Adult Immunization Schedule, 2013

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for the ACIP Adult Immunization Working Group

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Thanks to LaDora Woods for her expert support of the ACIP Adult Working Group

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Background

- **Each year, ACIP updates the adult immunization schedule**
  - Reflects and summarizes existing ACIP policy
    - No new policy
  - Monthly meetings of work group and consultation with vaccine subject matter experts
  - Will update with approved policy changes from the October ACIP meeting if published in MMWR prior to publication of Adult Schedule

- **2012 adult schedule also approved by:**
  - American College of Physicians
  - American Academy of Family Physicians
  - American College of Obstetrics and Gynecology
  - American College of Nurse Midwives

Proposed changes to Adult Schedule for 2012-Charts

- Incorporated changes in Tdap recommendations
  - Vaccination of all adults, now including those 65 years and older recommended for routine vaccination
    - Removes hashed bar for 65 and older
- Added bar for PCV13 vaccine
- Removed purple bar for MMR for persons born before 1957 – now consistent with footnote. MMR vaccine not recommended routinely for persons born before 1957 as they are considered immune.
- Corrected PPSV23 bar – change from yellow to purple for MSM

Recommended Adult Immunization Schedule—United States - 2013

Note: These recommendations must be read with the footnotes that follow containing 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) Female [5,*]	3 doses					
Human papillomavirus (HPV) Male [5,*]	3 doses					
Zoster [6]					1 dose	
Measles, mumps, rubella (MMR) [7,*]	1 or 2 doses					
Pneumococcal ~~(polysaccharide)~~ [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

For all persons in this category who meet the age requirements and who lack documentation of vaccination or have no evidence of previous infection

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

No recommendation

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.

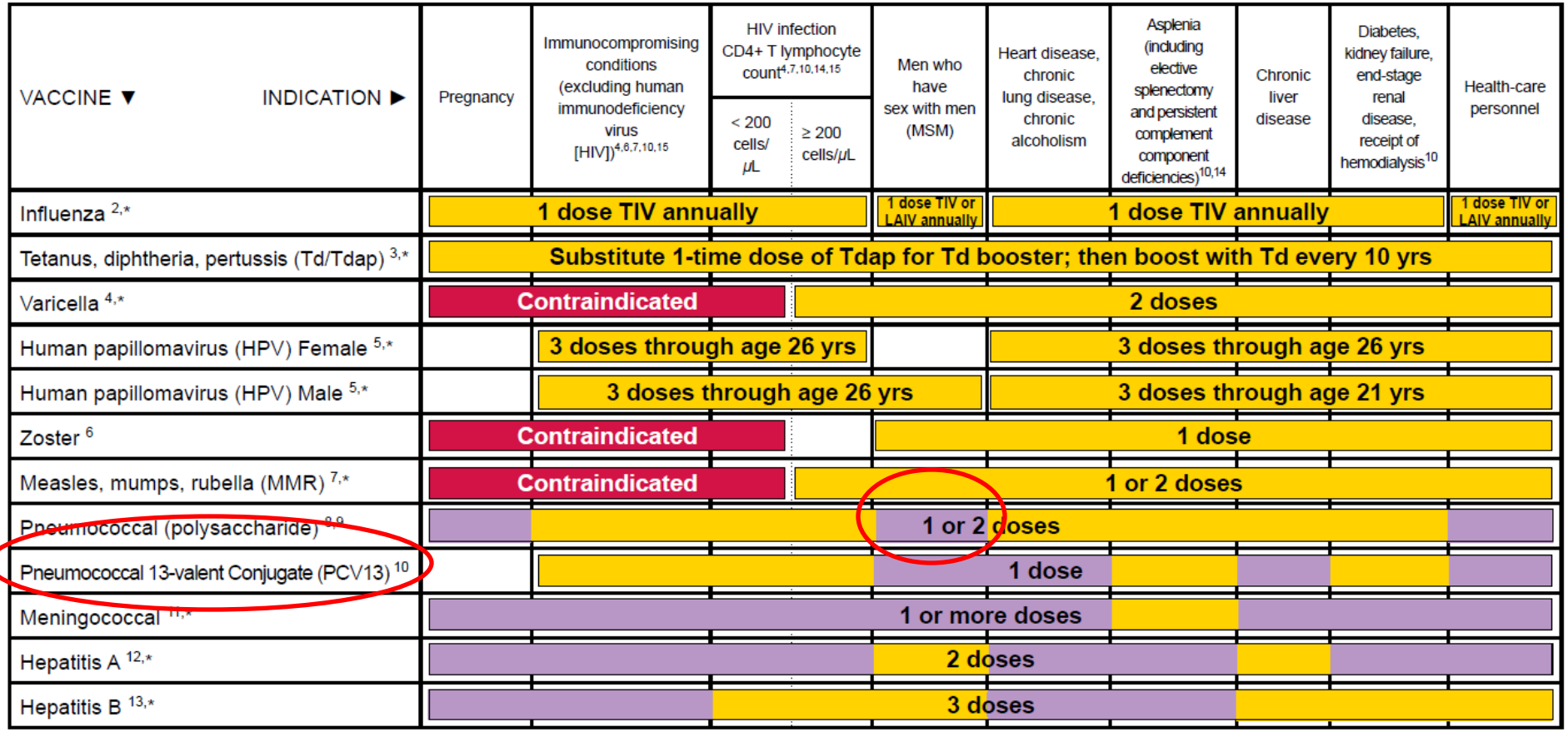
Information on how to file a Vaccine Injury Compensation Program claim is available at www.hrsa.gov/vaccinecompensation or by telephone, 800-338-2382. To file a claim for vaccine injury, contact the U.S. Court of Federal Claims, 717 Madison Place, N.W., Washington, D.C. 20005; telephone, 202-357-6400.

