

# VACCINATE ADULTS!

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

## What's Inside?

Ask the Experts .....	1
Do I Need Any Vaccinations Today? .....	4
Vaccinations for Adults . . .	
You're NEVER too old to get immunized! .....	5
How to Administer IM and SC Injections to Adults.....	6
U.S. Immunization Schedule for Adults, 2009 ...	7
Immunization Resources Order Form .....	11
Influenza Vaccination for Healthcare Workers: Our Duty to Our Patients.....	12



**FEDERAL and  
MILITARY  
EMPLOYEES**

Friendly reminder! When fall arrives, please make the **Immunization Action Coalition** your charity of choice during this year's Combined Federal Campaign. Use agency code

**#10612**

The Immunization Action Coalition is a 501(c)(3) charitable organization and your contribution is tax-deductible to the fullest extent of the law.

## Vital Immunization News from IAC

### Where to Get the Latest Updates on Novel H1N1 Influenza

Because information about the novel H1N1 influenza (“swine flu”) virus is constantly changing, this issue of *Vaccinate Adults* will not attempt to inform readers about the status of the H1N1 epidemic. The Centers for Disease Control and Prevention (CDC) has established extensive and continually updated H1N1 web resources for patients and healthcare professionals. Here are some that may be of particular interest:

- CDC's main H1N1 webpage ..... [www.cdc.gov/h1n1flu](http://www.cdc.gov/h1n1flu)
- Latest information from CDC ..... [www.cdc.gov/h1n1flu/whatsnew.htm](http://www.cdc.gov/h1n1flu/whatsnew.htm)
- Guidance for clinicians ..... [www.cdc.gov/h1n1flu/guidance](http://www.cdc.gov/h1n1flu/guidance)
- General information for the public ..... [www.cdc.gov/h1n1flu/general\\_info.htm](http://www.cdc.gov/h1n1flu/general_info.htm)
- Subscribe to CDC's email updates ..... [www.cdc.gov/emailupdates/index.html](http://www.cdc.gov/emailupdates/index.html)

In addition, the Immunization Action Coalition (IAC) has developed an H1N1 information web page, [www.immunize.org/h1n1](http://www.immunize.org/h1n1), which is updated daily. IAC selects from CDC website content, journal articles, partner resources, and news articles to present H1N1 influenza information that may have special relevance for *Vaccinate Adults* readers and other users of IAC's [www.immunize.org](http://www.immunize.org) website.

### Don't Miss an Issue of *Vaccinate Adults*!

We thank the thousands of readers who subscribed to *Vaccinate Adults* in response to our request in the most recent issue. If you have not yet requested a free subscription, please do so today!

When you subscribe, you'll receive up-to-the-minute notifications of new online issues of *Vaccinate Adults*. You can also sign up to receive IAC's weekly vaccine news and information bulletin, *IAC Express*, which is delivered by email every Monday.

Please continue to share *Vaccinate Adults* with your colleagues. You can print pages of interest to hand out at your office, or you can email a link to the issue to as many people as you like.

- To subscribe to *Vaccinate Adults* ..... [www.immunize.org/subscribe](http://www.immunize.org/subscribe)
- To access issues online ..... [www.immunize.org/va](http://www.immunize.org/va)

As always, we thank you for your continued dedication to protecting health and saving lives through immunization.

## 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).

### 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))

### General questions

**We sometimes see patients who have an acute illness but are due for vaccination. We're never quite sure if we should withhold the vaccine or not. What do you advise?**

A “moderate or severe acute illness” is a precaution for administering any vaccine. A mild acute illness (e.g., mild upper-respiratory tract infection or diarrhea) with or without fever is not.

**Some of our employees have a contact allergy to latex gloves. Can they receive vaccines that are supplied in vials or syringes that contain latex?**

Yes. A contact allergy to latex is not a contraindication or precaution to vaccination. Consequently, a person with a *contact allergy* to latex can be safely vaccinated with a vaccine supplied in a vial or sy-

ringe that contains natural rubber or rubber latex. People who have an *anaphylactic allergy* to latex should not be vaccinated, however.

**When patients need multiple vaccines, can we just combine them in one syringe?**

Absolutely not. Vaccines should never be mixed in a single syringe except when specifically approved by FDA and packaged for that specific purpose.

**Which vaccines are supplied in vials or syringes containing latex?**

You can find information on latex in vaccine packaging in Appendix B of CDC's Guide to Vaccine Contraindications and Precautions at [www.cdc.gov/vaccines/recs/vac-admin/downloads/contraindications-guide-508.pdf](http://www.cdc.gov/vaccines/recs/vac-admin/downloads/contraindications-guide-508.pdf).

(continued on page 2)

## Vaccinate Adults!

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)  
[www.vaccineinformation.org](http://www.vaccineinformation.org)  
[www.izcoalitions.org](http://www.izcoalitions.org)

**Vaccinate Adults** is a semiannual publication of the Immunization Action Coalition (IAC) written for health professionals. Content is reviewed by the Centers for Disease Control and Prevention (CDC) for technical accuracy. This publication is supported by CDC Grant No. 1U38IP000290. The content is solely the responsibility of IAC and does not necessarily represent the official views of CDC. ISSN 1526-1824.

### Publication Staff

Editor: Deborah L. Wexler, MD  
Associate Editor: Diane C. Peterson  
Managing Editor: Dale Thompson  
Contributing Editor: Lisa H. Randall, JD  
Editorial Asst.: Janelle Tangonan Anderson  
Consultants: Teresa A. Anderson, DDS, MPH  
Linda A. Moyer, RN, and Mary Quirk  
Layout: Kathy Cohen

### IAC Staff

Assistant to the Director: Becky Payne  
Office Administrator: Robin VanOss  
Administrative Asst.: Susan Broadribb

IAC publishes a free email news service (*IAC Express*) and three free periodicals (*Needle Tips*, *Vaccinate Adults*, and *Vaccinate Women*). To subscribe to any or all of them, go to [www.immunize.org/subscribe](http://www.immunize.org/subscribe).

IAC, a 501(c)(3) charitable organization, publishes practical immunization information for health professionals to help increase immunization rates and prevent disease.

### Vaccinate Adults is also supported in part by the following:

sanofi pasteur • Merck & Co., Inc.  
GlaxoSmithKline • Novartis Vaccines  
Wyeth Pharmaceuticals • CSL Biotherapies  
MedImmune, Inc. • Baxter Healthcare Corp.  
American Pharmacists Association  
Mark and Muriel Wexler Foundation  
Anonymous

IAC maintains strict editorial independence in its publications.

## Board of Directors

**Kristen Ehresmann, RN, MPH**  
Minnesota Department of Health  
**Neal Holtan, MD, MPH**  
St. Paul-Ramsey County Public Health  
**Anne Kuettel, PHN**  
St. Paul-Ramsey County Public Health  
**Cindy Uldrich**  
UnitedHealthcare Corporation  
**Deborah L. Wexler, MD**  
Immunization Action Coalition

**Our policy in our large internal medicine practice is to routinely review and administer all vaccinations that are indicated for our adult patients. We struggle with the requirement to provide VISs to each patient we vaccinate. We think we have a solution and would like your opinion of it. We would like to create a re-usable packet of laminated VIS sheets (fastened together on a ring). We plan to place a packet in each exam room for patients to read prior to vaccine administration. On the bottom of each sheet would be a statement, "If you would like a copy of this sheet to take home, please ask our staff." This will ensure that patients are given the VIS sheets to read prior to vaccine administration. It will also help save paper; our experience is that many patients throw out the VIS documents or leave them behind in the waiting room.**

Many clinicians are looking for ways to reduce paper overload, so this is a common question. Your solution will meet the spirit of the federal law, as long as you ask the patient if they would like to take home a paper copy of the VIS and to refer to it if needed (e.g., if they need to know what to do if there is an adverse event). Patients can also download VISs onto mobile devices. For more information about this technology, go to [www.cdc.gov/vaccines/pubs/vis/vis-downloads.htm](http://www.cdc.gov/vaccines/pubs/vis/vis-downloads.htm).

