

# VACCINATE ADULTS!

from the Immunization Action Coalition — [www.immunize.org](http://www.immunize.org)

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## CDC updates its recommendations for use of MCV4 vaccine in adolescents and adults

In January 2011, CDC published the ACIP's recently updated MCV4 vaccination recommendations in *MMWR*. CDC's previous recommendations, issued in 2005 and 2007, called for a single dose of MCV4 for adolescents at age 11–12 years, with catch-up vaccination for those ages 13–18 years. At the time it was thought that the dose given at age 11–12 would provide protection that would last through the years when meningococcal disease rates peak (ages 16–21). However, data gathered since indicate many adolescents might not be protected for more than 5 years from the date of vaccination. In January 2011, CDC issued updated MCV4 vaccination recommendations. The updated recommendations cover the following groups:

**Adolescents:** Routinely vaccinate adolescents with a first dose of MCV4 at ages 11–12, and follow with a booster dose at age 16. Those who receive the first dose at ages 13 through 15 need a one-time booster at ages 16 through 18. No booster is needed for those who receive the first dose at or after age 16.

**College students:** Administer 1 dose of MCV4 to unvaccinated incoming college students ages 19 through 21 years, and consider vaccinating current-

ly enrolled unvaccinated college students in this age group. Give a booster dose of MCV4 to students younger than age 22 who are about to enter college if they received their most recent dose more than 5 years earlier, and consider giving booster doses to currently enrolled students who meet these criteria.

**People with risk factors:** Administer 2 doses of MCV4 at least 8 weeks apart to people younger than age 56 who have the following risk factors: persistent complement component deficiency, or functional or anatomic asplenia. For people with risk factors age 56 years and older, administer 1 dose of MPSV4. Give booster doses every 5 years to people with these risk factors.

**People with HIV-infection:** HIV-infected people ages 2 through 55 years who are in a group recommended to be vaccinated should be given 2 doses of MCV4 at least 8 weeks apart.

For more complete information on CDC's meningococcal vaccination recommendations, see the "Ask the Experts" feature below, including the table titled "Summary of meningococcal vaccination recommendations, by risk group." To access the updated recommendations, go to [www.cdc.gov/mmwr/PDF/wk/mm6003.pdf](http://www.cdc.gov/mmwr/PDF/wk/mm6003.pdf) and see pages 72–76.

## 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).

### Tdap and Td vaccines

**According to the newest CDC recommendations, which healthcare workers should be vaccinated against pertussis with Tdap vaccine?**

On February 23, 2011, CDC's Advisory Committee on Immunization Practices (ACIP) voted to

approve the following recommendations for the use of Tdap in healthcare personnel.

- All healthcare personnel (HCP), regardless of age, should receive a single dose of Tdap as soon as feasible if they have not previously received Tdap and regardless of the time since last Td dose.
- Tdap is not currently licensed for multiple administrations. After receipt of Tdap, HCP should receive routine booster immunization against tetanus and diphtheria according to previously published guidelines.
- Hospitals and ambulatory-care facilities should provide Tdap for HCP and use approaches that maximize vaccination rates (e.g., education about the benefits of vaccination, convenient access, and the provision of Tdap at no charge).

To obtain a copy of the provisional ACIP recommendations that reflect these changes, go to: [www.cdc.gov/vaccines/recs/provisional](http://www.cdc.gov/vaccines/recs/provisional).

### Meningococcal vaccines

**I've heard the recently updated recommendations for the use of meningococcal conjugate vaccines in adolescents now include a booster dose. Would you please tell me more?**

CDC recommends people age 11 or 12 years be routinely vaccinated with quadrivalent menin-

gococcal conjugate vaccine (MCV4) and receive a booster dose at age 16 years. Adolescents who receive the first dose at age 13 through 15 years should receive a one-time booster dose, preferably at ages 16 through 18 years, which are the years before the peak in incidence of meningococcal disease occurs. Teens who receive their first dose of meningococcal conjugate vaccine at or after age 16 years do not need a booster dose, as long as they have no risk factors.

**Can you provide a comprehensive overview of the meningococcal conjugate vaccine recom-**

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online at [www.immunize.org/va](http://www.immunize.org/va)  
**Immunization Action 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)

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### Publication Staff

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Associate Editor: Diane C. Peterson

Managing Editor: Dale Thompson

Edit./Opr. Asst.: Janelle Tangonan Anderson

Consultants: Teresa A. Anderson, DDS, MPH

Linda A. Moyer, RN, and Mary Quirk

Layout: Kathy Cohen

Website Design: Sarah Joy

### IAC Staff

Operations Manager: Robin VanOss

Operations Assistant: Casey Pauly

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# Vaccine Highlights

## Recommendations, schedules, and more

*Editor's note: The information in Vaccine Highlights is current as of April 25, 2011.*

### Immunization schedules – U.S.

On Feb. 4, CDC published “Recommended Adult Immunization Schedule—U.S., 2011.” Issued jointly by ACIP, AAFP, ACOG, and ACP, it is available at [www.cdc.gov/vaccines/recs/schedules/adult-schedule.htm](http://www.cdc.gov/vaccines/recs/schedules/adult-schedule.htm). This issue of *Vaccinate Adults* includes a reformatted version on pages 4–6.

On Feb. 11, CDC published “Recommended Immunization Schedules for Persons Aged 0 Through 18 Years—U.S., 2011.” Issued jointly by ACIP, AAP, and AAFP, it is available at [www.cdc.gov/vaccines/recs/schedules/child-schedule.htm](http://www.cdc.gov/vaccines/recs/schedules/child-schedule.htm).

IAC has developed laminated 6-page color versions of both immunization schedules, the child and teen as well as the adult. They are available for purchase. For more information visit [www.immunize.org/shop/laminated-schedules.asp](http://www.immunize.org/shop/laminated-schedules.asp).

### Tdap and Td news

On Jan. 14, CDC published “Updated Recommendations for Use of Tetanus Toxoid, Reduced Diphtheria Toxoid, and Acellular Pertussis (Tdap) Vaccine.” The recommendations, which allow expanded use of Tdap vaccine in children ages 7–10 years and in adults age 65 and older, also permit Tdap vaccination regardless of interval since receipt of the last tetanus- or diphtheria-toxoid containing vaccine. To obtain a copy of the recommendations, go to [www.cdc.gov/mmwr/pdf/wk/mm6001.pdf](http://www.cdc.gov/mmwr/pdf/wk/mm6001.pdf) and see pages 13–15.

On April 4, CDC issued “ACIP Provisional Recommendations for Health Care Personnel on use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine (Tdap) and use of Postexposure Antimicrobial Prophylaxis.” The provisional recommendations state that all healthcare personnel (HCP), regardless of age, should receive a single dose of Tdap as soon as feasible if they have not previously received one and regardless of the interval since the last Td dose. After receiving Tdap, HCP should receive routine Td boosters, according to previously published guidelines. In addition, healthcare facilities should provide Tdap for HCP and use approaches that maximize vaccination rates. To obtain a copy of the provisional ACIP recommendations, go to [www.cdc.gov/vaccines/recs/provisional](http://www.cdc.gov/vaccines/recs/provisional).

Also in 2011, the Joint Commission issued a monograph titled *Tdap Vaccination Strategies for Adolescents and Adults, Including Health Care Personnel—Strategies from Research and Practice*. Its goal is to increase Tdap uptake by helping healthcare organizations implement or enhance Tdap vaccination programs for adolescents and adults. To access the monograph, go to [www.jointcommission.org/assets/1/6/Tdap\\_Monograph.pdf](http://www.jointcommission.org/assets/1/6/Tdap_Monograph.pdf).