Additional information about the vaccines in this schedule, extent of available data, and contraindications for vaccination is also available at www.cdc.gov/vaccines 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.

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), the American Academy of Family Physicians (AAFP), the American College of Physicians (ACP), American College of Obstetricians and Gynecologists (ACOG) and American College of Nurse-Midwives (ACNM).

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



*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

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, 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.

Proposed Updates to Footnotes

- **Added information to footnote 1 pointing readers to general immunization recommendations regarding vaccination when vaccination history unknown**
  - Preliminary data from University of Colorado survey indicated this issue was one that general adult medical providers wanted more information on from the schedule.
- **Changed abbreviation of inactivated influenza vaccine from TIV (trivalent) to IIV in anticipation of marketing of QIV (quadrivalent) vaccine in the 2013-14 season**
  - LAIV vaccine already FDA approved as a QIV preparation
  - One or more quadrivalent inactivated influenza vaccine formulations may also be available next year.

*Handouts mistakenly included TIV in the last 2 bullets. Corrected on this slide set.

Proposed Updates to Footnotes, slide 2

- **Updated Td/Tdap footnote to reflect that all adults, including 65 years and older, recommended to receive Tdap vaccine**
  - Administer Tdap to all adults, including pregnant women (preferred >20 weeks gestation) 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, administer the first 2 doses at least 4 weeks apart and the third dose 6–12 months after the second.

Proposed Updates to Footnotes, slide 3

- Simplified wording in varicella vaccine footnote section on evidence of immunity
- Evidence of immunity to varicella in adults includes any of the following:
- ——documentation of 2 doses of varicella vaccine at least 4 weeks apart;
- ——U.S.-born before 1980 ~~(although for~~ except health-care personnel and pregnant women~~; birth before 1980 should not be considered evidence of immunity);~~
- ——, history of varicella based on diagnosis or verification of varicella disease by a health-care provider; ~~or (for a patient reporting a history of or having an atypical case, a mild case, or both, health-care providers should seek either an epidemiologic link to 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);~~
- ——history of herpes zoster based on diagnosis or verification of herpes zoster disease by a health-care provider; or
- ——laboratory evidence of immunity or laboratory confirmation of disease.

Proposed Updates to Footnotes, slide 4

- HPV – minor wording changes to decrease words
  - Added:
    - 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.
  - Deleted:
    - HPV vaccines are not live vaccines and can be administered to persons who are immunocompromised as a result of infection (including HIV infection), disease, or medications. Vaccine is recommended for immunocompromised persons through age 26 years who did not get any or all doses when they were younger. The immune response and vaccine efficacy might be less than that in immunocompetent persons. Men who have sex with men (MSM) might especially benefit from vaccination to prevent condyloma and anal cancer. HPV4 is recommended for MSM through age 26 years who did not get any or all doses when they were younger. Ideally, vaccine should be administered before potential exposure to HPV through sexual activity; however, persons who are sexually active should still be vaccinated consistent with age-based recommendations. HPV vaccine can be administered to persons with a history of genital warts, abnormal Papanicolaou test, or positive HPV DNA test.

