

“DID YOU KNOW”

Did you know that Indoor Air Quality (IAQ) is sometimes worse “inside” your office and/or residence than that outside? (Please see IAS EPA link)

Indoor air pollution is different from outside pollution - different sources emit different pollutants. Indoor pollutants include gases such as carbon monoxide, biologicals such as mold toxins, radioactives such as radon, chemicals such as ammonia, and particles such as smoke, dust, pollen, and spores. Inadequate ventilation makes pollution worse by not bringing in enough outside air to dilute the pollutants and by not carrying them back outside. High temperature and humidity make polluted air even more dangerous.

Why is IAQ important?

First - Poor IAQ (Indoor Air Quality) can make people chronically and/or acutely ill, permanently injure or even kill them (i.e. exposure to Carbon Monoxide (CO). Poor IAQ can cause sick building syndrome (SBS) and/or building-related illnesses (BRI) such as “Legionella”, “Aspergillosis”, asthma, pneumonitis, and many other allergic responses. Various indoor contaminants affect some building occupants while they are in a building but go away when they leave, without being traced to any specific pollutants.

Second - IAQ problems can significantly reduce the value and marketability of a home or commercial building.

Third – many individuals are suing construction companies, building owners/ sellers, architects, engineers, real estate agents, general contractors, and various manufacturers - and - over bad IAQ.

Heating, Ventilation, and Air Conditioning (HVAC) engineering and installation

The primary engineering problem leading to poor indoor air quality (IAQ) is “Inadequate” ventilation – i.e. less than 10 cubic feet per minute of air coming into a building. A modern, "tight", well-insulated building can trap pollutants inside (i.e. carbon dioxide – from exhalation), and allow them to accumulate to uncomfortable or dangerous levels (i.e. above OSHA’s Permissible Exposure Levels (PEL).

The HVAC system, if poorly engineered or installed, can accumulate and spread pollution (providing a perfect environment for bioaerosols to grow (i.e. mold and bacteria).

Interior construction materials and equipment can also cause problems - many materials emit gases or dangerous particles into the air) i.e. formaldehyde from new carpets), including certain pressed-wood products and other building materials, asbestos-containing insulation, adhesives, and solvents. These can also lead to problems if floor or wall coverings are installed without proper ventilation.

Poor drainage (especially HVAC condensation drainage lines) and poor ventilation of unoccupied spaces such as crawl spaces and attics, whether due to poor design or

improper construction, can trap moisture. Similarly, inadequate construction of building exterior envelopes can allow moisture under flooring and inside walls.

Moisture, darkness, and warmth encourage mold, and mold can cause many negative health effects. Some common indoor molds, such as *Stachybotrys*, *Aspergillus*, *Cladosporium* and *Penicillium*, airborne spores that can trigger serious allergic responses and can even be toxic to “immune compromised” individuals such as cancer recovery victims, newborn babies, etc.

How do we know if a building has an IAQ problem?

The best way to find out is by conducting a comprehensive Indoor Air Quality investigation. Some problems, such as radon, can be tested even before a building is occupied. Other problems can develop over time, and require periodic checks of HVAC ducts, crawl spaces, attics, and building exterior envelopes.

Indoor Air Specialists, LLC can immediately identify any potentially hazardous situation inside your home or office and immediately offer a solution – please contact us.

Benefits of Air Duct Cleaning

If a recent of ailments (coughing, allergic reactions, etc.) has been wreaking havoc on your or your employee’s daily life, then poor indoor air quality (IAQ) could be the culprit. According to the Environmental Protection Agency, indoor air pollution is one of the greatest risks to public health on a whole throughout the country. Fortunately, there is a way to combat household air pollution and improve your quality of life. By having your home and or offices air ducts professionally cleaned, you can save yourself a world of trouble on so many levels.

Better health

The dirtier your ducts – the worse you’re likely to physically feel due to airborne particulate clogging up your airways. Poor indoor air quality can cause a variety of health issues and ailments, including asthma, allergies, nausea and fatigue. By circulating dust (skin particles, animal dander, lint, etc.) and other contaminants throughout your household environment, dirty air ducts can trigger and aggravate conditions such as asthma and allergies. If your health is important to you, then add “air duct cleaning” to your list of home maintenance services to pursue.

Lower utility bills

Most heating, ventilation, and air conditioning (HVAC) duct systems work by drawing in household air and circulating it throughout your home/office. The presence of particulate (i.e. dust, debris) within a HVAC duct system can work to inhibit regular air flow, thereby reducing the efficiency of your associated heating and cooling systems. When this

occurs, your HVAC systems electrically, gas and or fuel oil powered motors need to “work harder” and your utility bills will ultimately increase. Therefore, if you’re looking to save money on energy costs, HVAC air duct cleaning is clearly the best option.

In the “short term” you will have to expend some cash to bring in **Indoor Air Specialists, LLC** to do the job - fortunately your investment will pay for itself in the “long term” in terms of energy savings and increased indoor comfort!

Did you know...?

...air is the basic essential of life!

