No More Excuses
You Need a Flu Vaccine

“Oh, the flu isn’t so bad...right?”

Wrong. The flu (influenza) is a contagious disease which affects the lungs and can lead to serious illness, including pneumonia. While pregnant women, young children, older people, and people with certain chronic medical conditions like asthma, diabetes, and heart disease are at increased risk of serious flu-related complications, even healthy people can get sick enough to miss work or school for a significant amount of time or even be hospitalized.

“I’m Healthy
I don’t need a flu vaccine.”

Anyone can become sick with the flu and experience serious complications. Older people, young children, pregnant women and people with medical conditions like asthma, diabetes, heart disease, or kidney disease are at especially high risk from the flu, but kids, teens, and adults who are active and healthy also can get the flu and become very ill from it. Flu viruses are unpredictable, and every season puts you at risk. Besides, you might be around someone who’s at high risk from the flu...a baby...your grandparents, or even a friend. You don’t want to be the one spreading flu, do you?

“Wait a minute
I got a flu vaccine once and still got sick.”

Even if you got a flu vaccine, there are still reasons why you might have felt flu-like symptoms:

- You may have been exposed to a non-flu virus before or after you got vaccinated. The flu vaccine can only prevent illnesses caused by flu viruses. It cannot protect against non-flu viruses.
- Or you might have been exposed to flu after you got vaccinated but before the vaccine took effect. It takes about two weeks after you receive the vaccine for your body to build protection against the flu.
- Or you may have been exposed to an influenza virus that was very different from the viruses included in that year’s vaccine. The flu vaccine protects against the three influenza viruses that research indicates will cause the most disease during the upcoming season, but there can be other flu viruses circulating.

“But what if the flu vaccine makes me sick? I can’t risk missing work or school.”

The flu vaccine cannot give you the flu. The most common side effects from a flu shot are a sore arm and maybe a low fever or achiness. The nasal-spray flu vaccine might cause congestion, runny nose, sore throat, or cough. If you do experience them at all, these side effects are mild and short-lived. And that’s much better than getting sick and missing several days of school or work or possibly getting a very severe illness and needing to go to the hospital.

“Wait a minute
I got a flu vaccine once and still got sick.”

Even if you got a flu vaccine, there are still reasons why you might have felt flu-like symptoms:

- You may have been exposed to a non-flu virus before or after you got vaccinated. The flu vaccine can only prevent illnesses caused by flu viruses. It cannot protect against non-flu viruses.
- Or you might have been exposed to flu after you got vaccinated but before the vaccine took effect. It takes about two weeks after you receive the vaccine for your body to build protection against the flu.
- Or you may have been exposed to an influenza virus that was very different from the viruses included in that year’s vaccine. The flu vaccine protects against the three influenza viruses that research indicates will cause the most disease during the upcoming season, but there can be other flu viruses circulating.
Flu seasons are unpredictable. They can begin early in the fall and last late into the spring. As long as flu season isn’t over, it’s not too late to get vaccinated, even during the winter. Getting a flu vaccine is the best way to protect yourself and your family. If you miss getting your flu vaccine in the fall, make it a New Year’s resolution—flu season doesn’t usually peak until January or February and can last until May. The flu vaccine offers protection for you all season long.

Your body’s level of immunity from a vaccine received last season is expected to have declined. You may not have enough immunity to be protected from getting sick this season. You should get vaccinated again to protect yourself against the three viruses that research suggests are likely to circulate again this season.

Flu vaccines have been given for more than 50 years and they have a very good safety track record. Flu vaccines are made the same way each year and their safety is closely monitored by the Centers for Disease Control and Prevention and the Food and Drug Administration. Hundreds of millions of flu vaccines have been given safely.

For more information, visit
http://www.flu.gov
http://www.cdc.gov/flu
or call
800-CDC-INFO
If you work in a health care setting...

Get Your Flu Vaccine!

Protect Yourself
Getting a flu vaccine is your best protection against the flu.

Protect Your Patients
Flu can be life-threatening.

Avoid Missing Work
If you get sick, others may need to cover your duties.

Get your flu vaccine at:
Figure 1. Recommended adult immunization schedule, by vaccine and age group

<table>
<thead>
<tr>
<th>VACCINE</th>
<th>AGE GROUP</th>
<th>19-21 years</th>
<th>22-26 years</th>
<th>27-49 years</th>
<th>50-59 years</th>
<th>60-64 years</th>
<th>≥ 65 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza</td>
<td>1 dose annually</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tetanus, diphtheria, pertussis (Td/Tdap)</td>
<td>1 dose Tdap each pregnancy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Varicella</td>
<td>2 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human papillomavirus (HPV) Female</td>
<td>3 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human papillomavirus (HPV) Male</td>
<td>3 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zoster</td>
<td>1 dose</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measles, mumps, rubella (MMR)</td>
<td>1 or 2 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumococcal 13-valent conjugate (PCV13)</td>
<td>1-time dose</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumococcal polysaccharide (PPSV23)</td>
<td>1 or 2 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meningococcal</td>
<td>1 or more doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>2 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>3 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haemophilus influenzae type b (Hib)</td>
<td>1 or 3 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Covered by the Vaccine Injury Compensation Program

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.

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

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

<table>
<thead>
<tr>
<th>VACCINE</th>
<th>INDICATION</th>
<th>Pregnancy</th>
<th>Immuno-compromising conditions (excluding human immunodeficiency virus [HIV])</th>
<th>HIV infection (CD4+ T lymphocyte count ≤ HIV)</th>
<th>Men who have sex with men (MSM)</th>
<th>Kidney failure, end-stage renal disease, receipt of hemodialysis</th>
<th>Heart disease, chronic lung disease, chronic alcoholism</th>
<th>Asplenia (including elective splenectomy and persistent complement component deficiencies)</th>
<th>Chronic liver disease</th>
<th>Diabetes</th>
<th>Healthcare personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza</td>
<td>1 dose IIV annually</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tetanus, diphtheria, pertussis (Td/Tdap)</td>
<td>1 dose IIV or IIV annually</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Varicella</td>
<td>Contraindicated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human papillomavirus (HPV) Female</td>
<td>3 doses through age 26 yrs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human papillomavirus (HPV) Male</td>
<td>3 doses through age 26 yrs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zoster</td>
<td>Contraindicated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measles, mumps, rubella (MMR)</td>
<td>1 dose</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumococcal 13-valent conjugate (PCV13)</td>
<td>Contraindicated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumococcal polysaccharide (PPSV23)</td>
<td>1 or 2 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meningococcal</td>
<td>1 or more doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>2 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>3 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haemophilus influenzae type b (Hib)</td>
<td>1 or 3 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*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 recommended for adults 19 years and older, as of February 1, 2015. 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/hcp/acip-recs/index.html). 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.
Footnotes—Recommended Immunization Schedule for Adults Aged 19 Years or Older: United States, 2015

1. Additional information
- Additional guidance for the use of the vaccines described in this supplement is available at www.cdc.gov/vaccines/hcp/acip-recs/index.html.
- 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.
- Additional 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/destinations/list.
- Additional information and resources regarding vaccination of pregnant women can be found at www.cdc.gov/vaccines/adults/rec-vac/pregnant.html.

