Introduction to Human Health Risk Assessment

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This course presents the basic principles of qualitative health risk assessment of environmental chemicals, including an overview of the qualitative skills necessary to evaluate the probability of injury, disease or death in the general population from exposure to environmental contamination. It will also emphasize the qualitative aspects of hazard identification, exposure assessment, dose-response evaluation and risk characterization. In addition, it will address issues in risk management and communication. The topics covered in this course include:

**Learning Objectives**

Module 1: Introduction to risk and risk assessment
- Differentiate between risk assessment, risk management and risk communication

Module 2: Hazard identification
- Describe the process by which experts elicit the hazardous nature of a substance
- Compare and contrast hazard identification for carcinogens and systemic toxicants

Module 3: Dose-response evaluation
- Define dose, and differentiate it from environmental concentration and environmental exposures
- Compare and contrast the assumptions for dose-response evaluation for carcinogens and systemic toxicants

Module 4: Exposure assessment
- List some key variables that exposure assessors use to quantify or qualify exposures
- Describe at least 3 different methods of acquiring exposure information

Module 5: Risk characterization, management, and communication
- Outline the various interests and inputs that a risk manager must assess and synthesize in order to make a risk decision
- Describe how public perception of risk may determine the extent to which they receive and understand risk communication messages

**Competencies**

- Identify limits to own knowledge/skill/authority and identify key system resources for referring matters that exceed these limits.
- Recognize unusual events that might indicate an emergency and describe appropriate action.

* Bioterrorism and Emergency Readiness

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