

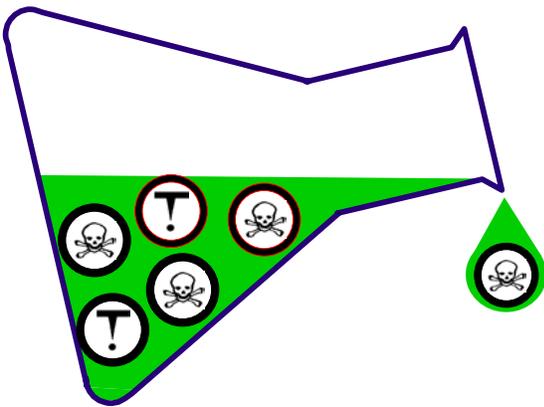
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# Health Hazards of Workplace Chemicals

presented by:

ALARA Industrial Hygiene Services

Toronto, Ontario  
October 14, 2015



*“All substances are poisons; there is none which is not a poison. The right dose differentiates a poison from a remedy”*

*Paracelsus*

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## COURSE OBJECTIVES

This is a course on basic toxicology that goes beyond the content of WHMIS training courses or in introductory “health effects” talks. It is designed as a refresher for professional occupational hygienists or a useful overview of the field for professionals with engineering or science backgrounds who want to understand the effects of industrial chemicals on the human body. Some knowledge of biology and chemistry is assumed.

**ALARA** Industrial Hygiene Services has a strong commitment to occupational health education and training. This course will provide participants with a better understanding of the mechanisms by which industrial chemicals may affect the health of exposed workers. Emphasis will also be given to understanding how to correctly apply occupational exposure limits. The course has been designed for occupational hygienists, environmental engineers and technologists who want to enhance their knowledge of industrial chemical exposures and human health.

### The course will be held at:

The Downtown Holiday Inn, 30 Carlton Street, Toronto, 1-416-977-6655

For certification maintenance with ABIH, this course provides 7 hours of technical content. CRBOH has awarded 1 RM point.

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## COURSE PROGRAM

- 8:30 Introduction: General Principles of Toxicology – the dose-response relationship. Toxicity vs. hazard, factors influencing toxicity. Toxicity testing
- 9:45 Absorption, Distribution and Elimination – routes of entry, sites of absorption, distribution, biotransformation of toxicants. Routes of elimination
- 10:45 Toxic Effects in the Blood. Blood cells, oxygen transport and the toxic effects of carbon monoxide and hydrogen sulfide
- 12:00 Lunch break
- 1:00 Target Organs and Organ Specific Toxicants. Examples of compounds that exert toxic effects on the lung, liver, kidney, nervous system and skin
- 2:00 Toxic Metals. The toxic effects of selected metals including lead, mercury, cadmium, nickel, chromium
- 3:15 Solvent Toxicity. Toxic effects associated with common classes of industrial solvents; effects on the skin, central nervous system and specific organs
- 4:15 Exposure Limits. Threshold limit values, time weighted average, short term and ceiling exposure limits: their relationship to health hazard and toxicity.
- 5:00 Adjournment

## COURSE INSTRUCTOR

### Charles W. Pilger, CIH, ROH, C.Chem

Chuck has an MSc in organic chemistry (Waterloo) and an MEng in industrial hygiene (Toronto). He has taught graduate and undergraduate courses in occupational health and safety and environmental analysis, and now offers professional development workshops in occupational hygiene. He has directed a university occupational health and safety laboratory, and conducted research in occupational hygiene and environmental health.

Other workshops offered by ALARA include:

- Occupational Hygiene Air Sampling
- Evaluation of Indoor Air Quality
- Bioaerosols in the Workplace
- Noise exposure evaluation
- Metalworking Fluid Hazards and Their Control
- Toxic Dusts - asbestos, lead, silica
- Heat Stress
- Working Safely With Isocyanates
- Solvent Hazards

For more information, Phone: (416) 759-9579 or e-mail: [info@alaraihs.com](mailto:info@alaraihs.com) [www.alaraihs.com](http://www.alaraihs.com)

## REGISTRATION

Fill out the course registration form and email to **ALARA** at [info@alaraihs.com](mailto:info@alaraihs.com) to reserve a space. Registration will be confirmed upon receipt of payment.

**Fee:** \$400.00 plus 13% H.S.T. (Total cost \$452.00)

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