



GENERAL HEALTH TESTING

Alanine Aminotransferase Information Sheet

What is Alanine Aminotransferase (ALT)?

Alanine aminotransferase (ALT) is an enzyme involved in amino acid metabolism. Measurements of ALT are useful for detecting liver disease and monitoring overall health (1). The highest levels of ALT are detected in liver tissues. When the liver is damaged, ALT is released into the circulating blood, resulting in increased blood levels that can be detected from a blood sample (2).

What are normal ALT levels?

The upper limit of normal serum ALT differs between studies, as various factors influence ALT levels, including ethnicity, gender, age, and bodyweight (1). According to the package insert for the assay available here, the reference range is 0-55 U/L for children and adults (3).

Where can I find more info?

Visit www.genetrackdiagnostics.com for full test information, including specimen collection requirements

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NOTE:

This brochure is provided for general information purposes only. It is not intended to replace medical advice from a health professional.

What do elevated ALT levels mean?

Markedly high ALT levels in serum occur in various diseases that affect the liver, including hepatitis, mononucleosis, and cirrhosis. Typically, ALT values are at least 10-fold higher than the normal range in individuals with liver disease. In addition, ALT levels are elevated before clinical signs and symptoms of liver disease appear providing an important tool for prompt diagnoses (4).

Measurements of ALT activity are also useful for monitoring overall health, as ALT levels can be elevated in various other health conditions, including diabetes, cardiovascular disease, obesity, and metabolic syndrome (5; 6; 7).

References:

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- (4) Kaplan MM. (2002). Alanine Aminotransferase Levels: What's Normal? *Ann Intern Med*, 137, 49-51.
- (5) Fraser A, Longnecker MP & Lawlor DA. (2007). Prevalence of Elevated Alanine Aminotransferase Among US Adolescents and Associated Factors: NHANES 1999–2004. *Gastroenterol*. 133 (6), 1814-1820.
- (6) Yun et al. (2009). Elevated alanine aminotransferase levels predict mortality from cardiovascular disease and diabetes in Koreans. *Atherosclerosis*, 205, (2) 533-537.
- (7) Eckel RH, Grundy SM & Zimmet PZ. (2005). The metabolic syndrome. *The Lancet*, 365 (9468), 16-22.