2. Influenza vaccination
- Annual vaccination against influenza is recommended for all persons aged 6 months of age or older.
- Persons aged 6 months or older, including pregnant women and persons with hiv-Only allergy to eggs can receive the inactivated influenza vaccine (IIV). An age-appropriate IIV formulation should be used.
- Adults aged 18 years or older can receive the recombinant influenza vaccine (RIV) (Fluarix, Fluarix-Ad) if they do not contain any egg protein and can be given to age-appropriate persons with egg allergy of any severity.
- Healthy, nonpregnant persons aged 2 to 49 years without high-risk medical conditions can receive either intranasally administered live, attenuated influenza vaccine (LAIV) (Fluzone) or IIV.
- Health care personnel who care for severely immunocompromised persons who require care in a protected environment should receive IV or RIV; health care personnel who receive LAIV should avoid providing care for severely immunosuppressed persons for 7 days after vaccination.
- The intramuscularly or intradermally administered IIV are options for adults aged 18 through 64 years.
- Adults aged 65 years or older can receive the standard-dose IIV or the high-dose IIV (Fluzone High-Dose).
- A list of currently available influenza vaccines can be found at www.cdc.gov/flu/protext/vaccine/vaccines.htm.

3. Tetanus, diphtheria, and acellular pertussis (Td/Tdap) vaccination
- Administration of 2 doses of Tdap vaccine to pregnant women during each pregnancy (preferably during 27 to 36 weeks’ gestation) regardless of interval since prior Td or Tdap vaccination.
- Persons aged 11 years or older who have not received Tdap vaccine or for whom vaccine status is unknown should receive a dose of Tdap followed by tetanus and diphtheria toxoids (Td) booster doses every 10 years thereafter. Tdap can be administered regardless of interval since the most recent tetanus or diphtheria-toxoid-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 to 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).

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.
- Vaccination should be emphasized for 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 health care facility. The second dose should be administered 4 to 8 weeks after the first dose.
- 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.

5. Human papillomavirus (HPV) vaccination
- Two vaccines are licensed for use in males. 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 aged 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 aged 13 through 21 years, if not previously vaccinated.
- Males aged 18 through 26 years may be vaccinated.
- HPV4 is recommended for men who have sex with men through age 26 years for those 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 for those 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 administered 4 to 8 weeks (minimum interval of 4 weeks) after the first dose; the third dose should be administered 10 to 16 weeks after the first dose and 6 weeks after the second dose (minimum interval of at least 12 weeks).
- 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 or termination of pregnancy.

6. Zoster vaccination
- A single dose of zoster vaccine is recommended for adults aged 60 years or older regardless of whether they report a prior episode of herpes zoster. Although the vaccine is licensed by the U.S. Food and Drug Administration for use among and can be administered to persons aged 50 years or older, ACIP recommends that vaccination begin at age 60 years.
- Persons aged 60 years or older with chronic medical conditions may be vaccinated unless their condition constitutes a contraindication, such as pregnancy or severe immunodeficiency.

7. Measles, mumps, rubella (MMR) vaccination
- Adults born before 1957 are generally 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.
- Mumps component:
  - A routine second dose of MMR vaccine, administered a minimum of 28 days after the first dose, is recommended for adults who:
    - are students in postsecondary educational institutions,
    - work in a health care facility, or
    - plan to travel internationally.
  - Persons who received inactivated (killed) measles vaccine or mumps vaccine of unknown type during 1963–1967 should be revaccinated with 2 doses of MMR vaccine.
- Rubella component:
  - For women of childbearing age, regardless of birth year, rubella immunity should be determined. If there is no evidence of immunity, women who are not pregnant should be vaccinated. Pregnant women who do not have evidence of immunity should receive MMR vaccine upon completion or termination of pregnancy and be discharged from the health care facility.

8. Pneumococcal (13-valent pneumococcal conjugate vaccine [PCV13] and 23-valent pneumococcal polysaccharide vaccine [PPSV23]) vaccination
- General information
  - When indicated, only a single dose of PCV13 is recommended for adults. No additional dose of PPSV23 is indicated for adults vaccinated with PPSV23 at or after age 65 years.
  - When both PCV13 and PPSV23 are indicated, PCV13 should be administered first; PCV13 and PPSV23 should not be administered during the same visit.
  - When indicated, PCV13 and PPSV23 should be administered to adults whose pneumococcal vaccination history is incomplete or unknown.
- Adults aged 65 years or older who
  - Have not received PCV13 or PPSV23: Administer PCV13 followed by PPSV23 in 6 to 12 months.
  - Have not received PCV13 but have received a dose of PPSV23 at age 65 years or older: Administer PCV13 at least 1 year after the dose of PPSV23 received at age 65 years or older.
Footnotes—Recommended Immunization Schedule for Adults Aged 19 Years or Older: United States, 2015

8. Pneumococcal vaccination (continued)

Have not received PCV13 but have received 1 or more doses of PPSV23 before age 65: Administer PCV13 at least 1 year after the most recent dose of PCV13; administer a dose of PPSV23 6 to 12 months after PCV13, or as soon as possible if this time window has passed, and at least 5 years after the most recent dose of PPSV23.

— Have received PCV13 but not PCV13 before age 65: Administer PPSV23 6 to 12 months after PCV13, or as soon as possible if this time window has passed.

— Have received PCV13 and 1 or more doses of PPSV23 before age 65: Administer PPSV23 6 to 12 months after PCV13, or as soon as possible if this time window has passed, and at least 5 years after the most recent dose of PPSV23.

• Adults aged 19 through 64 years with immunocompromising conditions or anatomical or functional asplenia (defined below) who

— Have not received PCV13 or PPSV23: Administer PCV13 followed by PPSV23 at least 8 weeks after PCV13; administer a second dose of PCV13 at least 5 years after the first dose of PCV13.

— Have not received PCV13 but have received 1 dose of PPSV23: Administer PCV13 at least 1 year after the most recent dose of PPSV23, administer a second dose of PPSV23 at least 8 weeks after PCV13 and at least 5 years after the first dose of PPSV23.

— Have not received PCV13 but have received 2 doses of PPSV23: Administer PCV13 at least 1 year after the most recent dose of PPSV23.

— Have received PCV13 but not PPSV23: Administer PPSV23 at least 8 weeks after PCV13; administer a second dose of PPSV23 at least 5 years after the first dose of PPSV23.

— Have received PCV13 and 1 dose of PPSV23: Administer a second dose of PPSV23 at least 5 years after the first dose of PPSV23.

• Adults aged 19 through 64 years with cerebrospinal fluid leaks or cochlear implants: Administer PCV13 followed by PPSV23 at least 8 weeks after PCV13.

• Adults aged 19 through 64 years with chronic heart disease (including congenital heart failure and cardiomyopathies, excluding hypertension), chronic lung disease (including chronic obstructive lung disease, emphysema, and asthma), chronic liver disease (including cirrhosis), alcoholism, or diabetes mellitus: Administer PPSV23.

• Adults aged 19 through 64 years who smoke cigarettes or reside in nursing home or long-term care facilities: Administer PPSV23.

• Routine pneumococcal vaccination is not recommended for American Indian/Alaska Native or other adults unless they have the indications as above; however, public health authorities may consider recommending the use of pneumococcal vaccines for American Indian/Alaska Native or other adults who live in areas with increased risk for invasive pneumococcal disease.