Proposed Updates to Footnotes, slide 5

- PPSV
  - Clarified that all adults 65 and older recommended for PPSV and timing of doses for those possibly vaccinated earlier.
    - all adults age 65 years and older ~~without a history of PPSV vaccination;~~
  - Added language to indicate that vaccine should be administered if vaccination status unknown.
  - Added language to specify that chronic renal failure and nephrotic syndrome were included among high risk/immunocompromising conditions.
  - Inserted language on timing of vaccination with PPSV vs PCV13 and referred to PCV13 footnote

Proposed Updates to Footnotes, slide 6

- PPSV

  Added:

  - Persons with immunocompromising conditions and other selected conditions are recommended to receive PCV13 and PPSV vaccines. See footnote 10 for information on timing of PCV13 and PPSV vaccinations.
  - When indicated, PPSV 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).

Proposed Updates to Footnotes, slide 7

- PPSV revaccination
  - Clarified that persons <65 may have received 1 or 2 prior doses, but still were recommended to receive a dose of PPSV23 at age 65 or later if at least 5 years since prior PPSV23 dose (added language is underlined below)

Persons who received 1 or 2 doses of PPSV 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.

Proposed Updates to Footnotes, slide 8

- PCV 13
  - Added footnote to schedule based on provisional recommendations published in the MMWR http://www.cdc.gov/vaccines/recs/provisional/downloads/pcv13-adults-ic.pdf
  - Adults 19 years of age 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 PPSV should receive a single dose of PCV13 followed by a dose of PPSV at least 8 weeks later.
  - Adults 19 years of age or older with the aforementioned conditions who have previously received one or more doses of PPSV should receive a dose of PCV13 one or more years after the last PPSV dose was received. For those that require additional doses of PPSV, 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 PPSV.
  - 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 50 years and older, ACIP recommends PCV13 for adults 19 years and older with the specific medical conditions noted above.

Proposed Updates to Footnotes, slide 9

- **Minor verbage changes to hepatitis A and hepatitis B footnotes to use exact wording from full ACIP recommendations**
  - HAV indication: men who have sex with men and persons who use injection or noninjection illicit drugs;
  - HBV indication: household contacts and sex partners of hepatitis B surface antigen positive persons ~~with chronic HBV infection~~; clients and staff members of institutions for persons with developmental disabilities; HBV dosing information: 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.
- **No changes to Zoster, MMR, meningococcal or Hib vaccines footnotes**

Contraindications Table

- Included last year for first time.
- Updated Influenza Inactivated vaccine (IIV)

"Persons who experience only hives with exposure to eggs should receive IIV."

- For LAIV, clarifies which contraindications are based on package insert and which based on ACIP recommendations

"Conditions for which ACIP recommends against use, but which are not contraindications in vaccine package: immune suppression, certain chronic medical conditions such as asthma, diabetes, heart or kidney disease, and pregnancy."

Contraindications Table, slide 2

- Minor changes for Tdap (refers now to prior neurologic reactions to pertussis-containing vaccines, not just to Tdap)
- Clarifies language for zoster and varicella vaccines about use of antivirals in precautions and language now consistent with LAIV and antivirals language:

"Receipt of specific antivirals (i.e., acyclovir, famciclovir, or valacyclovir) 24 hours before vaccination; ~~if possible,~~ avoid use of these antiviral drugs for 14 days after vaccination."

- Added PCV13 to table
- Deleted "pregnancy" as a precaution for hepatitis A
  - Consistent with hepatitis B vaccine;
  - ACIP recommends HAV use during pregnancy when benefits outweigh potential risk;
  - Pregnancy not listed as a contraindication or precaution for package insert. Havrix package insert:

    "Animal reproduction studies have not been conducted with Havrix. It is also not known whether Havrix can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Havrix should be given to a pregnant woman only if clearly needed."

