

# Risk management

[Literature](#), [Russian Literature](#)



ENVM 665 RISK ASSESSMENT ASSIGNMENT 3 Each question is worth 10

points Exposure/dose: a. Define and discuss the significance and differences between exposure-response evaluation and dose-response assessment.

Dose response assessment is method used to determine the potential risk an individual face when exposed to toxic substance. In the assessment the assessor must clarify the links that exist in biological response to the toxicant dose and the magnitude. It also describes how severe health could deteriorate as a result of exposure to agent.

a) Give an example of how each would be used.

Dose response assessment could be used as the key way in risk ascertaining to determination the presence or absence of a cause-effect relationship. If beyond any reasonable doubt there is such a relationship then the data needed for response becomes very important. This assessment is also very important in analysis in characterization of danger within the constraints of risk assessment.

2. Define the following terms and describe how they are used.

a. RfD is the amount of medication to be administered at a specific time, it is administered as specified amount or at a given amount of radiation. They are used in neuromuscular assessment and it help in identification of performance limiting factors.

b. RfC is the level of exertion an individual has the ability to exert, and the restrictive factors limiting work one can do. It helps to determine if one is capable of performing certain tasks.

c. NOAEL it is the amount of concentration of a given substance that has an effect on the subject under test. It helps to administer treatment at the right

time.

d. LOAEL it is a term used in the study of toxicity of chemicals, it refers to the lowest level at which exposure to toxic substance can cause adverse effects. It determines whether the level of treatment has been reached or rather intervention.

e. MDD is abbreviation for major depressive disorder and is manifested by combination of symptoms that disrupts an individual capacity to perform tasks even ability to eat and enjoy oneself.

3. Formaldehyde is a chemical that has been to be present in certain types of flooring.

a. Discuss the nature of the issue with formaldehyde being used in flooring and other interior finish materials.

They are treated with melamine or phenol they produce hard thermoset phenol formaldehyde resin and melamine resin. Making permanent adhesives that are used in flooring

b. List the chemical properties of formaldehyde.

Its chemical formula is  $\text{CH}_2\text{O}$

formaldehyde is also colorless irritating pungent smell.

c. List the physical properties of formaldehyde.

In terms of physical properties it has a molecular weight of 30.03 and it is a gaseous state. Its melting point is  $-92^\circ\text{C}$  and boiling point is  $-21^\circ\text{C}$ .

List the toxicological properties of formaldehyde.

People exposed to formaldehyde have irritating eyes and noses and may cause asthma but often rare. One can be exposed through drinking water.

d. Discuss and provide justification for what you believe to be the pathway(s)

of exposure to formaldehyde as a result of its use in interior finishes and the risks that people may be exposed to, if any.

Formaldehyde emissions are in manufactured housing plywood and particle board. The standards should be set such that the level of or less in manufactured housing. It is also released into indoor air from construction materials and a variety of consumer products.