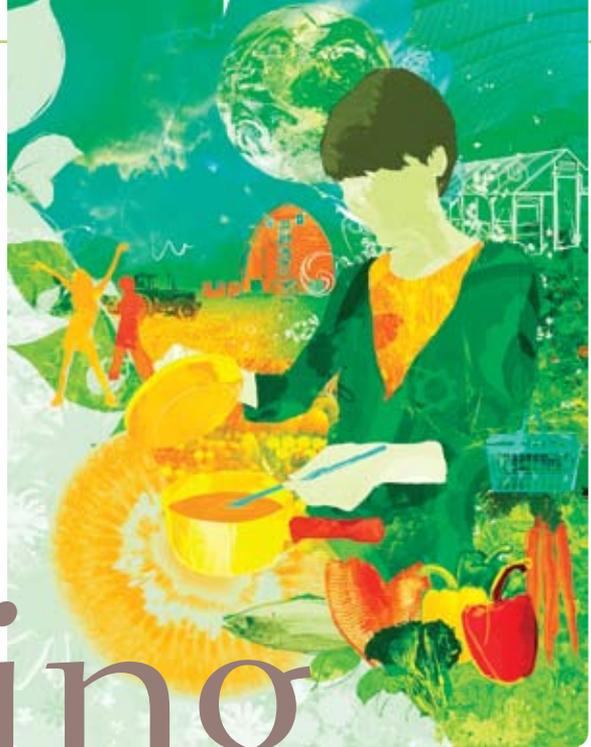


Green is trendy. Green is smart. And Kermit the Frog may have said it best: “It isn’t easy being green.” But can it be? We think so. Making simple shifts in everyday choices—what you eat, how you clean your house, the products you use to take care of your kids and pets—can make a big difference for the planet and for your personal health. We’ve packed this Delicious Living Green Guide with basics from groceries to flea collars, bedding to sunscreens. We’ll explain what to buy (and not buy) and what you need to know to live a healthy, eco-friendly lifestyle. So go ahead, green up!

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eco eating



BY HELEN OLSSON

Switching to compact fluorescent bulbs. Biking to work. These are basic tactics in the battle against global warming. But what about dinner? Food is often overlooked in the race to cut energy consumption and greenhouse-gas emissions. And yet, switching from a diet high in animal products—particularly beef—to a diet of mostly vegetables, grains, and poultry is tantamount to trading in a gas-guzzling Yukon XL for a hybrid Prius.

A meal's carbon footprint all starts with how its ingredients are produced. Before it even hits the road, the food you consume requires vast amounts of fossil fuel to grow and process: fertilizers, pesticides, farm machinery, processing, and packaging all eat up their share. In fact, transportation accounts for only 11 percent of foods' carbon footprint, while the production phase makes up 83 percent. And although all foods require energy to be produced, some require much more than others: Producing a single cheeseburger sends a hefty 10.7 pounds of carbon dioxide (CO₂) into the atmosphere. A family of four that cuts out burgers once a week saves the planet 2,225 pounds of carbon emissions a year—the equivalent of unplugging your fridge for 365 days.

Food choices for a healthier planet— and a healthier you

Unrefined plant-based foods, on the other hand, require much less energy. A veggie stir-fry of carrots, broccoli, and peppers causes only 1.5 pounds of CO₂ emissions.

“Our industrial food system has a very large ecological footprint. We need to fundamentally change the paradigm,” says Frederick Kirschenmann, a distinguished fellow at the Leopold Center for Sustainable Agriculture at Iowa State University and president of the Stone Barns Center for Food and Agriculture in Pocantico Hills, New York. That change starts at home by making meal choices with “low carbon,” rather than “low carb,” in mind.

The happy news is that a low-carbon diet is a win-win: It's good for Mother Nature, and it's good for you, too. “Personal health and planetary health are deeply connected,” says Kate Geagan, MS, RD, coauthor of *Go Green, Get Lean: Trim Your Waistline with the Ultimate Low-Carbon Footprint Diet* (Rodale, 2009). And you don't need to bake vegan casseroles in a solar-powered oven to make a difference. ▶

Eat less beef, more plant-based foods. Americans, on average, eat more than 200 pounds of meat per person each year—66 pounds of it beef. By some estimates, we eat an average of two ¼-pound burgers a week. Behind every T-bone, there’s a burning trail of fossil fuel. To start, growing the copious amounts of corn needed to feed cattle requires synthetic fertilizers and pesticides made from fossil fuels. It takes 32 pounds of feed to produce 4 pounds of beef. Then there’s the matter of planting, harvesting, processing, packaging, and transporting all that feed. Ultimately, it takes ten times the amount of fossil fuel to produce 1 calorie of beef than it takes to produce 1 calorie of grain.

What’s more, through their natural digestive process, cows belch huge amounts of methane, an even more potent heat-trapping gas than CO₂. Livestock contribute 18 percent of the planet’s total greenhouse-gas emissions (GHG)—more than all the planes, trains, and automobiles combined.