In March, CDC published “Best Practices for Health Care Professionals on the Use of Polymerase Chain Reaction (PCR) for Diagnosing Pertussis.” It is a compilation of optimal procedures that can help healthcare professionals avoid common pitfalls that often lead to inaccurate PCR test results. To

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access the document, go to [www.cdc.gov/pertussis/clinical/downloads/diagnosis-pcr-bestpractices.pdf](http://www.cdc.gov/pertussis/clinical/downloads/diagnosis-pcr-bestpractices.pdf). In addition, two 4-minute videos on how to properly obtain specimens for pertussis testing are available at [www.cdc.gov/pertussis/clinical/diagnostic-testing/specimen-collection.html](http://www.cdc.gov/pertussis/clinical/diagnostic-testing/specimen-collection.html).

### Meningococcal vaccine news

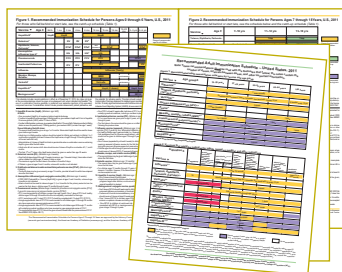
On Jan. 28, CDC published “Updated Recommendations for Use of Meningococcal Conjugate Vaccines.” Changes include (1) routine first-time vaccination of adolescents, preferably at ages 11 or 12 years, followed by a booster dose at age 16 years and (2) a 2-dose primary series administered 2 months apart for people ages 2–55 years with persistent complement component deficiency, or with functional or anatomic asplenia. To obtain a copy of the recommendations, go to [www.cdc.gov/mmwr/pdf/wk/mm6003.pdf](http://www.cdc.gov/mmwr/pdf/wk/mm6003.pdf) and see pages 72–76. For additional details, see the editorial on page 1 of this issue. For pertinent Q&As answered by CDC experts

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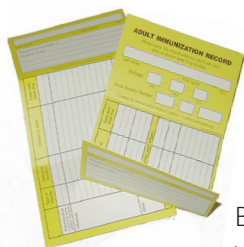
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## Recommended Adult Immunization Schedule – United States, 2011

Note: These recommendations **must** be read with the footnotes that follow; the notes contain the number of doses, intervals between doses, and other important information.

Figure 1. Recommended adult immunization schedule, by vaccine and age group


Vaccine ▼	Age group ►	19–26 years	27–49 years	50–59 years	60–64 years	≥65 years
Influenza <sup>1,*</sup>		1 dose annually				
Tetanus, diphtheria, pertussis (Td/Tdap) <sup>2,*</sup>		Substitute one-time dose of Tdap for Td booster; then boost with Td every 10 yrs				
Varicella <sup>3,*</sup>		2 doses				
Human papillomavirus (HPV) <sup>4,*</sup>		3 doses (females)				
Zoster <sup>5</sup>					1 dose	
Measles, mumps, rubella (MMR) <sup>6,*</sup>		1 or 2 doses			1 dose	
Pneumococcal (polysaccharide) <sup>7, 8</sup>			1 or 2 doses			1 dose
Meningococcal <sup>9,*</sup>				1 or more doses		
Hepatitis A <sup>10,*</sup>				2 doses		
Hepatitis B <sup>11,*</sup>				3 doses		


\*Covered by the Vaccine Injury Compensation Program.

Figure 2. Vaccines that might be indicated for adults, based on medical and other indications

Vaccine ▼	Indication ►	Pregnancy	Immunocompromising conditions (excluding human immunodeficiency virus [HIV]) <sup>3, 5, 6, 13</sup>	HIV infection <sup>3, 6, 12, 13</sup> CD4+ T lymphocyte count <200 cells/μL    ≥200 cells/μL	Diabetes, heart disease, chronic lung disease, chronic alcoholism	Asplenia <sup>12</sup> (including elective splenectomy and persistent complement component deficiencies)	Chronic liver disease	Kidney failure, end-stage renal disease, receipt of hemodialysis	Healthcare personnel
Influenza <sup>1,*</sup>									1 dose TIV or LAIV annually
Tetanus, diphtheria, pertussis (Td/Tdap) <sup>2,*</sup>		Td							Substitute one-time dose of Tdap for Td booster; then boost with Td every 10 yrs
Varicella <sup>3,*</sup>		Contraindicated							2 doses
Human papillomavirus (HPV) <sup>4,*</sup>									3 doses for females through age 26 yrs
Zoster <sup>5</sup>		Contraindicated							1 dose
Measles, mumps, rubella (MMR) <sup>6,*</sup>		Contraindicated							1 or 2 doses
Pneumococcal (polysaccharide) <sup>7, 8</sup>									1 or 2 doses
Meningococcal <sup>9,*</sup>									1 or more doses
Hepatitis A <sup>10,*</sup>									2 doses
Hepatitis B <sup>11,*</sup>									3 doses

\*Covered by the Vaccine Injury Compensation Program.

 For all persons in this category who meet the age requirements and who lack evidence of immunity (e.g., lack documentation of vaccination or have no evidence of previous infection)

 Recommended if some other risk factor is present (e.g., on the basis of medical, occupational, lifestyle, or other indications)

 No recommendation

These schedules indicate the recommended age groups and medical indications for which administration of currently licensed vaccines is commonly indicated for adults ages 19 years and older, as of January 1, 2011. For all vaccines being recommended on the adult immunization schedule: a vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Licensed combination vaccines may be used whenever any components of the combination are indicated and when the vaccine's other components are not contraindicated. For detailed recommendations on all vaccines, including those used primarily for travelers or that are issued during the year, consult the manufacturers' package inserts and the complete statements from the Advisory Committee on Immunization Practices ([www.cdc.gov/vaccines/pubs/acip-list.htm](http://www.cdc.gov/vaccines/pubs/acip-list.htm)).

## Footnotes

For complete statements by the Advisory Committee on Immunization Practices (ACIP), visit [www.cdc.gov/vaccines/pubs/acip-list.htm](http://www.cdc.gov/vaccines/pubs/acip-list.htm)

**1. Influenza vaccination.** Annual vaccination against influenza is recommended for all persons age 6 months and older, including all adults. Healthy, nonpregnant adults younger than age 50 years without high-risk medical conditions can receive either intranasally administered live, attenuated influenza vaccine (FluMist) or inactivated vaccine. Other persons should receive the inactivated vaccine. Adults age 65 years and older can receive the standard influenza vaccine or the high-dose (Fluzone) influenza vaccine. Additional information on influenza vaccination is available at [www.cdc.gov/vaccines/vpd-vac/flu/default.htm](http://www.cdc.gov/vaccines/vpd-vac/flu/default.htm).

**2. Tetanus, diphtheria, and acellular pertussis (Td/Tdap) vaccination.** Give a one-time dose of Tdap to adults younger than age 65 years who have not received Tdap previously or for whom vaccine status is unknown to replace one of the 10-year Td boosters, and as soon as feasible to all 1) postpartum women, 2) close contacts of infants younger than age 12 months (e.g., grandparents, child-care providers), and 3) healthcare personnel with direct patient contact. Adults age 65 years and older who have not previously received Tdap and who have close contact with an infant younger than age 12 months also should be vaccinated. Other adults age 65 years and older may receive Tdap. Tdap can be given regardless of interval since the most recent tetanus or diphtheria-containing vaccine.

Adults with uncertain or incomplete history of completing a 3-dose primary vaccination series with Td-containing vaccines should begin or complete a primary vaccination series. For unvaccinated adults, give the first 2 doses at least 4 weeks apart and the third dose 6–12 months after the second. If incompletely vaccinated (i.e., less than 3 doses), give remaining doses. Substitute a one-time dose of Tdap for one of the doses of Td, either in the primary series or for the routine booster, whichever comes first.