• Immunocompromising conditions that are indications for pneumococcal vaccination are: Congenital or acquired immune deficiency (including B- or T-lymphocyte deficiency, complement deficiencies, and phagocytic disorders excluding chronic granulomatous disease), HIV infection, chronic renal failure, nephrotic syndrome, leukemia, lymphoma, Hodgkin disease, generalized malignancy, multiple myeloma, solid organ transplant, and iatrogenic immunosuppression (including long-term systemic corticosteroids and radiation therapy).

• Anatomical or functional asplenia that are indications for pneumococcal vaccination are: Sickle cell disease and other hemoglobinopathies, congenital or acquired asplenia, splenic dysfunction, and splenectomy. Administer pneumococcal vaccines at least 2 weeks before immunosuppressive therapy or an elective splenectomy, and as soon as possible to adults who are newly diagnosed with asymptomatic or symptomatic HIV infection.

9. Meningococcal vaccination

• Administer 2 doses of quadrivalent meningococcal conjugate vaccine (MenACWY [Menactra, Menevo]) at least 2 months apart to adults of all ages with anatomical or functional asplenia or persistent complement component deficiencies. HIV infection is not an indication for routine vaccination with MenACWY. If an HIV-infected person of any age is vaccinated, 2 doses of MenACWY should be administered at least 2 months apart.

• Administer a single dose of meningococcal vaccine to microbiologists routinely exposed to isolates of Neisseria meningitidis, military recruits, persons at risk during an outbreak attributable to a vaccine serogroup, 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.

• MenACWY is preferred for adults with any of the preceding indications who are aged 55 years or younger as well as for adults aged 56 years or older who a) were vaccinated previously with MenACWY and are recommended for revaccination, or b) for whom multiple doses are anticipated. Meningococcal polysaccharide vaccine (MPSV4 [Menomune]) is preferred for adults aged 56 years or older who have not received MenACWY previously and who require a single dose only (e.g., travelers).

• Revaccination with MenACWY every 5 years is recommended for adults previously vaccinated with MenACWY or MPSV4 who remain at increased risk for infection (e.g., adults with anatomical or functional asplenia, persistent complement component deficiencies, or microbiologists).

10. Hepatitis A vaccination

• Vaccinate any person seeking protection from hepatitis A virus (HAV) infection

— without underlying conditions or without a history of HAV infection

— among persons with underlying conditions or with a history of HAV infection as directed by 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 first dose.

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

11. Hepatitis B vaccination

• Vaccinate persons with any of the following indications and any person seeking protection from hepatitis B virus (HBV) infection:

— sexually active persons who are not in a long-term, mutually monogamous relationship (e.g., persons with more than 1 sex partner during the previous 6 months); persons seeking evaluation or treatment for a sexually transmitted disease (STD); current or recent injection drug users; and men who have sex with men;

— health care personnel and public safety workers who are potentially exposed to blood or other body fluids

— persons with diabetes who are 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 the likelihood of acquiring HBV infection, including the risk posed by an increased need for assisted blood glucose monitoring in long-term care facilities, the likelihood of experiencing chronic sequelae if infected with HBV, and the 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;

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

• 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 at least 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 to 30 followed by a booster dose at month 12 may be used.

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

12. Haemophilus influenzae type b (Hib) vaccination

• One dose of Hib vaccine should be administered to persons who have undergone elective splenectomy or who are undergoing elective splenectomy if they have not previously received Hib vaccine. Hib vaccine should be administered between 2 and 12 months after a successful transfusion, regardless of vaccination history; at least 4 weeks should separate doses.

• Hib vaccine is not recommended for adults with HIV infection since their risk for Hib infection is low.

13. Immunocompromising conditions

• Inactivated vaccines generally are acceptable (e.g., pneumococcal, meningococcal, and 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/hcp/acip-recs/index.htm.
Guess who needs a Flu Vaccine?

Everyone 6 months of age and older needs a flu vaccine every year. Ask us about getting one today!

Todos las personas mayores de 6 meses de edad necesitan vacunarse contra la influencia (la gripe) todos los años. ¡Pregúntenos por la vacuna hoy mismo!
pregnant women are at risk for serious complications from flu

- Severe illness
- Hospitalization
- Pneumonia
- Preterm and emergency cesarean delivery
- Death

Ask your doctor about the flu vaccine today!

Vaccination can protect both pregnant mothers and their babies from flu and flu-related complications.

LEARN MORE AT www.cdc.gov/flu or 1-800-CDC-INFO
FLU PREVENTION TIPS

Get vaccinated
Wash hands often
Cover coughs & sneezes
Stay home when sick

Flu vaccine is recommended for everyone six months of age and older every year.

PROTECT YOURSELF AND THOSE YOU LOVE AGAINST FLU

For more information, visit GetImmunizedCA.org
¿Quién necesita la vacuna contra la gripe?

Millones de californianos están en riesgo de contraer la gripe regular (influenza estacional) este año.

Siga las precauciones arriba y vacúnese. Reduzca su riesgo de contraer la gripe y enfermar a su familia, amigos y colegas.

¡VACÚNENSE CONTRA LA GRIPE HOY MISMO!

Para más información, visite VacunasyMiSalud.org

¿Quién necesita la vacuna contra la gripe?

Todas las personas de 6 meses de edad y mayores deben vacunarse contra la gripe.

La vacuna está disponible como inyección o espray nasal.
<table>
<thead>
<tr>
<th>Age</th>
<th>Manufacturer</th>
<th>Brand Name</th>
<th>Presentation</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>6–35 months old</td>
<td>Sanofi Pasteur, Inc.</td>
<td>Fluzone® Quadrivalent</td>
<td>0.25 mL single-dose syringe</td>
<td>Quadrivalent</td>
</tr>
<tr>
<td>Healthy Persons 2–49 years old</td>
<td>MedImmune Vaccines, Inc.</td>
<td>FluMist® Quadrivalent</td>
<td>0.2 mL single-dose nasal sprayer</td>
<td>ACIP does not recommend FluMist® be used in 2016-17</td>
</tr>
<tr>
<td>36 months &amp; Older</td>
<td>GlaxoSmithKline Biologics</td>
<td>Fluarix® Quadrivalent</td>
<td>0.5 mL single-dose syringe</td>
<td>1. Quadrivalent</td>
</tr>
<tr>
<td>36 months &amp; Older</td>
<td>GlaxoSmithKline</td>
<td>FluLaval® Quadrivalent</td>
<td>5.0 mL** multi-dose vial</td>
<td>2. Quadrivalent</td>
</tr>
<tr>
<td>36 months &amp; Older</td>
<td>GlaxoSmithKline</td>
<td>FluLaval® Quadrivalent</td>
<td>0.5 mL single-dose vial</td>
<td>3. Quadrivalent</td>
</tr>
<tr>
<td>36 months &amp; Older</td>
<td>Sanofi Pasteur, Inc.</td>
<td>Fluzone® Quadrivalent</td>
<td>0.5 mL single-dose vial</td>
<td>4. Quadrivalent</td>
</tr>
<tr>
<td>36 months &amp; Older</td>
<td>Sanofi Pasteur, Inc.</td>
<td>Fluzone® Quadrivalent</td>
<td>5.0 mL** multi-dose vial</td>
<td>6. Quadrivalent</td>
</tr>
<tr>
<td>4 years &amp; Older</td>
<td>Seqirus</td>
<td>Fluvirin®</td>
<td>5.0 mL** multi-dose vial</td>
<td>Trivalent</td>
</tr>
<tr>
<td>4 years &amp; Older</td>
<td>Seqirus</td>
<td>Fluvirin®</td>
<td>0.5 mL single-dose syringe</td>
<td>Trivalent</td>
</tr>
<tr>
<td>4 years &amp; Older</td>
<td>Seqirus</td>
<td>Flucelvax®</td>
<td>0.5 mL prefilled syringe</td>
<td>Quadrivalent</td>
</tr>
<tr>
<td>5 years &amp; Older</td>
<td>CSL Limited</td>
<td>Afluria®</td>
<td>0.5 mL single-dose syringe</td>
<td>Trivalent</td>
</tr>
<tr>
<td>5 years &amp; Older</td>
<td>CSL Limited</td>
<td>Afluria®</td>
<td>5.0 mL** multi-dose vial</td>
<td>Trivalent</td>
</tr>
</tbody>
</table>