## Mumps, measles, rubella vaccine

**I've lost a vial of MMR diluent, which is sterile water. Since it's sterile water, is there any reason I can't dilute the vaccine with sterile water from our clinic's treatment room supply?**

No, you cannot mix the MMR component with sterile water. A vaccine should only be mixed with the diluent formulated for it and supplied with it.

## Tetanus, diphtheria, pertussis

**Someone in our clinic gave the childhood DTaP to a 50-year-old instead of Tdap. How should this be handled?**

The adult who received DTaP received the appropriate amount of tetanus toxoid and MORE diphtheria toxoid and pertussis antigen than is recommended for adults. Count the dose as valid, but take measures to prevent this error in the future.

**We recently saw a 30-year-old man who remembers that he received a "tetanus booster" in another state within the past 2 years. The problem is he cannot remember if he received Tdap or Td, and we can't obtain an immunization record. His wife is pregnant, and we would like to immunize him against pertussis as a way to protect their soon-to-be-born child. Should we give him Tdap in this situation?**

Yes. Whenever you lack vaccination documentation and vaccination is indicated, give the patient Tdap

unless they are older than age 64. Tdap vaccine is not licensed by the FDA for people who are older than age 64.

### Should we give Tdap to an adult who has a history of pertussis infection?

CDC recommends that adults who have a history of pertussis generally receive Tdap according to the routine recommendation. This practice is preferred because the duration of protection induced by pertussis is unknown (waning might begin as early as 7 years after infection) and because the 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 safety concern.

**Recently, one of our staff went to a conference where she heard that Boostrix [Tdap; GSK] can be administered to adults. Is this correct? We thought Boostrix could be used only for pre-teens and teens.**

Yes, it's correct. In December 2008, FDA expanded the age indication for Boostrix for use in people ages 10 through 64. Previously it was indicated for people ages 10 through 18. The other Tdap vaccine—Adacel [sanofi pasteur]—is indicated for people ages 11 through 64. To read a summary of indications for use of Boostrix, as published in the *Morbidity and Mortality Weekly Report (MMWR)*, go to [www.cdc.gov/mmwr/preview/mmwrhtml/mm5814a5.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5814a5.htm).

### Can an adult receive Tdap if they had a contraindication or precaution to DTP as a child?

Tdap has two contraindications and four precautions. The contraindications are (1) anaphylactic reaction to a prior dose of the vaccine or any of its components and (2) encephalopathy within 7 days of a previous dose of DTaP or DTP; in this case, give Td instead of Tdap. The precautions are (1) moderate or severe acute illness; (2) history of an Arthus reaction following a previous dose of a tetanus-containing and/or diphtheria

(continued on page 10)

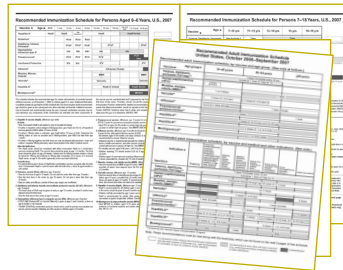
## Vaccinate Adults correction policy

The Immunization Action Coalition works tirelessly to ensure the accuracy of the information we make available. At times, however, mistakes occur. 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).

DISCLAIMER: *Vaccinate Adults!* is available to all readers free of charge. Some of the information in this issue is supplied to us by the Centers for Disease Control and Prevention in Atlanta, Georgia, and some information is supplied by third-party sources. The Immunization Action Coalition (IAC) has used its best efforts to accurately publish all of this information, but IAC cannot guarantee that the original information as supplied by others is correct or complete, or that it has been accurately published. Some of the information in this issue is created or compiled by IAC. All of the information in this issue is of a time-critical nature, and we cannot guarantee that some of the information is not now outdated, inaccurate, or incomplete. IAC cannot guarantee that reliance on the information in this issue will cause no injury. Before you rely on the information in this issue, you should first independently verify its current accuracy and completeness. IAC is not licensed to practice medicine or pharmacology, and the providing of the information in this issue does not constitute such practice. Any claim against IAC must be submitted to binding arbitration under the auspices of the American Arbitration Association in St. Paul, Minnesota.

## Laminated adult and child immunization schedules Order one of each for every exam room

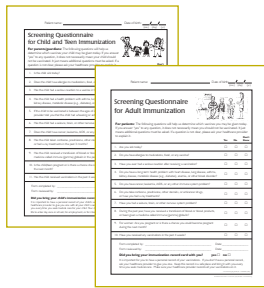
Here are the ACIP/AAFP/ACOG/ACP-approved immunization schedule for adults and the ACIP/AAP/AAFP-approved schedule for people ages 0 through 18 years. Both are laminated for heavy-duty use, complete with essential footnotes, and printed in color for easy reading. The cost is \$10 for each schedule and only \$6.50 each for five or more copies.



To order, visit [www.immunize.org/shop](http://www.immunize.org/shop), or use the order form on page 11.

For 20 or more copies, contact us for discount pricing: [admininfo@immunize.org](mailto:admininfo@immunize.org)

## Screening questionnaires for vaccine contraindications! Now with English on front/Spanish on back; in pads of 100 sheets

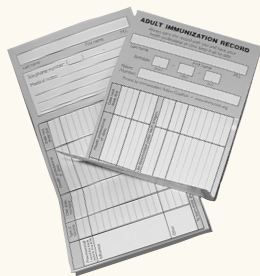


Save valuable staff time and make sure your patients are fully screened by using these simple 1-page questionnaires (one for adult immunization, another for children/teens). Patients respond to questions by checking off "yes" and "no" boxes while waiting to be seen. Staff reviews answers during the visit. These pads are priced at \$16 per 100-sheet pad. Prices drop to \$12 each for 2 pads, \$11 each for 3 pads, \$10 each for 4-9 pads. Keep pads at the receptionist's desk, the nurses' station, and in every exam room. To view the pads or for more details, visit IAC's website at [www.immunize.org/shop](http://www.immunize.org/shop).

To order, visit [www.immunize.org/shop](http://www.immunize.org/shop) or use the order form on page 11.

For 10 or more pads, contact us for discount pricing: [admininfo@immunize.org](mailto:admininfo@immunize.org)

## Immunization record cards available for all ages— For adults, for children & teens, and for a lifetime!



Now you can give any patient a permanent vaccination record card designed specifically for their age group: adult, child & teen, or lifetime. The three cards list all vaccines recommended for each age. The cards are printed on durable rip-, smudge-, and water-proof paper. Wallet-sized when folded, the cards are brightly colored to stand out. To view the cards or for more details, go to [www.immunize.org/shop](http://www.immunize.org/shop) and click on the images.

