

# Footnotes for Recommended Adult Immunization Schedule by Age Group and Medical Conditions, United States, 2003–2004

**1. Tetanus and diphtheria (Td) toxoids**—Adults including pregnant women with uncertain histories of a complete primary vaccination series should receive a primary series of Td. A primary series for adults is 3 doses: the first 2 doses given at least 4 weeks apart and the 3rd dose, 6–12 months after the second. Administer 1 dose if the person had received the primary series and the last vaccination was 10 years ago or longer. Consult *MMWR* 1991; 40 (RR-10): 1–21 for administering Td as prophylaxis in wound management. The ACP Task Force on Adult Immunization supports a second option for Td use in adults: a single Td booster at age 50 years for persons who have completed the full pediatric series, including the teenage/young adult booster. *Guide for Adult Immunization*. 3rd ed. ACP 1994: 20.

**2. Influenza vaccination**—Medical indications: chronic disorders of the cardiovascular or pulmonary systems including asthma; chronic metabolic diseases including diabetes mellitus, renal dysfunction, hemoglobinopathies, or immunosuppression (including immunosuppression caused by medications or by human immunodeficiency virus [HIV]), requiring regular medical follow-up or hospitalization during the preceding year; women who will be in the second or third trimester of pregnancy during the influenza season. Occupational indications: health-care workers. Other indications: residents of nursing homes and other long-term care facilities; persons likely to transmit influenza to persons at high-risk (in-home care givers to persons with medical indications, household contacts and out-of-home caregivers of children birth to 23 months of age, or children with asthma or other indicator conditions for influenza vaccination, household members and care givers of elderly and adults with high-risk conditions); and anyone who wishes to be vaccinated. For healthy persons aged 5–49 years without high risk conditions, either the inactivated vaccine or the intranasally administered influenza vaccine (Flumist) may be given. *MMWR* 2003; 52 (RR-8): 1–36; *MMWR* 2003; 53 (RR-13): 1–8.

**3. Pneumococcal polysaccharide vaccination**—Medical indications: chronic disorders of the pulmonary system (excluding asthma), cardiovascular diseases, diabetes mellitus, chronic liver diseases including liver disease as a result of alcohol abuse (e.g., cirrhosis), chronic renal failure or nephrotic syndrome, functional or anatomic asplenia (e.g., sickle cell disease or splenectomy), immunosuppressive conditions (e.g., congenital immunodeficiency, HIV infection, leukemia, lymphoma, multiple myeloma, Hodgkins disease, generalized malignancy, organ or bone marrow transplantation), chemotherapy with alkylating agents, anti-metabolites, or long-term systemic corticosteroids. Geographic/other indications: Alaskan Natives and certain American Indian populations. Other indications: residents of nursing homes and other long-term care facilities. *MMWR* 1997; 46 (RR-8): 1–24.

**4. Revaccination with pneumococcal polysaccharide vaccine**—One time revaccination after 5 years for persons with chronic renal failure or nephrotic syndrome, functional or anatomic asplenia (e.g., sickle cell disease or splenectomy), immunosuppressive conditions (e.g., congenital immunodeficiency, HIV infection, leukemia, lymphoma, multiple myeloma, Hodgkins disease, generalized malignancy, organ or bone marrow transplantation), chemotherapy with alkylating agents, anti-metabolites, or long-term systemic corticosteroids. For persons 65 and older, one-time revaccination if they were vaccinated 5 or more years previously and were aged less than 65 years at the time of primary vaccination. *MMWR* 1997; 46 (RR-8): 1–24.

**5. Hepatitis B vaccination**—Medical indications: hemodialysis patients, patients who receive clotting-factor concentrates. Occupational indications: health-care workers and public-safety workers who have exposure to blood in the workplace, persons in training in schools of medicine, dentistry, nursing, laboratory technology, and other allied health professions. Behavioral indications: injecting drug users, persons with more than one sex partner in the previous 6 months, persons with a recently acquired sexually-transmitted disease (STD), all clients in STD clinics, men who have sex with men. Other indications: household contacts and sex partners of persons with chronic HBV infection, clients and staff of institutions for the developmentally disabled, international travelers who will be in countries with high or intermediate prevalence of chronic HBV infection for more than 6 months, inmates of correctional facilities. *MMWR* 1991; 40 (RR-13): 1–19.

