



CANADIAN REGISTRATION BOARD OF OCCUPATIONAL HYGIENISTS CONSEIL CANADIEN D'AGRÉMENT DES HYGIÉNISTES

What can an Occupational Hygienist do for a Workplace?

The Workplace

When you look at what factors contribute to a successful workplace, a number of characteristics may come to mind: a positive safety culture, employee investment, work-life balance, a respectful environment, and teamwork. However, in terms of profits and productivity, Occupational Health and Safety (OHS), specifically Hygiene play a critical role.

The goal of most health and safety programs is to have zero incidents or injuries in the workplace. By achieving this, the workforce is generally more productive, and workers feel a sense of psychological safety and wellness, further adding to the success of the workplace.

A workplace health and safety program may include some of the following elements:

- Leadership Engagement
- Worker Participation
- Hazard Identification and Assessment
- Hazard Prevention and Control
- Education and Training
- Program Evaluation
- Communication
- Workplace Inspections / Practicing Situational Awareness
- Adherence to Safe Work Procedures
- Wearing Personal Protective Equipment (PPE)
- Good Housekeeping
- Reporting Hazards

While the above elements are all important, they tend to focus on the “now”, and work towards keeping workers safe from obvious hazards. The less obvious hazards are often ignored; these unidentified hazards are no less important, as they can lead to long term, sometimes irreversible illnesses and/or diseases. Many traditional health and safety programs do not put enough emphasis on the *health* component of these programs. This can lead to a number of problems for a workplace and is often only identified during an unexpected site inspection by a regulator, or perhaps after a worker has been diagnosed with a workplace related disease. Both of these scenarios can prove to be costly to the employer, sometimes in terms of monetary impacts, and reduced employee morale or poor perception of the company from clients and partners.

So - how can this potential issue be addressed?



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What is Occupational Hygiene?

The International Occupational Hygiene Association (IOHA) defines Occupational Hygiene as:

“The discipline of anticipating, recognizing, evaluating and controlling health hazards in the working environment with the objective of protecting worker health and well-being and safeguarding the community at large.”

The Occupational Hygienist

An Occupational Hygienist is a professional that will utilize scientific principles to carry out the role as defined by IOHA. The Occupational Hygienist will follow a process that includes identifying potential health hazards; based on the hazards identified, developing a strategy to conduct an exposure assessment if possible; and provide recommendations based on the outcome of the assessment. These recommendations may include the implementation of control measures to address any real or anticipated overexposures identified during the assessment. Health hazards identified and/or assessed by an Occupational Hygienist in the workplace may include (but are not limited to) chemical agents (such as gases, vapours, solids, fibres, liquids, dusts, mists, fumes), physical agents (noise and vibration, thermal stress, electromagnetic fields, lighting, ionizing radiation) and biological agents (e.g. bacteria, viruses, and fungi).

Recommending control measures to address an overexposure to any of the above-mentioned health hazards, the Occupational Hygienist will follow a basic concept known as the “Hierarchy of Controls”. The hierarchy of controls is a priority-based approach focused on controlling hazards in the workplace, starting with complete elimination of the hazard, moving to substitution for something less harmful (e.g. using a less toxic cleaning chemical), implementing engineering controls to reduce the amount of the hazard that reaches the worker (e.g. installation of a ventilation system for welding), then administrative controls (e.g. rotating workers to have less exposure time), and lastly, our last line of defense - personal protective equipment (PPE) (e.g. respirators, gloves, protective clothing).

To become an Occupational Hygienist, the CRBOH outlines required areas of competencies including:

- Basic Science
- Chemical Hazards
- Physical Hazards – Noise/Other
- Biological Hazards
- Legislation
- Ergonomics
- Biostatistics and Epidemiology
- Safety
- Environmental Issues
- Process Related Hazards
- Labour Relations



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- Ethics, and
- Management

To become a Safety Professional, the Board of Canadian Registered Safety Professionals (BCRSP) outlines required areas of competencies including:

- Hazard and Risks: Identification and Assessment
- Hazard and Risks: Controls and Mitigation
- Health and Safety Management
- Ethics, Professional Role and Function
- Technical, Human and Social Sciences, and
- Management Sciences

To become a Canadian Certified Professional Ergonomist (CCPE) or Associate Ergonomist (AE), the Canadian College for the Certification of Professional Ergonomists (CCCPE) outline required areas of competencies including:

- Physical ergonomics
- Cognitive ergonomics and human factors
- Legislation, standards and ethics
- Human performance
- Ergonomics in design
- Macro ergonomics and organizational design
- Systematic analysis and solution development

Although there is an obvious overlap between the practice of “health” and “safety”, the three professions do differ in scopes of practice and thus professional competencies. It is important that safety professionals without a deep background in industrial hygiene consult with hygienists to verify they are not missing “hidden hazards” in the workplace, and to set up programs to limit the potential for the employer to suffer monetary damage or reputational harm in the long-term.