Buy 1 box (250 cards) for \$37.50 (first order of a 250-card box comes with a 30-day, money-back guarantee). Discounts for larger orders:  
2 boxes \$35 each; 3 boxes \$32.50 each; 4 boxes \$30 each

To order, visit [www.immunize.org/shop](http://www.immunize.org/shop), or use the order form on page 11.

To receive sample cards, contact us: [admininfo@immunize.org](mailto:admininfo@immunize.org)

## Advisory Board

### Liaisons from Organizations

**William L. Atkinson, MD, MPH**  
*Nat'l Ctr. for Immun. & Resp. Diseases, CDC*

**Anna DeBlois Buchanan, MPH**  
*Assn. of State & Territorial Health Officials*

**Stephen L. Cochi, MD, MPH**  
*Nat'l Ctr. for Immun. & Resp. Diseases, CDC*

**Lawrence J. D'Angelo, MD, MPH**  
*Society for Adolescent Medicine*

**Paul Etkind, DrPH, MD**  
*Nat'l. Assn. of County & City Health Officials*

**Stanley A. Gall, MD**  
*Amer. College of Obstetricians & Gynecologists*

**Bruce Gellin, MD, MPH**  
*National Vaccine Program Office, DHHS*

**Kathleen F. Gensheimer, MD, MPH, FIDSA**  
*Council of State & Territorial Epidemiologists*

**Neal A. Halsey, MD**  
*Institute for Vaccine Safety, Johns Hopkins Univ.*

**Claire Hannan, MPH**  
*Association of Immunization Managers*

**Carol E. Hayes, CNM, MN, MPH**  
*American College of Nurse-Midwives*

**Gregory James, DO, MPH, FACOP**  
*American Osteopathic Association*

**Samuel L. Katz, MD**  
*Pediatric Infectious Diseases Society*

**Mary Beth Koslap-Petraco, RN-CS, CPNP**  
*National Assn. of Pediatric Nurse Practitioners*

**Marie-Michele Leger, MPH, PA-C**  
*American Academy of Physician Assistants*

**Harold S. Margolis, MD**  
*Pediatric Dengue Vaccine Initiative*

**Martin G. Myers, MD**  
*National Network for Immunization Information*

**Kathleen M. Neuzil, MD, MPH**  
*American College of Physicians*

**Paul A. Offit, MD**  
*Vaccine Education Ctr., Children's Hosp. of Phila.*

**Mitchel C. Rothholz, RPh, MBA**  
*American Pharmacists Association*

**Thomas N. Saari, MD**  
*American Academy of Pediatrics*

**William Schaffner, MD**  
*Infectious Diseases Society of America*

**Anne Schuchat, MD**  
*Nat'l Ctr. for Immun. & Resp. Diseases, CDC*

**Thomas E. Stenvig, RN, PhD**  
*American Nurses Association*

**Litjen Tan, PhD**  
*American Medical Association*

**John W. Ward, MD**  
*Division of Viral Hepatitis, NCHHSTP, CDC*

**Patricia N. Whitley-Williams, MD, MPH**  
*National Medical Association*

**Walter W. Williams, MD, MPH**  
*Office of Minority Health, CDC*

### Individuals

**Hie-Won L. Hann, MD**  
*Jefferson Medical College, Philadelphia, PA*

**Mark A. Kane, MD, MPH**  
*Consultant, Seattle, WA*

**Edgar K. Marcuse, MD, MPH**  
*University of Washington School of Medicine*

**Brian J. McMahon, MD**  
*Alaska Native Medical Center, Anchorage, AK*

**Walter A. Orenstein, MD**  
*Bill & Melinda Gates Foundation*

**Stanley A. Plotkin, MD**  
*Vaxconsult.com*

**Gregory A. Poland, MD**  
*Mayo Clinic, Rochester, MN*

**Sarah Jane Schwarzenberg, MD**  
*University of Minnesota*

**Coleman I. Smith, MD**  
*Minnesota Gastroenterology, Minneapolis, MN*

**Richard K. Zimmerman, MD, MPH**  
*University of Pittsburgh*

# Are you sure your adult patients are getting all the vaccinations they need?

Vaccinations are often overlooked in adult patients. This questionnaire will help you determine which vaccinations your patients need.

**SAVE TIME!**  
**Make copies of this 2-page vaccine screening questionnaire and ask your patients to fill it out while in the waiting room or exam room.**

For full-sized pages (8-1/2" x 11"), go to [www.immunize.org/catg.d/p4036.pdf](http://www.immunize.org/catg.d/p4036.pdf)

Your name: \_\_\_\_\_ Date of birth: \_\_\_\_/\_\_\_\_/\_\_\_\_ Today's date: \_\_\_\_/\_\_\_\_/\_\_\_\_  
(mo.) (day) (yr.) (mo.) (day) (yr.)

**Do I need any vaccinations today?**  
 Many adults are behind on their vaccinations. This questionnaire will help you and your healthcare provider determine if you need any vaccinations today. Please check the boxes that apply to you.

**Influenza vaccination**

- I'd like to be vaccinated to avoid getting influenza or spreading it to others this season.
- I am age 50 or older.
- I live with or provide care for a child younger than age 5.
- I am younger than age 50 and have an ongoing health problem, such as lung, heart, kidney, liver, or blood disease; diabetes; HIV/AIDS; a disease that affects my immune system; or a health condition that may cause me to choke when I swallow.
- I live with or provide care for an adult age 50 or older who has one of the health conditions described above.
- I live in a nursing home or chronic care facility.
- I am or will be pregnant during the influenza season.
- I am a healthcare worker.

**Pneumococcal vaccination**

- I am age 65 or older, and I have never had a pneumococcal shot.
- I am age 65 or older and had one pneumococcal shot when I was younger than age 65; it has been 5 years or more since that shot.
- I am younger than age 65. I have not been vaccinated against pneumococcal disease, and at least one of the following applies to me:
  - I smoke cigarettes.
  - I have heart, lung, liver, kidney, or sickle cell disease; diabetes; or alcoholism.
  - I have a weakened immune system due to cancer, Hodgkin's disease, leukemia, lymphoma, multiple myeloma, kidney failure, HIV/AIDS; or I am receiving radiation therapy; or I am on medication that suppresses my immune system.
  - I have had an organ or bone marrow transplant.
  - I have had my spleen removed, have had or will have a cochlear implant, or have leaking spinal fluid.

**Tetanus-, diphtheria-, and pertussis (whooping cough)-containing vaccination (e.g., DTP, DTaP, Tdap, or Td)**

- I am younger than age 65 and have not had a pertussis-containing vaccine as an adult.
- I have or will have close contact with a child younger than age 12, months and have not had a pertussis-containing vaccine as an adolescent or adult.
- I have not yet had at least 3 tetanus- and diphtheria-containing shots.
- I have had at least 3 tetanus- and diphtheria-containing shots in my lifetime, but I believe it's been 10 years or more since I received my last shot.
- I have no idea if I ever received any tetanus- and diphtheria-containing shots in school, the military, or elsewhere.

**Shingles (zoster) vaccination**

- I am an adult age 60 or older and haven't had a shingles shot.

