

Breathing is much easier in a Health House

Houses, by their nature, are dirty; dirtier inside than outside. Unless, of course, the house is a Health House

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The first houses in the Blue Ridge Region to be constructed under stringent guidelines from the American Lung Association for its Health House program will be at Piper Spring in Abingdon. That's where physician/developer Dr. Ernest Coburn is building 204 homes with upgraded HVAC systems and other features that will offer superior indoor air quality.

Another much smaller Health House project is going on in Charlottesville and while there are none in the Roanoke, Lynchburg or New River Valley areas just yet, a prominent "green" architect based in Roanoke says building materials that limit the "out-gassing" of chemicals that can cause respiratory problems is a design feature he is specifying.

At Piper Spring, the builders hired by Coburn's Houburn Construction Company had to undergo special training before they could tackle Health House project. Each home must also pass three tests before earning the Registered Health House title. At the heart of the concept is the heating, ventilation and air conditioning system.

Terry Boone of Perfect Air in

Abingdon is the HVAC contractor for Houburn Construction Company. This is the first Health House certified homes Perfect Air has been involved with, although Boone says he has installed other systems to American Lung Association guidelines. Company employees were trained at a Health House seminar in Richmond before they started work at Piper Spring.

Today's homes and commercial buildings do wonders for energy efficiency but also tend to leave air trapped inside structures that is full of pollutants. "We build our homes so tight that they don't breathe," says Boone.

Air conditioning units that were once relied upon for the dehumidification of indoor air-not by design, says Boone, but by default-aren't running long enough nowadays to do the job. Too-humid air can lead to mold and other problems. Humidity that is too low can also be an issue.

Fresh air ventilation systems installed by Perfect Air exchange stale indoor air for outside fresh air. Separate dehumidifiers and humidifiers maintain a 35-50 percent humidity level indoors, affording better control over dust, mites, bacteria, airborne viruses, etc.

"Air quality should be one of our main concerns," adds Boone, citing statistics that claim indoor air is 5 to 100 times more polluted than it is outside. Other numbers from the American Lung Association point to a 70 percent increase in the number of children diagnosed with asthma and allergies over the past 10 years.

Boone's father suffers from respiratory problems, one major reason he became interested in the project. A 2001 Health House seminar left Boone "excited" about the concept. There are some cost increases associated with building to guidelines now but both Boone and Coburn estimate that amounts to less than 10 percent, a figure that could decrease with the economics of scale if more are built nationwide. Boone is a 30-year industry veteran and his company has been featured in major trade publications, where he notes that indoor air quality is always a topic.

Boone met Coburn several years ago and told him about the Health House guidelines; shortly thereafter, they decided to team up at Piper Run, where the first homes are now going up. A radiologist by trade, Coburn is a longtime Southwest Virginia resident. "It has so many benefits for the individuals that would be living there," he says of Piper Spring.

Coburn says the concept has been used more extensively on the West Coast, but his development, designed with a rustic feel, is the first major Health House residential project east of the Mississippi. American Lung Association inspectors will be on hand at several points during the project to make sure all guidelines are followed. Coburn's Quest Group commercial contracting division may use those indoor air quality requirements in the future, although it is a more difficult process. "I'm looking forward to going ahead with the project," Coburn notes.

American Lung Association of Virginia spokesperson Terry Hargrove says five houses in Charlottesville should be completed around March. "This is a national program," adds Hargrove, noting that about 1,000 have been built to date in 30 states.

The American Lung Association's "breathe easy" headquarters building where she works in Richmond is built to Health House specifications. "These houses are not for sick or ailing people," she points about the new residential program. "These are for everybody." There are other standards for caulks, glues and even the nap height on carpet that can harbor dust and mites; go to www.healthhouse.org to see more.

Hargrove says the American Lung Association's "particular mission" is to raise the standards of construction so that many more are built to Health House guidelines for indoor air quality in the future. Holding builders accountable for "poor business practices that they've used in the past" is another long term goal.

In the Blue Ridge Region the official Health House concept hasn't found a taker yet, but architect Gregg Lewis of SmithLewis Architects in Roanoke says he is specifying materials that reduce "out-gassing" in many cases.

Clean ventilation ducts and a mechanical system that helps filter out pollutants are helpful but in many cases, Lewis says, the building industry has been remiss in using materials contribute to poor indoor air quality. "Formaldehyde is a perfect example of something that they continue to use in products that find their way into our houses, businesses and schools."

Fiberglass insulation, plywood and some furniture is still processed with formaldehyde, Lewis adds. "It's a known carcinogen," notes Lewis, still trying to get his C2C environmentally friendly prototype house off the ground in Roanoke and awaiting site preparation work.

The Green Building Council and its LEED program (usgbc.org) is a further example of efforts to reshape the building industry. "There are other models out there," notes Lewis, who calls some building practices and materials used "pretty disturbing." That leads to indoor air quality worse in

many cases than what people are breathing outdoors - a trend Health House and the American Lung Association hopes to reverse.