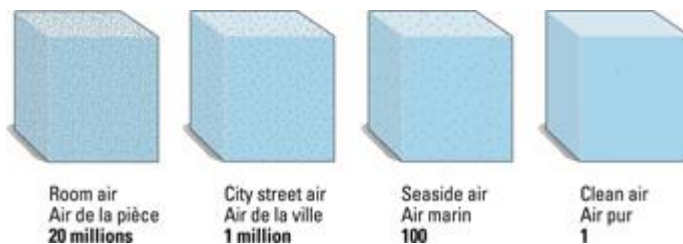
We draw 12,000 liters (that's over 3,000 gallons) of air into our lungs. We breathe in and out 20,000 times each day, yet we don't spend much time in the fresh forest air. On the contrary, we spend 90% of our time indoors. While we pay attention to our health when considering our diet most of us are indifferent to the quality of the air that we breathe.

Did you know...?

...the air in a busy city street is twenty times better than in your office!

We spend 90% of our time indoors where there is up to 20 million particles in 10 cubic feet of room air. The consequences dry or impure air has on our health can be severe. The U.S. Environmental Protection Agency classifies indoor air pollution as one of the five most dangerous environmental threats to our health. Air purification and humidification must play a key role in our efforts to obtain the optimum room climate for the protection of our health.

Particles per 10 cubic feet of air:



Potential consequences of impure air

The air which we breathe is full of harmful substances, and conditions worsen every day. House dust, mites, pollen, animal dander, tobacco smoke and other impurities encourage allergic reactions and respiratory diseases. Dry air increases the number of particles that circulate around the home. Therefore, properly humidified air prevents particles from travelling around the home.

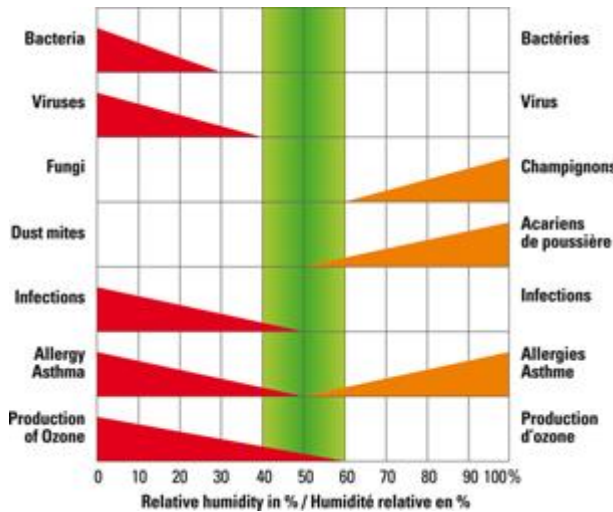
Potential consequences of poorly humidified air:
 Headache, dizziness, irritated nasal passage, nausea, tightened respiratory track, allergies, asthma, lung damage, skin irritation

Did you know...?

...you will perform best at humidity levels between 40% and 60%!

When room humidity is at an ideal level, we feel good. We are better able to concentrate and the number of errors and accidents is reduced dramatically.

Optimal hygiene for room air



Medical experts recommend a relative air humidity between 40 and 60 percent. At these levels our senses tell us the air in the room is ideally humidified. This humidity level also is ideal for our health, for the animals and plants in the room, for furniture, musical instruments and much more.

Temperature / Température

Outdoor air / De l'air extérieur	39°F / 4°C	34°F / 1°C	28°F / -2°C	19°F / -7°C
Indoor air / De l'air intérieur	72°F / 22°C	72°F / 22°C	70°F / 21°C	72°F / 22°C



Relative humidity / Humidité relative

Outside / Extérieur	78%	82%	71%	68%
Indoors / Intérieur	38%	33%	28%	20%

Did you know...?

... preventive measures can delay or avert the onset of an allergy!

With around 50% (!) of children presenting an increased hereditary risk, preventive measures can influence the onset of an allergy. Apart from establishing the family's allergy history and ensuring a good diet for the newborn baby and expectant mothers, preventive measures must also include the avoidance, elimination or reduction of environmental factors such as tobacco smoke, animal hairs, dust mites, spores and pollen.

When it comes to taking in a breath inside our home, we all take it for granted that it's healthy – but the truth is that indoor air pollution means that the air inside our homes could be more polluted than the air outside of it!

Symptoms of Pollution in the Home

We are often unaware of what this pollution does to our bodies, to such an extent that many of us don't even think of it. However, pollution can have a number of negative effects on our health, leading to symptoms such as...

- Fever,
- Headaches,
- Nausea,
- Fatigue,
- Cancer,
- Irritability,
- Depression,
- Dizziness,
- Anxiety,
- Respiratory problems,
- And more!

The Sources of Pollution in Our Homes

The truth is that the more we work at ensuring heat stays in our homes and that they are well insulated, the more we need to think about ventilation as a way of reducing the toxins in the air. These toxins come from a wide range of sources, including dust and animal dander.

Perhaps the most worrying source of toxins and chemicals in the air of our homes are chemical cleaners and products. This can include cosmetic products containing toxic

chemicals, products we use to clean our homes, air fresheners and more! We just don't realize the concoction of chemicals that goes into creating these products.

How to Reduce Levels of Pollution

The good news is that we can help to reduce the indoor air pollution of homes/offices by following a few basic steps: changing our HVAC air filters every ninety (90) days, opening the windows for fresh air and by having **Indoor Air Specialists, LLC** perform a comprehensive indoor air quality (IAQ) investigation and/or annual duct cleaning inside your home/office.

<http://www.epa.gov/radon/>