**Note:** Adults may need additional vaccinations, such as polio or others. Talk to your healthcare provider.

© 2008 Immunization Action Coalition. All rights reserved. For more information, visit [www.immunize.org](http://www.immunize.org). Form #P4036 (2/08)

Page 2

**Do I need any vaccinations today? (continued)**

**Hepatitis A vaccination**

- I want to be vaccinated to avoid getting hepatitis A and spreading it to others.
- I was vaccinated with hepatitis A vaccine in the past but never received the second shot.
- I might have been exposed to the hepatitis A virus in the past 2 weeks.
- I am in one of the following risk groups, and I haven't completed the 2-dose series of hepatitis A shots:
  - I travel in countries other than the U.S., Western Europe, Canada, Japan, Australia, and New Zealand.
  - I use street drugs.
  - I have chronic liver disease.
  - I am a man who has sex with men.
  - I have a clotting factor disorder.

**Hepatitis B vaccination**

- I want to be vaccinated to avoid getting hepatitis B.
- I am age 18 or younger and haven't completed the series of hepatitis B shots.
- I was vaccinated with hepatitis B vaccine in the past but never completed the full 3-dose series.
- I am in one of the following risk groups, and I haven't completed the series of hepatitis B shots:
  - I am sexually active and am not in a long-term, mutually monogamous relationship.
  - I have chronic liver disease.
  - I am on dialysis.
  - I am or will be on kidney dialysis.
  - I am an immigrant, or my parents are immigrants from an area of the world where hepatitis B is common.<sup>1,2</sup>
  - I live with or am a sex partner of a person with hepatitis B.
  - I have been diagnosed with a sexually transmitted disease.
  - I have been diagnosed with HIV.
  - I travel outside the U.S.<sup>1,2</sup>

**Measles-Mumps-Rubella (MMR) vaccination**

- I was born in 1957 or later and never received an MMR shot.
- I am a woman thinking about a future pregnancy and do not know if I'm immune to rubella.
- I am a healthcare worker; I do not have a history of measles or mumps, and I've had only one dose of MMR vaccine.
- I was born in 1957 or later, and I am included in one of the following groups for whom 2 MMR shots are recommended, but I have received only 1 shot.
  - \_\_\_\_\_ I am entering college or a post-high school educational institution.
  - \_\_\_\_\_ I had a blood test that shows I do not have immunity to measles, mumps, or rubella.
  - \_\_\_\_\_ I travel internationally.

**Chickenpox (varicella) vaccination**

- I was born in 1980 or later and have never had chickenpox or the vaccine, or I just don't know.
- I was born before 1980 and am either a healthcare worker or foreign born, and am not sure if I've had chickenpox or not.
- I may become pregnant and do not know if I've had chickenpox or the vaccine.

**Meningococcal vaccination**

- I am age 18 or younger and haven't received a meningococcal shot.
- I am (or will be) a college freshman living in a dorm.
- I am traveling to an area of the world where meningococcal disease is common.<sup>1</sup>
- I have sickle cell disease, or my spleen isn't working or has been removed, or I have a terminal complement component deficiency.

**Human papillomavirus vaccination**

- I am a woman age 26 or younger and haven't completed a series of shots against human papillomavirus.

1. Call your local travel clinic to find out if additional vaccines are recommended.  
 2. Areas with high rates of hepatitis B include Africa, China, Korea, Southeast Asia including Indonesia and the Philippines, South and Western Pacific Islands, interior Amazon Basin, certain parts of the Caribbean (i.e., Haiti and the Dominican Republic), and the Middle East except Israel. Areas with moderate rates include South Central and Southwest Asia, Israel, Japan, Eastern and Southern Europe, Russia, and most of Central and South America.  
 3. Most adults from moderate- or high-risk areas of the world do not know their hepatitis B status. All patients from these areas need hepatitis B blood tests to determine if they have been previously infected. The first hepatitis B shot can be given during the same visit as the blood tests but only after the blood is drawn.

© 2008 Immunization Action Coalition. All rights reserved. For more information, visit [www.immunize.org](http://www.immunize.org). Form #P4036 (3/08)



# Vaccinations for Adults

## You're NEVER too old to get immunized!

Getting immunized is a lifelong, life-protecting job. Don't leave your healthcare provider's office without making sure you've had all the vaccinations you need.

Vaccine Age ▶ ▼	19–49 years	50–64 years	65 years & older
<b>Influenza</b>	You need a dose yearly if you have a chronic health problem,* are a healthcare worker, have close contact with certain individuals,* or you simply want to avoid getting influenza or spreading it to others.	You need a dose every fall (or winter).	
<b>Pneumococcal</b>	You need 1–2 doses if you smoke cigarettes or if you have certain chronic medical conditions.*		You need 1 dose at age 65 (or older) if you've never been vaccinated. You may also need a 2nd dose.*
<b>Tetanus, diphtheria, pertussis (Td, Tdap)</b>	If you haven't had at least 3 tetanus-and-diphtheria-containing shots sometime in your life, you need to get them now. Start with dose #1, followed by dose #2 in 1 month, and dose #3 in 6 months. All adults need Td booster doses every 10 years. If you're younger than age 65 years and haven't had pertussis-containing vaccine as an adult, one of the doses that you receive should have pertussis (whooping cough) vaccine in it—known as Tdap. Be sure to consult your healthcare provider if you have a deep or dirty wound.		
<b>Hepatitis B (HepB)</b>	You need this vaccine if you have a specific risk factor for hepatitis B virus infection* or you simply wish to be protected from this disease. The vaccine is given as a 3-dose series (dose #1 now, followed by dose #2 in 1 month, and dose #3, usually given 5 months after dose #2).		
<b>Hepatitis A (HepA)</b>	You need this vaccine if you have a specific risk factor for hepatitis A virus infection* or you simply wish to be protected from this disease. The vaccine is usually given as 2 doses, 6–18 months apart.		
<b>Human papillomavirus (HPV)</b>	You need this vaccine if you are a woman who is age 26 years or younger. The vaccine is given in 3 doses over 6 months.		
<b>Measles, mumps, rubella (MMR)</b>	You need at least 1 dose of MMR if you were born in 1957 or later. You may also need a 2nd dose.*		
<b>Varicella (Chickenpox)</b>	If you've never had chickenpox or you were vaccinated but only received 1 dose, talk to your healthcare provider about whether you need this vaccine.		
<b>Meningococcal</b>	If you are a young adult going to college and plan to live in a dormitory, you need to get vaccinated against meningococcal disease. People with certain medical conditions should also receive this vaccine.*		
<b>Zoster (shingles)</b>			If you are age 60 years or older, you should get this vaccine now.

\* Consult your healthcare provider to determine your level of risk for infection and your need for this vaccine.

**Do you travel outside the United States?** If so, you may need additional vaccines. The Centers for Disease Control and Prevention (CDC) provides information to assist travelers and their healthcare providers in deciding the vaccines, medications, and other measures necessary to prevent illness and injury during international travel. Visit CDC's website at [www.cdc.gov/travel](http://www.cdc.gov/travel) or call (800) CDC-INFO ([800] 232-4636). You may also consult a travel clinic or your healthcare provider.

# How to Administer IM and SC Injections to Adults

## Intramuscular (IM) Injections

### Administer these vaccines via IM route:

Tetanus, diphtheria (Td), or with pertussis (Tdap); hepatitis A; hepatitis B; human papillomavirus (HPV); trivalent inactivated influenza (TIV); and meningococcal conjugate (MCV). Administer polio (IPV) and pneumococcal polysaccharide vaccine (PPSV) either IM or SC.

