

Evaluation of a moderate elevation of Aminotransferase levels (ALT, AST) (50 < ALT < 150)

Possible causes	Further investigations
Temporary elevation	
Post-viral infection EBV, CMV, coxsackie, adenovirus, influenza	Serology
Drugs Paracetamol Anaesthetic agents	
Strenuous exercise	CK
Chronic elevation: Hepatic causes	
Alcohol abuse AST > ALT; GGT significantly elevated	
Drugs	
<ul style="list-style-type: none"> • Antibiotics: Amoxicillin with clavulanic acid Synthetic penicillins e.g. Flucloxacillin Tetracyclines Ciprofloxacin Nitrofurantoin Ketoconazole Fluconazole Isoniazid • Antiepileptic drugs: Carbamazepine Phenytoin Valproate • Statins • NSAIDs • Aspirin • Niacin 	<ul style="list-style-type: none"> • diclofenac • nitrofurantoin • minocycline • Sulfonylureas • Methotrexate • Allopurinol • Propylthiouracil • Herbal remedies: black cohosh kava senna • Drugs of abuse: Amphetamines Cocaine Glues and solvents • Immunomodulatory drugs e.g. checkpoint inhibitors
but this list is not comprehensive see: LiverTox: ncbi.nlm.nih.gov/books/NBK547852	
Chronic Hepatitis B and C	Serology
Steatosis, Non-alcohol Steatohepatitis (NASH) Often GGT significantly elevated	Liver ultrasound
Haemochromatosis	Iron studies, gene test if indicated
Autoimmune Hepatitis Female to male ratio 4:1 Globulins elevated	ANA, anti-smooth muscle, anti-mitochondrial Ab anti-LKM
Alpha-1-antitrypsin deficiency	Alpha-1-antitrypsin level, phenotype
Wilson's disease (if < 40 years)	Ceruloplasmin, Serum and urine (24-hour) copper
Chronic elevation: Non-Hepatic causes	
Coeliac disease	Coeliac screen (includes anti-TTG Ab and total IgA)
Inherited muscle disorders	CK, gene tests if available
Acquired muscle disorders	CK, ESR, ANA
Strenuous exercise	CK