

Chapter 8 Environmental Health and Toxicology

Emergent diseases throughout the world such as SARS, bird flu, malaria, West Nile, and others are important topics in environmental science. It is essential to know the vectors of these diseases and methods to curtail these diseases. It is also important to differentiate between chronic and acute diseases.

In addition, this chapter has pertinent information that pertains to toxins in the environment. It is important to know the basic categories of toxins, as well as examples of each. You should know where these toxins are found, and the human health effect that results from exposure. LD50 experimentation is a valuable toxicity-testing tool that you will need to understand, including application of these test results to both lower-level organisms as well as humans.

In natural environments, the topics of bioaccumulation and biomagnification are key concepts. Understanding applications to food chains and trophic-level diagrams are necessary to be able to explain the implications of the removal of a species from a food chain, and what that would mean to the entire ecosystem.

Finally, risk and risk assessment are concepts that are used in evaluating many environmental decisions. Risk analysis in conjunction with cost/benefit analysis can be implemented to answer environmental questions. When examining an environmental issue with cost/benefit analysis, it is important to consider both economic and environmental costs/benefits.