

Hepatitis C factsheet: Fibroscan, APRI and liver biopsy



For more information about anything in this factsheet, phone the Hepatitis Infoline on 1800 803 990 or go to www.hep.org.au

Can't you get enough information from liver function tests?

When a person might have liver disease their doctor will use a variety of means to determine the level of possible disease. These methods include assessing the severity of symptoms, blood tests, ultrasound (or other x-rays of the liver) and liver biopsy.

One of the main blood tests performed is liver function testing (LFT); however, liver function testing is an indirect measure of liver injury and doesn't always reflect what is happening in the liver.

Ultrasound and other X-rays can indicate if there is a blockage of blood vessels to or from the liver, if there is an unusual mass in the liver such as a tumour, and can suggest that a patient might have advanced cirrhosis. The diagnosis of cirrhosis can only really be made by Fibroscan or liver biopsy.

Why is cirrhosis important?

A diagnosis of cirrhosis means that liver injury has led to the build-up of fibrous scar tissue in the liver to such an extent that the microscopic structure or "architecture" is affected. This scar tissue affects the blood flow through the liver and the function of the cells in the liver. Because the scar tissue affects the microscopic structure of the liver it, can only really be diagnosed by looking at a tiny piece of liver tissue down the microscope.

It has been estimated that between 10% and 20% of people with HCV and ongoing significant hepatitis may have developed cirrhosis. A diagnosis of cirrhosis is an important event for people because it means that they are now at increased risk of developing liver failure, primary liver cancer and other complications of cirrhosis. Because of the increased risk of these complications, people with cirrhosis may undergo testing and increased surveillance for these complications.

The presence or absence of cirrhosis is only part of the information available from liver biopsy. Apart from showing the amount of scar tissue (an indication of what has happened to the liver in the past), liver biopsies also show how active the hep C is now, and if there are other factors interacting with the hep C to damage the liver. These other factors include things like excess alcohol, iron accumulation in the liver or evidence that the body's own immune system is attacking liver cells (autoimmune disease).

Fibroscan

A fibroscan machine uses advanced ultrasound technology to assess the stiffness of your liver. It measures the speed of a vibration wave (a pulse) that is made by a probe on your lower chest overlying your liver. You hardly notice the pulse and about 10 pulses are measured, the whole examination taking around 15 minutes.

The stiffer your liver, the more likely that your liver has fibrosis or cirrhosis. The scan takes only 5-10 minutes and does not involve needles or other invasive instruments. Your liver is given a score...

2.5 – 7.4 suggests minimal fibrosis

7.5 – 9.4 suggests moderate fibrosis

9.5 or higher suggests severe fibrosis or cirrhosis.

Knowing the condition of your liver can help determine your long-term hep C outlook. For more information about this, speak to your doctor and see the booklets *What You Need To Know: a new guide to hepatitis C* and *LiverLife*.

APRI blood test

This is an online calculator that uses AST (a liver function test marker) and platelet count. It provides an estimate of a person's level of liver fibrosis. The score can be calculated in a couple of minutes and can then be used as part of the pretreatment assessment. Patients with lower levels of fibrosis can be treated by a doctor, while patients with moderate or severe fibrosis are referred on for treatment at Liver Clinics or by specialists.

Liver biopsy

In some cases, a liver biopsy may be required. This involves taking a sample of your liver and examining it under a microscope.

About 1 in every 300 people who have a liver biopsy could have a serious complication such as bleeding from the surface of the liver. This would usually mean staying in hospital for a day or two and may require an operation, although this is rare.

About 1 in every 1000 people who have a liver biopsy could die from it. So yes, there are risks with a liver biopsy but these risks need to be balanced against the benefits of more precise knowledge of what is happening in the liver.

Liver biopsies are not recommended lightly. Because of the relatively low, but none the less real risk associated, the final decision to proceed with biopsy should be made by the individual person.

Liver biopsy no longer a general requirement for treatment

For more than 10 years (from 1 April 2006) a liver biopsy has not been a mandatory pre-treatment test for people wanting to access government subsidised hepatitis C treatment.

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This factsheet was developed by Hepatitis NSW. It was abridged with assistance of Professor Geoff McCaughan from an original article by Professor Graeme Macdonald in *Hep C News* – the regular newsletter of the Hepatitis Council of QLD. Geoff McCaughan is Director of the AW Morrow Liver Centre and Physician in Charge at the Australian National Liver Transplant Unit. Graeme Macdonald is a consultant gastroenterologist at the Royal Brisbane Hospital.

Last update 18 August 2017