If a woman is pregnant and received the most recent Td vaccination 10 or more years previously, give Td during the second or third trimester. If the woman received the most recent Td vaccination less than 10 years previously, give Tdap during the immediate postpartum period. At the clinician's discretion, Td may be deferred during pregnancy and Tdap substituted in the immediate postpartum period, or Tdap may be given instead of Td to a pregnant woman after an informed discussion with the woman.

The ACIP statement for recommendations for giving Td as prophylaxis in wound management is available at [www.cdc.gov/vaccines/pubs/acip-list.htm](http://www.cdc.gov/vaccines/pubs/acip-list.htm).

**3. Varicella vaccination.** All adults without evidence of immunity to varicella should receive 2 doses of single-antigen varicella vaccine if not previously vaccinated or a second dose if they have received only 1 dose, unless they have a medical contraindication. Special consideration should be given to those who 1) have close contact with persons at high risk for severe disease (e.g., healthcare personnel and family contacts of persons with immunocompromising conditions) or 2) are at high risk for exposure or transmission (e.g., teachers; child-care employees; residents and staff members of institutional settings, including correctional institutions; college students; military personnel; adolescents and adults living in households with children; nonpregnant women of childbearing age; and international travelers).

Evidence of immunity to varicella in adults includes any of the following: 1) documentation of 2 doses of varicella vaccine at least 4 weeks apart; 2) U.S.-born before 1980 (although for healthcare personnel and pregnant women, birth before 1980 should not be considered evidence of immunity); 3) history of varicella based on diagnosis or verification of varicella by a healthcare provider (for a patient reporting a history of or having an atypical case, a mild case, or both, healthcare providers should seek either an epidemiologic link with a typical varicella case or to a laboratory-confirmed case or evidence of laboratory confirmation, if it was performed at the time of acute disease); 4) history of herpes zoster based on diagnosis or verification of herpes zoster by a healthcare provider; or 5) laboratory evidence of immunity or laboratory confirmation of disease.

Pregnant women should be assessed for evidence of varicella immunity. Women who do not have evidence of immunity should receive the first dose of varicella vaccine upon completion or termination of pregnancy and before discharge from the healthcare facility. The second dose should be given 4–8 weeks after the first dose.

**4. Human papillomavirus (HPV) vaccination.** HPV vaccination with either quadrivalent (HPV4) vaccine or bivalent vaccine (HPV2) is recommended for females at age 11 or 12 years and catch-up vaccination for females ages 13 through 26 years. Ideally, vaccine should be given before potential exposure to HPV through sexual activ-

ity; however, females who are sexually active should still be vaccinated consistent with age-based recommendations. Sexually active females who have not been infected with any of the four HPV vaccine types (types 6, 11, 16, and 18, all of which HPV4 prevents) or any of the two HPV vaccine types (types 16 and 18, both of which HPV2 prevents) receive the full benefit of the vaccination. Vaccination is less beneficial for females who have already been infected with one or more of the HPV vaccine types. HPV4 or HPV2 can be given to persons with a history of genital warts, abnormal Papanicolaou test, or positive HPV DNA test, because these conditions are not evidence of previous infection with all vaccine HPV types.

HPV4 may be given to males ages 9 through 26 years to reduce their likelihood of genital warts. HPV4 would be most effective when given before exposure to HPV through sexual contact.

A complete series for either HPV4 or HPV2 consists of 3 doses. The second dose should be given 1 to 2 months after the first dose; the third dose should be given 6 months after the first dose.

Although HPV vaccination is not specifically recommended for persons with the medical indications described in Figure 2, "Vaccines that might be indicated for adults, based on medical and other indications," it may be given to these persons because the HPV vaccine is not a live-virus vaccine. However, the immune response and vaccine efficacy might be less for persons with the medical indications described in Figure 2 than in persons who do not have the medical indications described or who are immunocompetent.

**5. Herpes zoster vaccination.** A single dose of zoster vaccine is recommended for adults age 60 years and older regardless of whether they report a previous episode of herpes zoster. Persons with chronic medical conditions may be vaccinated unless their condition constitutes a contraindication.

**6. Measles, mumps, rubella (MMR) vaccination.** Adults born before 1957 generally are considered immune to measles and mumps. All adults born in 1957 or later should have documentation of 1 or more doses of MMR vaccine unless they have a medical contraindication to the vaccine, laboratory evidence of immunity to each of the three diseases, or documentation of provider-diagnosed measles or mumps disease. For rubella, documentation of provider-diagnosed disease is not considered acceptable evidence of immunity.

*Measles component:* A second dose of MMR vaccine, given a minimum of 28 days after the first dose, is recommended for adults who 1) have been recently exposed to measles or are in an outbreak setting; 2) are students in postsecondary educational institutions; 3) work in a healthcare facility; or 4) plan to travel internationally. Persons who received inactivated (killed) measles vaccine or measles vaccine of unknown type from 1963 to 1967 should be revaccinated with 2 doses of MMR vaccine.

*Mumps component:* A second dose of MMR vaccine, given a minimum of 28 days after the first dose, is recommended for adults who 1) live in a community experiencing a mumps outbreak and are in an affected age group; 2) are students in postsecondary educational institutions; 3) work in a healthcare facility; or 4) plan to travel internationally. Persons vaccinated before 1979 with either killed mumps vaccine or mumps vaccine of unknown type who are at high risk for mumps infection (e.g., persons who are working in a healthcare facility) should be revaccinated with 2 doses of MMR vaccine.

*Rubella component:* For women of childbearing age, regardless of birth year, rubella immunity should be determined. If there is no evidence of immunity, women who are not pregnant should be vaccinated. Pregnant women who do not have evidence of immunity should receive MMR vaccine upon completion or termination of pregnancy and before discharge from the healthcare facility.

*Healthcare personnel born before 1957:* For unvaccinated healthcare personnel born before 1957 who lack laboratory evidence of measles, mumps, and/or rubella immunity or laboratory confirmation of disease, healthcare facilities should 1) consider routinely vaccinating personnel with 2 doses of MMR vaccine at the appropriate interval (for measles and mumps) and 1 dose of MMR vaccine (for rubella), and 2) recommend 2 doses of MMR vaccine at the appropriate interval during an outbreak of measles or mumps, and 1 dose during an outbreak of rubella. Complete information about evidence of immunity is available at [www.cdc.gov/vaccines/recs/provisional/default.htm](http://www.cdc.gov/vaccines/recs/provisional/default.htm).

(continued)

## Footnotes (continued)

**7. Pneumococcal polysaccharide (PPSV) vaccination.** Vaccinate all persons with the following indications:

*Medical:* Chronic lung disease (including asthma); chronic cardiovascular diseases; diabetes mellitus; chronic liver diseases, cirrhosis; chronic alcoholism; functional or anatomic asplenia (e.g., sickle cell disease or splenectomy [if elective splenectomy is planned, vaccinate at least 2 weeks before surgery]); immunocompromising conditions (including chronic renal failure or nephrotic syndrome); and cochlear implants and cerebrospinal fluid leaks. Vaccinate as close to HIV diagnosis as possible.

*Other:* Residents of nursing homes or long-term care facilities and persons who smoke cigarettes. Routine use of PPSV is not recommended for American Indians/Alaska Natives or persons younger than age 65 years unless they have underlying medical conditions that are PPSV indications. However, public health authorities may consider recommending PPSV for American Indians/Alaska Natives and persons ages 50 through 64 years who are living in areas in which the risk for invasive pneumococcal disease is increased.