All influenza vaccines are stored in the refrigerator. Questions: Toll-free: 877-2Get-VFC (877-243-8832)

* As of 7/2016, pending FDA approval for 6 months and older.
** Contains preservative and cannot be given to children younger than 3 years of age and pregnant women per California law (Health and Safety Code 124172).

These vaccines are available through the Vaccines for Children Program in 2016-2017 and can only be used for VFC eligible children through 18 years of age.
All influenza vaccines are stored in the refrigerator. Questions: Toll-free: 877-2Get-VFC (877-243-8832)
Recommended Immunization Schedule for Adults Aged 19 Years or Older, United States, 2017

In February 2017, the Recommended Immunization Schedule for Adults Aged 19 Years or Older, United States, 2017 became effective, as recommended by the Advisory Committee on Immunization Practices (ACIP) and approved by the Centers for Disease Control and Prevention (CDC). The 2017 adult immunization schedule was also reviewed and approved by the following professional medical organizations:

- American College of Physicians (www.acponline.org)
- American Academy of Family Physicians (www.aafp.org)
- American College of Obstetricians and Gynecologists (www.acog.org)
- American College of Nurse-Midwives (www.midwife.org)

CDC announced the availability of the 2017 adult immunization schedule at www.cdc.gov/vaccines/schedules/hcp/index.html in the Morbidity and Mortality Weekly Report (MMWR). The schedule is published in its entirety in the Annals of Internal Medicine.1 The adult immunization schedule describes the age groups and medical conditions and other indications for which licensed vaccines are recommended. The 2017 adult immunization schedule consists of:

- Figure 1. Recommended immunization schedule for adults by age group
- Figure 2. Recommended immunization schedule for adults by medical condition and other indications
- Footnotes that accompany each vaccine containing important general information and considerations for special populations
- Table. Contraindications and precautions for vaccines routinely recommended for adults

Consider the following information when reviewing the adult immunization schedule:

- The figures in the adult immunization schedule should be read with the footnotes that contain important general information and information about vaccination of special populations.
- When indicated, administer recommended vaccines to adults whose vaccination history is incomplete or unknown.
- Increased interval between doses of a multi-dose vaccine does not diminish vaccine effectiveness; therefore, it is not necessary to restart the vaccine series or add doses to the series because of an extended interval between doses.
- Adults with immunocompromising conditions should generally avoid live vaccines, e.g., measles, mumps, and rubella vaccine. Inactivated vaccines, e.g., pneumococcal or inactivated influenza vaccines, are generally acceptable.
- Combination vaccines may be used when any component of the combination is indicated and when the other components of the combination vaccine are not contraindicated.
- The use of trade names in the adult immunization schedule is for identification purposes only and does not imply endorsement by the ACIP or CDC.

Details on vaccines recommended for adults and complete ACIP statements are available at www.cdc.gov/vaccines/hcp/acip-recs/index.html. Additional CDC resources include:

- A summary of information on vaccination recommendations, vaccination of persons with immunodeficiencies, preventing and managing adverse reactions, vaccination contraindications and precautions, and other information can be found in General Recommendations on Immunization at www.cdc.gov/mmwr/preview/mmwrhtml/rr6002a1.htm.

- Vaccine Information Statements that explain benefits and risks of vaccines are available at www.cdc.gov/vaccines/hcp/vis/index.html.
- Information and resources regarding vaccination of pregnant women are available at www.cdc.gov/vaccines/adults/rec-vac/pregnant.html.
- Information on travel vaccine requirements and recommendations is available at wwwnc.cdc.gov/travel/destinations/list.
- CDC Vaccine Schedules App for clinicians and other immunization service providers to download is available at www.cdc.gov/vaccines/schedules/hcp/schedule-app.html.
- Recommended Immunization Schedule for Children and Adolescents Aged 18 Years or Younger is available at www.cdc.gov/vaccines/schedules/hcp/index.html.

Report suspected cases of reportable vaccine-preventable diseases to the local or state health department.

Report all clinically significant post-vaccination reactions to the Vaccine Adverse Event Reporting System at www.vaers.hhs.gov or by telephone, 800-822-7967. All vaccines included in the 2017 adult immunization schedule except herpes zoster and 23-valent pneumococcal polysaccharide vaccines are covered by the Vaccine Injury Compensation Program. Information on how to file a vaccine injury claim is available at www.hrsa.gov/vaccinecompensation or by telephone, 800-338-2382.

Submit questions and comments regarding the 2017 adult immunization schedule to CDC through www.cdc.gov/cdc-info or by telephone, 800-CDC-INFO (800-232-4636), in English and Spanish, 8:00am–8:00pm ET, Monday–Friday, excluding holidays.

The following acronyms are used for vaccines recommended for adults:

- HepA    hepatitis A vaccine
- HepA-HepB hepatitis A and hepatitis B vaccines
- HepB    hepatitis B vaccine
- Hib     Haemophilus influenzae type b conjugate vaccine
- HPV vaccine human papillomavirus vaccine
- HZV     herpes zoster vaccine
- IIV     inactivated influenza vaccine
- LAIV    live attenuated influenza vaccine
- MenACWY serogroups A, C, W, and Y meningococcal conjugate vaccine
- MenB    serogroup B meningococcal vaccine
- MMR     measles, mumps, and rubella vaccine
- MPSV4   serogroups A, C, W, and Y meningococcal polysaccharide vaccine
- PCV13   13-valent pneumococcal conjugate vaccine
- PPSV23  23-valent pneumococcal polysaccharide vaccine
- RIV     recombinant influenza vaccine
- Td      tetanus and diphtheria toxoids
- Tdap    tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccine
- VAR     varicella vaccine

1 MMWR Morb Mortal Wkly Rep. 2017;66(5). Available at www.cdc.gov/mmwr/volumes/66/wr/mm6605e2.htm?s_cid=mm6605e2_w.
Figures 1 and 2 should be read with the footnotes that contain important general information and considerations for special populations.

