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VACCINATE ADULTS!

from the Immunization Action Coalition — www.immunize.org

What's In This Issue

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Meningococcal Vaccination Recommendations for Teens, College Students, and Other Adults

Based on ACIP's March 22, 2013, recommendations titled *Prevention and Control of Meningococcal Disease,* this article highlights some of the information needed for preventing infections caused by *Neisseria meningitidis.* It also provides links to some valuable resources that will help healthcare professionals make appropriate vaccination decisions.

Vaccine nomenclature. The nomenclature for meningococcal vaccines indicates if the vaccine is conjugate or polysaccharide and the number of serotypes included in the vaccine. The only polysaccharide vaccine, Menomune (sanofi pasteur), is abbreviated as MPSV4, with the *P* indicating *polysaccharide,* and the *4* denoting the number of serotypes in the vaccine. Two different licensed conjugate vaccines—Menactra (sanofi pasteur) and Menveo (Novartis)—are abbreviated as MCV4, with the *C* indicating *conjugate.* The three vaccines mentioned above include the same four serotypes (A, C, W, and Y). Conjugate vaccines are further distinguished by the toxoid to which they are conjugated. Menactra (MCV4-D) is conjugated to diphtheria toxoid, and Menveo (MCV4-CRM) is conjugated to a nontoxic form of diphtheria toxin from *Corynebacterium diphtheriae.* (Note: The combination vaccine MenHibrix [Hib-MenCY; GlaxoSmithKline], licensed for use only in children age 6 through 18 months, is not covered in this article.)

Preteen, teen, and college student vaccination. ACIP recommends routine vaccination of all adolescents and teens age 11 through 18 years and of unvaccinated college students age 19 through 21 years who live in residence halls.

Adult vaccination. Vaccination of adults is targeted to people who (1) have risk factors such as persistent complement component deficiencies, functional or anatomic asplenia, including sickle cell disease, (2) have possible exposure in community outbreaks caused by a vaccine serogroup, (3) travel to or reside in a country where meningococcal disease is hyperendemic or epidemic, or (4) work as microbiologists routinely exposed to *Neisseria meningitidis.*

Vaccine schedule and product used. Opportunities for confusion arise from having multiple vaccine products available for use in teens, college students, and adults. In addition, the number of primary doses recommended and the need for

Meningococcal continued on page 4 ▶

Ask the Experts

IAC extends thanks to our experts, medical epidemiologist Andrew T. Kroger, MD, MPH; nurse educator Donna L. Weaver, RN, MN; and medical officer Iyabode Akinsanya-Beysolow, MD, MPH. All are with 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
- Call your state health dept. (phone numbers at www.immunize.org/coordinators)

PCV13 and PPSV23

If an adult patient has already had PPSV23 for his high-risk condition and also needs PCV13 for the same condition, how long should we wait before administering PCV13?

The recommended interval between administering PPSV23 and subsequent PCV13 is 1 year for adults. The recommended interval is based on a hypothetical concern about interference between PCV13 and PPSV23. The recommendations for high-risk adults are available at www.cdc.gov/mmwr/preview/mmwrhtml/mm6140a4.htm.

Hib

I work in a family medicine clinic that sees adults who are asplenic. Can we give them Hib vaccine since they are at high risk for Haemophilus influenzae type b disease?

Yes. In February 2013, ACIP voted to approve updated recommendations for the use of Hib vaccine in people with asplenia. The recommendations are to give 1 dose of Hib vaccine to asplenic patients age 5 years and older (including adults) if they have no history of receiving the vaccine. In addition, patients age 15 months and older (including adults) who are undergoing elective splenectomy should receive 1 dose if they have no history of receiving the vaccine. Ideally, administer the dose a minimum of 14 days before surgery. If the dose is not given before surgery, administer it after the procedure as soon as the patient's condition is stable. If the splenectomy was performed in the

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Vaccinate Adults!

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Coming Soon! IAC's New Website for Immunization Coalitions

The Immunization Action Coalition (IAC) will soon be launching a new website for immunization coalitions at www.ImmunizationCoalitions.org (www.izcoalitions.org is the current coalitions' website). The new website will be a one-stop shop for the Immunization Coalitions Network (details about this group appear later in this article). The new website will offer resources of importance to the network, promote the activities of immunization coalitions, and provide an interactive online database of local, state, regional, national, and international immunization coalitions.

The cornerstone of the website is a database that allows interested healthcare professionals, parents, immunization advocates, and others to learn more about immunization coalitions. Currently, the database includes information on the organization and activities of more than 200 immunization coalitions. Use this material to find contact information, resources, ideas, and volunteering opportunities.

www.ImmunizationCoalitions.org

SNEAK PEEK AT THE CONTENT

- **About the Network:** Learn more about the network and how to join it
- **Coalition Basics:** Access helpful tips and resources on starting, building, and maintaining a coalition
- **Network Activities:** Find current and past issues of the network's e-newsletter, learn about the listserv for coalitions, and more
- **Network Members:** Search the database of immunization coalitions, review the 2012 survey results of coalition members, and more
- **Events:** Monitor the calendar for events and conferences, including the latest information on upcoming network conference calls and the 2014 National Conference on Immunization and Health Coalitions
- **Resources:** Discover ongoing and frequently updated listings of noteworthy resources for coalitions

ABOUT THE NETWORK

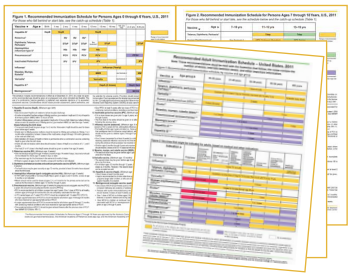
IAC founded the Immunization Coalitions Network in 2012. Currently, the network comprises more than 500 immunization advocates, including representatives from approximately 200 coalitions. IAC manages the group's communications and deliberations, including email listservs, newsletters, and website database. IAC also arranges speakers for the bimonthly conference calls. Are you interested in joining the network? If so, please email the network's project coordinator, Teresa A. Anderson, DDS, MPH, (teresa@immunize.org) for more information.

IAC will announce the launch of ImmunizationCoalitions.org in *IAC Express,* our free weekly email news service. If you would like to start receiving weekly email announcements about important developments related to immunization, as well as the future notification of the launch, we urge you to complete the sign-up form at www.immunize.org/subscribe.

We suggest you subscribe to *IAC Express.* It's free! Once you complete the sign-up form at www.immunize.org/subscribe, you'll start receiving weekly issues and special editions in your email in-box.

