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## **ABINGDON – Looking for a healthier house?**

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Soon, you'll have to look no further than just off U.S. Highway 19.

A planned 200-house development will be the first in Southwest Virginia built according to the American Lung Association's Health House standards.

The building standards include extensive efforts at ventilation, moisture control and air filtration.

The goal is better indoor air quality.

"This is something new for the region," said Bob Moffitt, spokesman for the Health House program, which is based in St. Paul, Minn.

"In terms of a large planned community [using Health House standards], it's one of the first on the eastern seaboard."

With growing concern in recent years about mold allergies and asthma – and with a growing population of older people with respiratory problems – indoor air quality has started to get more attention across the country.



Now, the issue is crossing the gap between health and business professionals.

Locally, Ernest Coburn is a doctor and developer who is breaking new ground. He says he wants people to have healthier houses, and that's why he's building according to the Lung Association's standards.

"I'm a radiologist by trade, and I'm very close to lung disease and see it daily," Coburn said. "The Health House does really lean more toward clean air for a person with lung disease, or preventing lung disease."

In late October, Coburn signed an agreement with the Lung Association on Abingdon's first Health House. He officially broke ground Tuesday.

The house will be the first in a subdivision called Piper Spring Estates, which sparked controversy among the neighbors earlier this year over road access – an issue Coburn says has nothing to do with the Health House plan.

The idea has already caught on in places like California and Nevada, where some developers have put the concept into practice on a large scale.

So far, its use in other parts of the country has been scattered, although it began in Minnesota.

Moffitt says the American Lung Association of Hennepin County, Minn., decided 13 years ago to build a test house to study indoor air quality.

"It was intended just to be a one-time experiment in Minnesota, where we pulled together a bunch of building experts. We were just going to do a model home and write about it," Moffitt said.

"It just kind of took off from there. The next year, we had other lung associations in different states asking if they could do that too, and before we knew it, Health House became a national program."

Since then, more than 1,000 houses have been built adhering to Health House standards in at least 30 states, Moffitt said.

The closest ones to Bristol are four hours away in Charlottesville, Va., where five Health Houses are under construction.

Every year, Moffitt said, the demand for the homes increases.

"The consumer is the one that's really driving it," he said. "It's not the builder. It's the home buyer who's really asking for this."

The growing popularity of the Health House, he said, is part of the same trend that brought non-toxic paint – and a more health-conscious generation of other construction and home improvement products – to hardware store shelves over the last decade.

The factors that Health House standards seek to control, including water, humidity, chemical-leeching materials and poor ventilation, are at the root of negative health effects associated with poor indoor air quality, according to health experts.

Khizar Wasti, director of the Division of Public Health Toxicology for the Virginia Department of Health, discussed some of the air quality problems that can exist indoors.

Mold, he said, tends to grow in places with high humidity, or where water gets into the walls of a house and stays.

He said people who are sensitive to mold can experience both short- and long-term effects. Common mold-related complaints include allergy symptoms such as an itchy or stuffy nose, watery eyes and headaches.

"If they have a pre-existing condition, respiratory problems, they may be aggravated by exposure to mold," Wasti said.

For example, he said, asthma attacks may be more frequent as a result of mold exposure.

People can also have a reaction to chemicals, particularly in new homes, such as toxic compounds in paint, solvents and sealants often used during construction.

For example, formaldehyde, used in the manufacture of particleboard and some adhesives, is one chemical that can irritate the eyes and nose.

Children and the elderly, Wasti said, tend to be more sensitive to mold and chemical exposure.

Another indoor air quality problem is the accumulation of carbon monoxide and carbon dioxide in homes that do not have adequate ventilation.

"These are the typical things that are produced even by activities like breathing and smoking, cooking, using the fireplace, burning wood or burning kerosene heaters," Wasti said.

At low concentrations, these gases can cause drowsiness and headaches; at high concentrations, they can be deadly.

Health Houses are supposed to eliminate these potential problems and also reduce radon, a gas that naturally exists in the soil in some places and can cause lung cancer.

So how does a Health House work? It is built to keep moisture and pollutants out and then equipment is used to control the indoor environment.

It deals with the water issue first with efforts to keep it out. If water does get in, it's kept confined to a particular area of the house. It has a system to control the humidity, helping dry out any dampness, and a ventilation system to keep fresh air circulating through the house.

The standards also require the use of materials that do not emit chemicals like formaldehyde, and include coating beneath the basement floor to keep radon out.

The air in a Health House is also filtered as it comes in to reduce the number of particles in the air.

Health Houses do cost a little more. The added cost varies geographically based on local housing standards and building costs.

Terry Boone, president of Perfect Air of Abingdon, which is doing some of the work on Coburn's houses, said building to those specifications normally adds 10 percent to 15 percent to the total cost.

But Coburn said he's not worried about the additional expense. He plans to market the homes in large cities and believes that Abingdon's reputation as a good place to retire will help spur sales, particularly with the lower cost of real estate in this part of the country.

And, he said, "As in anything, if you have a better product, it's going to be more appealing."