**Figure 1. Recommended immunization schedule for adults aged 19 years or older by age group, United States, 2017**

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>19–21 years</th>
<th>22–26 years</th>
<th>27–59 years</th>
<th>60–64 years</th>
<th>≥ 65 years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Influenza¹</strong></td>
<td></td>
<td></td>
<td>1 dose annually</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Td/Tdap²</strong></td>
<td></td>
<td>Substitute Tdap for Td once, then Td booster every 10 yrs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MMR³</strong></td>
<td></td>
<td></td>
<td>1 or 2 doses depending on indication</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>VAR⁴</strong></td>
<td></td>
<td></td>
<td>2 doses</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HZV⁵</strong></td>
<td></td>
<td></td>
<td></td>
<td>1 dose</td>
<td></td>
</tr>
<tr>
<td><strong>HPV–Female⁶</strong></td>
<td>3 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HPV–Male⁶</strong></td>
<td></td>
<td></td>
<td>3 doses</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PCV13⁷</strong></td>
<td></td>
<td></td>
<td></td>
<td>1 dose</td>
<td></td>
</tr>
<tr>
<td><strong>PPSV23⁷</strong></td>
<td></td>
<td></td>
<td>1 or 2 doses depending on indication</td>
<td>1 dose</td>
<td></td>
</tr>
<tr>
<td><strong>HepA⁸</strong></td>
<td></td>
<td></td>
<td>2 or 3 doses depending on vaccine</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HepB⁹</strong></td>
<td></td>
<td></td>
<td>3 doses</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MenACWY or MPSV4¹⁰</strong></td>
<td></td>
<td></td>
<td>1 or more doses depending on indication</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MenB¹⁰</strong></td>
<td></td>
<td></td>
<td>2 or 3 doses depending on vaccine</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hib¹¹</strong></td>
<td></td>
<td></td>
<td>1 or 3 doses depending on indication</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Legend**
- **Yellow**: Recommended for adults who meet the age requirement, lack documentation of vaccination, or lack evidence of past infection
- **Purple**: Recommended for adults with additional medical conditions or other indications
- **White**: No recommendation.
Figure 2. Recommended immunization schedule for adults aged 19 years or older by medical condition and other indications, United States, 2017

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Pregnancy</th>
<th>Immuno-compromised (excluding HIV infection)</th>
<th>HIV infection CD4+ count (cells/μL)</th>
<th>Asplenia, persistent complement deficiencies</th>
<th>Kidney failure, end-stage renal disease, on hemodialysis</th>
<th>Heart or lung disease, chronic alcoholism</th>
<th>Chronic liver disease</th>
<th>Diabetes</th>
<th>Healthcare personnel</th>
<th>Men who have sex with men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 dose</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>annually</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Td/Tdap</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>contraindicated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMR</td>
<td>contraindicated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAR</td>
<td>contraindicated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HZV</td>
<td>contraindicated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HPV–Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HPV–Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCV13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPSV23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HepA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HepB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MenACWY or MPSV4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MenB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hib</td>
<td>3 doses post-HSCT recipients only</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Recommended for adults who meet the age requirement, lack documentation of vaccination, or lack evidence of past infection**

**Recommended for adults with additional medical conditions or other indications**

**Contraindicated**

**No recommendation**

Substitute Tdap for Td once, then Td booster every 10 yrs.
1. Influenza vaccination

General information
- All persons aged 6 months or older who do not have a contraindication should receive annual influenza vaccination with an age-appropriate formulation of inactivated influenza vaccine (IIV) or recombinant influenza vaccine (RIV).
- In addition to standard-dose IIV, available options for adults in specific age groups include: high-dose or adjuvanted IIV for adults aged 65 years or older, intradermal IIV for adults aged 18 through 64 years, and RIV for adults aged 18 years or older.
- Notes: Live attenuated influenza vaccine (LAIV) should not be used during the 2016–2017 influenza season. A list of currently available influenza vaccines is available at www.cdc.gov/flu/protect/vaccine/vaccines.htm.

Special populations
- Adults with a history of egg allergy who have only hives after exposure to egg should receive age-appropriate IIV or RIV.
- Adults with a history of egg allergy other than hives, e.g., angioedema, respiratory distress, lightheadedness, or recurrent emesis, or who required epinephrine or another emergency medical intervention, may receive age-appropriate IIV or RIV. The selected vaccine should be administered in an inpatient or outpatient medical setting and under the supervision of a healthcare provider who is able to recognize and manage severe allergic conditions.
- Pregnant women and women who might become pregnant in the upcoming influenza season should receive IIV.

2. Tetanus, diphtheria, and acellular pertussis vaccination

General information
- Adults who have not received tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap) or for whom pertussis vaccination status is unknown should receive 1 dose of Tdap followed by a tetanus and diphtheria toxoid-containing vaccine last received.
- Adults with an unknown or incomplete history of a 3-dose primary series with tetanus and diphtheria toxoid-containing vaccines should complete the primary series that includes 1 dose of Tdap.
- Unvaccinated adults should receive the first 2 doses at least 4 weeks apart and the third dose 6–12 months after the second dose.
- Notes: Information on the use of Td or Tdap as tetanus prophylaxis in wound management is available at www.cdc.gov/mmwr/preview/mmwrhtml/r5517a1.htm.

Special populations
- Pregnant women should receive 1 dose of Tdap during each pregnancy, preferably during the early part of gestational weeks 27–36, regardless of prior history of receiving Tdap.

3. Measles, mumps, and rubella vaccination

General information
- Adults born in 1957 or later without acceptable evidence of immunity to measles, mumps, or rubella (defined below) should receive 1 dose of measles, mumps, and rubella vaccine (MMR) unless they have a medical contraindication to the vaccine, e.g., pregnancy or severe immunodeficiency.
- Notes: Acceptable evidence of immunity to measles, mumps, or rubella in adults is: born before 1957, documentation of receipt of MMR, or laboratory evidence of immunity or disease. Documentation of healthcare provider-diagnosed disease without laboratory confirmation is not acceptable evidence of immunity.

Special populations
- Pregnant women who do not have evidence of immunity to rubella should receive 1 dose of MMR upon completion or termination of pregnancy and before discharge from the healthcare facility; non-pregnant women of childbearing age without evidence of rubella immunity should receive 1 dose of MMR.
- Adults with primary or acquired immunodeficiency including malignant conditions affecting the bone marrow or lymphatic system, systemic immunosuppressive therapy, or cellular immunodeficiency should not receive MMR.
- Adults with human immunodeficiency virus (HIV) infection and CD4+ T-lymphocyte count ≥200 cells/μl for at least 6 months who do not have evidence of measles, mumps, or rubella immunity should receive 2 doses of MMR at least 28 days apart. Adults with HIV infection and CD4+ T-lymphocyte count <200 cells/μl should not receive MMR.
- Adults who work in healthcare facilities should receive 2 doses of MMR at least 28 days apart; healthcare personnel born before 1957 who are unvaccinated or lack laboratory evidence of measles, mumps, or rubella immunity, or laboratory confirmation of disease should be considered for vaccination with 2 doses of MMR at least 28 days apart for measles or mumps, or 1 dose of MMR for rubella.
- Adults who are students in postsecondary educational institutions or plan to travel internationally should receive 2 doses of MMR at least 28 days apart.
- Adults who received inactivated (killed) measles vaccine or measles vaccine of unknown type during years 1963–1967 should be revaccinated with 1 dose of MMR.
- Adults who were vaccinated before 1979 with either inactivated mumps vaccine or mumps vaccine of unknown type who are at high risk for mumps infection, e.g., work in a healthcare facility, should be considered for revaccination with 2 doses of MMR at least 28 days apart.
- Adults with a history of egg allergy other than hives, e.g., angioedema, respiratory distress, lightheadedness, or recurrent emesis, who required epinephrine or another emergency medical intervention may receive age-appropriate IIV or RIV. The selected vaccine should be administered in an inpatient or outpatient medical setting and under the supervision of a healthcare provider who is able to recognize and manage severe allergic conditions.
- Adults with a history of egg allergy who have only hives after exposure to egg should receive age-appropriate IIV or RIV.