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MAKE A BALANCED CHOICE» Dine on red meat sparingly, says Geagan. The health benefits—including preventing heart disease, diabetes, and certain cancers—of eating less red meat and more fruits and vegetables are well documented. For starters, try cutting out one or two red meat-based meals per week. Geagan suggests substituting grilled portobello mushrooms for meaty burgers or simmering beans and veggies together to create a hearty chili. (For additional ideas, check out *Delicious Living’s* vegetarian recipe archives at deliciousliving.com/food/)

Eat whole foods; limit processed products. Energy-intensive processed foods, clustered in the center of the grocery store, are high in calories and low in nutritional benefit, says Anna Lappé, author of *Grub: Ideas for an Urban Organic Kitchen* (Tarcher/Penguin, 2006). “To take an apple and turn it into a frozen apple turnover requires a tremendous amount of energy,” adds Geagan. Freezing, drying, canning, and refining—as well as shrink-wrapping and boxing—take energy.

Lappé also points to the thorny issue of palm oil, an ingredient used in place of unhealthful trans fats in some “healthy” processed foods. In Malaysia and Indonesia, where nearly 90 percent of the world’s palm oil is produced, carbon-sequestering rainforest and peat bogs are being destroyed to make way for palm-oil plantations.

Did you know?

In our current system, food travels an average **1,500 miles** from field to fork.

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 U.S. agriculture currently emits about **925 billion pounds** of carbon dioxide each year from crop and livestock production.

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 Packaging is responsible for emitting **24,200 tons** of greenhouse gases every year.

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 In 2000, the global food system produced **3,800 calories** per U.S. citizen per day, up **800 calories** since 1957.

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 Sources: Cool Foods Campaign (coolfoodscampaign.org); USDA Agriculture Fact Book (usda.gov/factbook/chapter2.htm).

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MAKE A BALANCED CHOICE» Michael Pollan, author of *In Defense of Food* (Penguin, 2008), recommends shopping the periphery of the supermarket, where you find energy-efficient whole foods—fruits, vegetables, and fish. If you must buy processed products, Lappé suggests her “rule of thumb”: Avoid those with ingredient lists longer than the width of your thumb, particularly ones filled with unpronounceable ingredients.

Eat locally and seasonally; avoid air-freighted food. The fossil fuels burned to ship your lobster from Maine or your cherries from South America exact a heavy price on the environment. Flying food 5,000 miles releases more than 16 pounds of CO₂, while food that is transported less than 150 miles by truck produces less than a pound of CO₂ emissions. The issue of food miles can be complicated, however: In one study, tomatoes shipped from Spain to the U.K. had a lower carbon footprint than local hothouse tomatoes. Yet when you buy local, you’re supporting nearby small-scale sustainable farmers. ➤

The enthusiasm of the “locavore” movement is commendable, but going local won’t solve it all. The types of foods you choose still make a tremendous impact. A 2008 study in the journal *Environmental Science and Technology* found that “shifting less than one day per week’s worth of calories from red meat and dairy products to chicken, fish, eggs, or a vegetable-based diet achieves more GHG reduction than buying all locally sourced food.”

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MAKE A BALANCED CHOICE» Eat produce in season, when it is less likely to have been shipped long distances. Whenever possible, favor local produce at the store.

For fish, go lower on the food chain. While it’s certainly important to go local and seasonal with seafood choices, doing so can be tricky—especially if you live in a landlocked state. Wherever you live, the best solution is to eat lower on the food chain, says Helene York, foundation director for the Bon Appétit Management Company, a food service group that serves some 80 million meals a year based on a low-carbon diet. “The energy required to fish high trophic-level species like tuna and deep-sea fish like Chilean sea bass is enormous,” says York.

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MAKE A BALANCED CHOICE» York recommends clams, mussels, and oysters, which require “practically zero” energy to farm. Other good choices are herbivorous fish, like tilapia and catfish and species low on the food chain, such as mackerel, herring, and sardines. If you must have your pan-seared salmon, ideally it has been flash frozen at sea and transported in a container ship instead of a jumbo jet, says York. And skip the shrimp cocktail, she says. Imported shrimp can have an even higher carbon footprint than beef.

Eat small-scale local organic. Organic farming has the potential to use one-third fewer fossil fuels than conventional farming. Organic practices create healthy soil that sequesters carbon while eliminating energy-intensive synthetic fertilizers and pesticides. In a 28-year field study conducted by the Rodale Institute that compared side-by-side conventional and organic plots,

the organic systems showed an increase in soil carbon of 15 percent to 28 percent, while the conventional system showed virtually no increase at all. The Rodale Institute estimates that converting just 2 acres of cropland to organic production is equivalent to taking one car off the road.

