

This section provides a brief introduction to the most common tests available to test for and monitor hepatitis C. If you have decided to be tested, make an appointment with your doctor to receive the test results in person. Your doctor can explain the results, answer your questions, and recommend follow-up if necessary.

Preparing for testing

Getting as much information about hepatitis C before being tested can help reduce any anxiety or fear you have about being tested and getting the results. Talking with a General Practitioner (GP) or Hepatitis Council about being tested can help you get the information you need.

Before being tested, your doctor should talk to you about why you want to be tested, what the tests involve, how hepatitis C is transmitted and the natural history of hepatitis C. Doctors should also listen to any concerns you have about testing and answer your questions. It is a good idea to write down any questions you would like answered before you go to the doctor.

A person must give their consent to be tested for hepatitis C.

As well, doctors can refer you to specialists and to support services that can provide you with more support when the test results are known.

Antibody test

The initial screening test for hepatitis C is a blood test which checks for antibodies. The human body produces antibodies in response to the virus. The antibody test looks for these specific antibodies, not for the virus itself, to work out if you have been exposed to the hepatitis C virus. It may take up to three months for antibodies to appear in your blood following infection (although it is usually positive by 6 weeks). This is known as the 'window period'. During this time antibody testing may not provide an accurate result.

A negative antibody test result usually means that a person has not been infected with the virus. However, the blood sample may have been taken in the window period before antibodies can be detected.

A positive antibody test result means antibodies were found, which is proof that the virus must have infected you at some point in time. About 25% of people who develop hepatitis C antibodies in response to infection get rid of (or clear) the virus within 6 months. If people are able to clear the virus, the antibodies remain in the blood for some time, possibly the rest of their life. This means a positive antibody test doesn't necessarily mean someone has the virus. A different test, the Polymerase Chain Reaction (PCR) test is used to see whether you have the virus in your blood.

One situation when the antibody test is not reliable is in a newborn baby. Babies born to mothers infected with hepatitis C can have a positive antibody test without actually being infected. This positive 'maternal antibody' usually only lasts 12–18 months, therefore, it is recommended that testing of children should not be done until after this time.

Polymerase Chain Reaction (PCR) test

Unlike an antibody test, the PCR test can detect whether the virus (not just the antibodies to the virus) is present in your blood. The hepatitis C virus is usually found in low levels in the blood and the PCR test uses a laboratory technique to amplify up the genetic material of the virus (hence, Chain Reaction). There are three types of PCR tests:

1. HCV PCR viral detection test

The basic PCR viral detection tests are used to determine if a person has the virus, formally called 'qualitative test'. This is especially useful in the case of people who have an inconclusive (unclear) HCV antibody test, or when their liver function tests

are consistently normal, or where their liver function tests are abnormal but there are other possible causes of liver disease. It is recommended for anyone who is antibody positive that they have the PCR test done to see if they still have the virus.

Unlike the antibody test a PCR test can also confirm if the virus is present during the 'window period' after infection. Using the PCR test, the virus can be detected in the blood as early as two weeks after infection. This test can also be used to confirm the HCV status when a person has immunodeficiency (e.g. due to HIV infection) or has been immunosuppressed by drugs (such as in organ transplantation) as this can also be associated with a false negative HCV antibody test result.

2. HCV PCR viral load test

The PCR viral load test looks for the virus and estimates the amount of hepatitis C virus circulating in someone's blood, formally called 'quantitative test'. This test can help in determining the likelihood of response to treatment, particularly in regard to people with genotype 1. There are also alternative technologies other than PCR which can be used to determine the level of virus in the blood.

3. HCV PCR genotype test

The genetic make up of the hepatitis C virus is highly variable and this has allowed scientists to divide the virus up into six genetic groups known as genotypes. The PCR genotype test looks for the virus, and determines the particular strain (genotype) of HCV a person has. The genotype testing can help predict a person's chances of responding to therapy. For example, with combination therapy of pegylated interferon and ribavirin, those people with genotypes 2 and 3 have a higher chance of cure (approx. 80%) than those people with genotype 1 (approx. 50%) and also have a reduced treatment period (6 months for genotypes 2 and 3 vs 12 months for genotype 1).

Note: cure is defined as having no presence of the virus immediately after therapy, and for six months afterwards.

Liver function test

A Liver Function Test (LFT) is a blood test that gives an indication of whether the liver is functioning properly. A liver function test measures the amount of particular chemicals (enzymes) in the blood. This provides a gauge of possible damage to liver cells. The damaged liver cells release the enzymes into the bloodstream where they can be detected. This damage can be caused by many things including the hepatitis C virus.

For people with hepatitis C, the enzyme Alanine Aminotransferase (ALT) is the most relevant enzyme measured by an LFT. ALT is an enzyme in the liver that can leak out into the blood when liver cells are inflamed. When ALT levels are elevated, it can indicate liver damage. Viruses, alcohol and some drugs can damage liver cells. Damage to your liver can occur even with normal ALT test results. This test is a basic guide and should only be viewed as part of the overall picture of your health.

If your ALT levels are consistently abnormal (elevated), it is important to discuss referral to a liver specialist with your GP. If your LFT results show a certain pattern, or don't seem to correspond with your symptoms, your doctor may suggest you have different tests.

Liver biopsy

The diagnosis of cirrhosis can only really be made by liver biopsy. Cirrhosis is a condition where liver cells are damaged and replaced by scar tissue because of chronic inflammation. The scar tissue affects the flow of blood and other fluids through the liver. Without good blood flow, together with a reduction in total liver cells, the liver cannot function properly and it becomes lumpy and hard. Scar tissue can form in the liver due to inflammation that occurs with hepatitis C. A liver biopsy determines how much scar tissue has formed in your liver and whether or not you are developing cirrhosis.

All people who wanted to have government funded hepatitis C treatment prior to April 2006 had to have a liver biopsy first, but that is no longer the case. However, if you are considering treatment your doctor may recommend that you have a liver biopsy and you should discuss the pros and cons of having this test with them.

A liver biopsy is generally performed in day clinics at hospitals and involves removing a tiny sample of your liver by inserting a thin needle into your upper abdominal region.

For more information

For further information on hepatitis C please contact the national infoline 1300 HEP ABC (1300 437 222). The infoline diverts to information and support lines at your local state or territory hepatitis council.

Some of the information above has been abridged from various resources, these resources include:

Women and Hepatitis C (Hepatitis Australia)—can be ordered from your local Hepatitis Council (ph. 1300 437 222) or download PDF from www.hepatitisaustralia.com

Preparing for Testing (Hepatitis Australia)—can be ordered from your local Hepatitis Council (ph. 1300 437 222) or download PDF from www.hepatitisaustralia.com

Antibody testing factsheet (Hepatitis C Council of NSW)—Download PDF from www.hepatitisc.org.au/quickref/factsheet.html

Liver function testing factsheet (Hepatitis C Council of NSW)—Download PDF from www.hepatitisc.org.au/quickref/factsheet.html

Liver biopsy factsheet (Hepatitis C Council of NSW)—Download PDF from www.hepatitisc.org.au/quickref/factsheet.html

PCR availability factsheet (Hepatitis C Council of NSW)—Download PDF from www.hepatitisc.org.au/quickref/factsheet.html