[www.cdc.gov/travel/diseases/hbv.htm](http://www.cdc.gov/travel/diseases/hbv.htm)

**6. Hepatitis A vaccination**—For the combined HepA-HepB vaccine use 3 doses at 0, 1, 6 months). Medical indications: persons with clotting-factor disorders or chronic liver disease. Behavioral indications: men who have sex with men, users of injecting and noninjecting illegal drugs. Occupational indications: persons working with HAV-infected primates or with HAV in a research laboratory setting. Other indications: persons traveling to or working in countries that have high or intermediate endemicity of hepatitis A. *MMWR* 1999; 48 (RR-12): 1–37. ([www.cdc.gov/travel/diseases/hav.htm](http://www.cdc.gov/travel/diseases/hav.htm))

**7. Measles, Mumps, Rubella vaccination (MMR)**—Measles component: Adults born before 1957 may be considered immune to measles. Adults born in or after 1957 should receive at least one dose of MMR unless they have a medical contraindication, documentation of at least one dose or other acceptable evidence of immunity. A second dose of MMR is recommended for adults who:

- are recently exposed to measles or in an outbreak setting
- were previously vaccinated with killed measles vaccine
- were vaccinated with an unknown vaccine between 1963 and 1967
- are students in post-secondary educational institutions
- work in health care facilities
- plan to travel internationally

Mumps component: 1 dose of MMR should be adequate for protection. Rubella component: Give 1 dose of MMR to women whose rubella vaccination history is unreliable and counsel women to avoid becoming pregnant for 4 weeks after vaccination. For women of child-bearing age, regardless of birth year, routinely determine rubella immunity and counsel women regarding congenital rubella syndrome. Do not vaccinate pregnant women or those planning to become pregnant in the next 4 weeks. If pregnant and susceptible, vaccinate as early in postpartum period as possible. *MMWR* 1998; 47 (RR-8): 1–57; *MMWR* 2001; 50: 1117.

**8. Varicella vaccination**—Recommended for all persons who do not have reliable clinical history of varicella infection, or serological evidence of varicella zoster virus (VZV) infection who may be at high risk for exposure or transmission. This includes, health-care workers and family contacts of immunocompromised persons, those who live or work in environments where transmission is likely (e.g., teachers of young children, day care employees, and residents and staff members in institutional settings), persons who live or work in environments where VZV transmission can occur (e.g., college students, inmates and staff members of correctional institutions, and military personnel), adolescents and adults living in households with children, women who are not pregnant but who may become pregnant in the future, international travelers who are not immune to infection. Note: Greater than 95% of U.S. born adults are immune to VZV. Do not vaccinate pregnant women or those planning to become pregnant in the next 4 weeks. If pregnant and susceptible, vaccinate as early in postpartum period as possible. *MMWR* 1996; 45 (RR-11): 1–36; *MMWR* 1999; 48 (RR-6): 1–5.

**9. Meningococcal vaccination (quadrivalent polysaccharide vaccine for serogroups A, C, Y, and W-135)**—Consider vaccination for persons with medical indications: adults with terminal complement component deficiencies, with anatomic or functional asplenia. Other indications: travelers to countries in which disease is hyperendemic or epidemic (“meningitis belt” of sub-Saharan Africa, Mecca, Saudi Arabia for Hajj). Revaccination at 3–5 years may be indicated for persons at high risk for infection (e.g., persons residing in areas in which disease is epidemic). Counsel college freshmen, especially those who live in dormitories, regarding meningococcal disease and the vaccine so that they can make an educated decision about receiving the vaccination. *MMWR* 2000; 49 (RR-7): 1–20.

Note: The AAFP recommends that colleges should take the lead on providing education on meningococcal infection and vaccination and offer it to those who are interested. Physicians need not initiate discussion of the meningococcal quadrivalent polysaccharide vaccine as part of routine medical care.

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*Summary of Recommendations Published by*

**The Advisory Committee on  
Immunization Practices**



**Department of Health and Human Services  
Centers for Disease Control and Prevention**



# Recommended Adult Immunization Schedule, United States, 2003–2004

## by Age Group

Age Group	19–49 Years	50–64 Years	65 Years and Older
<b>Tetanus, Diphtheria (Td)*</b>	1 dose booster every 10 years <sup>1</sup>		
<b>Influenza</b>	1 dose annually <sup>2</sup>	1 dose annually <sup>2</sup>	
<b>Pneumococcal (polysaccharide)</b>	1 dose <sup>3,4</sup>		1 dose <sup>3,4</sup>
<b>Hepatitis B*</b>	3 doses (0, 1-2, 4-6 months) <sup>5</sup>		
<b>Hepatitis A</b>	2 doses (0, 6-12 months) <sup>6</sup>		
<b>Measles, Mumps, Rubella (MMR)*</b>	1 dose if measles, mumps, or rubella vaccination history is unreliable; 2 doses for persons with occupational or other indications <sup>7</sup>		
<b>Varicella*</b>	2 doses (0, 4-8 weeks) for persons who are susceptible <sup>8</sup>		
<b>Meningococcal (polysaccharide)</b>	1 dose <sup>9</sup>		

See Footnotes for Recommended Adult Immunization Schedule, by Age Group and Medical Conditions, United States, 2003-2004 on back cover

For all persons in this group
  Catch-up on childhood vaccinations
  For persons with medical / exposure indications

\*Covered by the Vaccine Injury Compensation Program. For information on how to file a claim call 800-338-2382. Please also visit [www.hrsa.gov/osp/vicp](http://www.hrsa.gov/osp/vicp) To file a claim for vaccine injury contact: U.S. Court of Federal Claims, 717 Madison Place, N.W., Washington D.C. 20005, 202-219-9657.

