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## Medical Encyclopedia: ALT

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### Alternative names

SGPT; Serum glutamate pyruvate transaminase; Alanine transaminase

### Definition

A test that measures the amount of ALT in serum.

### How the test is performed

Blood is drawn from a vein on the inside of the elbow or the back of the hand. The puncture site is cleaned with antiseptic, and an elastic band is placed around the upper arm to apply pressure and restrict blood flow through the vein. This causes veins below the band to fill with blood.

A needle is inserted into the vein, and the blood is collected in an air-tight vial or a syringe. During the procedure, the band is removed to restore circulation. Once the blood has been collected, the needle is removed, and the puncture site is covered to stop any bleeding.

For an infant or young child, the area is cleansed with antiseptic and punctured with a sharp needle or a lancet. The blood may be collected in a pipette (small glass tube), on a slide, onto a test strip, or into a small container. Cotton or a bandage may be applied to the puncture site if there is any continued bleeding.

### How to prepare for the test

For infants and children:

The preparation you can provide for this test depends on your child's age and experience. For specific information regarding how you can prepare your child, see the following:

- infant test or procedure preparation (birth to 1 year)
- toddler test or procedure preparation (1 to 3 years)
- preschooler test or procedure preparation (3 to 6 years)
- schoolage test or procedure preparation (6 to 12 years)
- adolescent test or procedure preparation (12 to 18 years)

### How the test will feel

When the needle is inserted to draw blood, some people feel moderate pain, while others feel only a prick or stinging sensation. Afterward, there may be some throbbing.

### Why the test is performed

This test is used to determine if a patient has liver damage. ALT is an enzyme involved in the metabolism of the amino acid alanine. ALT is in a number of tissues but is in highest concentrations in the liver. Injury to the liver results in release of the enzyme into the blood.

### Normal Values

Normal range can vary according to a number of factors, including age and gender. Consult your physician or lab for interpretation.

### What abnormal results mean

Greater-than-normal levels may indicate:

- hepatitis (viral, autoimmune)
- use of hepatotoxic drugs
- hepatic (liver) ischemia (blood deficiency)
- cirrhosis
- hepatic tumor

### What the risks are

- excessive bleeding
- fainting or feeling light-headed
- hematoma (blood accumulating under the skin)
- infection (a slight risk any time the skin is broken)
- multiple punctures to locate veins

### Special considerations

Veins and arteries vary in size from one patient to another and from one side of the body to the other. Obtaining a blood sample from some people may be more difficult than from others.

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