4. Varicella vaccination

General information
- Adults without evidence of immunity to varicella (defined below) should receive 2 doses of single-antigen varicella vaccine (VAR) 4–8 weeks apart, or a second dose if they have received only 1 dose.
- Persons without evidence of immunity for whom VAR should be emphasized are: adults who have close contact with persons at high risk for serious complications, e.g., healthcare personnel and household contacts of immunocompromised persons; adults who live or work in an environment in which transmission of varicella zoster virus is likely, e.g., teachers, childcare workers, and residents and staff in institutional settings; adults who live or work in environments in which varicella transmission has been reported, e.g., college students, residents and staff members of correctional institutions, and military personnel; non-pregnant women of childbearing age; adolescents and adults living in households with children; and international travelers.
- Notes: Evidence of immunity is: bone marrow or lymphatic system; history of varicella or herpes zoster diagnosis or varicella or herpes zoster disease by a healthcare provider; or laboratory evidence of immunity or disease.

Special populations
- Pregnant women should be assessed for evidence of varicella immunity. Pregnant women who do not have evidence of immunity should receive the first dose of VAR upon completion or termination of pregnancy and before discharge from the healthcare facility; the second dose 4–8 weeks after the first dose.
- Healthcare institutions should assure and ensure that all healthcare personnel have evidence of immunity to varicella.
- Adults with malignant conditions, including those that affect the bone marrow or lymphatic system or who receive systemic immunosuppressive therapy, should not receive VAR.
- Adults with human immunodeficiency virus (HIV) infection and CD4+ T-lymphocyte count ≥200 cells/μl may receive 2 doses of VAR 3 months apart. Adults with CD4+ T-lymphocyte count <200 cells/μl should not receive VAR.

5. Herpes zoster vaccination

General information
- Adults aged 60 years or older should receive 1 dose of herpes zoster vaccine (HZV), regardless of whether they had a prior episode of herpes zoster.

Special populations
- Adults aged 60 years or older with chronic medical conditions may receive HZV unless they have a medical contraindication, e.g., pregnancy or severe immunodeficiency.
- Adults with malignant conditions, including those that affect the bone marrow or lymphatic system or who receive systemic immunosuppressive therapy, should not receive HZV.
- Adults with human immunodeficiency virus (HIV) infection and CD4+ T-lymphocyte count <200 cells/μl should not receive HZV.

6. Human papillomavirus vaccination

General information
- Adult females through age 26 years and adult males through age 21 years who have not received any human papillomavirus (HPV) vaccine should receive a 3-dose series of HPV vaccine at 0, 2, and 6 months. Males aged 22 through 26 years may be vaccinated with a 3-dose series of HPV vaccine at 0, 1–2, and 6 months.
- Adult females through age 26 years and adult males through age 21 years (and males aged 22 through 26 years who may receive HPV vaccination) who initiated the HPV vaccination series before age 15 years and received 2 doses are recommended to receive a 3-dose series of HPV vaccine at 0, 1–2, and 6 months.
- Adult females through age 26 years and adult males through age 21 years (and males aged 22 through 26 years who may receive HPV vaccination) who initiated the HPV vaccination series before age 15 years and received only 1 dose, or 2 doses less than 5 months apart, are not considered adequately vaccinated and should receive 1 additional dose of HPV vaccine.
- Adult females through age 26 years and adult males through age 21 years (and males aged 22 through 26 years who may receive HPV vaccination) who initiated the HPV vaccination series before age 15 years and received 2 doses are recommended to receive a 3-dose series of HPV vaccine at 0, 1–2, and 6 months.
- Pregnant women who have not received any HPV vaccine or who have received any HPV vaccine should receive a 3-dose series of HPV vaccine at 0, 1–2, and 6 months.
- Adult females and males through age 26 years with immunocompromising conditions (described below), including those with human immunodeficiency virus (HIV) infection, should receive a 3-dose series of HPV vaccine at 0, 1–2, and 6 months.
- Pregnant women who have not received any HPV vaccine or who have received any HPV vaccine should receive a 3-dose series of HPV vaccine, although there is no evidence that the vaccine poses harm. If a woman is found to be pregnant before initiating the HPV vaccination series, delay the remaining doses until after the pregnancy. No other intervention is needed. Pregnancy testing is not needed before administering HPV vaccine.
- Notes: Immunocompromising conditions for which a 3-dose series of HPV vaccine is indicated are primary or secondary immunocompromising conditions that might reduce cell-mediated or humoral immunity, e.g., B-lymphocyte antibody deficiencies, complete or partial T-lymphocyte defects, HIV infection, malignant neoplasms, transplantation, autoimmune disease, and immunosuppressive therapy.
7. Pneumococcal vaccination

General information
- Adults who are immunocompetent and aged 65 years or older should receive 13-valent pneumococcal conjugate vaccine (PCV13) followed by 23-valent pneumococcal polysaccharide vaccine (PPSV23) at least 1 year after PCV13.
- Adults aged 19 years or older who have human immunodeficiency virus (HIV) infection should receive 1 dose of PCV13 and 1 dose of PPSV23 at least 8 weeks after PCV13, followed by a second dose of PPSV23 at least 5 years after the first dose of PPSV23. If the most recent dose of PPSV23 was administered before age 65 years, at age 65 years or older, administer another dose of PPSV23 at least 8 weeks after PCV13 and at least 5 years after the most recent dose of PPSV23.
- Adults aged 19 years or older who have immunocompromising conditions or anatomical or functional asplenia (described below) should receive PCV13 and a dose of PPSV23 at least 8 weeks after PCV13, followed by a second dose of PPSV23 at least 5 years after the first dose of PPSV23. If the most recent dose of PPSV23 was administered before age 65 years, at age 65 years or older, administer another dose of PPSV23 at least 8 weeks after PCV13 and at least 5 years after the most recent dose of PPSV23.

Notes: Immunocompromising conditions that are indications for pneumococcal vaccination are congenital or acquired immunodeficiency including B- or T-lymphyocyte deficiency, complement deficiencies, and phagocytic disorders excluding chronic granulomatous disease; human immunodeficiency virus (HIV) infection; chronic renal failure and nephrotic syndrome; leukemia, lymphoma, Hodgkin disease, generalized malignancies including leukemia, lymphoma, and pretransplantation; congenital or acquired asplenia, splenic dysfunction, and splenectomy. Pneumococcal vaccines should be given at least 2 weeks before immunosuppressive therapy or an elective splenectomy, and as soon as possible to adults who are diagnosed with HIV infection.

