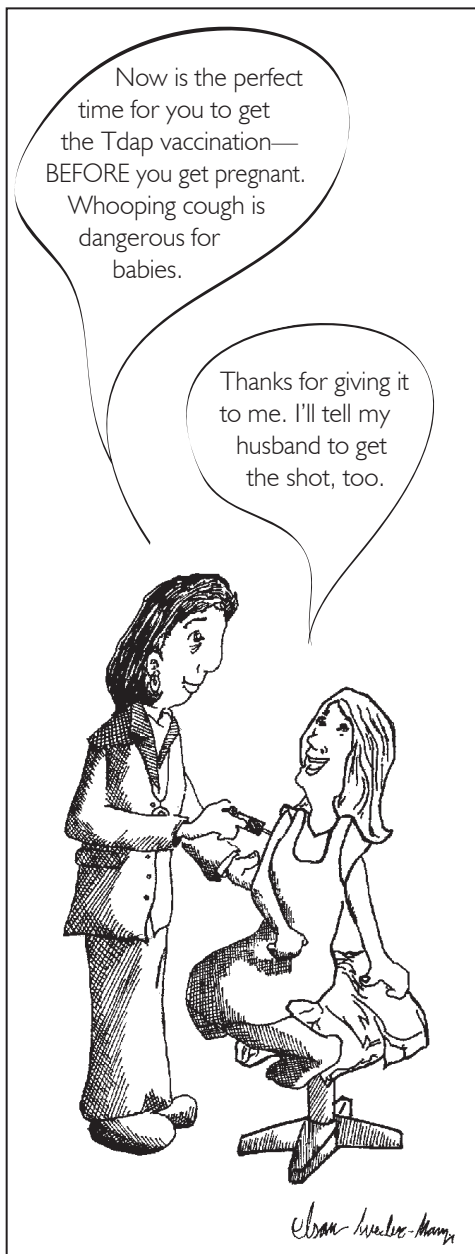


# VACCINATE WOMEN

Visit [www.immunize.org](http://www.immunize.org) for up-to-date immunization information from the Immunization Action Coalition

Highlighting the latest developments in routine immunization and hepatitis B prevention for obstetrician-gynecologists



## Ask the Experts

*IAC extends thanks to our experts, William L. Atkinson, MD, MPH, and Andrew T. Kroger, MD, MPH, medical epidemiologists at the National Center for Immunization and Respiratory Diseases, Centers for Disease Control and Prevention (CDC); and Joanna Buffington, MD, MPH, medical epidemiologist, Division of Viral Hepatitis (DVH), CDC; and Linda A. Moyer, RN, IAC consultant, who until her retirement, was an epidemiologist and chief, Education and Training Team, at DVH.*

### General vaccine questions

**We operate an acute care hospital and commonly give vaccinations to our employees and patients. Are we required to use Vaccine Information Statements (VISs), or does that apply only to patients seen in outpatient settings?**

VISs must be given to all persons, including adults, before administering HPV, Td, Tdap, MMR, varicella, hepatitis A, hepatitis B, meningococcal, influenza, or polio vaccine. Current VISs are available from the CDC's website at [www.cdc.gov/vaccines/pubs/vis](http://www.cdc.gov/vaccines/pubs/vis) and from the Immunization Action Coalition's (IAC) website at [www.immunize.org/vis](http://www.immunize.org/vis). You'll also find many VIS translations on IAC's site.

**Which vaccines are recommended to be given postpartum to mothers of newborns before hospital discharge?**

The following vaccines are recommended for new mothers before they leave the hospital: (1) women who have not previously been vaccinated with Tdap need 1 dose to protect their newborn; (2) women who did not receive influenza vaccination during pregnancy need to be vaccinated if it is still influenza vaccination season (through May); (3) women who tested susceptible to rubella on prenatal testing need MMR vaccine if they don't have a documented dose of MMR in their medical record; (4) women who are not immune to chickenpox need 2 doses of varicella vaccine, dose #1 before hospital discharge and dose #2 given 4–8 weeks after dose #1.

**Sometimes I have to give 3 vaccines like Tdap, HepA, and HepB at the same visit. Can I put them in the same syringe?**

No! Individual vaccines for adults should never be mixed in the same syringe.

