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**Bch306**

**Review questions**

**17/sci03/007**

**Questions**

1. **Acute exposure can lead to chronic effect justify this statement**
2. **Discuss is drug a toxin ? Justify**

**Answer**

1. **Acute toxicity :** Acute toxicity is therefore an adverse effect that is manifest within a relatively short time ( ranging from. Almost immediately to several days ) after a single or multiple exposure of a substance within 24 hours . sub- acute and sub -chronic toxicity studies helps to investigate the effect of repeated exposure of substances (3to 4 doses ) in animals for 14 to 28 ,and 90 days respectively . Even the most benign substances will elicit acute toxicity if administered at a sufficiently high dose . However, raising the dose of a chemical dose not ensure that chronic toxicity will ultimately be attained .since chronic toxicity typically occurs at dosages below those that elicit acute toxicity observed at the higher dosage may simply reflect acute, and not chronic toxicity . Effect encountered with acute toxicity commonly consist of mortality or morbidity . From a quantitative standpoint these effect are measured as the LD50 , ED50,LC50, or EC50 .The LD50 and ED50 represents the dose of the material that causes mortality (LD50 )or some other define effect (ED50) in 50% of a treated population.

In contrast to acute toxicity , chronic toxicity is characterized by prolonged exposure and sublethal effect elicited through mechanisms that are distinct from those that cause acute toxicity.

**2). Is drug a toxin?**

Yes drugs are toxins : Toxins are poisons . Poisons are chemical /physical agents that produces

Adverse responses in biological organisms. Paracelsus (1493-1541) said “What is there that is not poison? All things are poison and nothing withoutPoisons . Solely, the dose determines that a thing is not a poison” . Therefore Drugs are toxins .

Toxins also include some medicines that are helpful in small doses, but poisonous in large amounts.

Most toxins that cause problems in humans come from germs such as bacteria. For example, the symptoms of cholera are caused by a toxin made by cholera bacteria.

Other toxins that cause problems include metals, such as lead, and certain chemicals in the environment.