### Injection site:

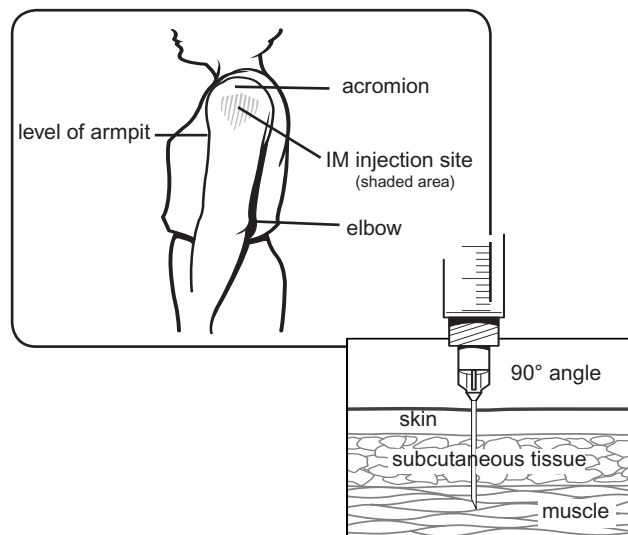
Give in the central and thickest portion of the deltoid—above the level of the armpit and below the acromion (see the diagram).

### Needle size:

22–25 gauge, 1–1½" needle (see note at right)

### Needle insertion:

- Use a needle long enough to reach deep into the muscle.
- Insert the needle at a 90° angle to the skin with a quick thrust.
- Separate two injections given in the same deltoid muscle by a minimum of 1".



*Note: A ¾" needle is sufficient in adults weighing <130 lbs (<60 kg); a 1" needle is sufficient in adults weighing 130–152 lbs (60–70 kg); a 1–1½" needle is recommended in women weighing 152–200 lbs (70–90 kg) and men weighing 152–260 lbs (70–118 kg); a 1½" needle is recommended in women weighing >200 lbs (>90 kg) or men weighing >260 lbs (>118 kg). A ¾" (16mm) needle may be used only if the skin is stretched tight, the subcutaneous tissue is not bunched, and injection is made at a 90-degree angle.*

## Subcutaneous (SC) Injections

### Administer these vaccines via SC route:

MMR, varicella, meningococcal polysaccharide (MPSV), and zoster (shingles). Administer polio (IPV) and pneumococcal polysaccharide vaccine (PPSV) either SC or IM.

### Injection site:

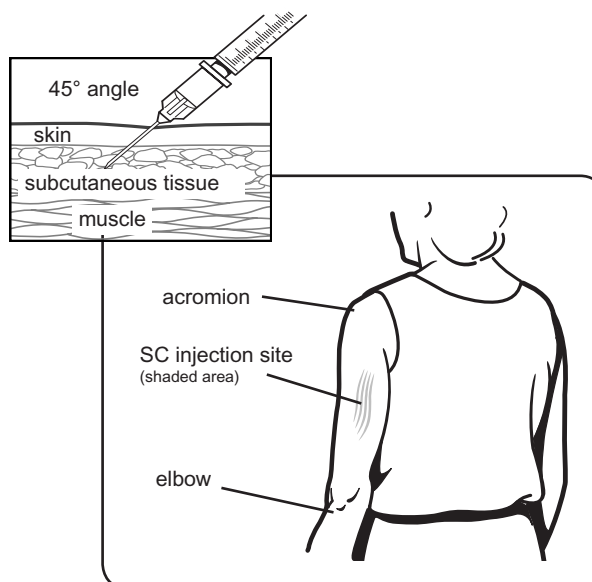
Give in fatty tissue over the triceps (see the diagram).

### Needle size:

23–25 gauge, 5/8" needle

### Needle insertion:

- Pinch up on the tissue to prevent injection into the muscle. Insert the needle at a 45° angle to the skin.
- Separate two injections given in the same area of fatty tissue by a minimum of 1".



Adapted by the Immunization Action Coalition, courtesy of the Minnesota Department of Health

## Recommended Adult Immunization Schedule – United States, 2009

Note: These recommendations **must** be read with the footnotes that follow, which 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 yrs	27–49 yrs	50–59 years	60–64 yrs	≥65 years
Tetanus, diphtheria, pertussis (Td/Tdap) <sup>1,*</sup>		Substitute 1-time dose of Tdap for Td booster; then boost with Td every 10 yrs				Td booster every 10 yrs
Human papillomavirus (HPV) <sup>2,*</sup>		3 doses (females)				
Varicella <sup>3,*</sup>		2 doses				
Zoster <sup>4</sup>					1 dose	
Measles, mumps, rubella (MMR) <sup>5,*</sup>		1 or 2 doses		1 dose		
Influenza <sup>6,*</sup>			1 dose annually			
Pneumococcal (polysaccharide) <sup>7,8</sup>		1 or 2 doses				1 dose
Hepatitis A <sup>9,*</sup>		2 doses				
Hepatitis B <sup>10,*</sup>		3 doses				
Meningococcal <sup>11,*</sup>		1 or more 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>13</sup>	HIV infection <sup>3,12,13</sup>		Diabetes, heart disease, chronic lung disease, chronic alcoholism	Asplenia <sup>12</sup> (including elective splenectomy and terminal complement component deficiencies)	Chronic liver disease	Kidney failure, end-stage renal disease, receipt of hemodialysis	Healthcare personnel
				CD4+ T lymphocyte count						
				<200 cells/μL	≥200 cells/μL					
Tetanus, diphtheria, pertussis (Td/Tdap) <sup>1,*</sup>		Td	Substitute 1-time dose of Tdap for Td booster; then boost with Td every 10 yrs							
Human papillomavirus (HPV) <sup>2,*</sup>			3 doses for females through age 26 years							
Varicella <sup>3,*</sup>		Contraindicated	2 doses							
Zoster <sup>4</sup>		Contraindicated	1 dose							
Measles, mumps, rubella (MMR) <sup>5,*</sup>		Contraindicated	1 or 2 doses							
Influenza <sup>6,*</sup>			1 dose TIV annually							1 dose TIV or LAIV annually
Pneumococcal (polysaccharide) <sup>7,8</sup>			1 or 2 doses							
Hepatitis A <sup>9,*</sup>			2 doses							
Hepatitis B <sup>10,*</sup>			3 doses							
Meningococcal <sup>11,*</sup>			1 or more 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 prior 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, 2009. 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)).

The recommendations in this schedule were approved by the Centers for Disease Control and Prevention's (CDC) Advisory Committee on Immunization Practices (ACIP), the American Academy of Family Physicians (AAFP), the American College of Obstetricians and Gynecologists (ACOG), and the American College of Physicians (ACP).

## Footnotes

**Note:** Immunization recommendations from ACIP are available at [www.cdc.gov/vaccines/pubs/acip-list.htm](http://www.cdc.gov/vaccines/pubs/acip-list.htm)

**1. Tetanus, diphtheria, and acellular pertussis (Td/Tdap) vaccination.** Tdap should replace a single dose of Td for adults ages 19 through 64 years who have not received a dose of Tdap previously.

Adults with uncertain or incomplete history of primary vaccination series with tetanus and diphtheria toxoid-containing vaccines should begin or complete a primary vaccination series. A primary series for adults is 3 doses of tetanus and diphtheria toxoid-containing vaccines; give the first 2 doses at least 4 weeks apart and the third dose 6–12 months after the second. However, Tdap can substitute for any one of the doses of Td in the 3-dose primary series. The booster dose of tetanus and diphtheria toxoid-containing vaccine should be given to adults who have completed a primary series and if the last vaccination was received 10 or more years previously. Tdap or Td vaccine may be used, as indicated.

