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Medical Encyclopedia: LDH

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Alternative names

Lactate dehydrogenase; Lactic acid dehydrogenase

Definition

This is a blood test that measures the amount of lactate dehydrogenase (LDH). See also LDH isoenzymes.

How the test is performed

Blood is drawn from a vein or from a heel, finger, toe, or earlobe. The laboratory centrifuges the blood to separate the serum (liquid portion) from the cells, and the LDH test is done on the serum.

How to prepare for the test

Your health care provider may advise you to withhold drugs that may affect the test. Drugs that can increase LDH measurements include anesthetics, aspirin, clofibrate, fluorides, mithramycin, narcotics, and procainamide.

Why the test is performed

LDH is most often measured to evaluate the presence of tissue damage. The enzyme LDH is in many body tissues, especially the heart, liver, kidney, skeletal muscle, brain, blood cells, and lungs.

LDH catalyzes the interconversion of pyruvate and lactate. Exercising muscles convert (and red blood cells metabolize) glucose to lactate. Lactate is released into the blood and is eventually taken up by the liver. The liver converts lactate back to glucose and releases glucose into the blood. This glucose is then taken up by resting muscles, red blood cells, and other tissues.

Normal Values

Normal values may vary slightly from laboratory to laboratory. A typical range is 105-333 IU/L (international units per liter).

What abnormal results mean

Higher-than-normal levels may indicate:

- cerebrovascular accident (CVA, stroke)
- heart attack
- hemolytic anemia
- hypotension

- infectious mononucleosis
- intestinal ischemia (blood deficiency) and infarction (tissue death)
- liver disease (for example, hepatitis)
- muscle injury
- muscular dystrophy
- neoplastic (new abnormal tissue formation) states
- pancreatitis
- pulmonary infarction (tissue death)

If the LDH level is elevated, the health care provider will often recommend measurement of LDH isoenzymes.

Additional conditions under which the test may be performed:

- anemia of vitamin B-12 deficiency
- megaloblastic anemia
- pernicious anemia

Update Date: 4/15/2005

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