

## 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, VOC's, 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

### Mechanical and HVAC

- ◆ 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

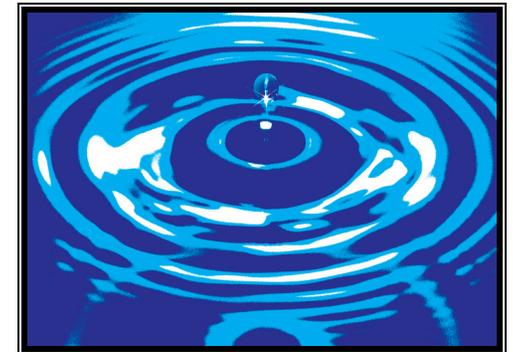
## For additional information

**Call - 813.957.6672**

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# Legionnaires Disease

**A PROACTIVE APPROACH  
AND  
EARLY DETECTION**



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## Legionnaires' Disease

Legionnaires' disease, which is also known as Legionellosis, is a form of pneumonia. It was called Legionnaires' disease because the first known outbreak occurred during a convention of the Pennsylvania Department of the American Legion. In that outbreak, approximately 221 people contracted this previously unknown type of bacterial pneumonia, and 34 people died.

In North America, the overall proportion of nosocomial pneumonia's caused by Legionella sp. has not been determined; although reported proportions from individual hospitals have ranged from zero to 14%. Because diagnostic tests for Legionella sp. infection are not routinely performed on all patients who have hospital-acquired pneumonia in most U.S. hospitals, this range probably underestimates the incidence of Legionnaires disease.

Legionnaires' disease is most often contracted by inhaling mists from water sources such as whirlpool baths, showers, and cooling towers that are contaminated with Legionella bacteria.

### Who's At Risk?

People most at risk of getting sick from the bacteria are older people (usually 65 years of age or older), as well as people who are smokers, or those who have a chronic lung disease (like emphysema). Case rates are higher in males, those with chronic illnesses, or under medical treatment regimes that are immunosuppressive; that is, depress the body & its defense mechanisms against bacteria. Patients in hospitals and nursing homes represent a large number of people who may be at higher risk of acquiring legionellosis.

## Current Practice

Two strategies are typically practiced with regard to preventing nosocomial legionellosis, especially in hospitals in which no cases or only sporadic cases of the illness have been detected. The cost-benefit ratio of incorporating these measures in hospitals should be thoroughly evaluated.

The first approach is based on periodic, routine culturing of water samples from the hospital's potable water system to detect Legionella sp. This approach is based on the premise that nosocomial legionellosis cannot occur if Legionella sp. is not present in the potable water system. Proponents of this strategy indicate that when physicians are informed that the potable water system of the hospital is culture-positive for Legionella sp., they are more inclined to conduct the necessary patient tests for Legionellosis.

The second approach to preventing nosocomial legionellosis involves:

- ♦ maintaining a high index of suspicion for legionellosis and appropriately using diagnostic tests for legionellosis in patients who have nosocomial pneumonia and are at high risk for developing the disease and dying from the infection,
- ♦ initiating an investigation for a hospital source of Legionella sp. upon identification of one case of definite or two cases of possible nosocomial Legionnaires disease and
- ♦ routinely maintaining water systems, cooling towers, etc. and using only sterile water for the filling and terminal rinsing of nebulization devices.

### Why Be Proactive?

Litigation costs are more expensive and time consuming than early detection and mitigation. Being proactive saves time, money and provides a front line defense.

## What We Offer

### *“An Alternative Proactive Approach”*

We offer a cost effective three-step proactive approach to early detection and avoidance of a nosocomial Legionnaires' disease outbreak.

- Step 1.** Work with your staff to provide a risk assessment of the facility and determine the sources most likely to contribute to an outbreak of Legionnaires' disease.
- Step 2.** Obtain water samples from sources identified in step 1. Culture and analyze water samples. Provide a written report of findings, laboratory results and include recommendations, when required, on an annual basis.
- Step 3.** Develop a maintenance program for high-risk water systems and prepare an emergency response in case an outbreak should occur.

*Periodic or routine monitoring is not an effective program by itself and will only be effective when included as part of a comprehensive maintenance program.*

### Ensuring Professionalism

We listen to the concerns of your staff and make sure that our approach fits your needs. We identify the personnel who will be responsible for your project and provide their experience and related qualifications.

Our staff members have a thorough knowledge of health care facilities and understand the interrelationship of the building structure, associated mechanical systems and human activities. They are familiar with associated codes and standards as well as the regional climate conditions.