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

Here are the ACIP/AAFP/ACP/ACOG/ACNM-approved schedule for adults and the ACIP/AAP/AAFP-approved immunization schedule for people ages 0 through 18 years. Both are laminated and washable for heavy-duty use, complete with essential footnotes, and printed in color for easy reading. The cost is $7.50 for each schedule and only $5.50 each for five or more copies.



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Now you can give any patient a permanent vaccination record card designed specifically for their age group: adult, child & teen, or lifetime. These brightly colored cards are printed on durable rip-, smudge-, and water-proof paper. To view the cards or for more details, go to www.immunize.org/shop and click on the images.

Buy 1 box (250 cards) for $45 (first order of a 250-card box comes with a 30-day, money-back guarantee). Discounts for larger orders: 2 boxes $40 each; 3 boxes $37.50 each; 4 boxes $34.50 each

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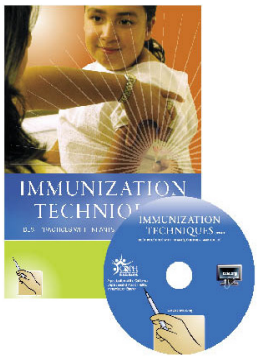
To receive sample cards, contact us: admininfo@immunize.org

"Immunization Techniques — Best Practices with Infants, Children, and Adults"



The California Department of Public Health, Immunization Branch, updated its award-winning training video, "Immunization Techniques: Best Practices with Infants, Children, and Adults." The 25-minute DVD can be used to train new employees and to refresh the skills of experienced staff on administering injectable, oral, and nasal-spray vaccines to children, teens, and adults. Make sure your healthcare setting has the 2010 edition!

The cost is $17 each for 1–9 copies; $10.25 each for 10–24 copies; $7 each for 25–49 copies; $5.75 each for 50–99 copies.

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Vaccine Highlights

Recommendations, schedules, and more

Editor's note: The information in Vaccine Highlights is current as of May 10, 2013.

The next ACIP meetings

A committee of 15 national experts, the Advisory Committee on Immunization Practices (ACIP) advises CDC on the appropriate use of vaccines. ACIP meets three times a year in Atlanta; meetings are open to the public. The next two meetings will be held on June 19–20 and October 23–24. For more information, visit www.cdc.gov/vaccines/acip/index.html.

ACIP periodically issues public health recommendations on the use of vaccines. Clinicians who vaccinate should have a current set for reference. Published in the *Morbidity and Mortality Weekly Report (MMWR),* ACIP recommendations are easily available. Here are sources:

- Download them from links on IAC's website: www.immunize.org/acip.
- Download them from CDC's website: www.cdc.gov/vaccines/pubs/acip-list.htm.

Immunization schedules

On Feb. 1, CDC published "Recommended Immunization Schedules for Persons Aged 0 Through 18 Years and Adults Aged 19 Years and Older—United States, 2013." You will find IAC's reformatted version of the 2013 U.S. Immunization Schedule for Adults Age 19 Years and Older on pages 6–8 of this issue of *Vaccinate Adults*.

IAC has developed laminated, 6-page, full-size color versions of both 2013 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.

Meningococcal vaccine news

On March 22, CDC published ACIP recommendations titled *Prevention and Control of Meningococcal Disease.* The recommendations summarize previously published recommendations including those that call for (1) routine vaccination with a quadrivalent meningococcal conjugate vaccine (MCV4) for adolescents age 11 or 12 years, with a booster dose at age 16 and (2) routine vaccination for people at increased risk for meningococcal disease. Access the recommendations at www.cdc.gov/mmwr/preview/mmwrhtml/rr6202a1.htm.

Tdap vaccine news

On Feb. 22, CDC published "Updated Recommendations for Use of Tetanus Toxoid, Reduced Diphtheria Toxoid, and Acellular Pertussis Vaccine (Tdap) in Pregnant Women." The recommendations advise prenatal care providers to administer a dose of Tdap during each pregnancy irrespective of the patient's prior history of receiving Tdap. To obtain the recommendations, go to www.cdc.gov/mmwr/pdf/wk/mm6207.pdf (pages 131–135).

VIS news

On Feb. 27, CDC posted an updated VIS for pneumococcal conjugate vaccine (PCV13). To access the VIS and 13 translations, go to www.immunize.org/vis/vis_pcv.asp.

Starting with the PCV13 VIS, CDC will create supplementary provider information for each new and updated VIS. Intended to help providers answer patient questions, the supplementary document has information about the vaccine, such as contraindications and precautions, as well as links to pertinent ACIP recommendations. Access the PCV13 supplementary document at www.cdc.gov/vaccines/pubs/vis/downloads/vis-pcv-hcp-supplmt.pdf.

On May 9, CDC issued a new VIS for tetanus-diphtheria-acellular pertussis (Tdap) vaccine. It reflects recent changes in ACIP recommendations regarding use of Tdap during pregnancy. **Note:** This VIS contains information about Tdap only; when vaccinating a patient with Td vaccine, providers should give the patient the Td/Tdap VIS (dated 1/24/12) until a VIS dedicated exclusively to Td (currently in development) is available. Access the new Tdap VIS at www.immunize.org/vis/tdap.pdf. Access the provider information for the Tdap VIS at www.cdc.gov/vaccines/pubs/vis/downloads/vis-tdap-hcp.pdf.

For a ready-to-print table of current dates of VISs for posting in your practice, go to www.immunize.org/catg.d/p2029.pdf.

Vaccination error reporting

In December 2012, the Institute for Safe Medication Practices launched its National Vaccine Error Reporting Program (VERP). The program allows healthcare professionals to confidentially report vaccine administration errors and near misses. Its goal is to better quantify sources of errors and advocate for product changes (such as changes to the vaccine name or label) that will ensure patient safety. For additional information and to access an electronic VERP reporting form, go to verp.ismp.org.

Influenza news

On Feb. 27, FDA's Vaccines and Related Biological Products Advisory Committee recommended that trivalent-formulation influenza vaccines for the 2013–14 influenza season contain the following: an A/California/7/2009 (H1N1)-like virus; an (H3N2) virus antigenically like the cell-propagated prototype virus A/Victoria/361/2011; and a B/Massachusetts/2/2012-like virus. The committee also recommended that the quadrivalent-formulation influenza vaccine contain the previously listed three strains and also a B/Brisbane/60/2008-like virus. For further information, go to www.fda.gov/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/Post-MarketActivities/LotReleases/ucm343828.htm.