If a woman is pregnant and received the last Td vaccination 10 or more years previously, give Td during the second or third trimester. If the woman received the last Td vaccination less than 10 years previously, give Tdap during the immediate postpartum period. A dose of Tdap is recommended for postpartum women, close contacts of infants younger than age 12 months, and all healthcare personnel with direct patient contact if they have not previously received Tdap. An interval as short as 2 years from the last Td is suggested; shorter intervals can be used. Td may be deferred during pregnancy and Tdap substituted in the immediate postpartum period, or Tdap can be given instead of Td to a pregnant woman after an informed discussion with the woman.

Consult the [ACIP statement](#) for recommendations for giving Td as prophylaxis in wound management.

**2. Human papillomavirus (HPV) vaccination.** HPV vaccination is recommended for all females ages 11 through 26 years (and may begin at age 9 years) who have not completed the vaccine series. History of genital warts, abnormal Papanicolaou test, or positive HPV DNA test is not evidence of prior infection with all vaccine HPV types; HPV vaccination is recommended for persons with such histories.

Ideally, vaccine should be given before potential exposure to HPV through sexual activity; 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 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.

A complete series consists of 3 doses. The second dose should be given 2 months after the first dose; the third dose should be given 6 months after the first dose.

HPV vaccination is not specifically recommended for females with the medical indications described in Figure 2, “Vaccines that might be indicated for adults based on medical and other indications.” Because HPV vaccine is not a live-virus vaccine, it may be given to persons with the medical indications described in Figure 2. 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. Healthcare personnel are not at increased risk because of occupational exposure, and should be vaccinated consistent with age-based recommendations.

**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 the second dose if they have received only one 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 presenting with 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 healthcare provider 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. Herpes zoster vaccination.** A single dose of zoster vaccine is recommended for adults ages 60 years and older regardless of whether they report a prior episode of herpes zoster. Persons with chronic medical conditions may be vaccinated unless their condition constitutes a contraindication.

**5. Measles, mumps, rubella (MMR) vaccination.** *Measles component:* Adults born before 1957 generally are considered immune to measles. Adults born during or after 1957 should receive 1 or more doses of MMR unless they have a medical contraindication, documentation of 1 or more doses, history of measles based on healthcare provider diagnosis, or laboratory evidence of immunity.

A second dose of MMR is recommended for adults who 1) have been recently exposed to measles or are in an outbreak setting; 2) have been vaccinated previously with killed measles vaccine; 3) have been vaccinated with an unknown type of measles vaccine during 1963–1967; 4) are students in postsecondary educational institutions; 5) work in a healthcare facility; or 6) plan to travel internationally.

*Mumps component:* Adults born before 1957 generally are considered immune to mumps. Adults born during or after 1957 should receive 1 dose of MMR unless they have a medical contraindication, history of mumps based on healthcare provider diagnosis, or laboratory evidence of immunity.

A second dose of MMR 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. For unvaccinated healthcare personnel born before 1957 who do not have other evidence of mumps immunity, giving 1 dose on a routine basis should be considered and giving a second dose during an outbreak should be strongly considered.

*Rubella component:* 1 dose of MMR vaccine is recommended for women whose rubella vaccination history is unreliable or who lack laboratory evidence of immunity. For women of childbearing age, regardless of birth year, rubella immunity should be determined and women should be counseled regarding congenital rubella syndrome. 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.

**6. Influenza vaccination:** *Medical indications:* Chronic disorders of the cardiovascular or pulmonary systems, including asthma; chronic metabolic diseases, including diabetes mellitus, renal or hepatic dysfunction, hemoglobinopathies, or immunocompromising conditions (including immunocompromising conditions caused by medications or human immunodeficiency virus [HIV]); any condition that compromises respiratory function or the handling of respiratory secretions or that can increase the risk of aspiration (e.g., cognitive dysfunction, spinal cord injury, or seizure disorder or other neuromuscular disorder); and pregnancy during the influenza season. No data exist on the risk for severe or complicated influenza disease among persons with asplenia; however, influenza is a risk factor for secondary bacterial infections that can cause severe disease among persons with asplenia.

*Occupational indications:* All healthcare personnel, including those employed by long-term care and assisted-living facilities, and caregivers of children younger than age 5 years.

*Other indications:* Residents of nursing homes and other long-term care and assisted-living facilities; persons likely to transmit influenza to persons at high risk (e.g., in-home



## Footnotes (continued)

**Note:** Immunization recommendations from ACIP are available at [www.cdc.gov/vaccines/pubs/acip-list.htm](http://www.cdc.gov/vaccines/pubs/acip-list.htm)

household contacts and caregivers of children younger than age 5 years, persons 65 years and older, and persons of all ages with high-risk condition[s]; and anyone who would like to decrease their risk of getting influenza. Healthy, nonpregnant adults younger than age 50 years without high-risk medical conditions who are not contacts of severely immunocompromised persons in special care units can receive either intranasally administered live, attenuated influenza vaccine (FluMist®) or inactivated vaccine. Other persons should receive the inactivated vaccine.

**7. Pneumococcal polysaccharide (PPSV) vaccination.** *Medical indications:* Chronic lung disease (including asthma); chronic cardiovascular diseases; diabetes mellitus; chronic liver diseases, cirrhosis; chronic alcoholism; chronic renal failure or nephrotic syndrome; 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; and cochlear implants and cerebrospinal fluid leaks. Vaccinate as close to HIV diagnosis as possible.

*Other indications:* Residents of nursing homes or long-term care facilities and persons who smoke cigarettes. Routine use of PPSV is not recommended for Alaska Native or American Indian 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 Alaska Natives and American Indians ages 50 through 64 years who are living in areas in which the risk of invasive pneumococcal disease is increased.

**8. Revaccination with PPSV.** One-time revaccination after 5 years is recommended for persons 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 if they were vaccinated 5 or more years previously and were younger than age 65 years at the time of primary vaccination.

**9. Hepatitis A vaccination.** *Medical indications:* Persons with chronic liver disease and persons who receive clotting factor concentrates.

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

*Occupational indications:* Persons working with hepatitis A virus (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 (a list of countries is available at [www.cdc.gov/travel/content/diseases.aspx](http://www.cdc.gov/travel/content/diseases.aspx)) and any person seeking protection from HAV infection.

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 schedule, given on days 0, 7, and 21 to 30 followed by a booster dose at month 12 may be used.

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

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

*Behavioral indications:* Sexually active persons who are not in a long-term, mutually monogamous relationship (e.g., persons with more than 1 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.

*Other indications:* Household contacts and sex partners of persons with chronic hepatitis B virus (HBV) infection; clients and staff members of institutions for persons with developmental disabilities; international travelers to countries with high or intermediate prevalence of chronic HBV infection (a list of countries is available at [www.cdc.gov/travel/content/diseases.aspx](http://www.cdc.gov/travel/content/diseases.aspx)); and any adult seeking protection from HBV infection.

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 daycare facilities for persons with developmental disabilities.

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 schedule, given on days 0, 7, and 21 to 30 followed by a booster dose at month 12 may be used.

*Special formulation indications:* For adult patients receiving hemodialysis or with other immunocompromising conditions, 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.

**11. Meningococcal vaccination.** *Medical indications:* Adults with anatomic or functional asplenia, or terminal complement component deficiencies.