**After an adult has either been infected with or exposed to pertussis, is vaccination with Tdap recommended, and if so when?**

Yes. Adults who have a history of pertussis disease generally should receive Tdap according to the routine recommendation. In the U.S., two Tdap products are licensed for use. Adacel® (sanofi pasteur) is licensed for use in persons age 11–64 years, and Boostrix® (GlaxoSmithKline), is licensed for persons age 10–18 years. This practice

is recommended because the duration of protection induced by pertussis disease is unknown (waning might begin as early as 7 years after infection) and because diagnosis of pertussis can be difficult to confirm, particularly with tests other than culture for *B. pertussis*. Administering pertussis vaccine to persons with a history of pertussis presents no theoretical risk. For details, visit CDC's published recommendations on this topic at [www.cdc.gov/mmwr/PDF/tr/tr5517.pdf](http://www.cdc.gov/mmwr/PDF/tr/tr5517.pdf) (pages 24–25).

**Can a booster dose of Tdap be given to persons age 65 years and older?**

No brand of Tdap is approved by FDA for persons age 65 years and older. ACIP does not recommend off-label use of Tdap for this age group. However, a clinician may choose to administer Tdap to a person age 65 years or older if both patient and clinician agree that the benefit of Tdap outweighs the risk of a local adverse event.

### Immunization questions?

- Call the CDC-INFO Contact Center at (800) 232-4636 or (800) CDC-INFO
- Email [nipinfo@cdc.gov](mailto:nipinfo@cdc.gov)
- Call your state health dept. (phone numbers at [www.immunize.org/coordinators](http://www.immunize.org/coordinators))

**Should I test women for varicella (chickenpox) immunity at their first prenatal visit?**

Test pregnant women who lack either (1) documentation of receipt of 2 doses of varicella vaccine or (2) healthcare-provider diagnosis or verification of varicella or herpes zoster (shingles) disease. Women who are not immune should begin the 2-dose vaccination series immediately postpartum.

**How is varicella transmitted and for how long is it contagious?**

Chickenpox spreads from person to person by direct contact or through the air by coughing or sneezing. It is highly contagious. It can also be spread through direct contact with fluid from a blister of a person infected with chickenpox, or from direct contact with a sore from a person with

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## Vaccinate Women

Online at [www.immunize.org/vw](http://www.immunize.org/vw)  
Immunization Action Coalition

**Hepatitis B Coalition**  
1573 Selby Avenue, Suite 234  
St. Paul, MN 55104  
Phone: (651) 647-9009  
Fax: (651) 647-9131  
Email: [admin@immunize.org](mailto:admin@immunize.org)  
Websites: [www.immunize.org](http://www.immunize.org)  
[www.vaccineinformation.org](http://www.vaccineinformation.org)  
[www.hepprograms.org](http://www.hepprograms.org)  
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Website Design: Lantern Web™  
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The Hepatitis B Coalition, a program of IAC, promotes hepatitis B vaccination; HBsAg screening for all pregnant women; testing and vaccination for high-risk groups; and education and treatment for people chronically infected with hepatitis B virus.

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shingles. People with chickenpox are infectious for at least 6–7 days after the appearance of spots and until all lesions are crusted over.

### What are the CDC-recommended dosing intervals when using human papillomavirus (HPV) vaccine?

CDC recommends dose #2 be given 2 months after dose #1, and dose #3 be given 6 months after dose #1. The minimum interval between doses #1 and #2 is 4 weeks, and the minimum interval between doses #2 and #3 is 12 weeks. Overall, there must be an interval of at least 24 weeks between doses #1 and #3.

### A patient received a dose of HPV vaccine before she knew she was pregnant. What should I tell her?

HPV vaccine has not been causally associated with adverse outcomes of pregnancy or adverse events to the developing fetus. However, data on vaccination during pregnancy are limited. If a woman is found to be pregnant after initiating the vaccination series, delay completion of the series until after the pregnancy. If a dose is administered during pregnancy, there is no indication for intervention. Merck, the vaccine's manufacturer, has established a registry of women who were vaccinated with HPV during pregnancy. You or your pregnant patients should report an exposure to HPV vaccine; call (800) 986-8999. More information on HPV vaccination during pregnancy is available in the package insert at [www.merck.com/product/usa/pi\\_circulars/g/gardasil/gardasil\\_pi.pdf](http://www.merck.com/product/usa/pi_circulars/g/gardasil/gardasil_pi.pdf).

### Can a woman who is breastfeeding receive HPV vaccine?

Yes.

### Can HPV vaccine be administered at the same time as other vaccines?

Yes, it can.

### Are pap smears still necessary for women who receive HPV vaccine?

Yes. Vaccinated women still need to see their health-care provider for periodic cervical cancer screening. The vaccine does NOT provide protection against all types of HPV that cause cervical cancer, so even vaccinated women will still be at risk for some cancers from HPV.