**8. Revaccination with PPSV.** One-time revaccination after 5 years is recommended for persons ages 19 through 64 years with chronic renal failure or nephrotic syndrome; functional or anatomic asplenia (e.g., sickle cell disease or splenectomy); and for persons with immunocompromising conditions. For persons age 65 years and older, one-time revaccination is recommended if they were vaccinated 5 or more years previously and were younger than age 65 years at the time of primary vaccination.

**9. Meningococcal vaccination.** Meningococcal vaccine should be given to persons with the following indications:

*Medical:* A 2-dose series of meningococcal conjugate vaccine is recommended for adults with anatomic or functional asplenia, or persistent complement component deficiencies. Adults with HIV infection who are vaccinated should also receive a routine 2-dose series. The 2 doses should be given at 0 and 2 months.

*Other:* A single dose of meningococcal vaccine is recommended for unvaccinated first-year college students living in dormitories; microbiologists routinely exposed to isolates of *Neisseria meningitidis*; military recruits; and persons who travel to or live in countries in which meningococcal disease is hyperendemic or epidemic (e.g., the "meningitis belt" of sub-Saharan Africa during the dry season [December through June]), particularly if their contact with local populations will be prolonged. Vaccination is required by the government of Saudi Arabia for all travelers to Mecca during the annual Hajj.

Meningococcal conjugate vaccine, quadrivalent (MCV4) is preferred for adults with any of the preceding indications who are age 55 years and younger; meningococcal polysaccharide vaccine (MPSV4) is preferred for adults age 56 years and older. Revaccination with MCV4 every 5 years is recommended for adults previously vaccinated with MCV4 or MPSV4 who remain at increased risk for infection (e.g., adults with anatomic or functional asplenia, or persistent complement component deficiencies).

**10. Hepatitis A vaccination.** Vaccinate persons with any of the following indications and any person seeking protection from hepatitis A virus (HAV) infection:

*Behavioral:* Men who have sex with men and persons who use injection drugs.

*Occupational:* Persons working with HAV-infected primates or with HAV in a research laboratory setting.

*Medical:* Persons with chronic liver disease and persons who receive clotting factor concentrates.

*Other:* Persons traveling to or working in countries that have high or intermediate endemicity of hepatitis A (a list of countries is available at [www.cdc.gov/travel/contentdiseases.aspx](http://www.cdc.gov/travel/contentdiseases.aspx)).

Unvaccinated persons who anticipate close personal contact (e.g., household or regular babysitting) with an international adoptee during the first 60 days after arrival of the adoptee in the United States from a country of high or intermediate endemicity should be vaccinated. The first dose of the 2-dose hepatitis A vaccine series should be given as soon as adoption is planned, ideally 2 or more weeks before the arrival of the adoptee.

Single-antigen vaccine formulations should be given in a 2-dose schedule at either 0 and 6–12 months (Havrix), or 0 and 6–18 months (Vaqta). If the combined hepatitis A and hepatitis B vaccine (Twinrix) is used, give 3 doses at 0, 1, and 6 months; alternatively, a 4-dose Twinrix schedule may be used, given on days 0, 7, and 21 to 30, followed by a booster dose at month 12.

**11. Hepatitis B vaccination.** Vaccinate persons with any of the following indications and any person seeking protection from hepatitis B virus (HBV) infection:

*Behavioral:* Sexually active persons who are not in a long-term, mutually monogamous relationship (e.g., persons with more than one sex partner during the previous 6 months); persons seeking evaluation or treatment for a sexually transmitted disease (STD); current or recent injection-drug users; and men who have sex with men.

*Occupational:* Healthcare personnel and public-safety workers who are exposed to blood or other potentially infectious body fluids.

*Medical:* Persons with end-stage renal disease, including patients receiving hemodialysis; persons with HIV infection; and persons with chronic liver disease.

*Other:* Household contacts and sex partners of persons with chronic HBV infection; clients and staff members of institutions for persons with developmental disabilities; and international travelers to countries with high or intermediate prevalence of chronic HBV infection (a list of countries is available at [www.cdc.gov/travel/contentdiseases.aspx](http://www.cdc.gov/travel/contentdiseases.aspx)).

Hepatitis B vaccination is recommended for all adults in the following settings: STD treatment facilities; HIV testing and treatment facilities; facilities providing drug-abuse treatment and prevention services; healthcare settings targeting services to injection-drug users or men who have sex with men; correctional facilities; end-stage renal disease programs and facilities for chronic hemodialysis patients; and institutions and nonresidential day-care facilities for persons with developmental disabilities.

Give missing doses to complete a 3-dose series of hepatitis B vaccine to those persons not vaccinated or not completely vaccinated. The second dose should be given 1 month after the first dose; the third dose should be given at least 2 months after the second dose (and at least 4 months after the first dose). If the combined hepatitis A and hepatitis B vaccine (Twinrix) is used, give 3 doses at 0, 1, and 6 months; alternatively, a 4-dose Twinrix schedule, given on days 0, 7, and 21 to 30, followed by a booster dose at month 12 may be used.

Adult patients receiving hemodialysis or with other immunocompromising conditions should receive 1 dose of 40 µg/mL (Recombivax HB) given on a 3-dose schedule or 2 doses of 20 µg/mL (Engerix-B) given simultaneously on a 4-dose schedule at 0, 1, 2, and 6 months.

**12. Selected conditions for which *Haemophilus influenzae* type b (Hib) vaccine may be used.** 1 dose of Hib vaccine should be considered for persons who have sickle cell disease, leukemia, or HIV infection, or who have had a splenectomy, if they have not previously received Hib vaccine.

**13. Immunocompromising conditions.** Inactivated vaccines generally are acceptable (e.g., pneumococcal, meningococcal, influenza [inactivated influenza vaccine]) and live vaccines generally are avoided in persons with immune deficiencies or immunocompromising conditions. Information on specific conditions is available at [www.cdc.gov/vaccines/pubs/acip-list.htm](http://www.cdc.gov/vaccines/pubs/acip-list.htm).

Report all clinically significant postvaccination reactions to the Vaccine Adverse Event Reporting System (VAERS). Reporting forms and instructions on filing a VAERS report are available at [www.vaers.hhs.gov](http://www.vaers.hhs.gov) or by telephone, 800-822-7967.

Information on how to file a Vaccine Injury Compensation Program claim is available at [www.hrsa.gov/vaccinecompensation](http://www.hrsa.gov/vaccinecompensation) or by telephone, 800-338-2382. Information about filing a claim for vaccine injury is available through the U.S. Court of Federal Claims, 717 Madison Place, N.W., Washington, D.C. 20005; telephone, 202-357-6400.

Additional information about the vaccines in this schedule, extent of available data, and contraindications for vaccination also is available at [www.cdc.gov/vaccines](http://www.cdc.gov/vaccines) or from the CDC-INFO Contact Center at 800-CDC-INFO (800-232-4636) in English and Spanish, 24 hours a day, 7 days a week.

Use of trade names and commercial sources is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services.

