

# Learning Portal Lite: Liver dysfunction

This is a one-page summary; see the [full version online](#)

## Medicines and liver function

- The liver helps fat-soluble drugs to be **absorbed** from the gut.
- It produces proteins such as albumin that **distribute** drugs around the body.
- Hepatic enzymes such as cytochrome p450 **metabolise** medicines.
- Some drugs are **excreted** in bile; others are metabolised ready for kidney excretion.

## Types of liver dysfunction

Hepatocellular damage includes hepatitis, fibrosis, and cirrhosis. The latter is the most serious and is not reversible. Cholestasis means that bile flow is impaired.

## Liver function tests (LFTs)

These commonly comprise bilirubin, alkaline phosphatase, transaminases (ALT and AST), albumin, and prothrombin time. It is important to review them in line with the clinical picture – consider the patient as a whole, rather than looking at LFTs in isolation.

## Medicines in liver dysfunction

- You will often want to know about the route of clearance, metabolism, and side effect profile before making any decisions about use of a medicine in liver disease.
- Monitor LFTs in case of liver deterioration, and limit medicines to the most essential.
- A renally eliminated drug or a non-systemic formulation are often good choices.
- If drugs metabolised/cleared by the liver are needed in a patient with significant liver dysfunction, use low doses and only increase the dose slowly.
- Medicines causing LFT changes, fatigue/sedation, constipation, or electrolyte disturbances are potentially a concern in liver dysfunction. Try and use alternatives.

## Questions to ask

When advising about **choice of medicine** in liver dysfunction, your questions should include:

- Does the patient have a liver diagnosis and what are their LFTs?
- What is the medicine for, and what's your preferred choice?
- Have you already tried or considered any other treatment options?

For **drug-induced hepatotoxicity**, ask when signs/ symptoms began and identify all medicines taken recently and their start times.

## Information sources

These include SPCs, [Livertox](#), and the book *Drugs and the Liver* (Penny North-Lewis, 2008).