### Is the history of an abnormal pap a contraindication to the HPV vaccine series?

No. Even a woman found to be infected with a strain of HPV that is present in the vaccine could receive protection from the other 3 strains in the vaccine.

### Do women whose sexual preference is women need HPV vaccine?

Eligibility for HPV vaccine is not determined by sexual preference. The vaccine is recommended for all females age 11–12 years, and catch-up vaccination for all females age 13–26 years as long as there are no contraindications (e.g., pregnancy). Though most HPV

transmission occurs with sexual intercourse, the virus can be transmitted through sexual activity that does not involve penetration. It rarely can be transmitted through non-sexual routes, e.g., mother to newborn at time of birth.

### If a dose of HPV vaccine is significantly delayed, do I need to start the series over?

No, do not restart the series. Just pick up where the patient left off and complete the series.

### If a woman starts the HPV vaccine series at age 26 years and will turn 27 before completing it, can the vaccine be given after the 27th birthday?

HPV doses #1 and #3 must be at least 24 weeks apart. The series should be completed, even if this means that the series is completed after a woman turns 27.

### Can someone who has experienced an episode of shingles be vaccinated with zoster (shingles) vaccine?

Yes. Shingles vaccine is routinely recommended for all persons age 60 years and older who do not have contraindications.

### Can you give zoster vaccine to persons younger than age 60?

FDA has licensed the vaccine only for persons age 60 years and older. CDC does not recommend off-label use of shingles vaccine among persons younger than 60 years.

### When administering zoster vaccine, how much of the reconstituted vaccine should be given?

For single-dose vials, the entire volume of reconstituted vaccine should be administered.

### People are picking up zoster vaccine at local pharmacies and transporting it to the physician's office to be given. Should this vaccine be given?

Zoster vaccine must be stored at freezer temperature at all times. If the vaccine has been out of the freezer for

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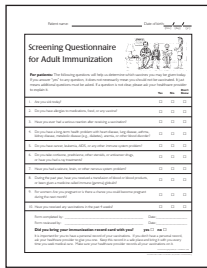
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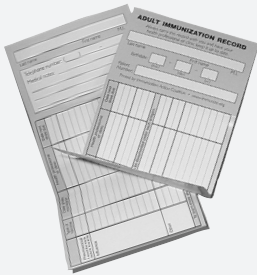
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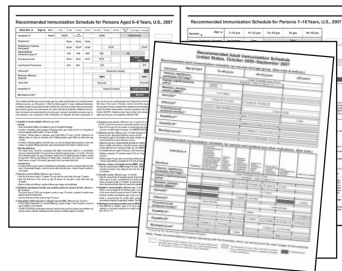
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more than 30 minutes, it should not be used unless a state health department or Merck has authorized its use.

## Hepatitis B and A

**It takes our hospital more than 24 hours for the lab to return the HBsAg test result on our labor and delivery patients. How can the newborns be managed if the HBsAg status of the mothers is not known?**

There are EIA-licensed HBsAg assays that do have a rapid turn-around; however, if you are unable to convince your lab to use such assays or if you cannot switch labs to do so, you should do the following:

- Order an HBsAg assay stat. Verify when the test result will be available and that it will be reported to the newborn nursery ASAP. If the nursery doesn't receive the report at the expected time, the nursery should call the lab for the result.

**Healthcare professionals who provide hospital care for a newborn whose mother's HBsAg status is unknown should be sure to do the following:**

- Follow the perinatal hepatitis B vaccination recommendations based on a mother with unknown HBsAg status. Make sure to give the first dose of single-antigen hepatitis B vaccine to infants of mothers of unknown status within 12 hours of birth. For preterm infants weighing less than 2 kg (4.4 lb), give HBIG plus hepatitis B vaccine within 12 hours of birth. Do not wait for the HBsAg test result before proceeding with hepatitis B vaccination since ALL newborns are recommended to receive hepatitis B vaccine at birth.
- If a positive maternal HBsAg test result is received from the laboratory, give the infant HBIG as soon as possible (no later than age 7 days) and complete the vaccine series according to the vaccination schedule for infants born to HBsAg-positive mothers. If the mother's HBsAg test result is negative, follow the routine vaccination recommendations for subsequent doses.
- Communicate the infant's vaccination record (and HBIG record, if any) and the mother's HBsAg status to both the infant's and mother's healthcare professionals. Follow-up case management is critical for an infant whose mother's HBsAg test result was unknown or positive.
- Contact the perinatal hepatitis B program at the

local or state health department immediately when the hospital identifies an HBsAg-positive mother or when an infant is born to an HBsAg-positive mother or a mother whose status is unknown at the time of discharge.

