
Hepatitis A and B

Two-pronged protection in one vaccine

Laboratory Centre for Disease Control

Safe and effective monovalent vaccines are available in Canada to protect against hepatitis A and hepatitis B.¹ In addition, a bivalent vaccine against both hepatitis A and hepatitis B has been licensed for adults (TWINRIX[®], SmithKline Beecham Pharma Inc) and children (TWINRIX[®] JUNIOR [reduced dose]). The bivalent vaccines are made from the same bulk vaccines used for the monovalent formulations. The safety and efficacy of the bivalent vaccines have been established.^{2,3}

Monovalent vaccine should be used when protection against only one of these diseases is required (see the *Canadian Immunization Guide*¹ for a complete discussion of the indications for hepatitis vaccines and recommendations for prevaccination screening for hepatitis B markers).

Bivalent hepatitis vaccine is preferred for people with indications for both hepatitis A and hepatitis B vaccines. These include the following groups:

- travelers to certain areas of Africa, Asia, and the Americas in which both hepatitis A and hepatitis B are endemic;
- users of illicit drugs, taken both orally and by injection;
- homosexual and bisexual males;
- hemophiliacs receiving plasma-derived replacement clotting factors;
- populations and communities in which both hepatitis A and hepatitis B are endemic;
- people who have previously received both hepatitis A and hepatitis B vaccine and who required additional doses of both; and
- people with clinically significant chronic liver disease, including chronic hepatitis due to hepatitis C virus.

In addition, if different indications apply for the two vaccine components, vaccination with the bivalent form is an effective way to protect against both diseases (for instance, inmates who have not already received hepatitis B vaccine



in a prison in which there is uncontrolled transmission of hepatitis A).

Information on adverse events has been published.^{2,3} The contraindication to bivalent hepatitis vaccines is a demonstrated previous anaphylactic reaction to any component of the vaccine.

Information on the vaccine, including dosage and administration, vaccination schedule, storage and handling requirements, and vaccine format has been published^{2,3} and is given in the product monograph.

TWINRIX[®] JUNIOR is a reduced-dose format of the adult bivalent vaccine intended for children aged 1 to 18 years. Each 0.5-mL dose contains 360 enzyme-linked immunosorbent assay units of inactivated hepatitis A viral antigen and 10 µg of hepatitis B purified surface antigen protein, equivalent to half the recommended adult dose.

The combined vaccine is recommended for pre-exposure prophylaxis of hepatitis A and hepatitis B infections in children and adolescents at risk, such as those residing in or traveling to areas where both infections are highly endemic, or those frequently receiving blood products (eg, hemophiliacs).

The recommended dose is 0.5 mL, injected intramuscularly, preferably in the deltoid region. Three primary doses are recommended, at intervals of 0, 1, and 6 months. Need for and timing of booster doses have not been established.

The vaccine is well tolerated. The most common complaint is soreness at the injection site. Side effects do not differ in frequency or severity from those associated with monovalent vaccines.

Clinical studies have shown that all healthy, seronegative subjects aged 1 to 5 years and 6 to 15 years had serum antibodies to hepatitis A virus and to hepatitis B surface antigen after completing the vaccination series.⁴

Details on vaccine use can be obtained from the product monograph. ♦

Adapted from the "Statement on combination vaccines against hepatitis A and hepatitis B" and the "Supplementary statement on hepatitis prevention—hepatitis A and hepatitis B combination vaccine for children," prepared by the National Advisory Committee on Immunization and published in Canada Communicable Disease Report 1999;25(ACS-3,4).

References

1. National Advisory Committee on Immunization. Statement on the prevention of hepatitis A infections. *Can Commun Dis Rep* 1994;20:133-43.
2. National Advisory Committee on Immunization. Supplementary statement on hepatitis prevention. *Can Commun Dis Rep* 1997;23(ACS-4):1-6.
3. National Advisory Committee on Immunization. *Canadian immunization guide*. 5th ed. Catalog no. H49-8/998E. Ottawa, Ont: Health Canada; 1998.
4. Diaz-Mitoma F, Law B, Parsons J. Combined vaccine against hepatitis A and B in children and adolescents. *Pediatr Infect Dis J* 1999;18:1090-114.