

# Evaluation of Lactate Dehydrogenase Isoenzymes (LDI)

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## Increased Lactate Dehydrogenase (LDH)

Exclude *in vitro* haemolysis

Perform Isoenzymes (if cause of LDH elevation is unclear)

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### Elevation of LD1

Myocardial infarction

Red blood cell diseases (e.g. haemolytic anaemia)

*In vitro* haemolysis

Some muscle dystrophies

Kidney disease

Kidney transplant rejection

Testicular/Germ cell tumours

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### Elevation of LD2

Infections

Lung diseases

Congestive heart failure

Lymphocyte turnover (e.g. lymphomas/EBV)

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### Elevation of LD3

Lung disease/injury

Lymphocyte turnover (e.g. lymphomas/EBV)

Splenic disorders

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### Elevation of LD4

Placenta disorders

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### Elevation of LD5

Liver diseases

Skeletal muscle diseases/injuries

Some intestinal problems

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### Elevation of multiple LDIs

Elevation of LD1, LD2, and LD5 may be caused by strenuous exercise.

Elevation of all the LDIs may be caused by injury to multiple organs (e.g. congestive heart failure, advanced cancers, autoimmune diseases, or shock).

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### Increases in Midzone Levels

Malignant pattern

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### Storage

Marked LD4/LD5 decrease occurs if sample stored below room temperature. If liver/skeletal muscle LDI is suspected, a fresh specimen is recommended.