

**SPECIAL SEMINAR****Dr. Ron Brecher**

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Toronto, Ontario.

**“Introduction to Human Health Risk Assessment”****11:45 AM****Wednesday, April 22, 2015****Room 12, Toxicology Centre**

Risk assessment is a science-based approach that can be used to quantify and describe risks to human health from chemical exposures. It is used around the world to support risk management decisions. For example, many Canadian quality standards and guidelines for drinking water, air, food, soil and consumer products are based on a foundation of risk assessment.

The risk assessment process involves four main steps:

1. Problem Formulation: Describe the hazard (chemicals), identify who is exposed (receptors), and how receptors can come in contact with the hazard.
2. Toxicity Assessment: Describe the harmful effects of the chemicals under expected conditions of exposure; describe the dose–response relationship.
3. Exposure Assessment: Quantify exposure (who, how, how much, how often, how long, etc.)
4. Risk Characterization: Describe the risk (nature and likelihood of adverse effects), place risk in context, describe magnitude and direction of uncertainty in risk estimates.

A variety of input data, assumptions and models are required at every step in the process. This presentation describes the risk assessment framework in detail, looking at the sources of the most commonly used types of hazard and exposure information. The presentation will also examine the differences between risk assessment and risk management, and the specific role of risk assessment in informing risk management decisions.

***Biography***

*Dr. Ron Brecher has 27 years’ experience as a consultant in toxicology, risk assessment and risk communication. In addition to his consulting practice, Ron has provided risk assessment and risk communication training across the country for government and private sector clients. He has served on expert panels and advisory committees in Canada and the U.S, including the Ontario Drinking Water Advisory Committee from 2004 until 2010. He is an adjunct professor in the School of Environmental Sciences at the University of Guelph, and recently completed a term with Public Health Ontario as a Senior Scientist, Public Health Toxicology and Risk Communication. Ron holds a BSc in biochemistry from Carleton and a doctorate from University of Sussex. He is a Diplomate of the American Board of Toxicology and is a Chartered Chemist in Ontario.*