Additional Services

Our additional Services include but are not limited to:

Indoor Environment

- Comprehensive building evaluations
- Sampling for contaminants and indicators (fungi, bio-aerosols, respirable particulate, volatile organic compounds, pollen, dust, allergens, chemicals, etc.)
- Water intrusion, cause and origin assessments
- OSHA complaint responses
- Sound, light and ergonomic studies
- Odor complaints
- Building risk assessments
- Evaluation of energy conservation measures on the indoor environment
- Development of management plans
- Maintenance procedures and check lists
- Project planning
- Education and training

Heating, Ventilating and Air Conditioning

- HVAC equipment and system assessments
- Ventilation and building pressurization studies
- Project management and supervision
- Mechanical system commissioning
- Facility needs assessments

Energy Services

- Building energy audits for residential, commercial, hospital, institutional and special use buildings

Litigation Support

Professional Affiliations

We actively participate in:

- American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc. (ASHRAE)
- Association of Energy Engineers (AEE)
- Environmental Engineers & Managers Institute (EEMI)
- American Industrial Hygienists Association (AIHA)
- American Academy of Allergy, Asthma & Immunology (AAAAI)
- American Indoor Air Quality Council (AMIAQ)
- Indoor Air Quality Association (IAQA)
- European Academy of Allergology & Clinical Immunology (EAACI)
- European Countries Biologist Association (ECBI)

Scientific Committees

Our scientific committee work includes:

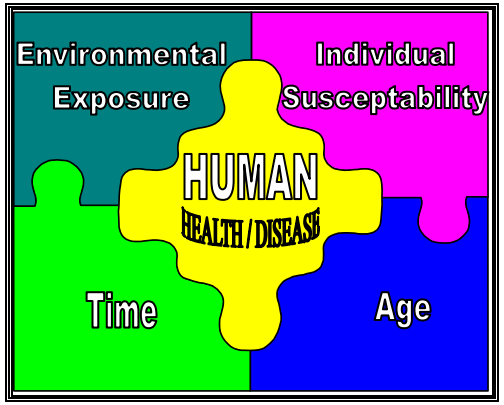
- ASHRAE – SSPC 62.1 "Ventilation for Acceptable Indoor Air Quality"
- American Academy of Allergy Asthma and Immunology's Aerobiology Committee
- American Academy of Allergy Asthma and Immunology's Indoor Allergens Committee
- American Industrial Hygienists Association's Bio-safety and Environmental Microbiology Committee
- American Academy of Allergy Asthma and Immunology's Environmental and Occupational Respiratory Diseases Committee

For additional information

Call - 813.957.6672

Biological Pollutants in the Home or Workplace

"Your Environment is Your Health"



D. C. Herrmann & Associates

"Indoor Environmental & Mechanical Consultants

13508 White Elk Loop

Tampa, FL 33626

Phone: 813.957.6672

Biological Pollutants

Biological pollutants are live or dead organisms and the substances that they produce. These biological pollutants may include:

- Dust Mites
- Cockroaches
- Animal Dander
- Rodent Urine
- Mold (Fungi)
- Pollen
- Bacteria
- Viruses

They are a natural occurrence, and are common in the air we breathe. Health effects of these pollutants depend upon the type and amount of the pollutant, the length of the exposure, and the individual person exposed. Given the same type and level of exposure, some individuals will not experience any reaction to the pollutant while others may experience an allergic, infectious or toxic reaction. Of these, toxic reactions are the least studied and understood. Allergies (including asthma and hay fever) are the most common types of reactions. It is estimated that the prevalence of environmental allergies in this country is approximately 30% in adults and 40% in children.

Scientists have studied common indoor allergens for many years and proposed threshold levels of allergen concentrations present in house dust that cause sensitization and symptoms for dust mites, cockroaches, and cat and dog dander. Specific allergens derived from these sources can be measured in buildings and compared with the established thresholds. Threshold levels for other allergens (including those derived from mold) have not been proposed.

Mold

Mold (fungi) has become a major focus of attention although other biological pollutants can pose an equal or greater risk to susceptible individuals. Due to the media hype about mold, other pollutants are often left out of an indoor building evaluation, though they may represent greater risk for sensitization and symptom development in the susceptible individual. The creation and use of such terms as *"Black Mold"* and *"Toxic Mold"* have become commonplace, although there is no scientific evidence to support them.

Mold produces tiny units of dispersion (spores) to reproduce. These spores waft through the indoor and outdoor air continually. When spores land on damp spots, they may begin growing and digesting whatever food source (organic materials) they have found. Indoors, mold can grow on wood, paper, carpet, and any other organic material if enough moisture is available. Some minor mold growth resulting from domestic activities such as cooking and showering frequently occur, and should not be a cause of concern. However, when excessive moisture or water is allowed to accumulate indoors, mold growth will often occur, particularly when the moisture problem is undiscovered or not quickly addressed. There is no practical way to eliminate all molds or mold spores in the indoor environment. Like most biological pollutants, the way to control indoor mold growth is to control moisture.

Growth and Amplification

Warm damp conditions, and in most cases a food source, encourage the growth and buildup of biological pollutants. Warm, humid conditions are common on a year round basis throughout most of Florida, explaining the frequency of growth and rapid amplification.

How Do They Get Indoors

Some pollutants (including mold) do not need an indoor source to be present indoors. For example, dog and cat dander is frequently found in a home or building that has never had cats or dogs. Pollutants may be brought indoors by attaching themselves to inhabitants, visitors, pets, and deliveries or carried in by the infiltration of outdoor air.

What Can You Do

Allergen avoidance is the first line of treatment to prevent environmental allergies and should be considered as an alternative and/or supplement to allergy medications. Allergen avoidance measures, preceded by an evaluation of the building, should be customized to address each individual situation.

Building Evaluations

At a minimum, a building evaluation should include listening to the concerns of the client, acquiring a building history, providing a visual and olfactory assessment of the buildings interior and exterior and obtaining moisture readings from building materials. Based on individual circumstances samples may be collected during or following the evaluation. Obvious problems discovered during the evaluation should be quickly and properly remediated and reevaluated after work has been completed in the affected areas.

Sampling

Sampling cannot substitute for a thorough building evaluation and should not be used or relied on as the sole initial investigative tool. Sampling is useful when used as part of a well designed sampling strategy to verify a hypothesis, when looking for a known contaminant or to support the efficacy of a remediation project. Sampling may also be considered when no problem is uncovered during a building evaluation and a biological pollutant is suspected. However, it should be recognized that while some pollutants have standard protocols for sampling, analysis, and interpretation of results, others such as mold do not.

What We Offer

- A thorough and comprehensive building evaluation tailored to your specific needs.
- Identification, experience and qualifications of the personnel responsible for your project.
- A written report of our findings and recommendations.

Our staff members have a comprehensive understanding of building construction, the associated mechanical systems, building activities and their day to day interactions.