

## Liver Enzyme Tests: AST and ALT

Two lab values commonly used to determine liver function include aspartate aminotransferase (AST) and alanine aminotransferase (ALT). AST is an enzyme released from cardiac tissue and hepatocellular cells whenever there is cell lysis and its normal range is between 8-20 U/L, while ALT is an enzyme found predominantly in the liver with lesser quantities found in the kidneys, heart, and skeletal muscle tissue. The normal range of ALT is 8-20 U/L. Elevated levels of either enzyme often indicate liver disease and may be due to conditions such as cirrhosis, hepatitis, or pancreatitis.



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### AST/ALT Ratio

[Ass-Tea to Aladdin-Tea with Ratio-radio](#)

This calculation is often done to assist in the differentiation of liver diseases. Most causes of hepatocellular injury are represented by an AST lower than the ALT.

### AST: 8-20 U/L

[Ass-Tea's \(8\) Ball to \(20\) Dollar-bill](#)

Aspartate aminotransferase (AST) is an enzyme released from cardiac tissue and hepatocellular cells whenever there is cell lysis. The amount of elevation is directly proportional to the severity of the number of cells affected. The normal range for AST is 8 to 20 units per liter (U/L). Increased AST levels are usually a sign of acute liver damage or disease and may be due to alcohol, along with conditions such as cirrhosis, hepatitis, or pancreatitis. Levels may also increase after heart procedures, surgery, seizure, or deep burns.

### ALT: 8-20 U/L

[Aladdin-Tea's \(8\) Ball to \(20\) Dollar-bill](#)

Alanine aminotransferase (ALT) is an enzyme found predominantly in the liver, with lesser quantities found in the kidneys, heart, and skeletal muscle tissue. The normal range of ALT is 8 to 20 units per liter (U/L). Increased levels often indicate liver disease and may be due to conditions such as cirrhosis, hepatitis, or pancreatitis.