

The most important reason for

Mechanical Ventilation in your home is obvious...

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HERE ARE 9 MORE...



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#2

POOR I.A.Q

Indoor Air Quality

- Homes and buildings are constructed to limit the flow of air going in or out
 - Pollutants are trapped and recalcitrated
- Once airborne pollutants are inside, they stay inside
- Indoor Air Pollution is the #1 environmental risk to your family's health



Energy efficient windows prevent air from escaping

Thick insulation prohibits contaminated air and pollutants from escaping.



The E.P.A. Estimates that indoor air is up to 100 times more polluted than outdoor air!

Contaminated air and humidity are circulated by your heating/AC system

Poor indoor air quality can lead to:

Headaches

Recurring Flu's

Aggravated Allergies

Persistent Coughs

Asthma

Many other common illnesses

HUMIDITY

#3

Water Content in the Air

In The Summer:

Increased humidity levels make your home a breeding ground for molds, dust mites, and other biological contaminants

In The Winter:

Humidity levels drop somewhat, but in today's modern, tightly sealed homes cause levels to remain high enough to continue to support these contaminants



Moisture damage contributes to over 90% of all building material failures.

Except for structural errors, moisture is the leading cause of building problems costing more than \$9 billion annually in the U.S.

Humidity provides the perfect environment for:

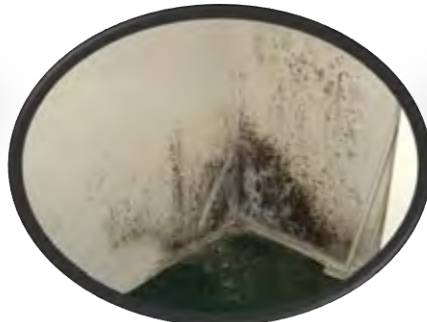
BACTERIA



DUST MITES



MOLD



#4

DUST MITES

How many are in your home?



- There can be up to **100,000** dust mites on one square yard of fabric
- An average bed or couch can contain over **1,000,000** dust mites



DUST MITES:

- Feed primarily on human skin
- Thrive in homes lacking proper ventilation
- Droppings' can cause development of serious allergies
- Aggravate existing allergies and increase asthma attacks

MOLD

Allergen, Health Hazard

#5

- Molds can live virtually anywhere
- They contain reproductive structures called spores
- Allergens on spores can cause mild to chronic illnesses
- Toxic mold has been linked to serious infections including fatal pulmonary disorder in infants



Without proper ventilation, centralized heating/AC systems can pick up mold contaminants and recirculate them throughout the home, spreading infestation.



SUMMERVILLE, SC (WCSC) - Beverley Rodgers' dream home became more of a health hazard for her family after mold took over. Rodgers says after having her old air conditioner replaced she found out the speed tap was not set properly causing very high levels of humidity in her home. Rodgers says along with the high levels of moisture in her home came high levels of mold. "I had air samples to show me how bad it was and eventually we had to have the house essentially demolished the only thing we kept was the brick, roof and studs," Rodgers said. Richard Bennett, an air quality testing technician, says the mold can amplify and moisture will cause it to grow and cause extensive damage to the structure and increase the health effects Rodgers blames the mold in her home for her son having to have three nasal surgeries and her persistent cough. "It can cause permanent brain damage and permanent respiratory damage," said Industrial Hygienist Ralph Wilson. Rodgers says she had to pay more than \$500,00 out of pocket to have her home restored. Bennett says although mold can be dangerous for anyone, the most vulnerable are children and the elderly.

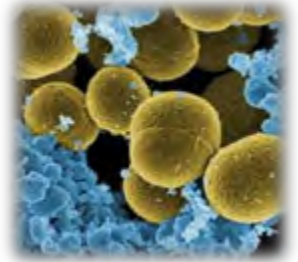
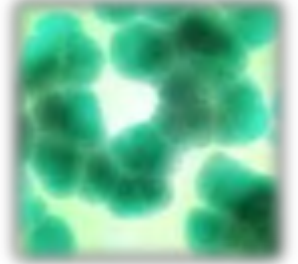
#6

BACTERIA

How many diseases begin?

- Microscopic organisms that can virtually live anywhere
- Millions of different species exist
- Thrive in air ducts & air-conditioning systems
- Contribute to musty smells and odors

Bacteria cause many diseases including: tuberculosis, staph, strep, typhoid fever, whooping cough, pneumonia, meningitis, influenza, plague, and anthrax



Ventilation is highly effective for removing sub-micron particulates, because the smaller and lighter a particulate, the slower it moves through the air. The longer a particulate remains airborne, the greater the chance ventilation has at exhausting it altogether. **Proper ventilation, using our unit, can reduce sub-micron particulates by up to 80%**

V.O.C.'s

Volatile Organic Compounds

#7



V.O.C.'s are chemicals that evaporate into harmful gases at room temperature. Poor Ventilation causes them to build to dangerous levels.



