

# Possible causes of an elevated CK

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## Cardiac muscle

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**Infarction**

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**Myopathy**

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**Myocarditis**

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## Skeletal muscle

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**Injury/Trauma**

Crush, Surgery, IM injections, Ischaemia

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**Alcohol**

Acute/Chronic alcohol excess

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**Drugs**

Statins, Amphotericin B, Azathioprine, Chloroquine, Clofibrate, Colchicine, Cyclosporin, Opioids, Steroids, Vincristine, Verapamil, Proton Pump Inhibitors

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**Infections**

Influenza, Coxsackie A and B, Clostridia, *Streptococcus pyogenes*, Parasitic infestations

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**Endocrine**

Hypothyroidism, Hyperthyroidism, Steroid myopathy

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**Metabolic**

Hypokalaemia, Vitamin D deficiency, Carnitine deficiency, Carnitine Palmitoyl-transferase deficiency, Hypoparathyroidism, Myophosphorylase deficiency, Mitochondrial disorders

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**Autoimmune**

Polymyositis, Dermatomyositis

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**Exercise**

Severe exertion, Marathon run, Convulsions, Paroxysmal myoglobinuria

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**Heat stroke**

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**Malignant hyperpyrexia**

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**Muscular dystrophy**

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## Miscellaneous

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**Macro-CK (request CK electrophoresis)**

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**Malignancy**

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**Cerebrovascular disease**

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**Diabetic ketoacidosis**

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## Useful further tests

Troponin

Serum LD and AST

CK-Isoenzymes, CK electrophoresis

Urinary myoglobin

Autoimmune immunology

DNA tests for muscular dystrophy