Assignment 2

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**Environmental Toxins**

Overview

Write a 3–4-page analysis on the impact of a selected toxin on human health.

By successfully completing this assignment, you will demonstrate your proficiency in the following course criteria:

* + 2: Analyze the impact of contaminants in the environment to human health.
    - Analyze the impact of a toxic substance on human health.
    - Analyze possible sources of exposure to a toxic substance.
    - Analyze what happens when a toxin enters the environment.
    - Analyze the persistency of a specific toxic substance.
    - Analyze government recommendations for a specific toxic substance.
  + 4: Communicate effectively in a variety of formats.
    - Write coherently to support a central idea in appropriate format with correct grammar, usage, and mechanics.

Context

Toxins are substances that can harm a living organism. When air, water, or soil is contaminated by toxins, it can lead to serious health problems. The Assignment 2 Context document provides a brief overview of topics related to toxicity. You may wish to review this document for key concepts and ideas related to this assignment.

Resources

* + Assignment 2 Context.

Library Resources

* + Carruth, R. S., & Goldstein, B. D. (2013). *Environmental health law: An introduction*. Somerset, NJ: Wiley.
  + Friis, R. H. (2012). *The Praeger handbook of environmental health*. Santa Barbara, CA: Praeger.
    - Volume 1: *Foundations of the Field.*  
      * Chapter 14, "Environmental Health Risk Assessment."
      * Chapter 16, "Significant Environmental Health Statutes and Key Regulations."
      * Chapter 18, "Risk Communication and Environmental Health: Principles, Strategies, Tools, and Techniques."
    - Volume 3: *Water, Air and Solid Waste.*  
      * Chapter 11, "Risk Assessment for Air Pollutants."
    - Volume 4: *Current Issues and Emerging Debate.*  
      * Chapter 1, "Workplace Hazards in the Chemical Industry."
      * Chapter 2, "Bio-monitoring of Toxic Substances in the Workplace Environment: A Complex Diagnostic Scheme with Many Players."
      * Chapter 3, "Reducing Hazards in the Workplace Environment."
      * Chapter 8, "Work-Related Unintentional Injuries."
  + Rom, W. N. (2012). *Environmental policy and public health: Air pollution, global climate change, and wilderness*. San Francisco, CA: Jossey-Bass.
    - Chapter 1, "The Clean Air Act and the National Environmental Policy Act."
    - Chapter 17, "Toxic Chemicals in the Environment: Government Regulations and Public Health."
  + Powell, M. C. (2007, June). New risk or old risk, high risk or no risk? How scientists' standpoints shape their nanotechnology risk frames. *Health, Risk & Society*, *9*(2), 173–190.

Internet Resources

* + CDC. (2014). Agency for toxic substances and disease registry. Retrieved from http://www.atsdr.cdc.gov/
  + United States Department of Labor. (2014). Occupational Safety and Health Administration – OSHA. Retrieved from https://www.osha.gov/

Bookstore Resources

* + Hilgenkamp, K. (2006). *Environmental health: Ecological perspectives*. Sudbury, MA: Jones and Bartlett.
    - Chapter 5, "Environmental Toxins and Toxicology." This chapter introduces you to terminology related to toxicology, the potential harmful effects of both natural and manufactured chemicals, the role of an environmental health professional, and how professionals define risks associated with environmental toxins.
    - Chapter 6, "Environmental Health, Risk Assessment, and Intervention." This chapter will help you understand the role of federal agencies and laws in protecting environmental health. You will also begin building an understanding of risk assessment and risk management.
    - Chapter 16, "Injury and Safety Issues." This chapter will help you understand the history of injury prevention, the major types of injuries in and out of the home, and the role of the Consumer Product Safety Commission regarding product safety.
    - Chapter 17, "Occupational Health and Safety." This chapter addresses the role and scope of the Occupational Health and Safety Act, common work site hazards, and the role of safety specialists.

Assignment Instructions

The purpose of this assignment is for you to learn how to summarize and critically evaluate a scientific paper on environmental toxins.