# Guide to Contraindications and Precautions<sup>1</sup> to Commonly Used Vaccines in Adults\*

Vaccine	Contraindications	Precautions <sup>1</sup>
<b>Tetanus, diphtheria, pertussis (Tdap)</b> <b>Tetanus, diphtheria (Td)</b>	<ul style="list-style-type: none"> <li>Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component</li> <li>For Tdap only: Encephalopathy (e.g., coma, decreased level of consciousness, prolonged seizures), not attributable to another identifiable cause, within 7 days of administration of previous dose of DTP, DTaP, or Tdap</li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> <li>Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of tetanus toxoid-containing vaccine</li> <li>History of arthus-type hypersensitivity reactions following a previous dose of tetanus toxoid-containing vaccine; defer vaccination until at least 10 years have elapsed since the last tetanus toxoid-containing vaccine</li> <li><b>For Tdap only:</b> Progressive or unstable neurologic disorder, uncontrolled seizures, or progressive encephalopathy; defer vaccination with Tdap until a treatment regimen has been established and the condition has stabilized</li> </ul>
<b>Human papilloma-virus (HPV)</b>	<ul style="list-style-type: none"> <li>Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component</li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> <li>Pregnancy</li> </ul>
<b>Measles, mumps, rubella (MMR)<sup>2</sup></b>	<ul style="list-style-type: none"> <li>Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component</li> <li>Pregnancy</li> <li>Known severe immunodeficiency (e.g., from hematologic and solid tumors; receiving chemotherapy; congenital immunodeficiency; long-term immunosuppressive therapy<sup>3</sup>; or patients with HIV infection who are severely immunocompromised)</li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> <li>Recent (within 11 months) receipt of antibody-containing blood product (specific interval depends on product<sup>4</sup>)</li> <li>History of thrombocytopenia or thrombocytopenic purpura</li> <li>Need for tuberculin skin testing<sup>5</sup></li> </ul>
<b>Varicella (Var)<sup>2</sup></b>	<ul style="list-style-type: none"> <li>Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component</li> <li>Known severe immunodeficiency (e.g., from hematologic and solid tumors; receiving chemotherapy; congenital immunodeficiency or long-term immunosuppressive therapy<sup>3</sup> or patients with HIV infection who are severely immunocompromised)</li> <li>Pregnancy</li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> <li>Recent (within 11 months) receipt of antibody-containing blood product (specific interval depends on product<sup>4</sup>)</li> <li>Receipt of specific antivirals (i.e., acyclovir, famciclovir, or valacyclovir) 24 hours before vaccination, if possible; delay resumption of these antiviral drugs for 14 days after vaccination</li> </ul>
<b>Influenza, injectable trivalent (TIV)</b>	<ul style="list-style-type: none"> <li>Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component, including egg protein</li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> <li>History of GBS within 6 wks of previous influenza vaccine</li> </ul>
<b>Influenza, live attenuated (LAIV)<sup>2</sup></b>	<ul style="list-style-type: none"> <li>Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component, including egg protein</li> <li>Pregnancy</li> <li>Immunosuppression</li> <li>Certain chronic medical conditions<sup>6</sup></li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> <li>History of GBS within 6 wks of previous influenza vaccine</li> <li>Receipt of specific antivirals (i.e., amantadine, rimantadine, zanamivir, or oseltamivir) 48 hours before vaccination; avoid use of these antiviral drugs for 14 days after vaccination</li> </ul>
<b>Pneumococcal polysaccharide (PPSV)</b>	<ul style="list-style-type: none"> <li>Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component</li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> </ul>
<b>Hepatitis A (HepA)</b>	<ul style="list-style-type: none"> <li>Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component</li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> <li>Pregnancy</li> </ul>
<b>Hepatitis B (HepB)</b>	<ul style="list-style-type: none"> <li>Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component</li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> </ul>
<b>Meningococcal, conjugate (MCV4)</b> <b>Meningococcal, polysaccharide (MPSV4)</b>	<ul style="list-style-type: none"> <li>Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component</li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> </ul>
<b>Zoster (Zos)</b>	<ul style="list-style-type: none"> <li>Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component</li> <li>Substantial suppression of cellular immunity</li> <li>Pregnancy</li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> <li>Receipt of specific antivirals (i.e., acyclovir, famciclovir, or valacyclovir) 24 hours before vaccination, if possible; delay resumption of these antiviral drugs for 14 days after vaccination</li> </ul>

## Footnotes

- Events or conditions listed as precautions should be reviewed carefully. Benefits of and risks for administering a specific vaccine to a person under these circumstances should be considered. If the risk from the vaccine is believed to outweigh the benefit, the vaccine should not be administered. If the benefit of vaccination is believed to outweigh the risk, the vaccine should be administered.
- LAIV, MMR, and varicella vaccines can be administered on the same day. If not administered on the same day, these vaccines should be separated by at least 28 days.
- Substantially immunosuppressive steroid dose is considered to be 2 weeks or more of daily receipt of 20 mg (or 2 mg/kg body weight) of prednisone or equivalent.
- Vaccine should be deferred for the appropriate interval if replacement immune globulin

products are being administered (see Table 5 in CDC. "General Recommendations on Immunization: Recommendations of the Advisory Committee on Immunization Practices [ACIP]" at [www.cdc.gov/vaccines/pubs/acip-list.htm](http://www.cdc.gov/vaccines/pubs/acip-list.htm)).

- Measles vaccination might suppress tuberculin reactivity temporarily. Measles-containing vaccine can be administered on the same day as tuberculin skin testing. If testing cannot be performed until after the day of MMR vaccination, the test should be postponed for at least 4 weeks after the vaccination. If an urgent need exists to skin test, do so with the understanding that reactivity might be reduced by the vaccine.
- For details, see CDC. "Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2010" at [www.cdc.gov/vaccines/pubs/acip-list.htm](http://www.cdc.gov/vaccines/pubs/acip-list.htm).

\*Adapted from "Table 6. Contraindications and Precautions to Commonly Used Vaccines," found in: CDC. "General Recommendations on Immunization: Recommendations of the Advisory Committee on Immunization Practices." *MMWR* 2011; 60(No. RR-2), p.40–41.

## Vaccines with Diluents: How to Use Them

The following vaccines must be reconstituted correctly before they are administered. Reconstitution means that the lyophilized (freeze-dried) vaccine powder or wafer in one vial must be reconstituted (mixed) with the diluent (liquid) in another. Only use the diluent provided by the manufacturer for that vaccine as indicated on the chart. ALWAYS check the expiration date on the diluent and vaccine. NEVER use expired diluent or vaccine.

Vaccine product name	Manufacturer	Lyophilized vaccine (powder)	Liquid diluent (may contain vaccine)	Time allowed between reconstitution and use*	Diluent storage environment
ActHIB (Hib)	sanofi pasteur	ActHIB	0.4% sodium chloride	24 hrs	Refrigerator
Hiberix (Hib)	GlaxoSmithKline	Hib	0.9% sodium chloride	24 hrs	Refrigerator or room temp
Imovax (RAB <sub>HDCV</sub> )	sanofi pasteur	Imovax	Sterile water	Immediately	Refrigerator
JE-VAX	sanofi pasteur	JE-VAX	Sterile water	8 hrs	Refrigerator
M-M-R II (MMR)	Merck	MMR	Sterile water	8 hrs	Refrigerator or room temp
Menomune (MPSV4)	sanofi pasteur	MPSV4	Distilled water	30 min (single-dose vial) 35 days (multi-dose vial)	Refrigerator
Menveo (MCV4)	Novartis	MenA	MenCWY	8 hrs	Refrigerator
Pentacel (DTaP-IPV/Hib)	sanofi pasteur	ActHIB	DTaP-IPV	Immediately†	Refrigerator
ProQuad (MMRV)	Merck	MMRV	Sterile water	30 min	Refrigerator or room temp
RabAvert (RAB <sub>PCECV</sub> )	Novartis	RabAvert	Sterile water	Immediately	Refrigerator
Rotarix (RV1)‡	GlaxoSmithKline	RV1	Sterile water, calcium carbonate, and xanthan*	24 hrs	Room temp
Varivax (VAR)	Merck	VAR	Sterile water	30 min	Room temp or refrigerator
YF-VAX (YF)	sanofi pasteur	YF-VAX	0.9% sodium chloride	60 min	Refrigerator
Zostavax (ZOS)	Merck	ZOS	Sterile water	30 min	Room temp or refrigerator

