Hep C factsheets
Antibody testing

Hepatitis C Council of NSW

What are antibodies?

Antibodies are our main form of defence in the bloodstream. They are a form of protein that is produced in response to anything foreign that gets into our bloodstream - such as viruses, bacteria, or vaccines.

Antibodies are mostly limited to the humeral spaces - an almost medieval term for body fluids which are outside the actual cells of the body. These include blood, milk and other body fluids.

What do antibodies do?

Basically antibodies stick to anything foreign that they find. The processes involved in a virus entering a body cell are complex and having big globs of protein (antibody) hanging off a virus can be enough to block their attempted entry to cells.

This is particularly true if there are a lot of antibodies around - and if they recognise different parts of a virus and cover the surface of it.

As well as the passive function of sticking to viruses, some antibodies trigger a series of events which result in inflammation of the area around a cell area, making it generally inhospitable to bacteria and viruses.

Are antibodies killer cells?

No, but cruising around in our bloodstream, are 'killer' cells called macrophages. When they bump into a cell or substance in the bloodstream, they need some kind of signal to determine whether they should engulf and destroy it - or whether it's a part of the body. When a foreign body in the bloodstream has antibodies stuck to it, the killer cells take it as a signal that it is something to be destroyed.

Why don't macrophages destroy hep C?

Hep C is a master of disguise. As the virus reproduces, it often changes its appearance ever so slightly. It's a process called mutation and means hep C confuses our antibodies and macrophages, remaining one step ahead of them. Although we quickly eradicate lots of hep C once it is identified, there are always some which have mutated, are not recognised, and survive our immune response.

How do hep C antibody tests work?

Hep C antibody tests are used to see if a person has ever developed hep C antibodies. If the test comes back positive, it means that HCV antibodies were found - proof that the virus has entered the bloodstream at some point in time.

If people are able to clear their hep C infection, they still keep their antibodies. Thus, a positive antibody test doesn't always mean someone has a current infection.

To confirm whether a person has hep C or not, a PCR test is usually performed. These tests look for presence of the actual hep C virus.

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Hep C Helpline and *HepConnect* (peer support): 02 9332 1599 / 1800 803 990

Web info: www.hepatitisc.org.au Web peer support: www.hepcaustralasia.org

The Hepatitis C Council of NSW Inc is a community-based, non-government organisation, funded by the NSW Health Dept.

What is the ‘window period’?

Once a virus enters the body it takes a period of time before antibodies are produced. Thus, an antibody test carried out too soon following infection might return a false negative result.

With HCV, it takes up to 12 weeks to be sure the antibody test will return an accurate result and this is called the HCV antibody window period.

The window period for confirming a hep C diagnosis has been reduced dramatically following introduction of HCV RNA (often called PCR) testing. The window period for these tests is three weeks.

Also see

Test counselling (factsheet)

PCR availability (factsheet)

PCR and HCV transmission (factsheet)

Preparing for Testing (booklet)

What you need to know (booklet)

- This factsheet was developed by the Hepatitis C Council of NSW. It was reviewed by the Hepatitis C Council of NSW Medical and Research Advisory Panel.