

INFORMATION PAPER

DHA-IHB
26 August 2016

SUBJECT: Counting Doses in Combined Regimens of Monovalent and Bivalent Hepatitis A and Hepatitis B vaccines

1. Purpose. To describe the required number of doses, using various combinations of monovalent (single antigen) hepatitis A and hepatitis B vaccines and the bivalent (combination hepatitis A and hepatitis B) vaccine, to ensure adequate immunity against both diseases.

2. Facts.

a. Service members and recruits may include personnel who are 17 years of age or older, and therefore, must be screened by age to ensure they receive age-appropriate doses (pediatric/adolescent vs. adult) of hepatitis vaccines.

b. Two monovalent hepatitis A vaccines are marketed in the United States: Havrix (manufactured by GlaxoSmithKline or GSK) and Vaqta (manufactured by Merck). Two monovalent hepatitis B vaccines are marketed in the United States: Engerix-B (manufactured by GlaxoSmithKline) and Recombivax-HB (manufactured by Merck). GlaxoSmithKline also markets Twinrix, a combination hepatitis A and hepatitis B vaccine.

c. The age-specific doses and dosing schedule of the hepatitis vaccines are as follows:

Monovalent Hepatitis A Vaccine (HAVRIX (GSK) or VAQTA (Merck))

Age	Number of Doses	Vaccine Dosage and Schedule
18 years of age or younger	1 initial dose and 1 booster dose	Administer an initial dose of 0.5 mL and a booster dose of 0.5 mL between 6 to 12 months later
19 years of age or older	1 initial dose and 1 booster dose	Administer an initial dose of 1.0 mL and a booster dose of 1.0 mL between 6 to 12 months later

Monovalent Hepatitis B Vaccine (ENGERIX-B (GSK)) or RECOMBIVAX-HB (Merck)

Age	Number of Doses	Vaccine Dosage and Schedule
19 years of age or younger	3 dose series	Administer an initial dose of 0.5 mL and then the next two doses of 0.5 mL at 1 month and 6 months from the initial dose
20 years of age or older	3 dose series	Administer an initial dose of 1.0 mL and then the next two doses of 1.0 mL at 1 month and 6 months from the initial dose

Bivalent (Combination) Hepatitis A and Hepatitis B Vaccine (TWINRIX (GSK))

Age	Number of Doses	Vaccine Dosage and Schedule
18 years of age or older	3 dose series	Administer an initial dose of 1.0 mL and then the next two doses of 1.0 mL at 1 month and 6 months from the initial dose

d. Age-specific doses (adult vs. pediatric/adolescent) must also be administered when the vaccine schedule includes both the monovalent and bivalent hepatitis vaccines. The mixed regimen of vaccines that induce adequate immunity against hepatitis A and hepatitis B are shown below. The individual vaccines within the combinations below can be administered in any sequence, if proper minimum timing between doses is observed. When Twinrix is part of the regimen, maintain the dose spacing requirement for Twinrix.

Mixed Regimen of Vaccines to Complete Hepatitis A and B Series

Hepatitis A and B (Twinrix)	Hepatitis A (HAVRIX or VAQTA)	Hepatitis B (Engerix B or Recombivax- HB)
17 years of age		
	2 doses HepA (0.5 mL)	3 doses HepB (0.5 mL)
18 years of age		
	2 doses of HepA (1.0 mL)	3 doses of HepB (0.5 mL)
1 dose Twinrix (1.0 mL)	2 doses HepA (0.5 mL) separated by 5 months	2 doses HepB (0.5 mL)
2 doses Twinrix (1.0 mL)	1 doses HepA (0.5 mL) administered 5 months after 2 nd dose of Twinrix	1 dose of HepB (0.5 mL) administered 5 months after 2 nd dose of Twinrix
19 years of age		
	2 doses HepA (1.0 mL)	3 doses HepB (0.5 mL)
1 dose of Twinrix (1.0 mL)	2 doses HepA (1.0 mL) separated by 5 months	2 doses HepB (0.5 mL)
2 doses of Twinrix (1.0 mL)	1 doses HepA (1.0 mL) administered 5 months after 2 nd doses of Twinrix	1 doses HepB (1.0 mL) administered 5 months after 2 nd dose of Twinrix
20 years of age or older		
	2 doses HepA (1.0 mL)	3 doses HepB (1.0 mL)
1 dose Twinrix (1.0 mL)	2 doses HepA (1.0 mL) separated by 5 months	2 doses HepB (1.0 mL)
2 doses Twinrix (1.0 mL)	1 dose HepA (0.5 mL) administered 5 months after 2 nd dose of Twinrix	1 dose HepB (1.0 mL) administered 5 months after 2 nd dose of Twinrix

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