The Average home consumes **TWO GALLONS** of household sprays and cleaning agents every year

Common Sources of V.O.C.'s:

- Household sprays/cleaners
- Air Fresheners
- New Carpet fibers
- Paint (dust/fumes)
- Insecticides

Short Term Symptoms:

- Eye, nose, throat & skin irritations
- Headaches, Dizziness, Nausea
- Vomiting & Coughing

Long-Term Symptoms

- Cancer
- Liver & Kidney Damage
- Central Nervous System Damage

#8

SMOKE

Not Just Cigarettes...



CARBON
MONOXIDE

Household smoke comes from many sources:

- Fireplaces
- Incense
- 2nd-hand cigarette smoke
- Candles
- Space Heaters
- Gas Furnaces/Water Heaters
- Gas Ranges



According to the Journal of the American Medical Association, "There are approximately 2,100 unintentional deaths from carbon monoxide (CO) every year in the U.S. In addition, more than 10,000 CO injuries occur annually from this colorless, odorless and tasteless poison." Many of these poisonings can be avoided...

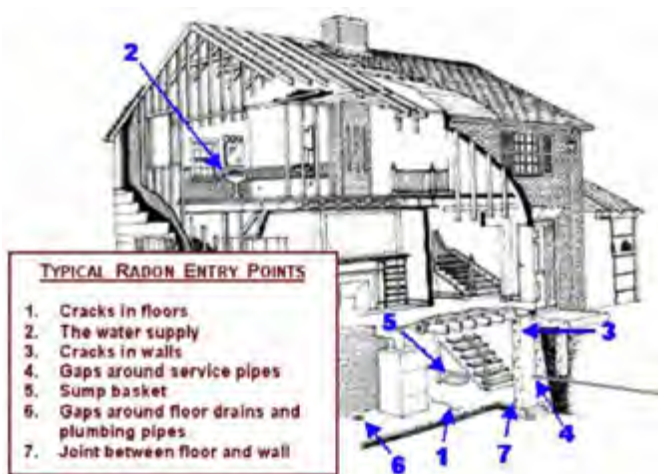
RADON GAS

#9

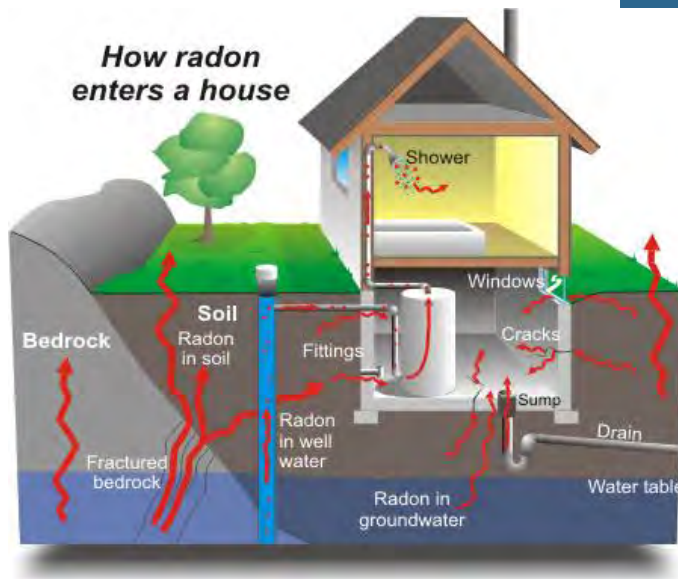
Invisible Danger

Radon Gas:

- Heaviest gas known on Earth
- Colorless & Odorless
- Contained in Soil
- Releases Alpha and Gamma radiation in your home (radioactive)
- Homes trap Radon gas, which builds to dangerous levels



Radon is the second leading cause of lung cancer. The U.S. Environmental Protection Agency (US E.P.A.) and Surgeon General's Office have estimated that as many as 20,000 lung cancer deaths are caused each year by radon.



EXPERTS AGREE

10

Ventilation is Key



“In order of effectiveness, the three methods of reducing pollutants in indoor air are: 1. Removal of the source or control of its emissions, 2. Ventilation, 3. Air Cleaning. Air Cleaning alone can be used as an adjunct to source control and ventilation. However, air cleaning alone cannot adequately remove all of the pollutants found in indoor air. Indoor air quality is among the top 5 most dangerous public health hazards.”



“Indoor air pollution contributes to lung disease, including respiratory tract infections, asthma, and lung cancer. Lung disease claims more than 300,000 lives in America every year, and is the 3rd leading cause of death in the United States.”



“There are both theoretical and empirical evidence that feasible moderation in ventilation rates can decrease asthma by up to 75%”



“Although the American Lung Association and the EPA recommend air filtration, they say that controlling the sources of allergy-causing pollution and ventilation are more important. In fact, research studies disagree on whether or not the filters give much added relief from asthma in a clean and well-ventilated home”

