

Why it's important your liver function is monitored

You'll have a number of routine tests to monitor your health as part of your HIV care. Tests are also used to see if you have any infections. If you're taking HIV treatment, you'll also have regular tests to see how well this is working and to make sure you are not developing any unwanted side-effects.

The health of your liver should be regularly checked by your doctor. Having a healthy liver is important to everybody, but it is particularly important for people with HIV as the liver plays a key role in breaking down and processing medicines used to treat HIV and other infections.

People with HIV who have a damaged immune system are also at risk of infections that can affect the liver, and regular liver function tests can help detect these.

Some anti-HIV drugs can cause side-effects that affect the liver and if you are taking them, your doctor will want to see if your liver is suffering any ill-effects because of them.

The health of your liver can also be damaged by drinking too much alcohol, using recreational drugs, your diet, taking large doses of vitamin A and some herbal and alternative remedies. Regular liver function tests can help see if this has occurred.

Hepatitis

In addition, some people with HIV are also infected with one or both of the viruses that cause hepatitis B and hepatitis C. Blood tests are available to see if you have these infections, and you should be tested soon after your diagnosis with HIV, and then at regular intervals if you are at risk of becoming infected with them. Monitoring the health of the liver can also help detect the presence of these viruses. In some cases, hepatitis B or hepatitis C infection is only detected because of abnormal liver function tests.

Hepatitis B and hepatitis C can make you ill and if you are infected with either or both of them the health of your liver will need to be carefully monitored.

Blood tests

Your doctor should regularly monitor levels of the liver enzymes aspartate aminotransferase (AST) and alanine aminotransferase (ALT). When the liver is damaged, increased levels of these enzymes are found in the blood.

Blood tests will also be used to check the levels of bilirubin in your blood. Increased levels of bilirubin in the blood can also be a sign that the liver isn't working properly. The anti-HIV drugs atazanavir (*Reyataz*) and indinavir (*Crixivan*) can cause levels of bilirubin to increase, leading to your skin and whites of the eyes turning yellow. Although this side-effect is not dangerous, it can be distressing.

Levels of alkaline phosphatase (ALP) can also be checked using blood tests. Raised levels can indicate that there is an obstruction in the liver or the presence of an infection, such as tuberculosis.

Physical tests of liver function

Your liver is in the lower right-hand side of your abdomen, and your doctor might perform a physical examination to check on its health. This will involve pressing on the liver to see if it is enlarged or painful. These symptoms can indicate that the liver isn't working properly.

Yellowing of the skins and eyes, often called jaundice, indicates that the liver isn't working as it should.

The liver infections hepatitis A, hepatitis B and hepatitis C as well as other liver diseases can cause your urine to become very dark and your stools to become pale. You may be asked to provide samples for testing in a lab.

Ultrasounds

If your doctor suspects that your liver has been damaged, then they may request tests such as an ultrasound. A sensor is placed on the belly and uses vibrations to create an image of the liver and this can sometimes show evidence of scarring (cirrhosis). This procedure is painless and non-invasive.

Liver biopsies and scans

Sometimes, the only reliable way to monitor the health of the liver is to test a small sample of liver tissue. This is called a liver biopsy. It is usually performed using local anaesthetic. It can be uncomfortable and cause soreness.

New tests are replacing liver biopsies. The most advanced are those using blood tests (*FibroTest*) and those using echo waves (*FibroScan*).