



## Serological Testing for Hepatitis

This clinical update is to inform you of our latest testing protocols with regards to hepatitis serology in order to make the testing more rational, focused, and clinically appropriate. In particular we are focusing on clarifying whether a request is for the purpose of diagnosing infection or to look for the presence of immunity. We can then focus and rationalise the assays performed in the laboratory.

***The inclusion of brief but pertinent clinical details is essential in optimal viral hepatitis serological testing.***

### “Hepatitis Screen/Viral Hepatitis Screen”:

We are discouraging clinicians from making generic requests such as “hepatitis screen” or “viral hepatitis screen”. It is essential that the specific laboratory tests are requested. This clarifies testing requirements for the laboratory and promotes clinically appropriate testing from the requestor. On those forms that do have “hepatitis screen” as a request we will perform **Hepatitis A IgM antibody, Hepatitis B surface antigen and Hepatitis C IgG antibody**. If the case details are indicative of chronic infection (or labelled as “chronic”), we will **omit the Hepatitis A IgM antibody**.

	Tests
Acute Hepatitis Screen	HAV IgM, HBsAg, HCV Ab
Chronic Hepatitis Screen	HBsAg, HCV Ab

### Hepatitis A:

Please state whether you are testing for active infection (HAV IgM) or whether you are checking for immunity (HAV IgG) in a patient. We will test accordingly. Acute Hepatitis A infection is relatively rare in New Zealand and is usually restricted to patients who have travelled abroad or contacts of imported cases. Hepatitis A is almost always associated with significantly deranged Liver Function Tests (LFTs), and in particular, the transaminases (ALT & AST)

### Hepatitis B:

- Please state whether you are trying to diagnose active Hepatitis B infection (HBsAg) or whether you are checking for Hepatitis B immunity (anti-HBsAb) in a patient. We will test accordingly.
- If the Hepatitis B surface antigen is positive on a patient unknown to have Hepatitis B infection, then we will automatically perform Hepatitis B e antigen (HBeAg) and Hepatitis B total core antibody (anti-HBcAb) in order to give a complete serological picture for the purposes of patient management. If there is clinical evidence of acute Hepatitis B infection then Hepatitis B core IgM antibody also needs to be tested (performed at Waikato Hospital Laboratory).
- Screening for immunity to Hepatitis B prior to immunisation is not usually indicated and should only be considered for those at higher risk of being chronically infected with Hepatitis B. Those deemed at low risk may be vaccinated without prior screening.
- A small proportion of people do not mount an immune response to the Hepatitis B vaccine course (“non-responders”). For people who are potentially at higher risk of contracting Hepatitis B (such as Healthcare workers), it is important to determine immunity after Hepatitis B vaccination. Hepatitis B surface antibody levels >10 IU/ml after a full vaccine course indicate long term immunity to Hepatitis B.
- If you are testing a baby born to a mother with chronic Hepatitis B infection you will need to test for both Hepatitis B surface antigen and Hepatitis B surface antibody.

Please note: All Clinical Updates are now on the Clinician page on our website.

[www.pathlab.co.nz](http://www.pathlab.co.nz)

If you would like to receive these updates via e-mail please forward your details to:

[info@pathlab.co.nz](mailto:info@pathlab.co.nz)

**Hepatitis C:**

In all cases of Hepatitis C we will initially check to see if Hepatitis C antibody is present (can indicate past or current infection). If the antibody result is positive, we will then proceed to exclude current infection with an HCV antigen test (performed at Waikato Hospital lab). The result will instruct you as to whether HCV RNA viral load testing is required.

**Hepatitis D:**

Suggest discussing the testing rationale with the Clinical Microbiologist. Consider testing if Hepatitis B surface antigen positive and the patient has acute liver failure, or if there is an epidemiological link to another laboratory confirmed case of Hepatitis D.

**Hepatitis E:**

May occasionally be found in patients who have travelled to endemic countries, e.g. India, Egypt, China. Within industrialised countries (including NZ), it is a rare cause of zoonotically acquired hepatitis (from pigs). It can occasionally cause severe acute hepatitis, particularly in pregnant women. Testing for Hepatitis E is usually reserved for those with unexplained hepatitis and after discussion with an appropriate specialist.

If you are comfortable in choosing the specific antigen/antibody assays that are required to diagnose a particular infection, then please do so.

If more detail is required on the epidemiology and risk factors for the different forms of viral hepatitis, please refer to this article on hepatitis testing published by BPAC.

[http://www.bpac.org.nz/BT/2009/July/docs/best\\_tests\\_july\\_2009\\_pages\\_2-8.pdf](http://www.bpac.org.nz/BT/2009/July/docs/best_tests_july_2009_pages_2-8.pdf)

Request on form	Assays performed	Laboratory/shorthand name
Hepatitis A infection	Hepatitis A IgM antibody	Anti-HAV IgM
Hepatitis A immunity	Hepatitis A IgG antibody	Anti-HAV IgG
Hepatitis B Infection	Hepatitis B surface antigen	HBsAg
Hepatitis B immunity	Hepatitis B surface antibody	Anti-HBsAb
Hepatitis C infection	Hepatitis C IgG antibody	Anti-HCV Ab

If there any queries with regards to viral hepatitis testing, please contact me through the Pathlab switchboard (07 858 0795).

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