Next Steps

- Revise based on ACIP meeting
- CDC clearance, including re-review by vaccine specific SMEs
- Submit to MMWR in early December
- Submit for approval by:
  - American Academy of Family Physicians (AAFP)
  - American College of Physicians (ACP)
  - American College of Obstetricians and Gynecologists (ACOG)
  - American College of Nurse Midwives (ACNM)
- Publication in MMWR anticipated in early February 2013 along with publication of 2011 NHIS estimates of non-influenza vaccine coverage in adults
- Publication in Annals of Internal Medicine same week as MMWR

Discussion and Vote

For more information please contact Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333
Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov Web: www.cdc.gov

Footnotes 2013

1. Additional information

- **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.**
- **Advisory Committee on Immunization Practices (ACIP) vaccine recommendations and additional information for specific vaccines are available at: http://www.cdc.gov/vaccines/pubs/acip-list.htm.**
- **Information on travel vaccine requirements and recommendations (e.g., for hepatitis A and B, meningococcal, and other vaccines) available at http://wwwnc.cdc.gov/travel/page/vaccinations.htm.**

Footnotes 2013

2. Influenza vaccination*

- Annual vaccination against influenza is recommended for all persons 6 months of age and older.
- Persons 6 months of age and older, including pregnant women, can receive the inactivated influenza vaccine (IIV).
- Healthy, nonpregnant adults younger than age 50 years without high-risk medical conditions can receive either intranasally administered live, attenuated influenza vaccine (LAIV) (FluMist), or IIV. Health-care personnel who care for severely immunocompromised persons (i.e., those who require care in a protected environment) should receive IIV rather than LAIV. Other persons should receive IIV.
- The intramuscular or intradermal administered IIV are options for adults aged 18–64 years.
- Adults aged 65 years and older can receive the standard dose IIV or the high-dose IIV (Fluzone High-Dose).

*Handouts still included TIV in the last 2 bullets. Corrected on this slide.

Footnotes 2013

3. Tetanus, diphtheria, and acellular pertussis (Td/Tdap) vaccination

- Administer Tdap to all adults, including pregnant women (preferred >20 weeks gestation), 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, administer 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 ACIP statement for recommendations for administering Td/Tdap as prophylaxis in wound management (See footnote 1).

Footnotes

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 have close contact with persons at high risk for severe disease (e.g., health-care personnel and family contacts of persons with immunocompromising conditions) or 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).
- 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 administered 4–8 weeks after the first dose.

Footnotes

4. Varicella vaccination, continued

•Evidence of immunity to varicella in adults includes any of the following:

- documentation of 2 doses of varicella vaccine at least 4 weeks apart;
- U.S.-born before 1980 except health-care personnel and pregnant women;
- history of varicella based on diagnosis or verification of varicella disease by a health-care provider;
- history of herpes zoster based on diagnosis or verification of herpes zoster disease by a health-care provider; or
- laboratory evidence of immunity or laboratory confirmation of disease.

Footnotes

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 11 or 12 years of age, and for those 13 through 26 years of age, if not previously vaccinated.
- For males, HPV4 is recommended in a 3-dose series for routine vaccination at 11 or 12 years of age, and for those 13 through 21 years of age, if not previously vaccinated. Males 22 through 26 years of age 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.

Footnotes

5. Human papillomavirus (HPV) vaccination, continued

- HPV vaccines are not live vaccines and can be administered to persons who are immunocompromised as a result of infection (including HIV infection), disease, or medications. Vaccination is recommended for immunocompromised persons through age 26 years who did not get any or all doses when they were younger. The immune response and vaccine efficacy might be less than that in immunocompetent persons.
- A complete series for either HPV4 or HPV2 consists of 3 doses. The second dose should be administered 1–2 months after the first dose; the third dose should be administered 6 months after the first dose (at least 24 weeks after the first dose).
- Although HPV vaccination is not specifically recommended for health-care personnel (HCP) based on their occupation, HCP should receive the HPV vaccine as recommended (see above).

Footnotes

6. Zoster vaccination – no change
7. MMR vaccination – no change

Footnotes

- 8. Pneumococcal polysaccharide (PPSV) vaccination

• Vaccinate all persons with the following indications:

- all adults age 65 years and older ~~without a history of PPSV vaccination~~;

- adults younger than 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.

Footnotes

8. Pneumococcal polysaccharide (PPSV) vaccination

- Persons with immunocompromising conditions and other selected conditions are recommended to receive PCV13 and PPSV vaccines. See footnote 10 for information on timing of PCV13 and PPSV 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.

Footnotes

8. Pneumococcal polysaccharide (PPSV) vaccination

- Routine use of PPSV is not recommended for American Indians/Alaska Natives or other persons younger than 65 years of age unless they have underlying medical conditions that are PPSV indications. However, public health authorities may consider recommending PPSV for American Indians/Alaska Natives who are living in areas where the risk for invasive pneumococcal disease is increased.
- When indicated, PPSV 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).