Meningococcal *. . . continued from page 1*

boosters varies by risk factor. And, finally, products for use in adults age 56 years and older include off-label recommendations. It is important that clinicians access the resources below for specific information on selecting a vaccine product and scheduling vaccination for their patients.

Resources

Prevention and Control of Meningococcal Disease, MMWR 2013; 62[No. RR-2], at www.cdc.gov/mmwr/pdf/rr/rr6202.pdf.

"Meningococcal Vaccination Recommendations by Age and/or Risk Factor" [a summary table], at www.immunize.org/catg.d/p2018.pdf.

"Summary of Recommendations for Child/Teen Immunization (Age birth through 18 years)," page 4, at www.immunize.org/catg.d/p2010.pdf.

"Summary of Recommendations for Adult Immunization (Age 19 years & older)," page 4, at www.immunize.org/catg.d/p2011.pdf.

IAC's "Ask the Experts" team from CDC

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past, and there is no history of Hib vaccination, the vaccine should be given at the next clinic visit.

Zoster

I have a patient who is eligible for zoster vaccination who is going to be receiving chemotherapy soon. What are the guidelines in such a situation?

The risk for zoster and its severe morbidity and mortality is much greater for immunosuppressed people. In this situation, the first step is to review the patient's vaccine history for zoster and other vaccines. Immunocompetent patients 60 years and older who have never received zoster vaccine and who anticipate starting immunosuppressive treatments or who have diseases that might lead to immunodeficiency should receive 1 dose of the vaccine as soon as possible, while their immunity is intact. Administer zoster vaccine at least 14 days before immunosuppressive therapy begins. Some experts advise delaying the start of immunosuppressive therapy until 1 month after zoster is administered, if delay is possible. See pages 19–20 of the ACIP recommendations *Prevention of Herpes Zoster* at www.cdc.gov/mmwr/PDF/rr/rr5705.pdf.

A 33-year-old patient in my practice has already suffered from three episodes of shingles. He would like to receive the zoster vaccine. Is this a good idea?

Though shingles vaccine (Zostavax, Merck) is FDA-licensed for people age 50 and older, ACIP recommends it routinely only for people age 60 and older. ACIP does not have a recommendation to administer the vaccine to younger people with recurrent zoster episodes. However, physicians may choose to administer a vaccine off-label, if in their clinical judgment, they think the vaccine is indicated. The patient should be informed that the use is off-label, and that the safety and efficacy of the vaccine has not been tested in people younger than 50.

Tdap

Some women have closely spaced pregnancies. Should we give Tdap during each pregnancy, even if it means such women would get 2 doses within 12 months?

Yes. ACIP looked into this issue and included related information in its recommendations published in *MMWR* on February 22, 2013 (www.cdc.gov/mmwr/pdf/wk/mm6207.pdf, pages 131–135). ACIP reviewed available data on birth statistics and discovered that among U.S. women who have more than one pregnancy, a very small percentage (2.5%) have an interval of 12 months or less between births. The majority of women who have two pregnancies have an interval of 13 months or more between births. Approximately 5% of women have four or more babies. ACIP concluded that (1) the interval between subsequent pregnancies is likely to be longer than is the persistence of maternal anti-pertussis antibodies, (2) most women would receive only 2 doses of Tdap, and (3) a small proportion of women would receive 4 or more doses.

A theoretical risk exists for severe local reactions (e.g., arthus reactions, whole limb swelling) for pregnant women who have multiple, closely spaced pregnancies. However, the frequency of side effects depends on the vaccine's antigen content and product formulation, as well as on preexisting maternal antibody levels related to the interval since the last dose and the number of doses received. The risk for severe adverse events has likely been reduced with current vaccine formulations (including Tdap), which contain lower doses of tetanus toxoid than did older vaccine formulations. ACIP believes the potential benefit of preventing pertussis morbidity and mortality in infants outweighs the theoretical concerns of possible severe adverse events in mothers.

At what gestational age of pregnancy should we vaccinate pregnant women with Tdap?

To maximize maternal antibody response and passive antibody transfer to the infant, the optimal time to administer Tdap is between 27 and 36 weeks' gestation. However, Tdap can be administered at any time during pregnancy. Previously, CDC had recommended that Tdap vaccination occur after 20 weeks' gestation.

We would like to avoid stocking both Tdap and Td vaccines. Is CDC likely to recommend that Tdap completely replace Td in the immunization schedule in the near future?

Currently, CDC recommends giving only 1 dose of Tdap to adolescents and adults who have not previously received the vaccine, with the exception of pregnant women, who should be vaccinated during each pregnancy. If CDC eventually recommends that people who are now recommended to receive only 1 dose of Tdap receive an additional dose, CDC is likely to recommend that they receive only 1 additional dose. Therefore, medical settings will need to continue to stock Td vaccine in order to administer it to patients who need to complete the full primary 3-dose tetanus and diphtheria series and also to administer 10-year booster doses of Td throughout the lifetime of those who have completed the primary series.

Meningococcal

The recently updated ACIP recommendations,* Prevention and Control of Meningococcal Disease, *advise using MCV4 in certain adults older than age 55. Please give me more details.

Previously, ACIP recommended only the quadrivalent meningococcal polysaccharide vaccine (MPSV4, Menomune, sanofi pasteur) for use in adults age 56 years and older. The newest recommendations, published on March 22, 2013, call for use of quadrivalent meningococcal conjugate vaccine (MCV4: Menactra, sanofi pasteur; Menveo, Novartis) in adults age 56 years and older who (1) were vaccinated previously with MCV4 and now need revaccination or (2) are recommended to receive multiple doses (e.g., adults with asplenia, microbiologists working with *Neisseria meningitidis*). Both MCV4 vaccine products are licensed for use in people through age 55 years, which means that the use of these vaccines in people age 56 and older is off-label but ACIP-recommended. See page 15 of the newly published *Prevention and Control of Meningococcal Disease* at www.cdc.gov/mmwr/pdf/rr/rr6202.pdf.

To receive "Ask the Experts" by email, subscribe to IAC's news service, *IAC Express*. Special "Ask the Experts" issues are published five times per year.

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www.immunize.org/askexperts

Vaccinate Adults correction policy

If you find an error, please notify us immediately by sending an email message to 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.

