

OPERATIONAL INSTRUCTION

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Supersedes: *refer below*

Number: OP 1285/00

Date: 18 April 2000

File No: 98-00006

Subject: HEPATITIS B IMMUNISATION PROGRAM

This Operational Instruction supersedes the following Circulars and Operational Instructions issued previously by the Health Department of Western Australia.

M 037 (04/06/1980)

M 203 (08/02/1989)

M 216 (07/03/1990)

M 192 (06/07/1988)

M 218 (04/07/1990)

OP 0688/96 (23/01/1996)

OP 0757/96 (30/07/1996)

OP 0758/96 (30/07/1996)

OP 0764/96 (13/08/1996)

OP 1162/99 (27/01/1999)

HEPATITIS B

Hepatitis B is an infectious disease of the liver caused by the hepatitis B virus (HBV). About 50% of adults and 10% of children develop symptoms after HBV infection, which can be acute (short-term) or chronic (long-term). Infection in infants is usually asymptomatic. After an incubation period of 2 to 6 months, HBV infection may cause an illness with symptoms including tiredness, loss of appetite, nausea, weight loss, abdominal discomfort, and jaundice (yellowing of the skin and whites of the eyes and dark-coloured urine). Less common symptoms include fever, arthritis, and rash. About 1 in 100 patients with HBV die from acute HBV infection.

CHRONIC HEPATITIS B INFECTION

About 95% of adults infected with HBV make a complete recovery. However, up to 90% of infants and 5% of older children and adults are unable to eliminate the HBV and remain infected for many years even though they usually do not have any symptoms. People with chronic HBV infection are called hepatitis B 'carriers' and can infect others with HBV. In Australia, about one person in every 1,000 is a hepatitis B carrier and about 1 in 5 carriers will die prematurely of either cirrhosis (liver failure) or liver cancer.

EPIDEMIOLOGY

About 40 new cases of HBV infection are reported to the Health Department each year. Most new cases are between 15 and 30 years of age, with slightly more males than females.

People from Central or South America, Southern or Eastern Europe, Africa, India, the Middle East, China, South East Asia, the Pacific Islands, or indigenous Australians have a higher proportion of chronic HBV infection.

TRANSMISSION

Blood is the most infectious source of HBV, but other body fluids including semen, vaginal secretions, and breast milk can also transmit HBV. Saliva may be infective if injected into tissue, e.g. by biting. Tears, sweat, urine, and faeces do not appear to transmit HBV. Both acute and chronic hepatitis B patients are infectious.

TREATMENT

There are some drugs available for the treatment of chronic HBV infection, including alpha-interferon, and advice should be sought from clinical specialists in this area.

PREVENTION

HBV transmission can be prevented by

- not sharing any drug injecting equipment (eg. needles, syringes, spoons, tourniquets, water)
- not having unprotected sex
- not sharing toothbrushes, dental floss, razors, or nail files
- demanding sterile equipment for tattooing, ear or body-piercing, acupuncture or electrolysis
- immediately cleaning and dressing wounds
- immunisation.

IMMUNISATION

The National Health and Medical Research Council recommends that all newborn children or 12 year old adolescents should be routinely immunised against hepatitis B. In addition, people in other hepatitis B high-risk groups described below should be immunised against hepatitis B.

- **Every newborn child**

Every child born on or after 1 May 2000 is eligible for free hepatitis B vaccine.

The first dose of monovalent hepatitis B vaccine should be given soon after birth (e.g. prior to discharge from the maternity unit), followed by doses of multivalent vaccine at 2, 4 and 12 months of age. Children who miss the birth dose of hepatitis B vaccine should be referred to their GP or other immunisation provider.

In order to reduce the number of injections, the second, third and fourth doses of hepatitis B vaccine at 2, 4 and 12 months of age will be available in the new Haemophilus influenzae type b – hepatitis B (Hib-HepB) combination vaccine, COMVAX™ (PEDVAXHib™ + H-B-VAX II™).

A minimum of 3 doses of hepatitis B vaccine are required to complete immunisation.

All vaccinations should be recorded on the Childhood Immunisation Record for parents to keep. The birth hepatitis B vaccination does not need to be reported to the Australian Childhood Immunisation Register (ACIR) until the second hepatitis B vaccination is given at two months of age, although these reports will be accepted. There is no ACIR payment for reporting the birth hepatitis B vaccination.

In some other Australian States and Territories, the second, third and fourth doses of hepatitis B vaccine will be offered at 2, 4 and 6 months of age with the new DTPa – hepatitis B (DTPa-HepB) combination vaccine, Infanrix-HepB™.(Infanrix™ + Engerix B™).

