Treatment for hepatitis B

Not everyone with hepatitis B needs treatment

Treatment does not usually cure hepatitis B.

The treatments for hepatitis B aim to prevent the virus being active and multiplying in the liver. The aim of treatment is to lower the viral load.

In New Zealand there are a number of drugs used to treat chronic hepatitis B:

**Pegylated interferon (Pegasys)** boosts the body’s immune system and changes the virus’ ability to multiply. It is a synthetic version of a protein our bodies naturally produce (interferon). Pegylated interferon is injected under the skin once a week for up to 48 weeks.

**Anti-viral Therapy**

**Entecavir** is an oral antiviral drug used in adults who have active virus and liver damage. Entecavir is funded as a first-line therapy for patients with chronic hepatitis B. Almost all patients achieve viral suppression (undetectable) and biochemical response (ALT below the upper limit of normal). Entecavir resistance is rare at less than one per cent after six years.

**Tenofovir** is an antiviral drug. It is an oral tablet taken once a day. Tenofovir has replaced Adefovir in New Zealand as the first-line therapy for Lamivudine-resistant hepatitis B infection. This is the preferred treatment during pregnancy and breastfeeding. No resistance to Tenofovir has been observed after five years of therapy.

Chronic hepatitis B is not curable and lifelong treatment is usually required. Long-term treatment is well tolerated and will prolong survival.

Refer your patients to The Hepatitis Foundation of New Zealand. In partnership with you, the Foundation will become responsible for managing your patient’s hepatitis B.
The Hepatitis Foundation of New Zealand and the Hepatitis B Follow-up Programme

The National Ministry of Health funded initiative is run by The Hepatitis Foundation of New Zealand to help people living with chronic hepatitis B maintain a healthy life. Healthcare providers are urged to refer patients confirmed as HBsAg positive to the Foundation for enrolment in the Hepatitis B Follow-up Programme. Individuals enrolled will be given six-monthly blood tests, education, up-to-date information, and access to secondary patient management system for effective management of hepatitis B, in partnership with primary care and the Foundation.

• patients that are >25 years and are of Maori, Pacific, or Asian ethnicity;
• they live with someone who has hepatitis B;
• they have ever had unprotected sexual contact with an HBV person;
• they received a tattoo using unsterile equipment.

Testing for chronic hepatitis B

The following blood tests are required to identify immune status:

- **HBsAg:** Indicates viral infection. In chronic HBV infection, HBsAg is ALWAYS detected.
- **Anti-HBs:** Indicates previous or present infection. Initially, a positive HBsAg test simply reveals the presence of hepatitis B in the blood. In order to consider an individual to have chronic hepatitis B, a further confirmatory test six months later is required. HBsAg, anti-HBs, and anti-HBc testing should be offered to household and sexual contacts of people with hepatitis B and vaccination should be offered to those who are susceptible to the virus. This is free of charge on the immunisation schedule to children under 18 years old, sexual partners, household contacts, and other groups. Refer to immunisation handbook.

Markers of hepatitis B virus infection

<table>
<thead>
<tr>
<th>Test</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Hepatitis B surface antigen (HBsAg)</strong></td>
<td>Shows whether the person has current hepatitis B virus infection. In chronic HBV infection, HBsAg is ALWAYS detected.</td>
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<tr>
<td><strong>Hepatitis B surface antibody (Anti-HBs or HBsAb)</strong></td>
<td>Shows whether the person has developed immunity to HBV, which will protect the person against future infection. It can be detected in people who have recovered from acute hepatitis B (natural immunity) or been vaccinated against it.</td>
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<tr>
<td><strong>Hepatitis B e antigen (HBeAg)</strong></td>
<td>Usually detected in the absence of anti-HBe. Shows that the hepatitis virus is multiplying at a very high rate and is therefore very infectious.</td>
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<tr>
<td><strong>Hepatitis B e antibody (Anti-HBe or HBeAb)</strong></td>
<td>Usually detected in the absence of HBsAg. This later phase of HBV infection follows the development of the patient’s immune response against HBsAg and is the most common one in children and young adults.</td>
</tr>
<tr>
<td><strong>Hepatitis B core antibody (Anti-HBc or HBcAb)</strong></td>
<td>Shows whether a person has ever been exposed to hepatitis B virus. It is detected in both patients with current infection and in those who have had previous acute infection which has resolved. Is not detected in individuals who have immunity through vaccination.</td>
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<tr>
<td><strong>Anti HBC IgM</strong></td>
<td>Always detected during acute infection and may be the only marker of acute infection in the ‘window phase’ when HBsAg has disappeared and anti-HBs levels are not yet high enough to be detected.</td>
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<tr>
<td><strong>Hepatitis B virus DNA (HBV DNA)</strong></td>
<td>Measures the level of HBV replication. High HBV DNA levels are one of the criteria for commencing antiviral therapy (along with high ALT or cirrhosis).</td>
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Management of people through the Hepatitis B Follow-up Programme

Regular surveillance of hepatitis B is vital in preventing liver cancer (hepatocellular carcinoma (HCC)). Research shows six-monthly follow-up of chronic hepatitis B patients is the gold standard of care to help reduce the risk of liver disease (including HCC).

**Blood tests can detect liver disease**

Under the Hepatitis B Follow-up Programme people with hepatitis B are offered regular blood tests to determine if they are still infected with the virus. Routine blood tests performed six-monthly are:

- HBsAg:
- Anti-HBs:
- ALT: screen for active liver inflammation (and needed for antiviral therapy):
- AFP: screen for hepatocellular carcinoma (HCC). Please note: this will also be elevated during pregnancy.
- LFT: liver function test.

The Hepatitis Foundation’s community hepatitis nurses actively follow-up people in the community, through home visits, to provide education and support to individuals and their families.

Monitoring for complications of chronic hepatitis B

**I) ACTIVE HEPATITIS NEEDING ANTIVIRAL THERAPY**

Six-monthly measurement of serum ALT in all HBsAg positive individuals. For those with mild inflammation of the liver (ALT <1.5x upper limit of normal (ULN)), continued six-monthly monitoring is indicated.

For those with significant inflammation of the liver (ALT >1.5xULN) repeat ALT in three months and refer to secondary care for consideration of antiviral therapy.

**II) HEPATOCELLULAR CARCINOMA (HCC)**

Six-monthly measurement of serum alpha fetoprotein (AFP) in all HBsAg positive individuals. For those with elevated AFP (>20ng/ml) repeat in one month; if remains elevated refer to secondary care for investigation for possible HCC. Please note: in all women of child-bearing potential, need to exclude pregnancy as cause for elevated AFP.

The Hepatitis Foundation of New Zealand will keep you informed of patient’s regular blood test results.