But you can’t rely on the USDA Organic label alone to assure a food’s low carbon imprint, because the industrialization of organic farming has changed the energy algorithm. Small-scale sustainable farms that use on-site compost can mitigate GHG emissions better than large-scale operations that need to truck in compost and use big machinery to weed fields and harvest crops. “There’s a very compelling reason to go organic. Overall it’s better for the planet,” says Eugene Cordero, PhD, coauthor of *Cool Cuisine: Taking the Bite out of Global Warming* (Gibbs Smith, 2008). “But if you’re talking strictly from a carbon dioxide-emissions standpoint, it’s a little unclear.”

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MAKE A BALANCED CHOICE» Health- and planet-wise, organic is still the best choice. Whenever possible, buy seasonal organic produce grown locally on small-scale farms. Look for “local” on produce displays or ask your retailer for a rundown of fresh, organic items sourced locally.

Reduce waste. The USDA’s Economic Research Service estimates that our current food system produces approximately 3,800 calories per person per day and that roughly 1,100 of those calories are lost due to spoilage, plate waste, cooking, and other losses. What’s more, organic matter emits methane when heaped in a landfill. In fact, landfills are second only to cattle in producing methane. In your garden, organic food matter can be composted into nitrogen-rich fertilizer, a process that doesn’t create emissions.

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MAKE A BALANCED CHOICE» “Take a bit less,” says Geagan. At the grocery store, buy only what you need. Avoid the temptation of buy-one-get-one-free offers. At home, dole out smaller portions, eat leftovers, and compost food waste. ■

A sea of issues

BY KATY NEUSTETER

You've signed up to save the whales and buy dolphin-free canned tuna. But rescuing the entire ocean sounds, well, titanic. From endangered sea turtles to escalating pollution, the issues are as varied as they are colossal. Having trouble wading through them all? Here are three top concerns—and how you can help.

1 Dead zones

The seafloor encompasses vast networks of life (think crabs, shrimp, clams) that support the ocean's food chain. However, large swathes of these species' habitats—particularly along coastlines and at river mouths—are dying off as bottom water becomes oxygen deprived, a result of excess fertilizer runoff. The most notable dead zone lies in the Gulf of Mexico; it's more than 8,000 square miles.

WHAT YOU CAN DO» Reduce toxic runoff by choosing organic when buying fertilizer-intensive products such as corn, soy, and cotton.

BY THE NUMBERS

5% of humans' dietary protein comes from the sea

50% of Earth's species live in oceans

71% of the planet's surface covered by ocean

97% of the planet's water is ocean

95% of ocean remains unexplored

Source: NOAA.gov



2 Contamination

Hidden dangers to fish lurk in many personal care products, perfumes, and detergents, including those containing triclosan and phthalates; synthetic musks such as galaxolide and tonalide; or bisphenol-A (BPA) leached from plastic containers. Expired prescription or over-the-counter medications that get flushed down the drain also contribute to ocean contamination. Scientists don't yet know all the impacts, but evidence points to these chemicals causing behavior changes that affect fish species' survival.

WHAT YOU CAN DO» Purchase all-natural beauty products free of the above toxic nasties. And don't flush meds! Contact your pharmacy or health care agency to ask whether it accepts unused or expired prescriptions for disposal or redistribution.

3 Depletion

More than 70 percent of marine stocks are exploited or depleted, according to the U.N. Food and Agricultural Organization. And though fishing methods are getting more efficient, the Ocean Conservancy notes for every 4 pounds of fish caught, 1 pound of "other animals," or bycatch, is thrown away—that includes turtles, sharks, and whales. Conventional fish farming may not be the answer; this method's byproduct pollution, parasites, and disease can leach into the ocean, threatening wild fish populations.

WHAT YOU CAN DO» Eat low on the food chain—abundant species, such as sardines and squid, reproduce quickly. And ask your market and restaurants to stock and serve fish exclusively from eco-conscious farms and fisheries.



Detox your home

BY MEGAN McMORRIS

It's easy to get overwhelmed when it comes to reducing toxins in your home. Between harsh cleaning products, pesticides, and fertilizers—even furniture and toys—it seems like there's always another story about something in your house that can harm you. Before you pull up stakes and start searching for a sterile bubble to live in, realize that taking small steps to cleaning up the most prevalent toxins can make a big impact.

"It's not about changing your entire house right now," says Anca Novacovici, founder of Eco-Coach, a Washington, D.C.-based company that runs home eco-audits. "You only need to change what you can fit into your daily routine and what makes sense financially. I encourage people to pick two things to change now, and then in a month reevaluate and see if you can change more." Here are the top toxins that may be lingering in your house, water, and yard, and some easy fixes to get you started. ➤

Is your living space a secret haven for toxins?
Create a healthier environment, starting today

Indoor air

When it comes to outdoor pollution, there's not a whole lot you can do to make a drastic change—but you do have some control over your indoor environment. "Indoor air can be two to five times more polluted than outdoor air," says Tom Kelly, director of the indoor environment division at the Environmental Protection Agency. "What happens is that the air gets trapped inside and doesn't circulate like it does outside; second, the products you bring into the home can create a soup of pollutants." (For a thorough booklet on indoor air quality, log on to epa.gov.)

