

# Environment assignment



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What are the THREE Environmental risks which you are most exposed to in each of the following situations? Please try not to duplicate the risks in your answers.

i. Your lifestyle (Including your behaviours and actions). Explain each risk in no more than 2-3 sentences. (3 points) To leave food cooking while enjoying an afternoon siesta exposes me to the dangers of suffocation by smoke in case it dries up and burns completely. Washing the latrine with bare hands exposes me to contact with pathogens that if not washed carefully my end up in the dishes, posing a health risk to anyone who consumes food from them. Sweeping dusty surfaces without sprinkling some water on them may expose me to breathing difficulties and respiratory diseases.

ii. Where you live (your home and neighbourhood). Explain each risk in no more than 2-3 sentences. Sharing clothes with the neighbor suffering from a communicable disease exposes me to a health risk of contacting the ailment Living in the flood prone area exposes me to the risk of drowning during hostile rainy seasons and water-borne diseases. The tall trees in the compound where I live may fall on our house causing injuries to the occupants. There is a high risk of lightning strike. (3 points)

iii. What you do for a living (school and work). Explain each risk in no more than 2-3 sentences. (3 points) I work as a part-time hospital ward attendant. I am exposed to the risk of contacting diseases from the patients that I attend to. I am also exposed to the risk of inappropriate work-place ergonomics since I stand throughout the time that I attend to patients. I might fall and get injured while working. As a student, I study late in to the night and sleep when I am extremely tired and sleepy. This may affect my concentration the following day especially when crossing the road. I might be hit by a car.

iv.

For EACH risk mentioned indicate which of these risks are voluntary (1 point) and which are involuntary (1 point) The risk of suffocation is voluntary The risk of contacting diseases from washing the latrine with bare hands is voluntary The risk of respiratory diseases is voluntary The risk of contacting a disease from an ill neighbor's clothes is voluntary The risk of drowning and water-borne diseases is not voluntary The risk of falling trees is voluntary. The trees can be cut down The risk of contacting a disease from the patients I attend to is not voluntary. Some disease outbreaks are noticed when they have already affected many people. The risk of fainting in the workplace due to standing for long hours is involuntary. This is because the hospital administration requires everybody to remain standing while working. The risk of lack of concentration is voluntary. I can control my reading behavior. 2. In each of the following cases, specify the route(s) of entry of the toxic substance to the body. Explain each answer in no more than 2-3 sentences. Provide at least ONE reference (2 points for each answer) i. A child living in an old house in which the paint is peeling is found to have an elevated level of lead in his blood. The toxic substances enter through the mouth as the child constantly collects and eats the old peels of paint (Guidotti & Ragain, 2007). ii. A worker in a retail dry-cleaning establishment who specialized in removing stains by rubbing them with special solvents develops liver disease, diagnosed to be caused by chlorinated hydrocarbons. The toxins enter the body through the skin. It has minute pores through which the chemicals find their way to the blood stream (Nate, 2010). iii. A hiker becomes violently ill after being bitten by a rattlesnake. The snake injects venom in to the blood stream that eventually reaches the heart causing a violent illness that is followed shortly by death if not treated urgently (Barry <https://assignbuster.com/environment-assignment-essay-samples/>

et al. 2002). 3. Chlorine is widely used to disinfect drinking water. It is known to form low molecular weight chloromethane compounds (e. g. chloroform) due to the presence of trace amounts of organic material in drinking water. There is some evidence to link exposure to chloromethane in drinking water with a higher risk of miscarriage during pregnancy. However, the use of chlorine in drinking water is credited with saving millions of lives due to the control of waterborne infectious disease. Chlorine is used because it remains in the water supply from point of treatment to point of consumption which is not possible with other types of disinfection such as ozonation. It is always recommendable to chlorinate drinking water to ensure that disease causing organisms are eliminated. How would you reconcile the benefits obtained from the chlorination of drinking water with the evidence of the potential for adverse effects from chlorination? Be as specific as possible regarding the information you would require and how you would approach this problem. Some examples of things that you should consider in your answer are: i, The level of chloroform which is considered toxic, Chloroform is toxic at low levels in water such as 14.5 ug/liter. It is therefore necessary to ensure that safe levels of chlorine are applied as recommended 2-3 mg/l by the World Health Organization (WHO) among other drinking water safety standards. The human body can not withstand more than 5 mg/l of chlorine in drinking water. Residual chlorine in tap water poses a high risk of miscarriage to pregnant women in the first trimester. Christian et al. (2002) observed that daily consumption of five or more glasses of chlorinated water containing 75 ug in pregnant women poses a high risk of miscarriage. Such women therefore need to reduce the level of chlorinated water intake until they give birth. For complete disinfection, a residual amount of chlorine in tap water

should be 0.5 mg/l at a pH of 7.5 to 8 under a contact time of 30 minutes. If pH is higher, the water can not be disinfected effectively (WHO, 2006).

Chlorine volatilizes during hot showers and can be inhaled especially when confined in the bathroom space. It also affects the body's natural oils and therefore should not be used in the shower. i. How many deaths occur due to water borne disease in countries with chlorinated water systems?"

Countries with chlorinated water rarely experience water-borne diseases. This is because chlorine effectively kills E. coli bacteria, hepatitis A virus, Giardia parasite and Cryptosporidium among other water contaminants (Christian et al. 2002). This provides evidence that chlorine is important for sterilization of drinking water. References Barry S., Dart, R. & Barish, A. (2002). "Bites of Venomous Snakes". The New England Journal of Medicine Vol. 347 (5) pp 347-56. Christian, M. S., York, R. G., Hoberman, A. M., Frazee, J., Fisher, L. C., Brown, W. R., & Creasy, D. M. (2002). "Oral (drinking water) two-generation reproductive toxicity study of dibromoacetic acid (DBA) in rats". International Journal of Toxicology, Vol. 21, pp 1-40  
Guidotti, T. L & Ragain, L (2007). "Protecting children from toxic exposure: three strategies". Pediatric clinics of North America Vol. 54 (2) pp 227-35  
Nate, D. (2010). "Pollution Prevention Institute aims to reduce dry-cleaning hazards", Rochester Business Journal, Vol. 28 (4), pp 88-101  
World Health Organization (2006). Water and Sanitation: Guidelines for drinking-water quality, 3rd Edition, World Health Organization