

# Abnormal Liver Chemistries

## Isolated Hyperbilirubinaemia

**Bili <65**  
Patient well: **check FBC & blood film to exclude haemolysis** if normal then possible Gilberts (repeat bil 1-3 months)

**Bili >65**  
Advice from consultant gastroenterologist on call via switchboard Tel:436156

## Isolated elevated ALP only

**Check vit D levels**  
**If low as per Barnsley Guidelines**

**If Vit D levels normal**  
advice from consultant gastroenterologist on call via switchboard Tel: 436156

**Bili, ALT, AST, ALP, GGT**  
Compare with previous results to assess trend  
**Any persistent abnormality needs further assessment**

**History and Examination**

**NILS (Non-Invasive Liver Screen) including Abdominal Ultrasound scan**

NILS bloods - normal +/- Fatty liver on USS

**Likely NAFLD**  
(Non-Alcoholic Fatty Liver Disease) +/- Metabolic Syndrome

**Calculate FIB4 Score**  
(a predictor of liver fibrosis) on BEST website or MD Calc  
Required parameters to calculate FIB4  
Age, AST, ALT, Platelet count

FIB4 score < 1.30

**Fatty Liver**

Manage Metabolic Syndrome  
Exercise  
Weight loss >10%  
Treat hypercholesterolaemia or hypertriglyceridaemia  
Reduce alcohol intake

Reassess LFT/FIB4 in 6 months

**Refer to secondary care if appropriate**

FIB4 score > 1.30

**Possibly NASH**  
(non alcoholic steatohepatitis) or established cirrhosis

**Refer to Secondary Care**

**Urgent Referral: ALT > 1000**

- Viral hepatitis
- Ischaemic hepatitis
- Drug-induced liver injury (Paracetamol)
- (Autoimmune hepatitis)

**NILS Blood Tests**  
(On ICE look for the Abnormal LFTs panel)

- LFTs, U&Es, Clotting profile, CRP
- Iron profile
- Immunoglobulins
- Auto-antibody profile (ANA, ASM, AMA, ALKM)
- Hepatitis B & C
- Hepatitis A and E if ALT > 1000
- tTg (Coeliac screen)
- Alpha-1-Antitrypsin (A1AT)
- Caeruloplasmin (if < 40 years of age)
- Alpha fetoprotein
- Fasting lipid profile

**Common Patterns of Livery Injury**

- ↑ AST/ALT = hepatocellular damage
- ↑ GGT/ALP = cholestasis
- AST >> ALT = alcohol
- ALP >> GGT = bone disease, pregnancy
- GGT >> ALP = alcohol, medications

**Hepatic Synthetic Dysfunction**

- ↑ Prothrombin Time (PT)
- ↓ Albumin
- ↑ Bilirubin

**Drug-Induced Liver Injury**

Acute hepatitis	Isoniazid, pyrazinamide, rifampicin, ibuprofen, nimesulide, cotrimoxazole, phenytoin, dapsone
Cholestatic	Chlorpromazine, amoxicillin-clavulanic acid, flucloxacillin, carbamazepine, phenytoin
Autoimmune	Minocycline, nitrofurantoin, alpha methyl dopa
Steatohepatitis	Tamoxifen, amiodarone, tetracycline, valproic acid
Granulomatous hepatitis	Dapsone, sulphonamides
Cirrhosis	Methotrexate, amiodarone
Bland cholestasis	Anabolic steroids, danazol
Nodular regenerative hyperplasia	Didanosine, stavudine
Vanishing bile duct syndrome	Carbamazepine, cotrimoxazole
Peliosis hepatis	Anabolic steroids, azathioprine
Hepatic adenoma	Oral contraceptive, anabolic steroids