To obtain a copy of the ACIP hepatitis B recommendations for infants, children, and teens, published in December 2005, go to [www.cdc.gov/mmwr/PDF/rr/tr5416.pdf](http://www.cdc.gov/mmwr/PDF/rr/tr5416.pdf).

**When I see a patient in my practice with an STD such as chlamydia, trichomonas, or genital warts, do I need to administer hepatitis B vaccine? What if it's a pregnant woman?**

These women should be vaccinated. Hepatitis B vaccine is recommended for all previously unvaccinated persons with a current or recent history of an STD. Pregnancy is not a contraindication for hepatitis B vaccination.

**I understand that the hepatitis B vaccination recommendations for travel outside the U.S. changed in 2006. Would you please review what has changed?**

Hepatitis B vaccination is recommended for international travel of any duration to areas that have high or intermediate levels of hepatitis B virus (HBV) endemicity. The previous recommendation qualified the length of stay. For specific CDC information about the travel destinations for which hepatitis B vaccination is recommended, go to [www.cdc.gov/travel/yellowBookCh4-HepB.aspx](http://www.cdc.gov/travel/yellowBookCh4-HepB.aspx).

**Who should receive hepatitis B postvaccination testing after receiving hepatitis B vaccination?**

Postvaccination testing is recommended for the following groups: healthcare and public safety workers at increased risk of continued exposure to blood on the job; immune compromised persons; and needle-sharing and sex partners of HBsAg-positive persons. Testing should be performed 1–2 months after the last dose of vaccine. For infants born to HBsAg-positive mothers, postvaccination testing is recommended 1–2 months after completion of at least 3 doses of a licensed hepatitis B vaccine series (i.e., at age 9–18 months, generally at the next well-child visit). Testing should not be performed before age 9 months or within 4 weeks of the most recent vaccine dose.

**What are the new recommendations for post-exposure prophylaxis for hepatitis A?**

The new CDC recommendations, published in October 2007 ([www.cdc.gov/mmwr/preview/mmwrhtml/mm5641a3.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5641a3.htm)), state that hepatitis A vaccine is preferred over immune globulin (IG) for postexposure prophylaxis for healthy persons age 12 months–40 years who have recently been exposed to hepatitis A virus (HAV) and who have not previously received hepatitis A vaccine. Previously, IG was preferred. Persons age 12 months to 40 years should receive a single dose of single-antigen hepatitis A vaccine or immune globulin (0.02 mL/kg) as soon as possible after exposure. For persons older than 40 years, IG is

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preferred, although vaccine can be used if IG is unavailable. It is important to note that IG should be given within 2 weeks of exposure to HAV. IG should also be used for children younger than age 12 months, immunocompromised persons, persons who have chronic liver disease or other chronic medical conditions, and persons for whom vaccine is contraindicated.

**What are the new recommendations for vaccination of travelers to protect them from HAV infection?**

*Editor's note: The following answer replaces the originally published incorrect answer. The new answer was posted online August 5, 2008.*

The new recommendations ([www.cdc.gov/mmwr/preview/mmwrhtml/mm5641a3.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5641a3.htm)) state that (1) hepatitis A vaccine is recommended for healthy susceptible persons ages 1 through 40 years who travel to or work in regions where hepatitis A is endemic and (2) hepatitis A vaccine should be given as soon as travel is considered, but it can be given any time prior to departure. For optimal protection, persons older than age 40 years, immunocompromised persons, and persons with diagnosed chronic liver disease or other chronic medical conditions, if departure will take place within two weeks, should also receive IG simultaneously with the first dose of hepatitis A vaccine but at a different anatomic injection site. For travelers younger than age 1 year, IG alone is recommended because hepatitis A vaccine is not licensed for use in this age group. Hepatitis A is endemic in all regions except the United States, Western Europe, New Zealand, Australia, Canada, and Japan. ♦

**Do you have patients who are HBsAg-positive?**

They need medical monitoring, including liver cancer screening; many can benefit from treatment.

The FDA licenses several medications for treatment in the United States.

Consult a liver specialist experienced in the treatment of viral hepatitis for appropriate monitoring guidelines and for help in determining which of your patients might benefit from treatment.

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