8. Hepatitis A vaccination

General information
- Adults who seek protection from hepatitis A virus infection may receive a 2-dose series of single-antigen hepatitis A vaccine (HepA) at either 0 and 1–2 months, or 0 and 6–12 months (YaVac). Adults may also receive a combined hepatitis A and hepatitis B vaccine (HepA-HepB) (Twinrix) as a 3-dose series at 0, 1, and 6 months. Acknowledgment of a specific risk factor by those who seek protection is not needed.
- Adults who travel in countries with high or intermediate levels of endemic hepatitis A infection or anticipate close personal contact with an international adoptee, e.g., reside in the same household or regularly babysit, from a country with high or intermediate level of endemic hepatitis A infection within the first 60 days of arrival in the United States should receive a HepA series.

Special populations
- Adults aged 19 through 64 years with chronic heart disease including congestive heart failure and cardiomyopathies (excluding hypertrophy); chronic lung disease including chronic obstructive lung disease, emphysema, and asthma; chronic liver disease including cirrhosis, alcoholism; or diabetes mellitus; or who smoke cigarettes should receive PPSV23. At age 65 years or older, they should receive PCV13 and another dose of PPSV23 at least 1 year after PCV13 and at least 5 years after the most recent dose of PPSV23.
- Adults aged 19 years or older with immunocompromising conditions, or anatomical or functional asplenia (described below) should receive PCV13 and a dose of PPSV23 at least 8 weeks after PCV13, followed by a second dose of PPSV23 at least 5 years after the first dose of PPSV23. If the most recent dose of PPSV23 was administered before age 65 years, at age 65 years or older, administer another dose of PPSV23 at least 8 weeks after PCV13 and at least 5 years after the most recent dose of PPSV23.
- Adults aged 19 years or older with cerebrospinal fluid leak or cochlear implant should receive PCV13 followed by PPSV23 at least 8 weeks after PCV13. If the most recent dose of PCV13 was administered before age 65 years, at age 65 years or older, administer another dose of PCV13 at least 8 weeks after PCV13 and at least 5 years after the most recent dose of PCV13.

Notes: Hib is not routinely recommended for adults with human immunodeficiency virus (HIV) infection regardless of their Hib history. 3 doses of Hib in at least 4 week intervals 6–12 months after transplant are indicated for adults who have received PPSV23 at age 65 years or older. When indicated, PCV13 and PPSV23 should be administered to adults whose pneumococcal vaccination history is incomplete or unknown.

9. Hepatitis B vaccination

General information
- Adults who seek protection from hepatitis B virus infection may receive a 3-dose series of single-antigen hepatitis B vaccine (HepB) (Engerix-B, Recombivax HB) at 0, 1, and 6 months. Adults may also receive a combined hepatitis A and hepatitis B vaccine (HepA-HepB) (Twinrix) at 0, 1, and 6 months. Acknowledgment of a specific risk factor by those who seek protection is not needed.

Special populations
- Adults at risk for hepatitis B virus infection by sexual exposure should receive a HepB series, including sex partners of hepatitis B surface antigen (HBsAg)-positive persons, sexually active persons who are in a mutually monogamous relationship, persons seeking evaluation or treatment for a sexually transmitted infection, and men who have sex with men (MSM).
- Adults at risk for hepatitis B virus infection by percutaneous or mucosal exposure to blood should receive a HepB series, including adults who are current or recent users of injection drugs, household contacts of HBsAg-positive persons, residents and staff of facilities for developmentally delayed, chemically dependent, hospitalized, incarcerated, and public safety workers at risk for exposure to blood or blood-contaminated body fluids, younger than age 60 years with diabetes mellitus, and age 60 years or older with diabetes mellitus at the discretion of the treating clinician.
- Adults with chronic liver disease including, but not limited to, hepatitis C virus infection, cirrhosis, fatty liver disease, alcoholic liver disease, autoimmune hepatitis, and an alanine aminotransferase (ALT) or aspartate aminotransferase (AST) level greater than twice the upper limit of normal should receive a HepB series.
- Adults with end-stage renal disease including those on pre-dialysis care, hemodialysis, peritoneal dialysis, and home dialysis should receive a HepB series. Adults on hemodialysis should receive a 3-dose series of 40 µg Recombivax HB at 0, 1, and 6 months or a 4-dose series of 40 µg Engerix-B at 0, 1, 2, and 6 months.
- Adults with human immunodeficiency virus (HIV) infection should receive a HepB series and a doxorubicin infusion if they have not been previously vaccinated.

10. Meningococcal vaccination

Special populations
- Adults with anatomical or functional asplenia or persistent complement component deficiencies should receive a 2-dose primary series of serogroups A, C, W, and Y meningococcal conjugate vaccine (MenACWY) at least 2 months apart and revaccinate every 5 years. They should also receive a series of serogroup B meningococcal vaccine (MenB) with either a 2-dose series of MenB-4C (Bexsero) at least 1 month apart or a 3-dose series of MenB-FHbp (Menveo) at 0, 1–2, and 6 months.
- Adults with human immunodeficiency virus (HIV) infection who have not been previously vaccinated should receive a 2-dose primary series of MenACWY at least 2 months apart and revaccinate every 5 years. Those who previously received 1 dose of MenACWY should receive a second dose at least 2 months after the first dose. Adults with HIV infection are not routinely recommended to receive MenB because meningococcal disease in this population is caused primarily by serogroups C, W, and Y. Microbiologists who are exposed to isolates of Neisseria meningitidis should receive 1 dose of MenACWY and revaccinate every 5 years if the risk for infection remains, and either a 2-dose series of MenB-4C at least 1 month apart or a 3-dose series of MenB-FHbp at 0, 1–2, and 6 months.
- Adults at risk because of a meningococcal disease outbreak should receive 1 dose of MenACWY if the outbreak is attributable to serogroup A, C, W, or Y, or either a 2-dose series of MenB-4C at least 1 month apart or a 3-dose series of MenB-FHbp at 0, 1–2, and 6 months if the outbreak is attributable to serogroup B.
- Adults with otitis media or live in countries with hyperendemic or epidemic meningococcal disease should receive 1 dose of MenACWY and revaccinate every 5 years if the risk for infection remains. MenB is not routinely indicated because meningococcal disease in these countries is generally not caused by serogroup B.
- Military recruits should receive 1 dose of MenACWY and revaccinate every 5 years if the increased risk for infection remains.
- First-year college students aged 21 years or younger who live in residence halls should receive 1 dose of MenACWY if they have not previously received MenACWY at age 16–23 years.
- Young adults aged 16 through 23 years (preferred age range is 16 through 18 years) who are healthy and not at increased risk for serogroup B meningococcal disease (described above) may receive either a 2-dose series of MenB-4C or a 3-dose series of MenB-FHbp at 0 and 6 months for short-term protection against most strains of serogroup B meningococcal disease.
- For adults aged 36 years or older who have not previously received serogroups A, C, W, and Y meningococcal vaccine, MenACWY is preferred. Adults aged 36 years or older who have been previously vaccinated should receive a combined hepatitis A and hepatitis B vaccine (Twinrix) at 0, 1, and 6 months. If the most recent dose of MenACWY was administered before age 65 years, at age 65 years or older, administer another dose of MenACWY at least 8 weeks after PCV13 and at least 5 years after the most recent dose of MenACWY.