*Other indications:* 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 (MCV) is preferred for adults with any of the preceding indications who are age 55 years or younger, although meningococcal polysaccharide vaccine (MPSV) is an acceptable alternative. Revaccination with MCV after 5 years might be indicated for adults previously vaccinated with MPSV who remain at increased risk for infection (e.g., persons residing in areas in which disease is epidemic).

**12. Selected conditions for which *Haemophilus influenzae* type b (Hib) vaccine may be used.** Hib vaccine generally is not recommended for persons age 5 years and older. No efficacy data are available on which to base a recommendation concerning use of Hib vaccine for older children and adults. However, studies suggest good immunogenicity in patients who have sickle cell disease, leukemia, or HIV infection or who have had a splenectomy; giving 1 dose of vaccine to these patients is not contraindicated.

**13. Immunocompromising conditions.** Inactivated vaccines generally are acceptable (e.g., pneumococcal, meningococcal, influenza [trivalent 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. To file a claim for vaccine injury, contact 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 is also 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.

toxoid-containing vaccine, including meningococcal conjugate vaccine; (3) Guillain-Barré Syndrome (GBS) 6 weeks or sooner after a previous dose of tetanus-toxoid containing vaccine; and (4) progressive or unstable neurological disorder, uncontrolled seizures or progressive encephalopathy until a treatment regimen has been established and the condition has stabilized. CDC has recently issued an excellent publication, Guide to Vaccine Contraindications and Precautions. To access it, go to [www.cdc.gov/vaccines/recs/vac-admin/downloads/contraindications-guide-508.pdf](http://www.cdc.gov/vaccines/recs/vac-admin/downloads/contraindications-guide-508.pdf).

### Human papillomavirus vaccine

**We inadvertently gave HPV #1 to a woman who didn't know she was pregnant at the time. How should we complete the schedule?**

First, you should report the vaccination incident to the Merck registry at (800) 986-8999. Second, withhold further HPV vaccine until she is no longer pregnant. Shortly after the pregnancy is completed, administer HPV#2. Give HPV#3 at 16 weeks after HPV#2 and no sooner than 24 weeks after HPV#1.

### Pneumococcal vaccine

**Some physicians in our area order pneumococcal polysaccharide vaccine (PPSV) every 5 years for their patients. Is this correct?**

No. CDC recommends 1 dose of PPSV for most people in a lifetime and 2 doses for certain people. PPSV is a polysaccharide vaccine that does not boost well, and data do not indicate that more than 2 doses are beneficial. IAC has a handy summary piece about the use of PPSV vaccine titled "Pneumococcal polysaccharide vaccine: CDC answers your questions" at [www.immunize.org/catg.d/p2015.pdf](http://www.immunize.org/catg.d/p2015.pdf). For detailed information, see the 1997 ACIP recommendations on prevention of pneumococcal disease at [ftp.cdc.gov/pub/Publica-](http://ftp.cdc.gov/pub/Publica-)

[titions/mmwr/RR/RR4608.pdf](http://titions/mmwr/RR/RR4608.pdf). Also see the 2008 provisional recommendations at [www.cdc.gov/vaccines/recs/provisional](http://www.cdc.gov/vaccines/recs/provisional).

**In its provisional pneumococcal recommendations ACIP recommends immunizing adult asthmatics with PPSV. Should I give PPSV to people with mild, intermittent asthma or exercise-induced asthma?**

PPSV is recommended for adults 19 years and older with all types of asthma.

**We know that pneumococcal polysaccharide vaccine (PPSV) is now recommended for asthmatics, but we're not sure exactly what the recommendation is. Can you spell it out for us? Also, is PPSV recommended for smokers as well?**

In December 2008, ACIP issued provisional recommendations that call for administering 1 dose of PPSV to adults ages 19 through 64 years who have asthma or who smoke cigarettes. Also, 1-time revaccination with PPSV is recommended for these patients when they reach age 65 if 5 or more years have elapsed since they received a previous dose of PPSV. To access the provisional recommendations, go to [www.cdc.gov/vaccines/recs/provisional](http://www.cdc.gov/vaccines/recs/provisional). For a useful 1-page summary of the people for whom PPSV is indicated, go to [www.immunize.org/catg.d/p2015.pdf](http://www.immunize.org/catg.d/p2015.pdf).

**Lately, some of our patients have been asking if they should receive PPSV during the current pandemic influenza situation. Has CDC changed the indications for use of PPSV during the pandemic?**

No, but it has issued new guidance because people for whom PPSV is indicated—i.e., those age 65 years and older and those age 2 through 64 years with certain high-risk conditions—are at increased risk for serious complications from influenza, as well as for pneumococcal disease. The new guidance reminds healthcare professionals that at this time, it is particularly important to administer PPSV to ALL the groups for whom it is indicated.

To access the new CDC guidance, go to [www.cdc.gov/h1n1flu/guidance/ppsv\\_h1n1.htm](http://www.cdc.gov/h1n1flu/guidance/ppsv_h1n1.htm).

### Zoster vaccine (shingles)

**Can I give our long-term care residents zoster, injectable influenza, and pneumococcal vaccines on the same day?**

Yes. Here are the general rules: (1) all vaccines used for routine vaccination in the United States can be given on the same day; (2) an inactivated vaccine can be administered either on the same day as or at any time before or after another inactivated or a live vaccine; and (3) any 2 LIVE vaccines that are not given on the same day must be spaced at least 4 weeks apart.

Zostavax (Merck) is a live, attenuated vaccine; injectable trivalent influenza vaccine (TIV) and pneumococcal polysaccharide vaccine (PPSV) are inactivated vaccines. Therefore, these 3 vaccines can be given on the same day or at any time before or after each other. They cannot, however, be given in the same syringe.

**When can a patient previously on immunosuppressive chemotherapy receive zoster vaccine?**

If the patient was on anticancer therapy, wait 3 months. If they were on high-dose steroids, isoantibodies, immune-mediators, immunomodulators, wait 1 month. Lastly, if they were on low doses of methotrexate, azathioprine, or 6-mercaptopurine, waiting is not indicated as these are not considered immunosuppressive. See the ACIP recommendations for zoster at [www.cdc.gov/mmwr/pdf/rr/rr5705.pdf](http://www.cdc.gov/mmwr/pdf/rr/rr5705.pdf) for details.

**How long should we wait before giving zoster vaccine to a patient who has had a blood transfusion?**

There is no waiting period for administering zoster vaccine following transfusion. Studies have shown the efficacy of zoster vaccine in patients receiving blood products. The amount of antigen in zoster vaccine is so substantial that it overpowers any antibody to herpes zoster that may be in the blood product. This is not the case for varicella and MMR vaccines, however. Wait 3 or more months before administering these vaccines to a patient who has received an antibody-containing blood product.

### Hepatitis A & B vaccines

**We heard there is an alternative schedule for the adult HepA-HepB (Twinrix; GSK) vaccine that gives the patient protection sooner than the standard schedule does. Can you tell us more?**

Yes. Licensed for use in people age 18 and older, the combined HepA-HepB vaccine is normally given as a 3-dose series at intervals of 0, 1, and 6 months. However, if someone needs protection sooner (e.g., imminent foreign travel), you can give it as a 4-dose series at intervals of 0, 7, and 21–30 days, followed by a dose at 12 months. ♦

To receive "Ask the Experts" by email, subscribe to the Immunization Action Coalition's news and information service, IAC Express. "Ask the Experts" editions are published five times per year. Subscribe at:

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

To find hundreds of "Ask the Experts" questions online answered by CDC experts, go to:

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

# Order Essential Immunization Resources from IAC

**Laminated immunization schedules give you solid information for 2009—order today!**

IAC has two laminated immunization schedules for 2009—one for adults and one for children/teens. Based on CDC's immunization schedules, the 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, print out and mail or fax the form below 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.