Recommended Adult Immunization Schedule – United States, 2013

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

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

Vaccine ▼ / Age Group ▶	19–21 years	22–26 years	27–49 years	50–59 years	60–64 years	≥65 years
Influenza[2,*]	1 dose annually					
Tetanus, diphtheria, pertussis (Td/Tdap)[3,*]	Substitute 1-time dose of Tdap for Td booster; then boost with Td every 10 yrs					
Varicella[4,*]	2 doses					
Human papillomavirus (HPV)[5,*] Females	3 doses					
Human papillomavirus (HPV)[5,*] Males	3 doses					
Zoster[6]					1 dose	
Measles, mumps, rubella (MMR)[7,*]	1 or 2 doses					
Pneumococcal polysaccharide (PPSV23)[8,9]	1 or 2 doses					1 dose
Pneumococcal 13-valent conjugate (PCV13)[10,*]	1 dose					
Meningococcal[11,*]	1 or more doses					
Hepatitis A[12,*]	2 doses					
Hepatitis B[13,*]	3 doses					

*Covered by the Vaccine Injury Compensation Program.

Figure 2. Recommended vaccinations that might be indicated for adults based on medical and other indications[1]

Indication ▶ / Vaccine ▼	Pregnancy	Immunocompromising conditions (excluding human immunodeficiency virus [HIV])[4,6,7,10,15]	HIV infection[4,6,7,10,14,15] CD4+ T lymphocyte count <200 cells/μL	HIV infection CD4+ T lymphocyte count ≥200 cells/μL	Men who have sex with men (MSM)	Heart disease, chronic lung disease, chronic alcoholism	Asplenia (including elective splenectomy and persistent complement component deficiencies)[10,14]	Chronic liver disease	Kidney failure, end-stage renal disease, receipt of hemodialysis	Diabetes	Healthcare personnel
Influenza[2,*]	1 dose IIV annually				1 dose IIV or LAIV annually	1 dose IIV annually					1 dose IIV or LAIV annually
Tetanus, diphtheria, pertussis (Td/Tdap)[3,*]	1 dose Tdap in each pregnancy	Substitute 1-time dose of Tdap for Td booster; then boost with Td every 10 yrs									
Varicella[4,*]	Contraindicated		2 doses								
Human papillomavirus (HPV)[5,*] Females		3 doses through age 26 years				3 doses through age 26 years					
Human papillomavirus (HPV)[5,*] Males		3 doses through age 26 years				3 doses through age 21 years					
Zoster[6]	Contraindicated				1 dose						
Measles, mumps, rubella (MMR)[7,*]	Contraindicated		1 or 2 doses								
Pneumococcal polysaccharide (PPSV23)[8,9]						1 or 2 doses					
Pneumococcal 13-valent conjugate (PCV13)[10,*]						1 dose					
Meningococcal[11,*]						1 or more doses					
Hepatitis A[12,*]						2 doses					
Hepatitis B[13,*]						3 doses					

*Covered by the Vaccine Injury Compensation Program.

For all persons in this category who meet the age requirements and who lack documentation of vaccination or have no evidence of previous infection; zoster vaccine recommended regardless of prior episode of zoster

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

No recommendation

These schedules indicate the recommended age groups and medical indications for which administration of currently licensed vaccines is commonly indicated for adults ages19 years and older, as of January 1, 2013. 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). 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.

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

Footnotes

1. Additional Information.
- Additional guidance for the use of the vaccines described in this supplement is available at www. cdc.gov/vaccines/pubs/acip-list.htm.
- Information on vaccination recommendations when vaccination status is unknown and other general immunization information can be found in the General Recommendations on Immunization at www.cdc.gov/mmwr/preview/mmwrhtml/rr6002a1.htm.
- Information on travel vaccine requirements and recommendations (e.g., for hepatitis A and B, meningococcal, and other vaccines) is available at wwwnc.cdc.gov/travel/page/vaccinations.htm.

2. Influenza vaccination.
- Annual vaccination against influenza is recommended for all persons age 6 months and older.
- Persons age 6 months and older, including pregnant women, can receive the inactivated influenza vaccine (IIV).
- Healthy, non-pregnant persons age 2–49 years without high-risk medical conditions can receive either intranasally administered live, attenuated influenza vaccine (LAIV) (FluMist), or IIV. Healthcare personnel who care for severely immunocompromised persons (i.e., those who require care in a protected environment) should receive IIV rather than LAIV.
- The intramuscularly or intradermally administered IIV are options for adults age 18–64 years.
- Adults age 65 years and older can receive the standard dose IIV or the high-dose IIV (Fluzone High-Dose).

3. Tetanus, diphtheria, and acellular pertussis (Td/Tdap) vaccination.
- Administer 1 dose of Tdap vaccine to pregnant women during each pregnancy (preferred during 27–36 weeks' gestation), regardless of number of years since prior Td or Tdap vaccination.
- Administer Tdap to all other adults who have not previously received Tdap or for whom vaccine status is unknown. Tdap can be administered regardless of interval since the most recent tetanus or diphtheria-containing vaccine.
- Adults with an unknown or incomplete history of completing a 3-dose primary vaccination series with Td-containing vaccines should begin or complete a primary vaccination series including a Tdap dose.
- For unvaccinated adults, give the first 2 doses at least 4 weeks apart and the third dose 6–12 months after the second.
- For incompletely vaccinated (i.e., less than 3 doses) adults, administer remaining doses.
- Refer to the Advisory Committee on Immunization Practices (ACIP) statement for recommendations for administering Td/Tdap as prophylaxis in wound management (see footnote #1).

4. Varicella vaccination.
- All adults without evidence of immunity to varicella (as defined below) should receive 2 doses of single-antigen varicella vaccine or a second dose if they have received only 1 dose.
- Special consideration for vaccination 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; non-pregnant women of childbearing age; and international travelers).
- 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.
- 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 except healthcare personnel and pregnant women; 3) history of varicella based on diagnosis or verification of varicella disease by a healthcare provider; 4) history of herpes zoster based on diagnosis or verification of herpes zoster disease by a healthcare provider; or 5) laboratory evidence of immunity or laboratory confirmation of disease.

