

healthy home *healthy you*

By "Shaylee" Sharon Oleson

ELIMINATE TOXINS AND NON-GREEN BUILDING PRODUCTS
TO CREATE A HEALTHY ENVIRONMENT, INSIDE AND OUT



IS YOUR HOME TOXIC? The Environmental Protection Agency (EPA) states that indoor air is five times more polluted than outdoor air, even in urban areas. We spend 90 percent of our time indoors, and since homes have become tighter over the years, Indoor Air Quality (IAQ) has become more important than ever. According to the EPA, poor IAQ contributes to a variety of health issues from allergies and asthma to itchy skin, headaches to digestive problems and worse.

The beneficial impact of having a green home starts with the most important thing: your health. As the old adage goes, "If you don't have your health, you don't have anything." The financial benefits of a healthy home mean fewer trips to the doctor, less down time, more money in your pocket, and more quality time with your family.

WHERE ARE THESE POLLUTANTS HIDING ANYWAY? Clutter makes it difficult to clean your home, and it harbors dust, mold spores and pet dander. Get rid of it!

Many cleaning products are full of toxic chemicals. Ones that leave a scent behind mean a film of chemicals is left that may be toxic. Switching to organic cleaners is helpful. There are more organic cleaners on the market now, or you can make your own from recipes online.

If you have a forced air furnace, clean the air ducts every two years. Forced air circulates mold, pet dander, dust, fumes from chemicals stored in the basement, and even small gas leaks in your pipes. Use high MERV (Minimum Efficiency Reported Value) rated filters, number 13-16, to capture the maximum percentage of pollutants.

Air fresheners, dryer sheets and fabric softeners are one of the largest contributors to poor IAQ. They contain toxic chemicals, including Phthalates, a hormone mimicker that alters hormone levels, and synthetic scents derived from petroleum. The Mayo Clinic states that exposure to synthetic fragrances is one of the top 10 causes of contact dermatitis.



Chlorine vapor created by shower water can trigger asthma. Drinking tap water and bathing in unfiltered water, or breathing chlorine vapors, accounts for 50 percent of daily chlorine intake. Get a whole-house water filter, such as an RO (reverse osmosis) system, to remedy this situation.

Furnishings, such as particle-board book shelves or cabinets, stuffed chairs or plush couches and floor-to-ceiling drapes, can contain formaldehyde, synthetic dyes and other toxic chemicals that off-gas into your breathing space. Choose solid wood cabinets and flooring with specialty non-toxic finishes, and organic fabrics. Clean carpets and fabrics thoroughly with a true S-type HEPA vacuum. Ideally, you should try to reduce the amount of fabric in each room to eliminate dust, mold and dust mite issues.

Use specialty non-toxic finishes for woodwork. For wall finishes, use clay-plaster or specialty non-toxic paints, versus low- or no-VOC (Volatile Organic Compound) paints. Use finishes labeled non-toxic versus low or zero-VOC because even zero-VOC products may still contain HAPs (Hazardous Air Pollutants) and VOCs that are unregulated or exempt by the government. Recent government research summarized that some paints marketed as low-VOC may still emit significant quantities of HAPs.



What's an Eco-Specialist and Why Do I Need One?

HIRING AN ECO-SPECIALIST can help ensure that your home or project is as healthy and green as possible. Eco-Specialists act as an eco-liaison between you and your building team to ensure the proper products are ordered, used and installed correctly for a seamless process. If you are in the planning stages of an addition or building a new home, an Eco-Specialist can help you make the proper selections for your yard, building envelop and more, right down to the finishes on your walls. With the glut of emerging technologies and products on the market, an Eco-Specialist can also help you sort through all the "Green Washing"—products that claim to be green but are not—and save you time and costly mistakes. Eco-Specialists are skilled at pinpointing sources of toxins in your home, such as poor water quality, gas leaks, mold, carbon monoxide and more, as well as checking and mitigating high levels of electric and magnetic fields that affect your overall health.

Six Healthy and Eco-Friendly Ideas for Your Building Project

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BY GOING GREEN, your carbon footprint—the total amount of greenhouse gases produced to directly and indirectly support human activity—is reduced, and that helps the entire planet. Designing and building homes with the proper materials right from the start reduces life-cycle costs, reduces repairs and maintenance, and makes for a healthier, more durable and comfortable home that you can enjoy for a lifetime!



1

FLOORING

Recycled ceramic or recycled glass tiles are a great choice, as well as cork, which is gaining popularity because of its soft feel, warmth and renewable properties. Instead of linoleum, use natural marmoleum. For wood flooring, try reclaimed woods or Forest Stewardship Council (FSC) certified wood. These are excellent for large areas, such as great rooms or living rooms.

2

WATER

Water conservation is probably the easiest way to save money. Dual flush toilets have flush capacities as low as 0.5 gallons per flush, as opposed to low flush toilets at 1.6 gallons. Low-flow water fixtures are an easy way to save money as well. ENERGY STAR®-rated washing machines and dishwashers are a no-brainer. Outside your house, install rain gardens to help keep water on your lot and out of lakes and rivers, and to reduce the mosquito population. Rain barrels reduce your water bill by using captured rainwater for flowers, plants and shrubs. There is also no-water, no-mow sod available that is very drought-resistant and virtually maintenance-free.



INSULATION

This is a hotly debated subject as far as performance and insulation values go, but when it comes to health, cotton batting, cellulose, soy-based spray foam and liquid ceramic still lead the way.

3

HEATING

Radiant sources are still best because it warms you up faster, lasts longer and is healthier, versus forced air, which circulates household contaminants. Consider a boiler with zone temperate regulation and in-wall or in-floor hydronic PEX tubing. If you use electric in-floor or in-wall heat, choose manufacturers that make low-EMF (electric and magnetic field) dual-conductor models with zone control. There are some great infrared ceiling heaters on the market now as well.