1 | Let air in

"You need to replace indoor air [with fresher outdoor air] once every three hours," suggests Kelly. The easiest way to do that is to open windows and doors. Even if you're not opening the windows, your main heating and cooling systems may help freshen things up if they operate with fans circulating air from outside. To improve indoor air quality, Kelly also recommends using a High Efficiency Particulate Arresting (HEPA) air filter, either a free-standing unit or one installed into your central air system.

2 | Use your nose

"Americans each use an average of 25 gallons of hazardous chemical products per year, most of which are in household cleaning products," says Jennifer Sass, PhD, senior health and environmental scientist at the Natural Resources Defense Council. The chemicals in cleaning products can lead to headaches, skin rashes, eye irritation, coughing, and wheezing, among other health issues. The easiest way to detect a toxic product? Use your sense of smell. "If your cleanser has a strong odor, it may be releasing toxins," says Kelly. And you can't rely on labels; cleaning products aren't required to list ingredients, says Denise Robinette, president of the Florida-based HealthyLiving Foundation. "Plus, with labels like 'nontoxic' or 'eco-friendly,' you don't really know what you're getting," she cautions. "Look for more specific labels, like 'fragrance-free.'" Fragrance is there to mask the chemical smell, so products without fragrance are less likely to be toxic, she explains. "If you want a fragrance, use an essential oil instead."

3 | Test for radon

"There are 20,000 deaths every year from lung cancer due to radon," says Kelly. A gas produced by naturally occurring uranium in soil and water, radon can get into your house by leaking through areas of lower pressure (such as cracks in your house's foundation). "Radon is highly radioactive and, as it degrades, its toxic decay product attaches itself to dust. When you breathe, it gets into your lungs, where it can potentially maim cells—starting the process of cancer," says Kelly. Because radon is odorless, colorless, and tasteless, it's hard to detect, so Kelly recommends getting an inexpensive home testing kit (available at Home Depot, or through the National Safety Council at nsc.org). If your house tests high, you'll need to hire a company certified to reduce radon levels by sealing foundation cracks and placing a collection area in the subsoil or, in some cases, installing a ventilation system. Go to epa.gov/iaq/whereyoulive.html to find your state radon office. ➤

There are easy ways to
cut down on indoor toxins—
without breaking your budget



Indoor surfaces

When you think of pollutants, the image of a cozy living room probably doesn't spring to mind. But stain repellents on couches and adhesives in carpet, not to mention fire retardants on mattresses and pillows, can contain noxious chemicals that release into the air. Fortunately, there are easy ways to cut down on such toxins—without breaking your budget. Check out the Environmental Working Group's (EWG) list of toxic furniture at ewg.org/node/21836; for information on mattresses, visit ewg.org/pbdefree.

1 | Sleep well

If you own a conventional mattress, you may be resting on chemicals known as polybrominated diphenyl ethers (PBDE), used to make mattresses fire resistant. Studies have linked PBDEs to developmental problems in children, memory impairment, thyroid disorders, decreased sperm count, and delayed puberty onset. While some states forbid the use of PBDEs (Washington, Hawaii, California, Maine, and others have introduced bans), the Consumer Products Safety Commission recently adopted even stricter federal guidelines for open-flame fire resistance. Novacovici recommends choosing a mattress made from organic wool or cotton, or natural rubber latex, though you may need a doctor's note to obtain a fire retardant-free mattress in some states. Organic mattresses are best, but if the price is a bit high for you, try using a mattress cover made of organic wool or organic cotton, or natural latex to reduce the amount of chemicals you are exposed to, recommends Novacovici.

2 | Rethink the wall-to-wall

When considering a new carpet, know this: Carpets can release toxins for their entire lives, but especially for the first six months to a year. "A lot of the chemicals in carpets aren't necessarily in the carpets themselves but in the adhesives they are installed with," says Novacovici.

"Ask for adhesives that aren't formaldehyde based." Also, look for those without chemical flame retardants or stain-resistant chemicals, because these also can contain PBDEs. When shopping, look for the Carpet and Rug Institute's Green Label and Green Label Plus; these indicate that a product has tested low for unhealthy volatile organic compounds (VOC), which release into the air throughout the life of the carpet. It's important to ventilate rooms well within the first few months of installing carpets, says Novacovici. What's more, once you have carpet, "it can act as a sink for household chemicals, which then release into the air," she says. If you have carpeting, use a vacuum with a HEPA filter, which is designed to trap 99.97 percent of particles, including many health-hampering chemicals, says Novacovici.

3 | Buy untreated

Look for couches, carpets, and rugs that aren't manufactured with stain-preventing chemicals that contain perfluorinated chemicals (PFC). These release into the air over the lifetime of the product, says Sass. If you do have some pretreated furniture, you're not doomed: Remember, it's all about getting fresh air into your home so you're not constantly breathing in the chemicals, says Sass. ➤



Water

There are more than 260 contaminants—including chlorine, lead, and pesticides—found in tap water, according to the EWG. Luckily, it's easier than ever to make the water you drink and bathe in safe. First, find out how your water quality rates by checking out the EWG's National Tap Water Quality Database at ewg.org.