5. Human papillomavirus (HPV) vaccination.
- Two vaccines are licensed for use in females, bivalent HPV vaccine (HPV2) and quadrivalent HPV vaccine (HPV4), and one HPV vaccine for use in males (HPV4).
- For females, either HPV4 or HPV2 is recommended in a 3-dose series for routine vaccination at age 11 or 12 years, and for those age 13 through 26 years, if not previously vaccinated.
- For males, HPV4 is recommended in a 3-dose series for routine vaccination at age 11 or 12 years, and for those age 13 through 21 years, if not previously vaccinated. Males age 22 through 26 years may be vaccinated.
- HPV4 is recommended for men who have sex with men (MSM) through age 26 years who did not get any or all doses when they were younger.
- Vaccination is recommended for immunocompromised persons (including those with HIV infection) through age 26 years who did not get any or all doses when they were younger.
- A complete series for either HPV4 or HPV2 consists of 3 doses. The second dose should be given 1–2 months after the first dose; the third dose should be given 6 months after the first dose (at least 24 weeks after the first dose).
- HPV vaccines are not recommended for use in pregnant women. However, pregnancy testing is not needed before vaccination. If a woman is found to be pregnant after initiating the vaccination series, no intervention is needed; the remainder of the 3-dose series should be delayed until completion of pregnancy.
- Although HPV vaccination is not specifically recommended for healthcare personnel (HCP) based on their occupation, HCP should receive the HPV vaccine as recommended (see above).

6. Zoster vaccination.
- A single dose of zoster vaccine is recommended for adults age 60 years and older regardless of whether they report a prior episode of herpes zoster. Although the vaccine is licensed by the Food and Drug Administration (FDA) for use among and can be administered to persons age 50 years and older, ACIP recommends that vaccination begins at age 60 years.
- Persons age 60 years and older with chronic medical conditions may be vaccinated unless their condition constitutes a contraindication, such as pregnancy or severe immunodeficiency.
- Although zoster vaccination is not specifically recommended for HCP, they should receive the vaccine if they are in the recommended age group.

7. 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, or laboratory evidence of immunity to each of the three diseases. Documentation of provider-diagnosed disease is not considered acceptable evidence of immunity for measles, mumps or rubella.
- *Measles component:* A routine second dose of MMR vaccine, administered a minimum of 28 days after the first dose, is recommended for adults who 1) are students in postsecondary educational institutions; 2) work in a healthcare facility; or 3) 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 routine second dose of MMR vaccine, administered a minimum of 28 days after the first dose, is recommended for adults who 1) are students in postsecondary educational institutions; 2) work in a healthcare facility; or 3) 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 considered for revaccination 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 consider routinely vaccinating personnel with 2 doses of MMR vaccine at the appropriate interval for measles and mumps or 1 dose of MMR vaccine for rubella.

8. Pneumococcal polysaccharide (PPSV23) vaccination.
- Vaccinate all persons with the following indications:
  - all adults age 65 years and older;
  - adults younger than age 65 years with chronic lung disease (including chronic obstructive pulmonary disease, emphysema, and asthma); chronic cardiovascular diseases; diabetes mellitus; chronic renal failure; nephrotic syndrome; chronic liver disease (including cirrhosis); alcoholism; cochlear implants; cerebrospinal fluid leaks; immunocompromising conditions; and functional or anatomic asplenia (e.g., sickle cell disease and other hemoglobinopathies, congenital or acquired asplenia, splenic dysfunction, or splenectomy [if elective splenectomy is planned, vaccinate at least 2 weeks before surgery]);
  - residents of nursing homes or long-term care facilities; and
  - adults who smoke cigarettes.

(continued)

Footnotes (continued)

- Persons with immunocompromising conditions and other selected conditions are recommended to receive PCV13 and PPSV23 vaccines. See footnote #10 for information on timing of PCV13 and PPSV23 vaccinations.
- Persons with asymptomatic or symptomatic HIV infection should be vaccinated as soon as possible after their diagnosis.
- When cancer chemotherapy or other immunosuppressive therapy is being considered, the interval between vaccination and initiation of immunosuppressive therapy should be at least 2 weeks. Vaccination during chemotherapy or radiation therapy should be avoided.
- Routine use of PPSV23 is not recommended for American Indians/Alaska Natives or persons younger than age 65 years unless they have underlying medical conditions that are PPSV23 indications. However, public health authorities may consider recommending PPSV23 for American Indians/Alaska Natives who are living in areas where the risk for invasive pneumococcal disease is increased.
- When indicated, PPSV23 should be administered to patients who are uncertain of their vaccination status and there is no record of previous vaccination. When PCV13 is also indicated, a dose of PCV13 should be given first (see footnote #10).

9. Revaccination with PPSV23.

- One-time revaccination 5 years after the first dose 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.
- Persons who received 1 or 2 doses of PPSV23 before age 65 years for any indication should receive another dose of the vaccine at age 65 years or later if at least 5 years have passed since their previous dose.
- No further doses are needed for persons vaccinated with PPSV23 at or after age 65 years.

10. Pneumococcal conjugate 13-valent (PCV13) vaccination.

- Adults age 19 years or older with immunocompromising conditions (including chronic renal failure and nephrotic syndrome), functional or anatomic asplenia, CSF leaks or cochlear implants, and who have not previously received PCV13 or PPSV23 should receive a single dose of PCV13 followed by a dose of PPSV23 at least 8 weeks later.
- Adults age 19 years or older with the aforementioned conditions who have previously received 1 or more doses of PPSV23 should receive a dose of PCV13 1 or more years after the last PPSV23 dose was received. For those that require additional doses of PPSV23, the first such dose should be given no sooner than 8 weeks after PCV13 and at least 5 years since the most recent dose of PPSV23.
- When indicated, PCV13 should be administered to patients who are uncertain of their vaccination status history and there is no record of previous vaccination.
- Although PCV13 is licensed by the Food and Drug Administration (FDA) for use among and can be administered to persons age 50 years and older, ACIP recommends PCV13 for adults age 19 years and older with the specific medical conditions noted above.

11. Meningococcal vaccination.

- Administer 2 doses of meningococcal conjugate vaccine quadrivalent (MCV4) at least 2 months apart to adults with functional asplenia or persistent complement component deficiencies.
- HIV-infected persons who are vaccinated should also receive 2 doses.
- Administer a single dose of meningococcal vaccine to 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.
- First-year college students up through age 21 years who are living in residence halls should be vaccinated if they have not received a dose on or after their 16th birthday.
- 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).

12. Hepatitis A vaccination.

- Vaccinate any person seeking protection from hepatitis A virus (HAV) infection and persons with any of the following indications:
  - men who have sex with men and persons who use injection or noninjection illicit drugs;
  - persons working with HAV-infected primates or with HAV in a research laboratory setting;
  - persons with chronic liver disease and persons who receive clotting factor concentrates;
  - persons traveling to or working in countries that have high or intermediate endemicity of hepatitis A; and
  - unvaccinated persons who anticipate close personal contact (e.g., household or regular babysitting) with an international adoptee during the first 60 days after arrival in the United States from a country with high or intermediate endemicity (see footnote #1 for more information on travel recommendations).The first dose of the 2-dose hepatitis A vaccine series should be administered 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 schedule may be used, given on days 0, 7, and 21–30, followed by a booster dose at month 12.

