

Hepatitis B Vaccination

Hepatitis B immune status

Post-vaccination serological testing 4 weeks after the third dose of hepatitis B vaccine is recommended only in those at high risk of acquiring the infection (e.g. health-care workers) and those likely to have a poor response (e.g. immunosuppressed). It is not recommended for the general population. If adequate anti-HBs levels are not reached following a full course of hepatitis B vaccination, the possibility of HBsAg carriage should be investigated.

Non-responders to primary vaccination

Those who are HBsAg negative and do not respond should be offered further doses. These can be given as either a fourth double-dose or a further 3 doses at monthly intervals, with further testing at least 4 weeks after the last dose.

There is limited evidence from several trials that HBsAg negative healthcare workers, who are non-responders to a primary course of vaccination and subsequent intramuscular booster schedule, as above, may respond to 5 µg of Engerix-B (0.25 mL of the adult formulation) administered intradermally at fortnightly intervals (up to 4 doses) with anti-HBs levels measured before each dose to assess for seroconversion.

Persistent non-responders should be informed that they are not protected and should minimise exposures, and about the need for HBIG within 72 hours of parenteral exposure to HBV.

Individuals who are at significant occupational risk who have a documented history of a primary course of hepatitis B vaccine, but it is not known whether they ever seroconverted, and they now have an anti-HBs level < 10 mIU/mL, should be given a single booster dose of vaccine and have their anti-HBs level checked 4 weeks later. If the anti-HBs level is <10 mIU/mL, these individuals should be regarded as non-responders and 2 further doses of hepatitis B vaccine should be given at monthly intervals. Anti-HBs levels should be rechecked at least 4 weeks after the last dose.

Booster doses

Although vaccine-induced antibody levels decline with time and may become undetectable, booster doses are not recommended in immunocompetent individuals after a primary course, as there is good evidence that a completed primary course of hepatitis B vaccination provides long-lasting protection. This applies to children and adults, including healthcare workers and dentists. However, booster doses are recommended for individuals with impaired immunity, in particular those with either HIV infection or renal failure. The time for boosting in such individuals should be decided by regular monitoring of anti-HBs levels at 6 to 12-monthly intervals.

Australian Immunisation Handbook, 9th Edition (2008).

<http://www.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook-hepatitisb>