### Laminated U.S. Immunization Schedules (details p. 3; call for discounts on bulk orders)

Qty.		Amt.
_____	R2009 Adult schedule: 1-4 copies—\$10 each; 5-19 copies—\$6.50 each.....	\$ _____
_____	R2008 Child/teen schedule: 1-4 copies—\$10 each; 5-19 copies—\$6.50 each ...	\$ _____

### Padded Questionnaires for Vaccine Contraindications English on one side/Spanish on the other (details p. 3; call for discounts on bulk orders)

100 sheets/pad; 1 pad—\$16; 2 pads—\$12 each; 3 pads—\$11 each; 4 pads—\$10 each

_____	R4065 Adult screening questionnaire in English/Spanish.....	\$ _____
_____	R4060 Child/teen screening questionnaire in English/Spanish .....	\$ _____

### Patient Immunization Record Cards – (wallet-sized) (details p. 3; call for discounts on bulk orders)

250 cards/box; 1 box—\$37.50; 2 boxes—\$35 each; 3 boxes—\$32.50 each; 4 boxes—\$30 each

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

### DVD and Videotape (call for discounts on bulk orders)

_____	D2020 DVD: Immunization Techniques: Safe, Effective, Caring .....	\$10.50
_____	V2020 Videotape: Immunization Techniques: Safe, Effective, Caring ....	\$10.50

**Subtotal for Purchases \$** \_\_\_\_\_

## Make a Charitable Contribution

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 IAC's 15 most popular print pieces, such as the "Summary of Recommendations for Adult Immunization."  
 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.

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

## 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!

**Method of payment:**  **Check enclosed** (payable to Immunization Action Coalition)

**Purchase order #** \_\_\_\_\_

Visa   
  Mastercard   
  Am. Express   
  Discover

Card #

Expiration Date mo/yr   CV Code #\*

\*The CV Code is the Credit Verification Code, the additional 3- or 4-digit number on your credit card.

Name/Title \_\_\_\_\_

Organization \_\_\_\_\_

Shipping address (Check one: This is my  organization address  home address)

City/State/Zip \_\_\_\_\_

Telephone \_\_\_\_\_

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

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

# Influenza Vaccination for Healthcare Workers: Our Duty to Our Patients

Immunizing healthcare workers is crucial to preventing nosocomial transmission of influenza, and it provides excellent behavioral modeling for patients who may wonder whether they themselves should be vaccinated. In most healthcare settings, however, there is plenty of room for improvement in employee vaccination rates. On average, fewer than half of healthcare personnel receive influenza vaccine each year.

The good news is that there are ways for healthcare facilities to encourage employees to get influenza vaccine. Here are three principal strategies to consider:

- 1. Make it free.** Employees are more likely to get vaccinated when they don't have to think about whether it's worth the cost. Also, by footing the bill, the healthcare institution demonstrates that it values employee vaccination.
- 2. Make it convenient.** Employees should be able to get vaccinated whenever their work permits—not just during regular business hours. For greatest convenience, the vaccine should come to them on a roving cart.
- 3. Make it mandatory.** Require vaccination for all healthcare personnel unless they have a medical contraindication. A less stringent approach is to allow employees to decline vaccination, but require that they complete and sign a declination form that spells out the risks they pose to their patients in declining vaccination.

Find the Immunization Action Coalition's influenza disease and vaccine resources at [www.immunize.org/influenza](http://www.immunize.org/influenza)

Several healthcare facilities around the country have used creative incentives to achieve outstanding employee immunization rates. Here are some:

- [Houston Northwest Medical Center, Houston, TX](#), offers vaccination outside its cafeteria. Departments compete to achieve the highest immunization rate.
- At [Blythesdale Children's Hospital, Valhalla, NY](#), the vaccine cart visits staff meetings, and paychecks come with immunization information enclosed.
- [St. Louis University Hospital, St. Louis, MO](#), requires employees to submit declination forms in person so that declining is no quicker than getting vaccinated.

The stories and techniques behind these and other successful programs can be found at [www.preventinfluenza.org/profs\\_workers.asp](http://www.preventinfluenza.org/profs_workers.asp) under "Best Practices."

It is estimated that 36,000 Americans die every year of influenza and its complications. This year, the appearance of the novel H1N1 strain may make for an even more intense influenza season. As healthcare professionals, we work hard to protect our patients and counsel them on good health habits. Let's take a further step by encouraging our co-workers to get vaccinated, by advocating for strong workplace immunization programs, and, of course, by getting vaccinated ourselves.

*Deborah L. Wexler, MD*

Deborah L. Wexler, MD  
[deborah@immunize.org](mailto:deborah@immunize.org)

## Vaccine Myths Busted

### 1. "I never get influenza."

Although influenza is best known for causing fever, muscle aches, and headache, it can also be responsible for milder illness—the scratchy throats and coughs that healthcare professionals are notorious for working through. Even when we have subclinical infection or relatively minor symptoms, we can still pass on the full-blown illness to our patients as we talk with them and provide care.

### 2. "I'm not in a risk group."

You may not be, but many of your patients are. As healthcare professionals, we must consider that not only are we in close contact with dozens of people every day, but many of these people have special vulnerabilities that put them at high risk of severe complications or death from influenza. The only good reason for a healthcare worker to skip influenza vaccination is a true medical contraindication.

### 3. "I forget to get vaccinated or don't have time."

Many healthcare workers hardly have time to catch their breath during the day, but it's worth carving out the few minutes it takes to get vaccinated against influenza. You may save a life with those few minutes.

### 4. "I'm concerned about vaccine side effects."

The most common side effect from influenza vaccine is a sore arm. Among adults, side effects such as fever, headache, fatigue, and myalgia occur no more often with vaccine than they do with placebo injection. *Influenza vaccine isn't capable of giving you influenza.*

Download IAC's resource sheet on influenza vaccination of healthcare workers, "**First Do No Harm.**" It outlines influenza-related CDC recommendations and JCAHO standards for healthcare facilities. If your workplace doesn't have an influenza immunization program, this one-page document offers a good place to start.

Find it at [www.immunize.org/catg.d/p2014.pdf](http://www.immunize.org/catg.d/p2014.pdf).

## It's convenient to contribute online at [www.immunize.org/support](http://www.immunize.org/support)

### I want to contribute to the Immunization Action Coalition (IAC)

- \$25     \$50     \$75     \$100  
 \$150     \$250     other \$ \_\_\_\_\_

Name/Title \_\_\_\_\_

Organization \_\_\_\_\_

#### Method of payment

Check enclosed (payable to Immunization Action Coalition)

Address \_\_\_\_\_

P.O. # \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Visa     Mastercard     Am. Express     Discover

Phone and Email \_\_\_\_\_

Fax this form to (651) 647-9131  
or mail to IAC, 1573 Selby Ave.,  
#234, St. Paul, MN 55104

Credit Card #

Exp. date (mo/yr)

CV Code #