

What's Behind the Buzz About 'Indoor Air Quality' & 'Sick Building Syndrome'?

I remember decades ago, back in New York City, first hearing the term "sick building syndrome." It had something to do with the chemicals from materials such as new carpet negatively affecting the health of office workers and home occupants.

More recently, we began hearing about "indoor air quality," an issue that was addressed by HVAC and other vendors.

Next we started hearing about volatile organic compounds (VOC), those chemicals that out-gas not only from carpeting but even from the paint applied to your walls. Merchants started advertising "low-VOC" products, not just paint and carpeting, that had less or none of the chemicals which could be harmful to human health.

It has all culminated in what we know today as the "healthy home movement." Some home builders now promote the homes they build as healthy, not just energy efficient.

I appreciate this focus on making our homes healthier, especially for those with compromised immune systems.

Flint Michigan's 2014 crisis involving lead in the water drawn from the Flint River and leaching from that city's lead pipe service lines brought that issue to our consciousness and saw cities all around the country, including Denver, invest in replacing lead service lines in their older housing stock. Nothing epitomizes an *unhealthy* home quite as much as when the water from its faucets poisons those who live there, especially the children.

Founded in 1992, the **National Center for Lead-Safe Housing** reflected the awareness of more wide-

ranging in-home hazards when it changed its name to the **National Center for Healthy Housing** in 2001. (Its website is www.nchh.org.)

One home health hazard that was not recognized until 1986 is toxic black mold. Its scientific name is *stachybotrys chartarum*. Mold spores are all around us, including in our homes, but black mold can kill. The public became more aware of it following Hurricane Katrina in 2005. As the waters receded from homes, black mold soon covered the walls that had been underwater or experienced excessive humidity.

In the real estate business, we are used to inspecting for lead and mold, but also for radon gas (which can cause lung cancer) and asbestos, which can be in drywall from China and in popcorn ceilings. It's even in some of the glues that have been used to lay vinyl flooring.

Just within the last year, there has been new attention to the hazard of methane and carbon monoxide emissions from gas cooking ranges. You are advised to run your kitchen exhaust fan (assuming it's ducted to the outdoors, not just recirculating through a filter) whenever a gas burner is on, not only when the food you're cooking is smoking.

And let's not forget the ever-present risk of home explosion in a home plumbed with natural gas. Now, *that* would be unhealthy!

That's quite a list of health-impacting hazards added to the out-gassing from carpeting and wall paints of volatile organic compounds.

Since some of these hazards, unlike lead pipes and lead-based

paint, are still legal, there's a space in the housing market for builders who go to great lengths to reduce any and every possible hazard that could contribute to an unhealthy home. I'll mention a couple such home builders at the end.

Increasingly, home builders in America (and elsewhere) are taking to heart the need to look more deeply at the components and materials they put into the homes they are selling.

In the profiles of homes featured in the Metro Denver Green Homes Tour last October, there was frequent mention of Heat (or Energy) Recovery Ventilators (HRVs or ERVs). The best of these devices not only condition fresh air for temperature as it is brought into the home to replace air being exhausted, they also test for high levels of carbon dioxide (which is considered a pollutant at high levels), and also for VOCs in the home's air.

From studying high performance homes including those in the green homes tours (both Denver and Boulder), I personally view an HRV, ERV or even a CERV (which contains a heat pump), an essential appliance in any modern home intended to be both energy efficient and healthy.

A fellow vacationer just told me about the **air scrubber** which he installed in his house. He reported that he and his wife felt the difference in just one day. I googled the phrase "air scrubber" since I hadn't heard of this appliance, and they do exist as either an inline unit for your forced air ductwork or free-standing if you don't have ductwork (such as in a home with hot water heat).

To quote RhoadsEnergy.com's blog post on air scrubbers, "It removes air pollution, VOCs, surface contaminants, pet dander, odors and dust. It provides a cleaner, healthier and more efficient home. This low maintenance device uses proprietary light waves along with a specialized catalytic process to keep your home cleaner."

ERVs and HRVs are easy to install in new construction, but difficult to install as a retrofit, because they require the installation of extensive new ductwork of their own. Indeed, introducing such an appliance might be impossible in many homes. In such cases, an air scrubber would be an ideal solution, because it is simply installed within existing ductwork.

I have not seen a lot of progress among Denver area home builders when it comes to sustainability, so I'm not real hopeful for progress in addressing indoor air quality. When I represented a buyer in Jefferson County last year, I attended the meeting at which upgrades were discussed. All the homes were being outfitted with high-efficiency gas furnaces and A/C units. An upgrade to a heat pump system was simply not available.

Builders are actually opposing new laws which would require all-electric homes — that is, no natural gas lines serving their subdivisions. Such laws are being passed in other states or cities.

The Federal EPA has a program called "**Indoor airPLUS**" which sets a standard for achieving a healthy home by addressing all the contaminants mentioned above. Colorado-based **Thrive Home Builders** builds *only* Indoor airPLUS-certified homes and has won the EPA's Leader Award eight years in a row. They are currently building homes starting at \$449,900 in Broomfield, Lone Tree and Denver's Loretto Heights. Call me or one of my broker associates below if you'd like us to show you those homes and represent you in a purchase.

Meritage is another Colorado builder of Indoor airPLUS-certified homes. Learn more at their website, www.MeritageHomes.com.

This week's topic was inspired by an article I read on Probuilder.com titled "Breathe Easier — Healthy Homes Go Mainstream." You can find a link to that article at <http://RealEstateToday.substack.com>.



Boulder Home Backing to Pond Back on Market

This fantastic 3-bedroom, 2-bath, 2,350-sq.-ft. home at **820 Racquet Lane** is at the end of a quiet cul-de-sac in east Boulder's Meadow Glen neighborhood, backing to a community pond and Boulder's outstanding biking trail network. Foothills Parkway, Baseline Road and Hwy 36 are nearby. Inside are hardwood floors throughout, a beautiful staircase with custom wrought iron railing, and lots of sunlight thanks to the open floor plan. There are two bedrooms with walk-in closets on the main level while the primary bedroom is located on the 2nd floor with a huge walk-in closet and ensuite bathroom. The kitchen features custom cherry cabinets, granite counters and a top-notch Viking refrigerator and range. There are two living rooms (main floor and upper floor) and a dedicated home office. Outside is a large and private fenced patio. The 2-car garage also has a spacious attic for extra storage. Get more details and take a narrated video tour at www.GRElistings.com, then call listing agent Chuck Brown at **303-885-7855** to request a private showing.



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"Concentrate on giving, and the getting will take care of itself." —Anonymous