Always refer to package inserts for detailed instructions on reconstituting specific vaccines. In general, follow these steps:

- For single-dose vaccine products (exceptions are Menomune in the multi-dose vial and Rotarix<sup>§</sup>), select a syringe and a needle of proper length to be used for both reconstitution and administration of the vaccine. Following reconstitution, Menomune in a multi-dose vial will require a new needle and syringe for each dose of vaccine to be administered. For Rotarix, see the package insert.<sup>‡</sup>
- Before reconstituting, check labels on both the lyophilized vaccine vial and the diluent to verify the following:
  - that they are the correct two products to mix together
  - that the diluent is the correct volume (especially for Menomune in the multi-dose vial)
  - that neither vaccine nor diluent has expired
- Reconstitute (i.e., mix) vaccine **just prior to use**<sup>‡</sup> by
  - removing the protective caps and wiping each stopper with an alcohol swab
  - inserting needle of syringe into diluent vial and withdrawing entire contents
  - injecting diluent into lyophilized vaccine vial and rotating or agitating to thoroughly dissolve the lyophilized powder
- Check the appearance of the reconstituted vaccine.
  - Reconstituted vaccine may be used if the color and appearance match the description on the package insert.
  - If there is discoloration, extraneous particulate matter, obvious lack of resuspension, or cannot be thoroughly mixed, mark the vial as “DO NOT USE,” return it to proper storage conditions, and contact your state or local health department immunization program or the vaccine manufacturer.
- If reconstituted vaccine is not used immediately or comes in a multi-dose vial (i.e., multi-dose Menomune),
  - clearly mark the vial with the date and time the vaccine was reconstituted
  - maintain the product at 35°–46°F (2°–8°C); do not freeze
  - protect reconstituted vaccines from light
  - use only within the time indicated on chart above

\* If the reconstituted vaccine is not used within this time period, it must be discarded.

† Within 30 minutes or less.

‡ Rotarix vaccine is administered by mouth using the applicator that contains the diluent. It is not administered as an injection.

## Summary of meningococcal vaccination recommendations, by risk group

Risk Group	Primary series	If and when to give booster
Persons ages 11 through 18 years	Give 1 dose of MCV4, preferably at age 11 or 12 years <sup>1</sup>	Give booster at age 16 years if primary dose given at age 12 years or younger
		Give booster at ages 16 through 18 years if primary dose given at ages 13 through 15 years <sup>2</sup>
Persons ages 19 through 21 years who will be attending college	Give 1 dose of MCV4, if previously unvaccinated <sup>1</sup>	Give booster dose if previous dose given at age younger than 16 years
Persons ages 19 through 21 years who are attending college	May give 1 dose of MCV4, if previously unvaccinated <sup>1</sup>	May give booster dose if previous dose given at age younger than 16 years
<b>Persons with persistent complement component deficiency (including C5-C9, properdin, factor H, factor D), or functional or anatomic asplenia</b>		
- for ages 2 through 55 years	Give 2 doses of MCV4, 2 months apart	Boost every 5 years with MCV4 <sup>3</sup>
- for age 56 years and older	Give 1 dose of MPSV	Boost every 5 years with MPSV
<b>Persons with prolonged increased risk for exposure (e.g., microbiologists routinely working with <i>Neisseria meningitidis</i> and travelers to or residents of countries where meningococcal disease is hyperendemic or epidemic)</b>		
- for ages 2 through 55 years	Give 1 dose of MCV4 <sup>1</sup>	Boost every 5 years with MCV4 <sup>4,5</sup>
- for age 56 years or older	Give 1 dose of MPSV	Boost every 5 years with MPSV <sup>5</sup>

1. If the person is HIV-positive, give 2 doses, 2 months apart.
2. The minimum interval between doses of MCV4 is 8 weeks.
3. If the person received a 1-dose primary series, give booster at the earliest opportunity, then boost every 5 years.
4. If younger than age 7 years, give booster after 3 years.
5. A booster dose is recommended if the person remains at increased risk.

**Note:** Children ages 2 through 10 years and adults ages 19 years and older without any of the risk factors listed above are not recommended for routine vaccination against meningococcal disease. If an adult patient requests vaccination against meningococcal disease, ACIP states that you can vaccinate them.

Technical content reviewed by the Centers for Disease Control and Prevention, April 2011

### **Recommendations, including those for vaccinating younger children and older adults who have risk factors?**

The table above provides a summary of the CDC recommendations for use of meningococcal vaccine for people of all ages. It reflects the changes issued by CDC in October 2010, which were published in early 2011.

### **Which people are recommended to receive a 2-dose primary series of MCV4?**

A 2-dose series of MCV4, spaced 2 months apart, is recommended for people younger than age 56 years who have functional or anatomic asplenia,

or persistent complement component deficiency, including C5-C9, properdin, factor H, and factor D. In addition, people in this age group who are HIV-positive who are vaccinated should also receive a 2-dose series of MCV4, spaced 2 months apart.

### **Are people who are HIV positive in a risk group for meningococcal disease?**

Being HIV-positive does *not* put a person into a risk group that necessitates MCV4 vaccination. However, the updated CDC recommendations for use of MCV4 vaccines state that people “with HIV who are vaccinated should receive a 2-dose primary series administered 2 months apart.” Accordingly, the following HIV-positive people should receive 2 initial doses of MCV4 (instead of 1), spaced 2 months apart:

- HIV-positive adolescents ages 11 through 18 who, like other adolescents, are recommended for routine MCV4 vaccination
- HIV-positive people ages 2 through 55 years who are at prolonged increased risk for exposure to meningococcal disease (e.g., travelers to or residents of countries where meningococcal disease

is hyperendemic or epidemic and microbiologists who routinely work with *Neisseria meningitidis*)

- Any HIV-positive adult who chooses to be vaccinated.

### **Which previously unvaccinated college students are recommended to receive MCV4 and how many doses should they be given?**

Previously unvaccinated students ages 19 through 21 years who will be in a college or university setting should receive 1 dose of MCV4. Further, students who meet these same criteria who are already attending college *may* be vaccinated. Routine vaccination is not recommended for adults age 22 and older who do not have risk factors. If an adult patient requests vaccination against meningococcal disease, CDC states that you can vaccinate them.

### **Which previously vaccinated college students need booster doses?**

A booster dose should be given to students age 21 years and younger if the previous dose was given 5 or more years earlier, and if the student is plan-

(continued on page 10)

### **Vaccinate Adults correction policy**

If you find an error, please notify us immediately by sending an email message to [admin@immunize.org](mailto:admin@immunize.org). We publish notification of significant errors in our email announcement service, *IAC Express*. Be sure you're signed up for this service. To subscribe, visit [www.immunize.org/subscribe](http://www.immunize.org/subscribe).

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ning to enter college (i.e., is not yet in college). A booster dose *may* be given to college students who meet these same criteria and are currently attending college.

**With three licensed meningococcal vaccines, how do I decide which one to use?**

Quadrivalent meningococcal conjugate vaccine (MCV4) is the preferred product for people ages 2 through 55 years. Both Menactra (sanofi) and Menveo (Novartis) are licensed for use in this age range. The conjugate vaccines are believed to have several advantages over meningococcal polysaccharide vaccine (MPSV4; Menomune [sanofi]), such as reduction in bacterial carriage in the nose

and throat, longer duration of immunity, and better immunologic memory. MPSV4 should be used for adults age 56 and older.

**For which patients is MPSV4 the preferential vaccine?**

MPSV4 is the only meningococcal vaccine licensed for adults age 56 years and older. MPSV4 can also be used in people ages 2 through 55 years who have a contraindication or precaution to MCV4.