1 | Lose the heavy metal

Lead can get into drinking water a number of ways, but one of the most common is via old pipes, says Kristin Marsteller, senior program manager of home and community partnerships and initiatives at the National Safety Council in Washington, D.C. "If you have an older home, you may have lead in your water, either from the old pipes themselves or from the lead solder that was used on pipes in the past," she says. You don't necessarily have to replace your pipes if you suspect lead, though. Installing a home water-filtration system may be effective (visit the National Safety Foundation website at nsf.org to find out more about household water-treatment options).

2 | Get clear

Depending upon your locale, your drinking water may contain varying levels of health-compromising chlorine, toxic metals such as mercury and lead, and pesticides and

microbes like salmonella and cryptosporidium, says Sass. To remove these, the Natural Resources Defense Council recommends using a water filter with NSF/ANSI Standard 53 certification.

3 | Shower safely

Drinking a cool glass of H₂O isn't the only way waterborne toxins can get into your body. For example, your skin readily absorbs chlorine—a possible carcinogen—when you shower. The chlorine levels in most tap water are high enough that your exposure during a 10-minute wash can equal as much as if you were to drink eight glasses of chlorinated water, particularly because warm water opens your pores and increases absorption. Novacovici suggests using a filter on your shower faucet head (average cost: \$30). ▶

TOXIC TOYS?

Because kids' smaller systems are more susceptible to chemicals, the recent reports on lead and other toxins in toys are even more troublesome. But plastic and painted toys aren't the only issues. Go to healthytoys.org to see how your tot's toys fare, and follow these dos and don'ts when choosing new ones.

DO



Look for natural fibers, including organic and undyed materials such as wool, cotton, and hemp.



Choose solid wood toys versus those made with particleboard or pressed wood, or those that have glued parts. The glues often contain formaldehyde, a known carcinogen.



Go with washable items. If you can throw Teddy in the wash, you can get rid of toxins, as well as dust mites, which contribute to children's asthma and allergies.

DON'T



Don't trust every plastic toy. Plastic toys can contain toxic phthalates, which are used to soften vinyl and have been linked to prostate problems, breast cancer, and hormonal disorders such as early-onset puberty.



Don't go for painted items. While some painted toys are safe, recent recalls have focused on leaded paints. In 2007, Mattel recalled about 250,000 toy cars and more than 900,000 character toys that were found to have lead paint.

Yard

You may think that what's outside won't harm you inside your home, but if your kids play in the yard they can be exposed to various chemicals—including fertilizers, pesticides, and lead in the soil—that they end up trekking indoors. Recommended yard products include those by [NaturaLawn of America \(nl-amer.com\)](http://NaturaLawn.com).



1 | Know your green

“Don't rely on the word green when you're looking for lawn-care products,” says Sass. “You have no idea what's really in the products.” The easiest way to decipher the level of toxicity, says Sass, is to read the ingredients: If you see a lot of chemicals with long, complicated names that you would need a PhD to understand, be wary of the product. Instead, look for products that contain recognizable ingredients.

2 | Don't go bare

Anything from nearby bridge construction (which often involves lead) to lead-based exterior paint can release this unhealthy metal into the soil, where it accumulates, says Marsteller. “If your kids play in the soil, they can get exposed.” She recommends covering any bare soil with grass, mulch, or gravel, which create a barrier, keeping contact to a minimum while playing or working outside. ■



Green cleaning basics

BY KATE HANLEY

Don't reduce the energy-renewing benefits of your purge by cleaning with toxic chemicals. Instead, follow these green cleaning tips from Annie B. Bond, author of *Home Enlightenment* (Rodale, 2008).

- 1| **Shun synthetics.** It may seem obvious, but the best way to keep potentially noxious chemicals out of your home, Bond says, is to avoid all products that contain synthetic ingredients—that means most scented products (unless it's scented with essential oils) and anything designed to be disposable, such as bathroom wipes.
- 2| **Break out the baking soda.** A tablespoon or so of baking soda sprinkled on a wet sponge makes a great, gentle abrasive for countertops, sinks, and tubs and showers.
- 3| **Try white vinegar.** This potent kitchen staple is known for its degreasing and antibacterial properties. Keep a spray bottle filled with undiluted white vinegar and use it to clean the stovetop, cutting boards, and toilets—just spray on and wipe off.
- 4| **Clear clogs less caustically.** “Drain cleaners are generally the most dangerous chemicals in your home,” Bond says. Instead of using conventional, lye-based drain openers, use washing soda instead, a relative of baking soda found in the laundry aisle. Pour a cup of it down the drain, allow it to sit up to 30 minutes, then flush the drain with three cups of hot water. Do this once a month to keep troublesome drains clear.
- 5| **Fight mold with tea tree oil.** Bleach isn't your only option for scrubbing away the mold that plagues tile grout and other water-logged crannies; tea tree oil is a powerful antifungal, Bond says. To use, add a teaspoon of the essential oil to a cup of water and apply the solution with a scrub brush.