This schedule indicates the recommended age groups for routine administration of currently licensed vaccines for persons 19 years of age and older. Licensed combination vaccines may be used whenever any components of the combination are indicated and the vaccine's other components are not contraindicated. Providers should consult the manufacturers' package inserts for detailed recommendations.

Report all clinically significant post-vaccination reactions to the Vaccine Adverse Event Reporting System (VAERS). Reporting forms and instructions on filing a VAERS report are available by calling 800-822-7967 or from the VAERS website at [www.vaers.org](http://www.vaers.org).

For additional information about the vaccines listed above and contraindications for immunization, visit the National Immunization Program Website at [www.cdc.gov/nip/](http://www.cdc.gov/nip/) or call the National Immunization Hotline at 800-232-2522 (English) or 800-232-0233 (Spanish).

Approved by the Advisory Committee on Immunization Practices (ACIP), and accepted by the American College of Obstetricians and Gynecologists (ACOG) and the American Academy of Family Physicians (AAFP)

## by Medical Conditions

Medical Conditions	Vaccine	Tetanus-Diphtheria (Td)*,1	Influenza <sup>2</sup>	Pneumococcal (polysaccharide) <sup>3,4</sup>	Hepatitis B*,5	Hepatitis A <sup>6</sup>	Measles, Mumps, Rubella (MMR)*,7	Varicella*,8
<b>Pregnancy</b>			A					
<b>Diabetes, heart disease, chronic pulmonary disease, chronic liver disease, including chronic alcoholism</b>			B	C		D		
<b>Congenital Immunodeficiency, leukemia, lymphoma, generalized malignancy, therapy with alkylating agents, antimetabolites, radiation or large amounts of corticosteroids</b>				E				F
<b>Renal failure / end stage renal disease, recipients of hemodialysis or clotting factor concentrates</b>				E		G		
<b>Asplenia including elective splenectomy and terminal complement component deficiencies</b>			H	E, I, J				
<b>HIV infection</b>				E, K			L	

See Special Notes for Medical Conditions below—also see Footnotes for Recommended Adult Immunization Schedule, by Age Group and Medical Conditions, United States, 2003-2004 on back cover

For all persons in this group
  Catch-up on childhood vaccinations
  For persons with medical / exposure indications
  Contraindicated

### Special Notes for Medical Conditions

- A.** For women without chronic diseases/conditions, vaccinate if pregnancy will be at 2<sup>nd</sup> or 3<sup>rd</sup> trimester during influenza season. For women with chronic diseases/conditions, vaccinate at any time during the pregnancy.
- B.** Although chronic liver disease and alcoholism are not indicator conditions for influenza vaccination, give 1 dose annually if the patient is age 50 years or older, has other indications for influenza vaccine, or if the patient requests vaccination.
- C.** Asthma is an indicator condition for influenza but not for pneumococcal vaccination.
- D.** For all persons with chronic liver disease.
- E.** For persons < 65 years, revaccinate once after 5 years or more have elapsed since initial vaccination.
- F.** Persons with impaired humoral immunity but intact cellular immunity may be vaccinated. *MMWR* 1999; 48 (RR-06): 1-5.
- G.** Hemodialysis patients: Use special formulation of vaccine (40 ug/mL) or two 1.0 mL 20 ug doses given at one site. Vaccinate early in the course of renal disease. Assess antibody titers to hep B surface antigen (anti-HBs) levels annually. Administer additional doses if anti-HBs levels decline to <10 millinternational units (mIU)/ mL.
- H.** There are no data specifically on risk of severe or complicated influenza infections among persons with asplenia. However, influenza is a risk factor for secondary bacterial infections that may cause severe disease in asplenic.
- I.** Administer meningococcal vaccine and consider Hib vaccine.
- J.** Elective splenectomy: vaccinate at least 2 weeks before surgery.
- K.** Vaccinate as close to diagnosis as possible when CD4 cell counts are highest.
- L.** Withhold MMR or other measles containing vaccines from HIV-infected persons with evidence of severe immunosuppression. *MMWR* 1998; 47 (RR-8):21-22; *MMWR* 2002; 51 (RR-02):22-24.