To begin, choose a toxin to research. *Note:* The CDC Web site and other materials listed in the Resources should provide you with a starting point in selecting a toxin.

Then, select at least three peer-reviewed articles about your chosen toxin to read carefully. Craft a 3–4-page analysis of the toxin's impact on human health based on what you have learned. Address the following in your analysis:

* + Highlight the main points presented in the articles you read. What message are the authors trying to convey about that toxin?
  + Describe the possible sources of human exposure to this toxin, and analyze their risk.
  + Analyze what happens when this toxin enters the environment.
  + Analyze the persistency of this toxin.
  + Analyze the federal government's recommendations for protecting human health from this toxin.
  + Describe what other sources of information say about these toxins.
    - Identify any discrepancies you found in your research.
    - If the authors have different perspectives, how might these differing views affect environmental health?

Your analysis should follow a logical structure and be evidence based. Use the MEAL Plan to help guide the organization of your analysis:

* + Main Idea: Present the main point or idea that you are making about the environmental toxin you studied.
  + Evidence: What does the research say? Support your statements with evidence from your research and personal experience.
  + Analysis: Summarize main ideas from articles related to the points outlined for this assessment. Compare and contrast the ideas of the authors of the two articles. Identify those ideas and facts that relate directly or indirectly to your main point. Make explicit links between source articles, your personal experience, and your current analysis.
  + Link: Integrate and combine information from the source articles and your personal experience to your main point or idea.

Additional Requirements

* + Written Communication: Written communication should be free of errors that detract from the overall message.
  + Length: This analysis should be 3–4 pages in content length. Include a separate title page and a separate references page.
  + Font and Font Size: Times New Roman, 12-point, double-spaced. Use Microsoft Word.
  + APA Formatting: Resources and in-text citations should be formatted according to APA (6th edition) style and formatting.
  + Number of Resources: You are required to cite a minimum of 3 scholarly resources. You may conduct independent research for resources and references to support your analysis. Provide a reference list and in-text citations for all of your resources, using APA format. You may cite texts and authors from the Resources.

Environmental Toxins Scoring Guide

| CRITERIA | NON-PERFORMANCE | C | B | A |
| --- | --- | --- | --- | --- |
| Analyze the impact of a toxic substance on human health. | Does not describe the impact of a toxic substance on human health. | Describes the impact of a toxic substance on human health. | Analyzes the impact of a toxic substance on human health. | Analyzes and evaluates the impact of a toxic substance on human health, providing opinions and supporting evidence. |
| Analyze possible sources of exposure to a toxic substance. | Does not describe possible sources of exposure to a toxic substance. | Describes possible sources of exposure to a toxic substance. | Analyzes possible sources of exposure to a toxic substance. | Analyzes and evaluates possible sources of exposure to a toxic substance. |
| Analyze what happens when a toxin enters the environment. | Does not describe what happens when a toxin enters the environment. | Describes what happens when a toxin enters the environment. | Analyzes what happens when a toxin enters the environment. | Analyzes what happens when a toxin enters the environment and assesses the options available to mitigate the risk of potential harm. |
| Analyze the persistency of a specific toxic substance. | Does not describe persistency of a toxic substance. | Describes persistency of a toxic substance. | Analyzes persistency of a toxic substance. | Analyzes persistency of a toxic substance and discusses impact of the toxin's lifecycle. |
| Analyze government recommendations for a specific toxic substance. | Does not describe government recommendations for a specific toxic substance. | Describes government recommendations for a specific toxic substance. | Analyzes government recommendations for a specific toxic substance. | Analyzes and evaluates government recommendations for a specific toxic substance, and discusses whether and how the recommendations need updating. |
| Write coherently to support a central idea in appropriate format with correct grammar, usage, and mechanics. | Does not write in support a central idea in appropriate format. Does not use correct grammar, usage, and mechanics. | Writes in support of an idea with consistent format, but includes major errors of grammar, usage, and mechanics. | Writes coherently to support a central idea in appropriate format with correct grammar, usage, and mechanics. | Writes coherently, using evidence to support a central idea in a consistently appropriate format, with correct grammar, usage, and mechanics. |