Reduce packaging waste

BY JASON STEVENSON

The simple click of your mouse can make a toaster oven, DVD, or even a garden gnome appear on your doorstep a few days later. But that new gnome will be encased in an oversized box stuffed with foam peanuts, twist ties, and shrink-wrap—all eventually destined for the local dump. Of the 254 million metric tons of waste generated in the United States in 2007, containers and packaging accounted for 31 percent. We landfill more corrugated cardboard boxes—8.2 million metric tons—than newspapers, office paper, and junk mail combined. And we still discard twice as many plastic soda bottles than we recycle.

“If you want to have the most beneficial impact on waste, you need to focus on the first R: reduce,” says Phil Simmons, an engineer at Hydroqual, a New Jersey-based environmental consulting firm. For any packaging you can’t avoid, turn to the other Rs: reuse and recycle. To ▶

Smart choices to use less and recycle more



Which is better: glass, plastic, or paper?

Compare the eco-impact of different packaging materials using this chart. For perspective: The average U.S. home burns 11,000 kilowatt hours of energy and produces 16,000 pounds of carbon dioxide through electricity use per year.

Material	Energy cost to produce \$1,000 worth	Greenhouse gases produced	Amount recovered in 2007	Landfill lifespan	Alternatives
Glass containers	6,944 kilowatt hours	3,527 lbs.	28%	1 million years	Always recycle glass—otherwise your great-great-great grandkids might find a bottle you threw away.
Plastic containers (#1, #2, #5)	3,889 kilowatt hours	2,425 lbs.	14%	450 years	Reduce use of throwaways, and try to buy easily recyclable #1 and #2 plastics.
Plastic bags and film	3,611 kilowatt hours	2,270 lbs.	10%	500–1,000 years	Use canvas grocery bags; wrap sandwiches in napkins.
Polystyrene foam peanuts	3,333 kilowatt hours	2,078 lbs.	7%	500 years	Cushion fragile shipments with crumpled newspapers or magazines. Drop off excess foam packaging peanuts at your local FedEx or UPS store.
Coated and uncoated paper bags	3,889 kilowatt hours	2,381 lbs.	37%	1 month	Switch to reusable canvas bags, and always recycle paper bags.
Coated and laminated paper, including gift wrap, tissue, and butcher paper	3,611 kilowatt hours	2,151 lbs.	Negligible	2–5 months	Wrap gifts in newspaper comics pages or reusable fabric wraps.
Corrugated cardboard	4,444 kilowatt hours	2,645 lbs.	74%	1–2 months	Buy packaging-free products. Reuse cardboard boxes and compost shredded cardboard.
Steel and aluminum cans, boxes, and other containers	4,722 kilowatt hours	3,262 lbs.	54%	200–400 years	Fill reusable containers at the bulk bins, and always recycle steel or aluminum containers.

Source: Economic Input-Output Life Cycle Assessment (EIO-LCA), eiolca.net/copyright/index.html.

Seven instant packaging savers

- 1| **Gift giving.** Place gifts in a large basket and cover with a decorative, reusable sheet or blanket.
- 2| **Laundry detergent.** Choose concentrated powdered soaps sold in cardboard boxes, such as the Citrus Laundry Powder line from BioKleen (biokleenhome.com). Recycle the box.
- 3| **Kitchen linens.** Replace paper products with cloth napkins and kitchen towels; they're not only colorful and stylish but will save you money in the long term. Store soiled napkins separate from clothes to avoid stains.
- 4| **Junk mail.** If you're receiving some of the 100 billion mailings that Americans get every year, de-list your name and address at the Direct Marketing Association website (dmachoice.org/dma/member/regist.action). To stop preapproved credit card offers, call 888.567.8688.
- 5| **School lunches.** Ditch squishy paper bags in favor of reusable containers (preferably stainless steel, which doesn't leach chemicals and is more durable than plastic). Instead of slipping sandwiches into plastic bags, wrap in cloth napkins and secure with a rubber band.
- 6| **Online purchases.** Buy local when you can, or search craigslist.org for gently used items from sellers closer to where you live. If you must "click-to-buy," reuse the cardboard box.
- 7| **Dog waste.** On your next walk, carry compostable BioBags (biobagusa.com), which decompose in one to six weeks. Deposit bags in a backyard container system, such as Doggie Dooley Toilet (doggiedooley.com), or discard with trash or leaf clippings. Don't compost or bury them near vegetable gardens—pet waste can contain harmful pathogens.

Less than 12 percent of all plastic packaging is recovered; the rest ends up in a landfill, discarded by a recycling center or thrown out by a frustrated consumer

reuse, save sturdy boxes to ship gifts or store books, or flatten to make art projects, says Michelle Bexelius, founder of ecokido.org; use glass and metal containers to organize household items like art supplies.