13. Hepatitis B vaccination.

- Vaccinate persons with any of the following indications and any person seeking protection from hepatitis B virus (HBV) infection:
  - 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;
  - healthcare personnel and public-safety workers who are potentially exposed to blood or other infectious body fluids;
  - persons with diabetes younger than age 60 years as soon as feasible after diagnosis; persons with diabetes who are age 60 years or older at the discretion of the treating clinician based on increased need for assisted blood glucose monitoring in long-term care facilities, likelihood of acquiring hepatitis B infection, its complications, or chronic sequelae, and likelihood of immune response to vaccination;
  - persons with end-stage renal disease, including patients receiving hemodialysis; persons with HIV infection; and persons with chronic liver disease;
  - household contacts and sex partners of hepatitis B surface antigen positive persons; 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; and
  - 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.
- Administer 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 administered 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, administered on days 0, 7, and 21–30, 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) administered on a 3-dose schedule at 0, 1, and 6 months or 2 doses of 20 μg/mL (Engerix-B) administered simultaneously on a 4-dose schedule at 0, 1, 2, and 6 months.

14. 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 anatomic or functional asplenia if they have not previously received Hib vaccine.

15. 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.

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 or by telephone, 800-822-7967. Information on how to file a Vaccine Injury Compensation Program claim is available at 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 is also available at www.cdc.gov/vaccines or from the CDC-INFO Contact Center at 800-CDC-INFO (800-232-4636) in English and Spanish, 8:00 a.m. – 8:00 p.m. Eastern Time, Monday – Friday, excluding holidays.

Guide to Contraindications and Precautions to Commonly Used Vaccines in Adults[1,*,†]

Vaccine	Contraindications[1]	Precautions[1]
Influenza, inactivated injectable (IIV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose of any influenza vaccine or to a vaccine component, including egg protein	• Moderate or severe acute illness with or without fever • History of Guillain-Barré Syndrome (GBS) within 6 weeks of previous influenza vaccination • Persons who experience only hives with exposure to eggs should receive IIV with the additional safety precautions found in the 2012–13 ACIP influenza recommendations, pages 613–618 at www.cdc.gov/mmwr/pdf/wk/mm6132.pdf
Influenza, live attenuated (LAIV)[2]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose of any influenza vaccine or to a vaccine component, including egg protein • Conditions for which the ACIP recommends against use, but which are not contraindications in vaccine package insert: immune suppression, certain chronic medical conditions such as asthma, diabetes, heart or kidney disease, and pregnancy[3]	• Moderate or severe acute illness with or without fever • History of GBS within 6 weeks of previous influenza vaccination • 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
Tetanus, diphtheria, pertussis (Tdap) **Tetanus, diphtheria (Td)**	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component **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	• Moderate or severe acute illness with or without fever • GBS within 6 weeks after a previous dose of tetanus toxoid-containing vaccine • History of arthus-type hypersensitivity reactions after a previous dose of tetanus or diphtheria toxoid-containing vaccine; defer vaccination until at least 10 years have elapsed since the last tetanus-toxoid containing vaccine **For Tdap only:** Progressive or unstable neurologic disorder, uncontrolled seizures, or progressive encephalopathy until a treatment regimen has been established and the condition has stabilized
Varicella (Var)[2]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component • Known severe immunodeficiency (e.g., from hematologic and solid tumors, receipt of chemotherapy, primary or acquired immunodeficiency, or long-term immunosuppressive therapy[4] or patients with human immunodeficiency virus [HIV] infection who are severely immunocompromised) • Pregnancy	• Moderate or severe acute illness with or without fever • Recent (within 11 months) receipt of antibody-containing blood product (specific interval depends on product)[5] • Receipt of specific antivirals (i.e., acyclovir, famciclovir, or valacyclovir) 24 hours before vaccination; avoid use of these antiviral drugs for 14 days after vaccination
Human papillomavirus (HPV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component	• Moderate or severe acute illness with or without fever • Pregnancy
Zoster (HZV)	• Severe allergic reaction (e.g., anaphylaxis) to a vaccine component • Known severe immunodeficiency (e.g., from hematologic and solid tumors, receipt of chemotherapy, or long-term immunosuppressive therapy[4] or patients with HIV infection who are severely immunocompromised) • Pregnancy	• Moderate or severe acute illness with or without fever • Receipt of specific antivirals (i.e., acyclovir, famciclovir, or valacyclovir) 24 hours before vaccination; avoid use of these antiviral drugs for 14 days after vaccination
Measles, mumps, rubella (MMR)[2]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component • Known severe immunodeficiency (e.g., from hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, or long-term immunosuppressive therapy[4] or patients with HIV infection who are severely immunocompromised) • Pregnancy	• Moderate or severe acute illness with or without fever • Recent (within 11 months) receipt of antibody-containing blood product (specific interval depends on product)[5] • History of thrombocytopenia or thrombocytopenic purpura • Need for tuberculin skin testing[6]
Pneumococcal (PCV13 or PPSV23)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component (including to any vaccine containing diphtheria toxoid for PCV13)	• Moderate or severe acute illness with or without fever
Meningococcal: conjugate (MCV4), polysaccharide (MPSV4)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component	• Moderate or severe acute illness with or without fever
Hepatitis A (HepA)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component	• Moderate or severe acute illness with or without fever
Hepatitis B (HepB)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component	• Moderate or severe acute illness with or without fever

Footnotes

1. Vaccine package inserts and the full ACIP recommendations for these vaccines should be consulted for additional information on vaccine-related contraindications and precautions and for more information on vaccine excipients. 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. A contraindication increases the chance of a serious adverse reaction. Therefore, a vaccine should not be administered when a contraindication is present.
2. LAIV, MMR, and varicella vaccines can be administered on the same day. If not administered on the same day, these live vaccines should be separated by at least 28 days.
3. For a complete list of conditions that CDC considers to be reasons to avoid getting LAIV, see CDC. "Prevention and Control of Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP)," 2010. *MMWR* 2010;59(No. RR-8), available at www.cdc.gov/vaccines/pubs/acip-list.htm.
4. Immunosuppressive steroid dose is considered to be 2 or more weeks of daily receipt of 20 mg prednisone or equivalent. Vaccination should be deferred for at least 1 month after discontinuation of such therapy. Providers should consult ACIP recommendations for complete information on the use of specific live vaccines among persons on immune-suppressing medications or with immune suppression because of other reasons.
5. 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]." *MMWR* 2011;60(No. RR-2), available at www.cdc.gov/vaccines/pubs/acip-list.htm.
6. Measles vaccination might suppress tuberculin reactivity temporarily. Measles-containing vaccine may 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.

