

Assignment adewale

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BIOCHEMISTRY

Write on the various ways to assess the integrity of liver following an exposure to a harmful toxicant (Paracetamol/Acetaminophen)

Acetaminophen (paracetamol, N-acetyl-p-aminophenol: APAP) is widely used over the counter analgesic and antipyretic. At therapeutic doses, it is believed to be safe, having analgesic and antipyretic effects similar to those of aspirin and ibuprofen, unlike these other drugs, acetaminophen has only one well-defined anti-inflammatory properties.

One out of the various ways to assess the integrity of liver after exposure to a toxicant (acetaminophen) is liver function test (LFT). Lots of test can be performed on the liver. Some commonly used test used in checking liver abnormalities are:

- Aspartate aminotransferase (AST)
- Alanine transaminase (ALT)
- Bilirubin

The aspartate aminotransferase test (AST) and alanine transaminase test (ALT) measure enzymes that the liver releases in response to damage or disease. The bilirubin test measures how good the liver disposes bilirubin.

Aspartate Aminotransferase (AST) Test

AST is an enzyme found in some parts of the body including the liver, muscle and heart. In comparison to ALT (Alanine transaminase test), AST levels are not specific for liver damage as ALT, so it is therefore measured together to check for liver problems. When the liver is damaged, AST ~~test~~ is released into the bloodstream. If a high result on AST, it might indicate a problem with the liver or muscle. The normal range for AST is up to 40 IU/L in adults and may be higher in infants and young children.

ALANINE TRANSAMINASE (ALT) Test

ALT is used by the body to metabolise proteins. If the liver is damaged, ALT can be released into the bloodstream. It causes ALT levels to increase. A higher result than the normal result on this test can be a sign of

damaged liver. An ALT above 251 U/L is raised and 93 U/L is levels typically required further testing and evaluation.

BILIRUBIN TEST

Bilirubin is a waste product from the breakdown of red blood cells. It is processed by the liver. Before it is excreted through stool, it passes through the liver. A damaged liver cannot process bilirubin. This causes an abnormally high level of bilirubin in the bloodstream. A high result on the bilirubin test may indicate that the liver isn't functioning well. The normal range for total bilirubin is typically 0.1-1.2 milligrams per deciliter (mg/dL) where are certain inherited diseases that raise bilirubin levels but the liver function is normal.