



BRIEF ANSWERS  
TO SPECIFIC  
CLINICAL  
QUESTIONS

## Q: Do patients who fail to complete a hepatitis A or hepatitis B vaccination series have to restart it?

### MIRIAM J. ALTER, PhD

Associate Director for Epidemiologic and Public Health Science, Division of Viral Hepatitis, Centers for Disease Control and Prevention, Atlanta, Ga

**A:** No. If the hepatitis A or hepatitis B vaccination series is interrupted, it is not necessary to restart either series.<sup>1</sup>

#### ■ HEPATITIS A VACCINES

Two hepatitis A vaccines are licensed in the United States for persons 2 years old or older. Although their schedules and formulations differ, both vaccines are given in a two-dose schedule, and the minimum interval between the first and second dose is 6 months; maximum intervals differ by age and by vaccine.<sup>2</sup>

Limited data indicate no difference in antibody concentrations among persons who received a delayed second dose and those vaccinated according to the recommended schedule.<sup>2</sup>

Postvaccination testing is not indicated, either when the schedule is interrupted or when the schedule is completed on time.<sup>2</sup>

#### ■ HEPATITIS B VACCINES

Two single-antigen hepatitis B vaccines are licensed in the United States for persons of any age. The dosages differ by vaccine and by age, but both vaccines are routinely given in three doses, the second and third given 1 and 6 months, respectively, after the first.<sup>3</sup>

For either vaccine, if the series is interrupted after the first dose, the second dose should be given as soon as possible, and the third dose at least 2 months after the second. If only the third dose is delayed, it should be given as soon as possible.

Although studies have not examined all possible variations, available data indicate that

longer-than-recommended intervals between doses do not reduce final antibody concentrations.<sup>4</sup> If the series is interrupted, testing for antibody response is not indicated before completing the remaining dose or doses.

Regardless of the schedule used, after the series is completed, postvaccination testing is indicated only for certain groups<sup>3</sup>:

- Infants born to mothers infected with hepatitis B virus (test at 9 to 15 months of age)
- Health care workers who have contact with patients or blood and are at risk for injuries with sharp instruments or needles (test 1 to 2 months after the last dose)
- Chronic hemodialysis patients (test 1 to 2 months after the last vaccine dose)
- Sex partners of hepatitis B virus-infected persons (test 1 to 2 months after the last vaccine dose).

Persons who do not respond to the primary vaccine series should complete a second three-dose series and be retested afterward. ■

#### ■ REFERENCES

1. General recommendations on immunization: recommendations of the Advisory Committee on Immunization Practices and the American Academy of Family Physicians. *MMWR* 2002; 51(No. RR-2):1-36.
2. Prevention of hepatitis A through active or passive immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 1999; 48(No. RR-12):1-37.
3. Hepatitis B virus: a comprehensive strategy for eliminating transmission in the United States through universal childhood vaccination: recommendations of the Immunization Practices Advisory Committee (ACIP). *MMWR* 1991; 40(No. RR-13):1-25.
4. Hadler SC, Margolis HS. Hepatitis B immunization: vaccine types, efficacy and indications for immunization. In: Remington JS, Swartz MN, editors. *Current Clinical Topics in Infectious Diseases*. Boston: Blackwell Scientific Publications, 1992:282-308.

ADDRESS: Miriam J. Alter, PhD, Division of Viral Hepatitis, Mailstop G37, Centers for Disease Control and Prevention, 1600 Clifton Road, Atlanta, GA 30333; e-mail malter@cdc.gov.

Limited data indicate that neither series need be restarted