* 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 (ACIP)." *MMWR* 2011; 60(No. RR-2), p. 40–41, and from Atkinson W, Wolfe S, Hamborsky J, eds. Appendix A. *Epidemiology and Prevention of Vaccine-Preventable Diseases* (www.cdc.gov/vaccines/pubs/pinkbook/index.html).

† Regarding latex allergy: some types of prefilled syringes contain natural rubber latex or dry natural latex rubber. Consult the package insert for any vaccine given.

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Patient Schedules for All Adults and for High-risk Adults

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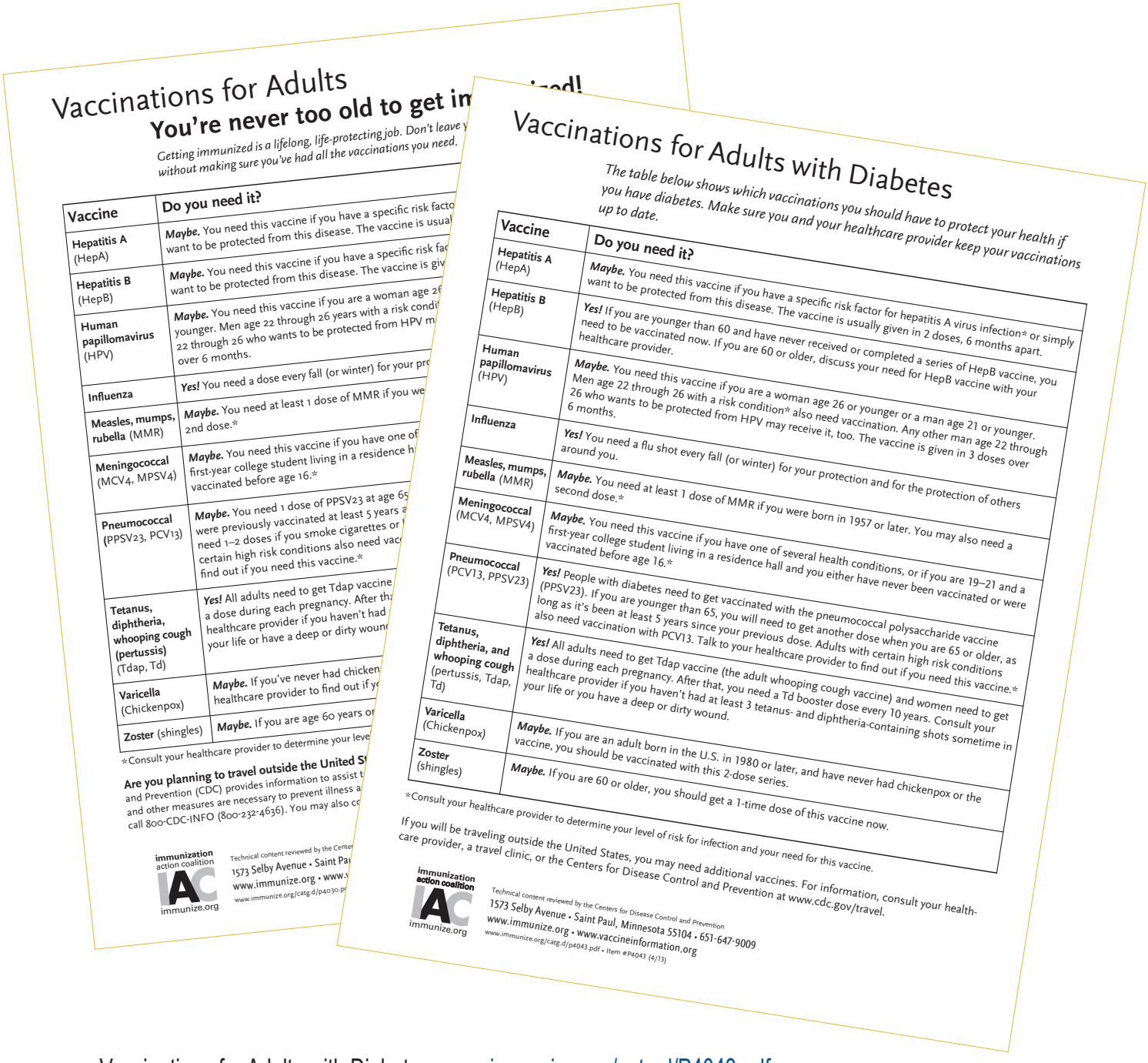

Vaccinations for Adults with Diabetes

The table below shows which vaccinations you should have to protect your health if you have diabetes. Make sure you and your healthcare provider keep your vaccinations up to date.

Vaccine	Do you need it?
Hepatitis A (HepA)	***Maybe.*** You need this vaccine if you have a specific risk factor for hepatitis A virus infection* or simply want to be protected from this disease. The vaccine is usually given in 2 doses, 6 months apart.
Hepatitis B (HepB)	***Yes!*** If you are younger than 60 and have never received or completed a series of HepB vaccine, you need to be vaccinated now. If you are 60 or older, discuss your need for HepB vaccine with your healthcare provider.
Human papillomavirus (HPV)	***Maybe.*** You need this vaccine if you are a woman age 26 or younger or a man age 21 or younger. Men age 22 through 26 with a risk condition* also need vaccination. Any other man age 22 through 26 who wants to be protected from HPV may receive it, too. The vaccine is given in 3 doses over 6 months.
Influenza	***Yes!*** You need a flu shot every fall (or winter) for your protection and for the protection of others around you.
Measles, mumps, rubella (MMR)	***Maybe.*** You need at least 1 dose of MMR if you were born in 1957 or later. You may also need a second dose.*
Meningococcal (MCV4, MPSV4)	***Maybe.*** You need this vaccine if you have one of several health conditions, or if you are 19–21 and a first-year college student living in a residence hall and you either have never been vaccinated or were vaccinated before age 16.*
Pneumococcal (PCV13, PPSV23)	***Yes!*** People with diabetes need to get vaccinated with the pneumococcal polysaccharide vaccine (PPSV23). If you are younger than 65, you will need to get another dose when you are 65 or older, as long as it's been at least 5 years since your previous dose. Adults with certain high risk conditions also need vaccination with PCV13. Talk to your healthcare provider to find out if you need this vaccine.*
Tetanus, diphtheria, and whooping cough (pertussis, Tdap, Td)	***Yes!*** All adults need to get Tdap vaccine (the adult whooping cough vaccine) and women need to get a dose during each pregnancy. After that, you need a Td booster dose every 10 years. Consult your healthcare provider if you haven't had at least 3 tetanus- and diphtheria-containing shots sometime in your life or you have a deep or dirty wound.
Varicella (Chickenpox)	***Maybe.*** If you are an adult born in the U.S. in 1980 or later, and have never had chickenpox or the vaccine, you should be vaccinated with this 2-dose series.
Zoster (shingles)	***Maybe.*** If you are 60 or older, you should get a 1-time dose of this vaccine now.