11. Haemophilus influenzae type b vaccination

Special populations
- Adults who have anatomical or functional asplenia or sickle cell disease, or are undergoing elective splenectomy should receive 1 dose of Haemophilus influenzae type b conjugate vaccine (Hib) if they have not previously received Hib. Hib should be administered at least 14 days before splenectomy.
- Adults with a hematopoietic stem cell transplant (HSCT) should receive 3 doses of Hib at least 4 week intervals 6–12 months after transplant regardless of their Hib history.
- Notes: Hib is not routinely recommended for adults with human immunodeficiency virus infection because their risk for Haemophilus influenzae type b infection is low.
### Additional Contraindications and Precautions

The Advisory Committee on Immunization Practices (ACIP) recommendations and package inserts for vaccines provide information on contraindications and precautions related to vaccines. Contraindications are conditions that increase the risk of a serious adverse reaction in vaccine recipients and the vaccine should not be administered when a contraindication is present. Precautions should be reviewed for potential risks and benefits for vaccine recipients. For a person with a severe allergy to latex, e.g., anaphylaxis, vaccines supplied in vials or syringes that contain natural rubber latex should not be administered unless the benefit of vaccination clearly outweighs the risk for a potential allergic reaction. For latex allergies other than anaphylaxis, vaccines supplied in vials or syringes that contain dry, natural rubber or natural rubber latex may be administered.

#### Table. Contraindications and precautions for vaccines recommended for adults aged 19 years or older*

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Contraindications</th>
<th>Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>IIV</td>
<td>• History of Guillain-Barré Syndrome within 6 weeks after previous influenza vaccination</td>
<td>• Egg allergy other than hives, e.g., angioedema, respiratory distress, lightheadedness, or recurrent emesis; or required epinephrine or another emergency medical intervention (IIV may be administered in an inpatient or outpatient medical setting and under the supervision of a healthcare provider who is able to recognize and manage severe allergic conditions)</td>
</tr>
<tr>
<td>LAIV</td>
<td>• History of Guillain-Barré Syndrome within 6 weeks after previous influenza vaccination</td>
<td>• LAIV should not be used during 2016–2017 influenza season</td>
</tr>
<tr>
<td>Tdap/Td</td>
<td>• 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 a vaccine containing tetanus or diphtheria toxoid or acellular pertussis</td>
<td>• Guillain-Barré Syndrome 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 pertussis-containing vaccine, progressive or unstable neurologic disorder, uncontrolled seizures, or progressive encephalopathy (until a treatment regimen has been established and the condition has stabilized)</td>
</tr>
<tr>
<td>MMR</td>
<td>• Severe immunodeficiency, e.g., hemolologic and solid tumors, chemotherapy, congenital immunodeficiency or long-term immunosuppressive therapy, human immunodeficiency virus (HIV) infection with severe immunocompromise; Pregnancy</td>
<td>• Recent (within 11 months) receipt of antibody-containing blood product (specific interval depends on product); History of thrombocytopenia or thrombocytopenic purpura; Need for tuberculin skin testing</td>
</tr>
<tr>
<td>VAR</td>
<td>• Severe immunodeficiency, e.g., hemolologic and solid tumors, chemotherapy, congenital immunodeficiency or long-term immunosuppressive therapy, HIV infection with severe immunocompromise; Pregnancy</td>
<td>• Recent (within 11 months) receipt of antibody-containing blood product (specific interval depends on product); Receipt of specific antiviral drugs (acyclovir, famciclovir, or valacyclovir) 24 hours before vaccination (avoid use of these antiviral drugs for 14 days after vaccination)</td>
</tr>
<tr>
<td>HZV</td>
<td>• Severe immunodeficiency, e.g., hemolologic and solid tumors, chemotherapy, congenital immunodeficiency or long-term immunosuppressive therapy, HIV infection with severe immunocompromise; Pregnancy</td>
<td>• Receipt of specific antiviral drugs (acyclovir, famciclovir, or valacyclovir) 24 hours before vaccination (avoid use of these antiviral drugs for 14 days after vaccination)</td>
</tr>
<tr>
<td>HPV</td>
<td>• Severe immunodeficiency, e.g., hemolologic and solid tumors, chemotherapy, congenital immunodeficiency or long-term immunosuppressive therapy, HIV infection with severe immunocompromise; Pregnancy</td>
<td>• Severe allergic reaction to any vaccine containing diphtheria toxoid</td>
</tr>
<tr>
<td>PCV13</td>
<td>• Severe allergic reaction to any vaccine containing diphtheria toxoid</td>
<td>• Pregnancy</td>
</tr>
</tbody>
</table>

2. MMR may be administered together with VAR or HZV on the same day. If not administered on the same day, separate live vaccines by at least 28 days.
3. Immunosuppressive steroid therapy is considered to be daily receipt of 20 mg or more prednisone or equivalent for two or more weeks. Vaccination should be deferred for at least 1 month after discontinuation of immunosuppressive 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.
4. Vaccine should be deferred for the appropriate interval if replacement immune globulin products are being administered. See: 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/mmwr/preview/mmwrhtml/rr6002a1.htm.
5. Measles vaccination may temporarily suppress tuberculin reactivity. Measles-containing vaccine may be administered on the same day as tuberculin skin testing, or should be postponed for at least 4 weeks after vaccination.


### Acronyms of vaccines recommended for adults

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Acronym</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis A vaccine</td>
<td>HepA</td>
</tr>
<tr>
<td>Hepatitis A and hepatitis B vaccines</td>
<td>HepA-HepB</td>
</tr>
<tr>
<td>Hepatitis B vaccine</td>
<td>HepB</td>
</tr>
<tr>
<td>Haemophilus influenzae type b conjugate vaccine</td>
<td>Hib</td>
</tr>
<tr>
<td>Human papillomavirus vaccine</td>
<td>HPV</td>
</tr>
<tr>
<td>Inactivated influenza vaccine</td>
<td>IPV</td>
</tr>
<tr>
<td>Live attenuated influenza vaccine</td>
<td>LAIV</td>
</tr>
<tr>
<td>MenACWY serogroups A, C, W, and Y meningococcal conjugate vaccine</td>
<td>MenACWY</td>
</tr>
<tr>
<td>MenB serogroup B meningococcal vaccine</td>
<td>MenB</td>
</tr>
<tr>
<td>Meningococcal polysaccharide vaccine</td>
<td>Meningococcal Vaccine</td>
</tr>
<tr>
<td>Mumps, measles, and rubella vaccine</td>
<td>MMR</td>
</tr>
<tr>
<td>Polysaccharide conjugate vaccine</td>
<td>MPSV4</td>
</tr>
<tr>
<td>PPSV23 23-valent pneumococcal polysaccharide vaccine</td>
<td>PPSV23</td>
</tr>
<tr>
<td>PCV13 13-valent pneumococcal conjugate vaccine</td>
<td>PCV13</td>
</tr>
<tr>
<td>Recombinant influenza vaccine</td>
<td>RIV</td>
</tr>
<tr>
<td>Tetanus and diphtheria toxoids</td>
<td>Td</td>
</tr>
<tr>
<td>Tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccine</td>
<td>Tdap</td>
</tr>
<tr>
<td>Varicella vaccine</td>
<td>VAR</td>
</tr>
</tbody>
</table>