4

5

HEALTHY ELECTRICAL WIRING

This is one area you've probably never heard of or even considered; however, research worldwide shows that potential



health impacts from exposure to Electromagnetic Fields (EMFs) in homes and offices may exist. These important suggestions for reducing EMF exposure can also be found in the Innovation Section of the Minnesota GreenStar® Guidelines for new home construction and remodeling:

- Use flexible metal-clad (MC) cable in walls, floors and ceilings in and around bedrooms within 8-10 feet of beds.
- Use polyethylene water service supply pipe to the street (where allowed by code) rather than copper.
- Avoid grounding to rebar in footings; ground instead to 20-foot rebar encased in concrete caisson buried 10 feet from house.
- Provide Category-5e or -6 Internet cable to jacks in all rooms where computers will be used to avoid wireless Internet (Wi-Fi). Keep the router hardwired-only without Wi-Fi, and use Ethernet cable to connect computers to wall jacks.
- Place the electric service meter and breaker panel on the far side of the garage, away from the house or occupied rooms in the house.

About the Author: Professional Eco Specialist "Shaylee" Sharon Oleson of Eco Shaylee LLC (<http://www.ecoshaylee.com>) is dedicated to eco-friendly initiatives that help both individuals and the environment. Since 2005 she has worked with chemically and electrically sensitive people to improve their health by providing environmental inspections and eco-consultations on consumer goods and new construction or remodeling projects. Her training includes the International Institute for Bau-Biologie & Ecology, University of Minnesota - Twin Cities, where she earned her Radon Installation Certification, and the Minnesota State University Mankato's Sustainable & Energy Efficient Building program. She is also a MN GreenStar Trained Professional.

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LIGHTING

Use daylight and LEDs (light emitting diodes) together in your design for maximum efficiency. Good quality LED lights should last 50,000 hours and are 90 percent efficient, compared to CFLs (compact fluorescent lights), which are only 75 percent efficient and last only 8,000 hours. Plus, LEDs have no mercury and emit fewer harmonic EMF frequencies, which can adversely affect your health.

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ENERGY STAR®

YOUR FIRST STEP TO GREEN

Energy-efficiency is truly central to green building, and the one aspect where you can see the payback in real dollars every month on your energy bill. That's why a lot of families insist that their new home be ENERGY STAR® certified. Homes that earn the ENERGY STAR® are 15 percent more energy efficient than traditional homes. That means lower energy bills, maintenance costs, and a quieter, more comfortable home.



Q: WHY SHOULD I ASK MY BUILDER TO MAKE SURE MY HOME IS ENERGY STAR® CERTIFIED?

A: You will experience lower energy bills because pieces are in place to help your home use less energy. You will also gain a quieter and more comfortable living environment with better air quality. The average ENERGY STAR® certified home is at minimum 15-30 percent more efficient than homes built to current new home building codes, resulting in up to an approximate savings of \$750-\$1,200 per year for a 3,500 square-foot home.

When purchasing an ENERGY STAR® certified home you'll have peace of mind knowing the home was independently tested by a certified independent home energy rater. To meet the ENERGY STAR® standard these homes must be tested by a certified HERS Rater on three separate occasions to verify effective insulation, air tightness of the building envelope/ductwork, and a final blower door test. The rater will conduct this test or analysis when the home is complete and establish a HERS Index for your home.

"A good place for home buyers to start is questioning their builder 'what is the HERS index on your home?' The builder must hire a third-party certified rater to test the home throughout the construction process. If they find leaks in ductwork or insulation, the rater will make recommendations on how to improve the problem before continuing with construction. A home must meet a HERS index of 80 or below to achieve the ENERGY STAR® rating by the EPA. The rater provides a relative energy use index, 100 is average use of American Standard building and an index of 0 indicates the proposed building uses no net purchased energy. The HERS is a linear metric where every percentage that a building's energy usage is reduced represents a decreased point reduction on the index."

Carole Griffith, Vice President of Sales, Homes by Tradition, LLC.



Visit these homes which have been ENERGY STAR® certified or are awaiting certification during the Parade of Homes™ this fall:

Berger Built Construction Co., Inc.	#14
Better Living Homes by Harstad	#265
Brandl Anderson Homes, Inc.	#107
Centex Homes	#95, 145 185, 322
Christian Builders, Inc.	#259
College City Design/Build, Inc.	#134
Country Joe Homes	#53, 97, 101, 130
Custom One Homes	#52, 60
D.J. Dalbec Homes	#209, 210
Derrick Custom Homes, LLC	#43
Fieldstone Family Homes Inc.	#55
Homes by JAMES, Inc.	#26, 307
Imperial Homes, Inc.	#1
K. Hovnanian Homes of MN, LLC	#109, 241, 245
Key Land Homes	#11, 56, 106, 113, 142, 150, 187, 262, 286, 300
Landmark, Inc.	#36
Lennar	#33, 64, 67, 90, 124, 193, 267
Main Street Builders, LLC	#37
McDonald Construction, Inc.	#47, 66, 141, 173, 194
Minks Custom Homes, Inc.	#315
Pineview Builders, Inc.	#23
Pratt Homes	#7, 9, 23, 54
Pro Craft Homes, Inc.	#4
Pulte Homes of Minnesota LLC	#220, 321
Ron Clark Construction	#79
Rottlund Homes	#42, 87, 89, 227, 228
Ryland Homes	#31, 111
Sherco Construction, Inc.	#293
Southwind Builders, Inc.	#3, 28
Stonewood, LLC	#157
Trumpy Homes	#189