

Take a look inside this healthy house to see how it protects homeowners and the environment.

## clean living

ust because it's natural doesn't necessarily mean it's good for you," says architect Cothran Harris. No, he's not scolding about a wayward diet; he's talking about the common misconception that green design equals healthy building. So what does it mean to build a healthy house, and what does one look like? Much the same as any other house—but the air inside is a lot cleaner. A healthy home is designed with building materials that won't release toxins (called offgas chemicals) into interior spaces. And no offgassing

means no pollutants or odors that could adversely affect the health of homeowners.

Concerns about chemical exposure can complicate the countless decisions that come with building a house, so it's crucial to hire professionals who can manage the process. Cothran Harris, builder Jeff Krueck, and interior designer Celeste Wegman took on such a project on Bald Head Island, North Carolina.

Due to the owner's health issues, "we couldn't use anything with a polyurethane base, including treated

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"Everyone's first comment when they walk in is,
"It doesn't smell like a new house." ---interior designer Celeste Wegman



A mix of sustainable and healthy products, such as bamboo floors and formaldehyde-free fabrics, introduces fewer chemicals in the environment. "There's no one part that makes this a healthy house," says architect Cothran Harris. "It takes all the pieces working together." Designer Celeste Wegman aired out the dining room chairs for months before coating them with a sealer to prevent offgassing.

wood and plywood," explains Jeff. Instead, he installed solid wood throughout the house, from sub-flooring to kitchen cabinets to the beam that supports the second story. "We built the entire house using timber framing—just like they would have 100 years ago," he says.

Traditional fiberglass insulation and PVC piping were off-limits, too. "In any structure there are a thousand details, and with these strict parameters, I had to keep my eyes open all the time," Jeff says. "We had to get creative for the home's central vacuum system. We used a metal muffler exhaust pipe in place of PVC."

While the crew tried to avoid using chemicals in this project, some were necessary. "Materials such as









The blues and browns of the marsh surrounding the house inspired Celeste's color palette. In the soothing master bedroom, she used environmentally safe paints, proving that healthy can also be stylish. Solid wood furnishings were custom-manufactured with white glue rather than yellow, which contains irritating chemicals.

pilings have to be treated to meet building codes," Cothran says. "But at least the offgassing goes outside, rather than into the house."

Not all chemicals hide behind walls, so designer Celeste Wegman had to do her homework when selecting interior finishes. "This was a labor-intensive project," she says. "We researched everything to make sure it was healthy." She learned about American Clay, an all-natural plaster that resists mold and contains no offgassing volatile organic compounds (VOCs). Celeste used it to coat the walls. "As a bonus, its suedelike texture adds depth to the interiors," Celeste says.

In the master bedroom, she painted the shiplap siding with a low-VOC paint that doesn't give off a

## did you know?

Formaldehyde, which the U.S. Environmental Protection Agency lists as a probable human carcinogen, is a common ingredient in building materials. Alternatives, such as wheat board and Johns Manville's fiberglass insulation, use formaldehyde-free bonding to reduce offgassing.

Sealing your house to keep out mold and allergens may actually cause a buildup of toxic chemicals, called offgassing (see "A Green Glossary," page 106) indoors. High-efficiency particulate air filters (HEPAs) will eliminate dust and mold spores before they enter the house, and also will filter out any VOC emissions to keep your air clean.

Take a cue from Celeste: Air out all furniture before bringing it into the house. Depending on your level of sensitivity, a few weeks should do the trick. Coat painted pieces with a water-based sealant to eliminate any remaining offgassing potential.



## read more about it

Turn to these guides for tips on selecting products the next time you're building or renovating. Your family (and Mother Nature) will thank you.

- Prescriptions for a Healthy House (New Society, 2001) by Paula Baker-Laporte, Erica Elliott, John Banta, and Lisa Flynn
- Green Building Products: The GreenSpec Guide to Residential Building Materials (New Society, 2006) by Alex Wilson and Mark Piepkorn
- The Healthy House Answer Book: Answers to the 133 Most Commonly Asked Questions (Healthy House Institute, 1997) by John and Lynn Marie Bower
- Green Remodeling: Changing the World One Room at a Time (New Society, 2004) by David R. Johnston and Kim Master
- The Healthy Home Workbook: Easy Steps for Eco-Friendly Living (Chronicle, 2006) by Kimberly Rider and Thayer Allyson Gowdy

new-paint smell. "Everyone's first comment when they walk in is, 'It doesn't smell like a new house,'" Celeste says. "I think that's one of the best compliments."

For furnishings, Celeste looked to combine comfort and health. Working with furniture designer Barclay Butera, she had all fabrics triple-washed before custommaking sofas and chairs. Even the carpet, which

Celeste used custom-mixed colors in this house, but American Clay offers three finishes and more than 30 colors that can be combined to form one-of-a-kind wall coverings.

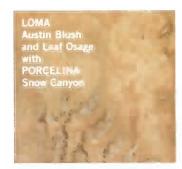
Celeste had custom-woven, went through a rigorous triple-cleaning process before installation.

A healthy house costs about 10 to 20 percent more to build, says Jeff. But for clients with chemical sensitivities, it's money well spent. Once healthy building takes off in commercial construction, residential demand will increase, he says. "If you're given the choice to be even a notch healthier, who wouldn't take it?"

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PORCELINA Snow Canyon