Recycling, however, takes some specific know-how. "When it comes to recycling, metals are almost always in demand, but plastics are trickier," says Simmons, the primary author of the 2006 State of Garbage in America Report, a state-by-state quantitative overview of waste generation and recovery. Most curbside recycling programs accept #1 and #2 plastics, such as beverage and detergent containers, but fewer also collect plastic film, such as grocery bags, dry-cleaner bags, and plastic wrap. As a result, less than 12 percent of all plastic packaging is recovered; the rest ends up in a landfill, discarded by a recycling center, or thrown out by a frustrated consumer.

Cut back on packaging consumption by buying in bulk, finding gently used goods, and shipping online orders together. Next, recycle religiously, and visit your city or county's website to learn which numbered plastics and other materials they accept. And finally, recognize that not all packaging materials are created equal. Plastics, metals, glass, and paper all carry different environmental costs—and the good-versus-bad breakdown may surprise you. "It's not just the materials we put in recycling bins, but also all the energy and resources to make the item," Simmons explains. For instance, producing brand-new glass bottles requires two-thirds more energy than producing new plastic bottles. ■

Safe for kids

A guide to children's bath and body products

BY HELEN OLSSON

bath time can be such fun. But, as many parents have become aware, those sweet-smelling baby products may contain some pretty unsavory chemicals—from skin irritants to more serious substances linked to hormone disruption, even cancer. Such chemicals are especially bad because children's thinner skin (it doesn't reach full thickness until age 20) leaves youngsters more susceptible to toxins. Plus, kids are less able to process the chemicals that get into their developing systems. Without a degree in chemistry, what's a parent to do when confronted with the confusing multisyllabic chemical compounds in ingredients lists? You'll be relieved to learn that there are plenty of safe products out there, if you know what to look for.

Don't trust "gentle" labels. Surprisingly, the FDA doesn't require safety testing of personal care-product ingredients. So cosmetic companies are free to use marketing claims without any burden of proof. An Environmental Working Group (EWG) study released in 2007 revealed that, on average, children are exposed to 60 chemicals daily via personal care products. Of those ▶



Seek out products that bear the USDA Organic Seal and don't contain chemical compounds with the "eth" suffix

To be double sure that the products you choose are safe, check out the EWG's Skin Deep database, which analyzes and rates personal care products for safety.

products, 27 have never been assessed by the government for safety. Although a few body care companies, such as Burt's Bees and Aubrey are pushing for better regulation of terms such as natural, another EWG study showed that 35 percent of products labeled natural contained artificial chemical preservatives, and 80 percent of products described as "gentle," "soothing," or "hypoallergenic" contained ingredients linked to allergies and skin irritation.

Go organic. After his kids begged for Scooby Doo and Bratz shampoos, David Steinman, author of *Safe Trip to Eden* (Thunder's Mouth, 2007), tested dozens of children's bath products for toxicity and discovered that many mainstream brands contained the contaminant 1,4-dioxane, a cancer-causing petrochemical. But here's the sticky wicket: Because it's a byproduct, 1,4-dioxane doesn't appear in the ingredients. "Consumers have no way of knowing," says Steinman. To be safe, he recommends seeking out products that bear the USDA Organic seal and don't contain chemical compounds with the "eth" suffix (like sodium laureth sulfate), a red flag for 1,4-dioxane.

Opt for fragrance-free products. Because fragrance formulas are considered proprietary, their specific ingredients aren't required to be listed on a product's label. "Hundreds of chemicals can hide in that one word *fragrance*," says Rebecca Sutton, an EWG staff scientist with a PhD in environmental chemistry. One particularly pesky group of toxins that hides under the

guise of fragrance is phthalates, chemicals that have been linked to reproductive problems. A study published in *Pediatrics* in February 2008 reported that babies are exposed to phthalates through lotions, shampoos, and powders—even though phthalates aren't listed in the products' ingredients.

Research safe brands. Even if your eyes are sharp enough to read the fine print, some dangers are hidden deeper. To be double sure that the products you choose are safe, check out the EWG's Skin Deep database (cosmeticdatabase.com), which analyzes and rates some 25,000 products for safety. Look up a product already on your shelf, or scan EWG's safest picks by product category. The website's Children's Product Guide (cosmeticdatabase.com/special/parentsguide/) outlines the most common ingredient hazards such as hormone-disrupting parabens and DMDM hydantoin, which can break down into formaldehyde, a cancer-causing agent.