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

If you will be traveling outside the United States, you may need additional vaccines. For information, consult your healthcare provider, a travel clinic, or the Centers for Disease Control and Prevention at www.cdc.gov/travel.

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Vaccinations for Adults
You're never too old to get im...ed!

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

Vaccine	Do you need it?
Hepatitis A (HepA)	***Maybe.*** You need this vaccine if you have a specific risk facto... want to be protected from this disease. The vaccine is usual...
Hepatitis B (HepB)	***Maybe.*** You need this vaccine if you have a specific risk fac... want to be protected from this disease. The vaccine is giv...
Human papillomavirus (HPV)	***Maybe.*** You need this vaccine if you are a woman age 2... younger. Men age 22 through 26 years with a risk condi... 22 through 26 who wants to be protected from HPV m... over 6 months.
Influenza	***Yes!*** You need a dose every fall (or winter) for your pr...
Measles, mumps, rubella (MMR)	***Maybe.*** You need at least 1 dose of MMR if you we... 2nd dose.*
Meningococcal (MCV4, MPSV4)	***Maybe.*** You need this vaccine if you have one of... first-year college student living in a residence h... vaccinated before age 16.*
Pneumococcal (PPSV23, PCV13)	***Maybe.*** You need 1 dose of PPSV23 at age 65... were previously vaccinated at least 5 years a... need 1–2 doses if you smoke cigarettes or... certain high risk conditions also need vac... find out if you need this vaccine.*
Tetanus, diphtheria, whooping cough (pertussis) (Tdap, Td)	***Yes!*** All adults need to get Tdap vaccine... a dose during each pregnancy. After th... healthcare provider if you haven't had... your life or have a deep or dirty woun...
Varicella (Chickenpox)	***Maybe.*** If you've never had chicken... healthcare provider to find out if y...
Zoster (shingles)	***Maybe.*** If you are age 60 years or...

*Consult your healthcare provider to determine your leve...

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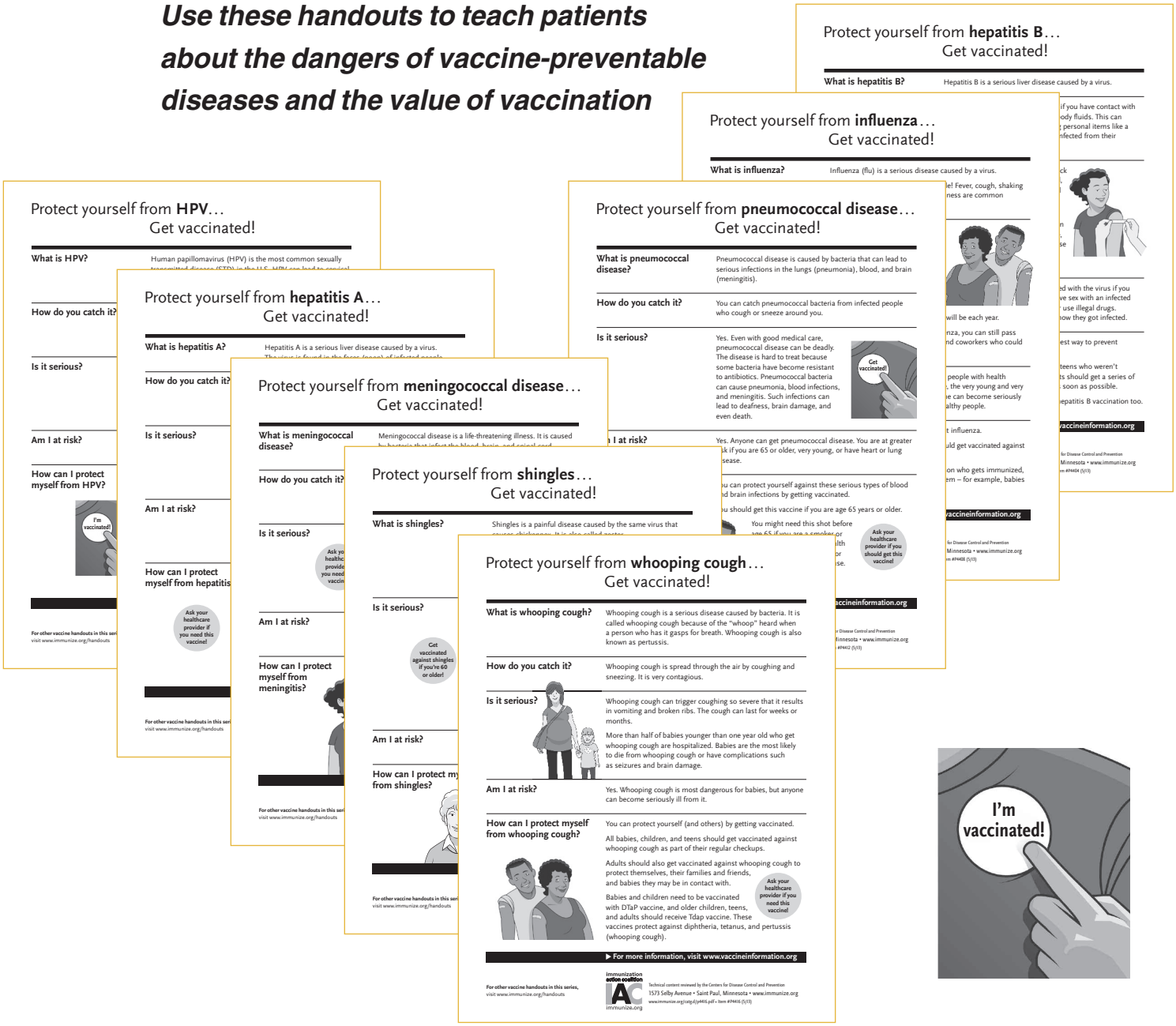

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