**Are the two meningococcal quadrivalent conjugate vaccines (MCV4) interchangeable?**

Whenever feasible, the same brand of vaccine should be used when 2 doses are recommended. If the vaccine provider does not know or have available the type of MCV4 vaccine previously administered (Menactra or Menveo), either product can be used to complete the series.

**A 19-year-old student who received 1 dose of MCV4 at age 12 years will be attending a community college this fall. Does she need a booster dose of MCV4?**

Yes. Adults ages 19 through 21 years who plan to attend college, and who received the previous dose of MCV4 before age 16 years, need a booster dose. They no longer need to be living in on-campus housing to qualify in a risk group for meningococcal vaccination.

**General vaccine questions**

**How many vaccines can be given during an office visit?**

No upper limit exists for the number of vaccines that can be administered during one visit. CDC consistently recommends that all needed vaccines be administered during an office visit.

**Which vaccines cannot be administered at an office visit along with other vaccines?**

All routine vaccines can be given during an office visit, as long as a different syringe is used for each vaccine.

**If all needed vaccines aren’t administered during the same visit, does one need to wait a certain period of time before administering the other needed vaccines?**

All inactivated vaccines can be given on the same

day, or on any day before or after giving other inactivated or live vaccines. However, if two live vaccines are not given on the same day, they need to be spaced at least 4 weeks apart.

**Do we have to check vital signs before giving vaccines?**

No. CDC does not recommend routinely checking a patient’s temperature or other vital signs before vaccination. Requiring these extra steps can be a barrier to immunization.

**Is it necessary to routinely test women for pregnancy before administering vaccines?**

No. However, females of childbearing age should be asked about the possibility of their being pregnant before they are given any vaccine for which pregnancy is a contraindication or precaution. The patient’s answer should be documented in the medical record. If the patient thinks she might be pregnant, a pregnancy test should be performed before administering live virus vaccines.

**Which vaccines can be given to breastfeeding women?**

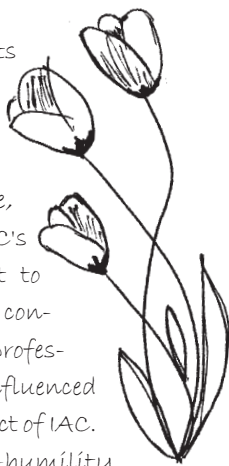
All vaccines except smallpox can be given to breastfeeding women. Breastfeeding is a precaution for yellow fever vaccine. Women who are breastfeeding should be advised to postpone travel to yellow fever endemic or epidemic regions; however, if travel cannot be postponed, the woman should receive yellow fever vaccine.

**Remembering Becky**

Rebecca Jean Payne

Jan. 14, 1953 – Mar. 25, 2011

This issue of *Vaccinate Adults* is dedicated to the memory of our dear friend and colleague, Becky Payne, IAC’s former Assistant to the Director. The consummate office professional, Becky influenced nearly every aspect of IAC. Her hallmarks—humility, wisdom, and generosity—left an indelible mark on all who were privileged to know her. She is dearly missed. ([more](#))



**Find all the Immunization Action Coalition’s Quick Links at**

[www.immunize.org/quicklinks](http://www.immunize.org/quicklinks)

These Quick Links are popular with IAC’s web users:

[www.immunize.org/vis](http://www.immunize.org/vis)

[www.immunize.org/handouts](http://www.immunize.org/handouts)

[www.immunize.org/askexperts](http://www.immunize.org/askexperts)

[www.immunize.org/standing-orders](http://www.immunize.org/standing-orders)

[www.immunize.org/subscribe](http://www.immunize.org/subscribe)

[www.immunize.org/vaccines](http://www.immunize.org/vaccines)

[www.immunize.org/acip](http://www.immunize.org/acip)

[www.immunize.org/journalarticles](http://www.immunize.org/journalarticles)

[www.immunize.org/photos](http://www.immunize.org/photos)

[www.immunize.org/concerns](http://www.immunize.org/concerns)

[www.immunize.org/shop](http://www.immunize.org/shop)

Visit [www.immunize.org](http://www.immunize.org) often for all the vaccination information you need.

# Order Essential Immunization Resources from IAC

*Laminated immunization schedules give you solid information for 2011—order today!*

IAC has two laminated immunization schedules for 2011—one for adults and one for children/teens. Based on CDC's immunization schedules, these laminated schedules are covered with a tough, washable coating. This allows them to stand up to a year's worth of use as at-your-fingertips guides to immunization and as teaching tools you can use to give patients and parents authoritative information. Plus,

each schedule includes a guide to vaccine contraindications and precautions, an additional feature that will help you make on-the-spot determinations about the safety of vaccinating patients of any age.

To order laminated schedules or any of our other essential immunization resources listed below, print out and mail or fax this page or place your order online at [www.immunize.org/shop](http://www.immunize.org/shop).

**It's convenient to shop IAC online at [www.immunize.org/shop](http://www.immunize.org/shop)**

## Order Essential Immunization Resources

### CD-ROM of IAC print materials

FREE with a contribution of \$75 or more (see below). The CD contains all of IAC's ready-to-print materials in English and any translations available in Spanish. Includes VISs in English and Spanish.

Qty.	Laminated 2011 U.S. Immunization Schedules (details p. 3; call for discounts on bulk orders)	Amt.
_____	R2009 Adult schedule: 1-4 copies—\$7.50 each; 5-19 copies—\$5.50 each.....	\$ _____
_____	R2008 Child/teen schedule: 1-4 copies—\$7.50 each; 5-19 copies—\$5.50 each ...	\$ _____

### NEW DVD! Immunization Techniques: Best Practices with Infants, Children, and Adults (details p. 3; call for discounts on bulk orders)

1-9 copies—\$17 each; 10-24 copies—\$10.25 each; 25-49 copies—\$7 each

_____	D2021 Immunization Techniques: Best Practices with Children/Teens/Adults....	\$ _____
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### Patient Immunization Record Cards — for adults, for children & teens, and for a lifetime! (all are wallet-sized; details p. 3; call for discounts on bulk orders)

250 cards/box; 1 box—\$45; 2 boxes—\$40 each; 3 boxes—\$37.50 each; 4 boxes—\$34.50 each

_____	R2005 Adult immunization record cards .....	\$ _____
_____	R2003 Child/teen immunization record cards .....	\$ _____
_____	R2004 Lifetime immunization record cards .....	\$ _____

**Total for Purchases \$** \_\_\_\_\_

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I am a ☐ new ☐ renewing contributor.

### Here is my contribution:

☐ \$25 ☐ \$50 ☐ \$75 ☐ \$100 ☐ \$125  
☐ \$150 ☐ \$200 ☐ \$250 other: \$ \_\_\_\_\_

☐ As a thank-you gift, I'd like a packet of some of IAC's most popular print pieces.

☐ I'm contributing \$75 or more and would like the additional thank-you gift of a CD containing all of IAC's English- and Spanish-language print materials, plus Vaccine Information Statements in English and Spanish.

IAC is a 501(c)(3) charitable organization and your contribution is tax deductible to the fullest extent of the law.

**Total for Purchases and Contribution \$** \_\_\_\_\_

## How to Place an Order

**By Credit Card:** Order easily online at our secure shopping cart at [www.immunize.org/shop](http://www.immunize.org/shop).

**By Check, Purchase Order, or Credit Card:** Print out this page, fill out the necessary information, and

**Fax the page to:** (651) 647-9131 or

**Mail the page to:** Immunization Action Coalition  
1573 Selby Avenue, Suite 234  
St. Paul, MN 55104

**Our federal ID# is 41-1768237.**

**For Questions or International Orders:** Contact us by phone at (651) 647-9009 or email [admininfo@immunize.org](mailto:admininfo@immunize.org)

**Thank you** for your support of the Immunization Action Coalition. We depend on you!

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Email address \_\_\_\_\_

**It's convenient to shop IAC online at [www.immunize.org/shop](http://www.immunize.org/shop)**

and a table summarizing the recommendations, see [Ask the Experts](#) in this issue.