- **High risk newborn children**

Every pregnant woman should be screened for hepatitis B infection. Babies of hepatitis B ‘carrier’ (HbsAg positive) mothers should be given hepatitis B immunoglobulin (100 IU) and a first dose of hepatitis B vaccine immediately after birth at separate sites. The immunoglobulin and vaccines are free of charge.

- **Children 12 years of age**

Every 12 year old child is eligible for 3 free paediatric hepatitis B vaccines. If the first dose of hepatitis B vaccine is administered during the child’s 12th year (i.e. between the 12th and 13th birthdays) then the child remains eligible for the remaining 2 free paediatric hepatitis B vaccines. Children who have received 3 doses of hepatitis B vaccine before their 12th birthday do not routinely require further hepatitis B vaccinations.

The routine hepatitis B vaccination schedule for 12 year old children is 0, 1, 3-6 months.

- **Household or sexual contacts of HBV carriers**

Every household or sexual contact of a hepatitis B carrier should be screened for hepatitis B infection. If they are not immune to hepatitis B then the household or sexual contact should be offered hepatitis B immunisation. Free paediatric and adult hepatitis B vaccines are available for proven susceptible household or sexual contacts. Contact the local Public Health Unit or Central Immunisation Clinic (Phone 9321 1312) for more information.

- **Other high risk groups**

Although free hepatitis B vaccine is not routinely available for each of the following groups of people, hepatitis B immunisation is recommended for:

- People who engage in high-risk behaviours, including men-who-have-sex-with-men, injecting drug use, body piercing or sex work

- People with chronic liver disease or hepatitis C
- All health care workers involved with patient care, and embalmers
- Inmates and staff of long-term correctional facilities
- Dialysis patients or patients who regularly receive blood products
- Long-term travellers to high risk areas
- Individuals and their families going to work in remote communities in WA.
- People whose occupation may bring them into frequent contact with blood or body fluids.

ADVERSE EFFECTS

The hepatitis B vaccine is very safe. Serious adverse effects following hepatitis B vaccination, including anaphylaxis, are very rare. Common temporary side effects include soreness at the injection site (5-15%), fever (2-3%), or nausea, dizziness, weakness, aches and pains (<1%). There is no reliable evidence that hepatitis B vaccine causes any chronic illnesses.

BOOSTERS

Routine hepatitis B vaccine boosters, including the 5 yearly boosters previously recommended for health care workers, are not recommended for immunocompetent people any more due to the demonstrated immune memory from successful hepatitis B immunisation. Individuals who may be immunosuppressed, e.g. HIV infected, chronic renal failure, should have their antibodies monitored on a 6-12 monthly basis, and be given booster doses if antibody levels are below 10 IU/ml.

POST EXPOSURE PROPHYLAXIS

Seek medical advice immediately. Prompt treatment with hepatitis B immunoglobulin (400 IU) within 72 hours, combined with hepatitis B immunisation, can prevent HBV infection.

VACCINES

Paediatric hepatitis B vaccine is available through the routine childhood vaccine sources - Fauldings HealthCare (Phone: 9353 0150) in the metropolitan area and Regional Pharmacies in rural areas.

HOSPITALS

Maternity units should implement policies and procedures to include routine hepatitis B vaccination for all newborn children, and have stocks in hand for commencing the universal infant program starting 1 May 2000.

HEALTH CARE WORKERS

Health care workers at risk of exposure to hepatitis B should be screened and vaccinated, if not immune and not carriers. Serological evidence of immunity (anti-Hbs) should be obtained 3 months after the 3rd dose of hepatitis B vaccine. Vaccinees who fail to develop immunity from the routine 3 dose hepatitis B

vaccination course should be offered a single, double dose vaccination or another 3 dose vaccination course followed by measurement of anti-Hbs. Vaccinees who fail to respond to either of these vaccine regimes should be managed as “non-responders” and receive hepatitis B immunoglobulin following HBV exposure.

CONSENT

Appropriate written and/or verbal information on the benefits and risks of the vaccination, and on the nature, incidence and management of adverse events following vaccination must be provided to the parents/guardians of minors prior to any vaccination. Appropriate information on the risks and benefits of hepatitis B vaccination is contained in Health Department pamphlets including 'Immunisation - The Facts' and 'Hepatitis B'.

Parents/guardians must indicate their consent either verbally or in writing after being given the opportunity to ask any questions concerning the vaccination prior to vaccination.

Written consent is not required provided that the above consent procedures have been followed, but it is recommended that it should be recorded that consent was received in the vaccinee's clinical record.

MORE INFORMATION

- NHMRC Australian Immunisation Handbook 7th Ed <http://immunise.health.gov.au>
- Local Public Health Unit
- Central Immunisation Clinic
16 Rheola Street, West Perth
Telephone: (08) 9321 1312
- Internet <http://www.cdc.gov/>
<http://www.phls.co.uk/>
<http://www.who.int/>
<http://www.health.gov/nhmrc/>

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