Use less. Often the easiest solution is the best solution. For instance, try using smaller amounts of fewer products. "Being more thoughtful about the number of products you use will automatically reduce the number of ingredients your child is exposed to," says Sutton. "Harsh soaps dry out the skin so you need to use lotion. Try just using a milder soap instead." And go easy on the amounts: Unless Junior has been baking mud pies, a small dab of body wash should get the job done. ■

Eco-friendly pet care

BY CARLOTTA MAST

Even when the rest of the family has gone green, Fluffy and Fido are often left to wreak a surprisingly massive toll on the environment. The estimated 10 million tons of waste produced each year by dogs and cats have a particularly devastating impact: Unbagged excrement can contaminate groundwater and soil with disease-carrying bacteria and parasites, while bagged waste stagnates in landfills. Meanwhile, pets are often exposed to dangerous levels of toxins because of the food and product choices we make for them. A 2008 study showed that dogs' and cats' toxic loads are often substantially higher and more varied than those of their human owners. So how can you take care of your pets and Mother Nature? Here are four ways to start.

Make their toys

Many foreign-made pet products contain lead and cadmium—which can harm animals who chew on and ingest their toys, says Will Falconer, DVM, a homeopathic veterinarian in Austin, Texas. “Over time, small amounts of these heavy metals can affect the nervous system, red blood cells, and bowels, and can even cause death,” he says. Protect your furry friends by giving them durable, nontoxic, U.S.-made products. Some imagination, organic cotton or wool stuffing, and a sewing machine can transform old jeans—or another durable cotton fabric



Reduce your four-legged friend's environmental impact and exposure to toxins

that will hold up against sharp teeth—into chew toys your pet will love. For the less crafty, gently used socks (no holes!) make it easy to create colorful sock animals. Find more ideas in *Eco Dog* by Corbett Marshall and Jim Deskevich (Chronicle, 2008).

Feed them organic

Ever since pet food tainted with melamine sickened and killed U.S. dogs and cats in 2007, consumers have become increasingly discriminating when it comes to store-bought pet grub. Although the affected food was recalled, there are other reasons to choose chow wisely. Besides exposing your animal companions to added growth hormones, antibiotics, and synthetic fertilizers, the agricultural implications (think pesticide runoff) of producing conventional kibbles' vegetable and meat proteins can also threaten soil and water quality. ➤

Choose USDA Organic pet nosh, which meets the same standards as certified-organic human food. Or talk with your veterinarian about making Spot's food from scratch. Cats and dogs require specific mixes of nutrients that vary by animal type, breed, and age. "But as long as it's nutritionally balanced, homemade food is much healthier than anything found in a can or bag because dogs' and cats' digestive systems process fresh, raw food better than cooked food," says Falconer. "Feeding them balanced raw diets will also increase their bodies' resistance to worms." Once you've gotten the OK from your vet, find recipes and ideas in *Dr. Pitcairn's New Complete Guide to Natural Health for Dogs and Cats* by Richard H. Pitcairn, DVM, PhD, and Susan Hubble Pitcairn (Rodale, 2005).

Pitch poop properly

Though your pet's feces should never find its way into your compost pile, Doggie Dooley and NatureMill offer pet-specific systems that use enzymes and heat to destroy harmful pathogens and convert waste into safe fertilizer. Or bury your pooch's backyard droppings away from vegetable gardens and water sources to avoid human exposure to pathogens, advises Tom Watson, project manager for Seattle's King County Recycling and Environmental Services. When you're out and about, dispose of waste in biodegradable poop baggies made from cornstarch plastic, such as those from BioBag. (The company also offers biodegradable cat-pan liners.) Even though landfill conditions prevent the bags from breaking down quickly, plastic made from cornstarch is a more sustainable choice than petroleum-based polyethylene.

Kitty poop should always be bagged and tossed in the trash because it can harbor an infectious parasite detrimental to fetuses and people with weak immune systems. However, most of the 2 million tons of nonbio-

degradable kitty litter sent to landfills annually contains quartz silica—recognized by the California Environmental Protection Agency as a human and pet carcinogen. A good option for cat lovers: biodegradable litter made from recycled newspaper, sawdust pellets, and corn. Or try chemical-free, wheat-based Swheat Scoop litter, available in natural markets. To absorb odors, dust litter with baking soda.

See to fleas

Conventional pest prevention and treatment options are far worse for animals' and people's health than the actual bugs are, says Jen Sass, PhD, a senior scientist and toxicologist at the National Resources Defense Council (NRDC). The NRDC estimates that "hundreds and probably thousands" of pets have been injured or killed because of exposure to the pesticides found in flea collars, aerosol sprays, and other pest-control products. "The Environmental Protection Agency has also acknowledged that these products expose children to unsafe chemicals because kids touch, rub, kiss, and sleep with their pets," she says.

Rather than using products that contain carbaryl, propoxur, and tetrachlorvinphos, sprinkle brewer's yeast, fresh garlic, or flaxseed oil in your pet's food—fleas hate the smell and taste, Sass says. Fleas also detest the smell of pennyroyal, lavender, mint, rosemary, sweet woodruff, and cedar. So either tie a bandanna filled with these pungent herbs around your pet's neck, or rub the dry herbs into your pet's coat. You can also purchase herbal flea collars at many health food and pet stores. If fleas have infested your home, sprinkle all pet beds and carpets with boric acid salts, which kill flea larvae without hurting people or pets, Falconer says. ■

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