## Shingles (zoster) vaccine news

On March 24, FDA approved Zostavax vaccine (Merck) for use in adults ages 50 through 59 years. Zostavax received initial FDA approval in 2006 for use in adults age 60 years and older. To access the package insert, go to [www.fda.gov/downloads/BiologicsBloodVaccines/Vaccines/Approved-Products/UCM132831.pdf](http://www.fda.gov/downloads/BiologicsBloodVaccines/Vaccines/Approved-Products/UCM132831.pdf).

## ACIP General Recs – 2011

On Jan. 28, CDC published “General Recommendations on Immunization.” It updates the previous General Recommendations, published in 2006. Revisions include changes made to the table of contraindications and precautions to vaccination, as well as the addition of a separate table of conditions that are commonly misperceived as contraindications and precautions. Information on vaccine storage and handling was also extensively revised. To obtain a copy of the 2011 “General Recommendations on Immunization,” go to: [www.cdc.gov/mmwr/pdf/rr/r6002.pdf](http://www.cdc.gov/mmwr/pdf/rr/r6002.pdf).

## Vaccine safety news

In January, the *British Medical Journal (BMJ)* published a three-part series about Dr. Andrew Wakefield’s 1998 paper, which fraudulently linked MMR vaccine to the development of autism. Written by investigative journalist Brian Deer, the series received international media attention.

IAC gathered notable media coverage into a web page titled “The Fraud Behind the MMR Scare.” It offers website users links to all three parts of the series, accompanying *BMJ* editorials, related print news coverage and commentary, and videos of broadcast media coverage. To access it, go to [www.immunize.org/bmj-deer-mmr-wakefield](http://www.immunize.org/bmj-deer-mmr-wakefield).

## New HHS vaccine information

On March 30, the U.S. Department of Health and Human Services (HHS) announced the launch of a new consumer-focused immunization website—[www.vaccines.gov](http://www.vaccines.gov). It is intended to help parents and other consumers learn about immunization and about the most effective way to protect themselves and their children from infectious diseases.

## Current VISs and dates

The use of most Vaccine Information Statements (VISs) is mandated by federal law. Listed below are the dates of the most current VISs. Check your stock of VISs against this list. If you have outdated VISs, print current ones from IAC’s website at [www.immunize.org/vis](http://www.immunize.org/vis). You’ll find VISs in more than 30 languages.

DTaP/DT/DTP	5/17/07	MMR	3/13/08
Hepatitis A	3/21/06	MMRV	5/21/10
Hepatitis B	7/18/07	PCV	4/16/10
Hib	12/16/98	PPSV	10/6/09
HPV (Cervarix)	3/30/10	Polio	1/1/00
HPV (Gardasil)	3/30/10	Rabies	10/6/09
Influenza (LAIV)	8/10/10	Rotavirus	12/6/10
Influenza (TIV)	8/10/10	Shingles	10/6/09
Japanese encephalitis		Td/Tdap	11/18/08
Ixiaro	3/1/10	Typhoid	5/19/04
JE VAX	3/1/10	Varicella	3/13/08
Meningococcal	1/28/08	Yellow fever	3/30/11

Multi-vaccine VIS .....9/18/08  
(for 6 vaccines given to infants/children:  
DTaP, IPV, Hib, HepB, PCV, RV)

# Leaders in Medicine and Infectious Disease Have Spoken: Mandatory Influenza Vaccination for All Healthcare Workers Is Imperative

Refer to the position statements of these leading medical organizations to guide you in developing and implementing a mandatory influenza vaccination policy at your healthcare institution or medical setting. Statement titles, URLs, publication dates, and excerpts follow.

### American Academy of Pediatrics (AAP)

Policy Statement—Recommendation for Mandatory Influenza Immunization of All Health Care Personnel (October 1, 2010)

<http://pediatrics.aappublications.org/cgi/content/abstract/peds.2010-2376v1>

*“The implementation of mandatory annual influenza immunization programs for HCP nationwide is long overdue. For the prevention and control of influenza, now is the time to put the health and safety of the patient first.”*

### American College of Physicians (ACP)

ACP Policy on Influenza Vaccination of Health Care Workers (October 1, 2010)

[www.acponline.org/clinical\\_information/resources/adult\\_immunization/flu\\_hcw.pdf](http://www.acponline.org/clinical_information/resources/adult_immunization/flu_hcw.pdf)

*“Vaccinating HCWs against influenza represents a duty of care, and a standard of quality care, so it should be reasonable that this duty should supersede HCW personal preference.”*

### American Medical Directors Association (AMDA)

Position Statement: Mandatory Immunization for Long Term Care Workers (March 2011)

[www.amda.com/governance/resolutions/J11.cfm](http://www.amda.com/governance/resolutions/J11.cfm)

*“Therefore be it resolved, AMDA - Dedicated to Long Term Care Medicine supports a mandatory annual influenza vaccination for every long-term health care worker who has direct patient contact unless a medical contraindication or religious objection exists.”*

### American Public Health Association (APHA)

APHA Policy Statement: Annual Influenza Vaccination Requirements for Health Workers (April 2011)

[www.apha.org/advocacy/policy/policysearch/default.htm?id=1410](http://www.apha.org/advocacy/policy/policysearch/default.htm?id=1410)

*“Encourages institutional, employer, and public health policy to require influenza*

*vaccination of all health workers as a precondition of employment and thereafter on an annual basis, unless a medical contraindication recognized in national guidelines is documented in the worker’s health record.”*

### Association for Professionals in Infection Control and Epidemiology, Inc. (APIC)

APIC Position Paper: Influenza Vaccination Should Be a Condition of Employment for Healthcare Personnel, Unless Medically Contraindicated (February 1, 2011)

[www.apic.org/Content/NavigationMenu/GovernmentAdvocacy/PublicPolicyLibrary/APIC\\_Influenza\\_Immunization\\_of\\_HCP\\_12711.PDF](http://www.apic.org/Content/NavigationMenu/GovernmentAdvocacy/PublicPolicyLibrary/APIC_Influenza_Immunization_of_HCP_12711.PDF)

*“As a profession that relies on evidence to guide our decisions and actions, we can no longer afford to ignore the compelling evidence that supports requiring influenza vaccine for HCP. This is not only a patient safety imperative, but is a moral and ethical obligation to those who place their trust in our care.”*

### Infectious Diseases Society of America (IDSA)

IDSA Policy on Mandatory Immunization of Health Care Workers Against Seasonal and Pandemic Influenza (rev. July 28, 2010)

[www.idsociety.org/redirector.aspx?id=15413](http://www.idsociety.org/redirector.aspx?id=15413)

*“Physicians and other health care providers must have two special objectives in view when treating patients, namely, ‘to do good or to do no harm’ (Hippocratic Corpus in Epidemics: Bk. I, Sect. 5, trans. Adams), and have an ethical and moral obligation to prevent transmission of infectious diseases to their patients.”*

### Society for Healthcare Epidemiology of America (SHEA)

Revised (SHEA) Position Paper: Influenza Vaccination of Healthcare Personnel (August 31, 2010) [www.journals.uchicago.edu/doi/full/10.1086/656558](http://www.journals.uchicago.edu/doi/full/10.1086/656558)

*“SHEA views influenza vaccination of HCP as a core patient and HCP safety practice with which noncompliance should not be tolerated.”*