Footnote

- 9. Revaccination with PPSV

- One-time revaccination 5 years after the first dose is recommended for persons 19 through 64 years of age 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 PPSV 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 PPSV at or after age 65 years.

Footnote

10. Pneumococcal conjugate 13 valent vaccination (PCV13)

- Adults 19 years of age 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 PPSV should receive a single dose of PCV13 followed by a dose of PPSV at least 8 weeks later.
- Adults 19 years of age or older with the aforementioned conditions who have previously received one or more doses of PPSV should receive a dose of PCV13 one or more years after the last PPSV dose was received. For those that require additional doses of PPSV, 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 PPSV.
- 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 50 years and older, ACIP recommends PCV13 for adults 19 years and older with the specific medical conditions noted above.

Footnotes

- 11. Meningococcal vaccination – no change
- 12. Hepatitis A vaccination
  - "men who have sex with men and persons who use injection or noninjection illicit drugs
- 13. Hepatitis B vaccination
  - "household contacts and sex partners of hepatitis B surface antigen positive persons ~~with chronic HBV infection~~; clients and staff members of institutions for persons with developmental disabilities; and international travelers to countries with high or intermediate prevalence of chronic HBV infection; and…
  - •"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.

TABLE. Contraindications and precautions to commonly used vaccines in adults[1*†]

Vaccine	Contraindications	Precautions
Influenza, injectable trivalent (IIV)	Severe allergic reaction (e.g., anaphylaxis) after 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-Barre syndrome (GBS) within 6 weeks of previous influenza vaccination. **Persons who experience only hives with exposure to eggs should receive IIV.**
Influenza, live attenuated (LAIV)[2]	Severe allergic reaction (e.g., anaphylaxis) after previous dose of any influenza vaccine or to a vaccine component, including egg protein. **Conditions for which 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 pertussis-containing vaccines: Encephalopathy (e.g., coma, decreased level of consciousness, or prolonged seizures) not attributable to another identifiable cause within 7 days of administration of a previous dose of Tdap or diphtheria and tetanus toxoids and pertussis (DTP) or diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine.	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 diptheria toxoid–containing vaccine; defer vaccination until at least 10 years have elapsed since the last tetanus toxoid–containing vaccine. For pertussis-containing vaccines: Progressive or unstable neurologic disorder, uncontrolled seizures, or progressive encephalopathy until a treatment regimen has been established and the condition has stabilized.
Varicella[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 human immunodeficiency virus (HIV) infection who are severely immunocompromised). Pregnancy.	Recent (≤11 months) receipt of antibody-containing blood product (specific interval depends on product).[5,6] 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.**
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.

TABLE. Contraindications and precautions to commonly used vaccines in adults[1*†]

Vaccine	Contraindications	Precautions
Zoster	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).[5,6] History of thrombocytopenia or thrombocytopenic purpura. Need for tuberculin skin testing.[7]
Pneumococcal polysaccharide (PPSV)	Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component.	Moderate or severe acute illness with or without fever.
Pneumococcal conjugate (PCV13)	Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component, including to any vaccine containing diphtheria toxoid.	Moderate or severe acute illness with or without fever.
Meningococcal, conjugate, (MCV4); meningococcal, 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. ~~**Pregnancy**~~	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.

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 is a condition in a recipient that 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. 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 http://www.cdc.gov/vaccines/pubs/acip-list.htm.
4. Immunosuppressive steroid dose is considered to be ≥2 weeks of daily receipt of 20 mg or 2 mg/kg body weight of prednisone or equivalent. Vaccination should be deferred for at least 1 month after discontinuation of such therapy.
5. Vaccine should be deferred for the appropriate interval if replacement immune globulin products are being administered.
6. See CDC. General recommendations on immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2011;60(No. RR-2). Available at http://www.cdc.gov/vaccines/pubs/acip-list.htm.
7. 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 ≥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 CDC. Table 6. Contraindications and precautions to commonly used vaccines. General recommendations on immunization: recommendations of the Advisory Committee on Immunization Practices. MMWR 2011;60(No. RR-2):40-41 and from Atkinson W, Wolfe S, Hamborsky J, eds. Appendix A. Epidemiology and prevention of vaccine preventable diseases. 12th ed. Washington, DC: Public Health Foundation, 2011. Available at http://www.cdc.gov/vaccines/pubs/pinkbook/index.html.
† Regarding latex allergy. Consult the package insert for any vaccine administered.