

There's Something in the Air...



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The sun was at the perfect angle as I closed all the curtains in our living room, making sure just a slender sunbeam came through the west-facing window. Then I laid on the carpet right where the light touched the floor. I slapped the carpet and up popped the little floaties. The more I smacked the carpet, the more floaties appeared. Then I'd try to write something in them only to see them swirl around my finger. I was seven years old then. Life was simple and floaties were fun.

Now I'm nearing 50, and I look at floaties very differently. I'm not so inclined to slap the carpet these days; my wife would give me strange looks. My viewpoint now comes from knowing what those floaties truly are - and that the ones I can't see can be the most dangerous.

Particulates are those little floaties that we see when a beam of sunlight shines through the window. They're also the ones we don't see, many less than a micron in diameter, which is one hundred times smaller than the width of a human hair. Particulates can be all sorts of stuff: dust, pollen, mold spores, bacteria, pet dander, dust mites, tobacco smoke, etc. Did you know, on average, 80% of dust is dead skin cells? If you're scratching while reading this, you're just making more dust!

Particulates become a major concern when we have allergic reactions to them. The U.S. Centers for Disease Control (CDC) classifies most particulates as a Danger "Level One" Concern. However, there are actually three danger levels of increasing concern. (See Sidebar)

Nature handles these three levels with an array of purifiers: wind, rain, lightning, ultraviolet light, plants and even bacteria. Technology has allowed us to duplicate some of these natural purifiers. Germicidal lights emit the C spectrum of Ultraviolet light (UVC) and have been used for years in hospitals and, more recently, in homes. This spectrum of light attacks contaminants in danger levels one and two. Another purifier we've been able to replicate is an Energy Recovery Ventilator, which removes stale air and replenishes with fresh air. It also removes and/or dilutes carbon dioxide and other toxic gases. And, by using a special chamber, the ventilator transfers heat and humidity, allowing you to recover 70% of the energy from the outgoing air! The best whole-house air cleaners tackle a myriad of particulates. Their effect is reduced, however, with the use of cheaper, box store variety filters. The "filtering" capabilities of these filters is questionable.

Less expensive filters may claim to be efficient, but it's not clear what that means. Filter effectiveness is based on particulate size. Some filters can remove a percentage of particulates larger than 10 microns. This helps, but when 98% of all indoor air particles are less than one micron, not much is being filtered out of your system. These same filters also typically have media fibers so dense that the filter restricts air flow, reducing the efficiency of your heating and cooling system.

We're often asked about room air cleaners called ionizers. These units often emit high levels of ozone, a known respiratory irritant. Many

There are some great websites for more information.

I like the EPA's site for kids:
airnow.gov/index.cfm?action=aqikids.index

American Lung Association link on indoor air quality:
www.lungusa.org/site/apps/s/content.asp?c=dvLUK900E&b=34706&ct=67087

Asthma and Allergy Foundation of America: www.aafa.org

models lack a fan which inhibits drawing polluted air across their charged plates. They may boast quietness but rate poor on efficiency. Another consideration is cost. You could spend four to five times more for a sufficient number of individual room air cleaners than for one of our whole house systems!

Hoffmann Brothers offers air cleaners/purifiers that can remove over 98% of particulates in the average home and eliminate all three CDC danger levels of indoor air contaminants. Even better-our systems only require a once a year filter change! Let us assist you in selecting the right system for your home or business.



Mold Spores



Staph Bacteria

**LEVEL ONE
Allergens & Particulates**
Dust & Pollen
Mildew
Dust Mites
Pet Allergens
Tobacco and wood smoke

**LEVEL TWO
Infectious Agents**
Bacterial Infections
Viral Infections
Influenza
RSV
Common Cold Viruses

**LEVEL THREE
Toxic Compounds**
Formaldehyde
Tobacco Smoke
Nitrogen Dioxide
Pesticides
Benzene

Do you have concerns? Then take a step toward a solution and call us today. Mention this article and receive HALF OFF our indoor air quality diagnostic fee. That's a savings of \$35.00! Why worry about what you and your family are breathing? Give yourself the peace of mind you deserve. Make this year a healthy air year. Call today!

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Questions? Call me at (314)664-3011 or email DavidP@HoffmannBros.com.

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