

# Summary of Recommendations for Adult Immunization\* (Age 19 years and older)

Vaccine name and route	People for whom vaccination is recommended	Schedule for vaccination administration (any vaccine can be given with another unless otherwise noted)	Contraindications and precautions (mild illness is not a contraindication)
<p><b>Influenza</b> Inactivated Influenza vaccine (IIV**) <i>Give IM</i></p> <p>** includes recombinant influenza vaccine (RIV) and cell culture-based inactivated influenza vaccine (ccIIV)</p> <p>Live attenuated influenza vaccine (LAIV) <i>Give NAS (intranasally)</i></p>	<p>For people through age 18yrs, consult “Summary of Recommendations for Child/Teen Immunization” at <a href="http://www.immunize.org/catg.d/p2010.pdf">www.immunize.org/catg.d/p2010.pdf</a>.</p> <ul style="list-style-type: none"> <li>Vaccination is recommended for all adults.</li> <li>Adults age 18 through 64yrs may be given any intramuscular IIV product (Fluzone, Fluvirin, Afluria, Flucelvax, Fluarix, FluLaval), or RIV4 (FluBlok).</li> <li>Adults age 18 through 64yrs may be given intramuscular IIV (Afluria) with a needle and syringe or using a jet injector (Stratis).</li> <li>Adults age 65yrs and older may be given any standard-dose IIV referenced in the second bullet above, Flud, or high-dose IIV (Fluzone High-Dose), or RIV4.</li> </ul> <p><b>Note:</b> Close contacts and caregivers who care for severely immunocompromised persons (i.e., those who require care in a protective environment) should receive IIV or RIV4 rather than LAIV. For information on other contraindications and precautions to LAIV, see far right column.</p>	<ul style="list-style-type: none"> <li>Give 1 dose every year in the fall or winter.</li> <li>Continue to give vaccine to unvaccinated adults throughout the influenza season (including when influenza activity is present in the community) and at other times when the risk of influenza exists.</li> <li>Early vaccination (July and August) may result in suboptimal immunity among older adults.</li> <li>If 2 or more of the following live virus vaccines are to be given – LAIV, MMR, Var, ZVL, and/or yellow fever – they should be given on the same day. If they are not given on the same day, space them by at least 28d (30d for yellow fever).</li> <li><b>Other guidance:</b> Adults with functional or anatomic asplenia, complement deficiency, cochlear implant, or CSF leak should not receive LAIV.</li> </ul>	<p><b>Contraindications</b></p> <ul style="list-style-type: none"> <li>History of severe allergic reaction (e.g., anaphylaxis) to a previous dose or to a vaccine component.</li> <li>For LAIV only: pregnancy; close contacts of severely immunocompromised people in a protective environment; functional or anatomic asplenia; CSF leak; cochlear implant; immunosuppression (including that caused by medications or HIV); receipt of zanamivir and oseltamivir within 48hrs, peramivir within 5d, or baloxavir within 17d. If use of any of these antiviral drugs within 14d after LAIV, revaccinate with IIV.</li> </ul> <p><b>NOTE:</b> People with egg allergy of any severity can receive any age-appropriate influenza vaccine (i.e., any IIV, RIV, or LAIV) that is otherwise appropriate for their health status. People having had a previous severe reaction to eggs involving symptoms other than hives should be administered vaccine in a medical setting (e.g., a health department or physician office) and should be supervised by a healthcare provider who is able to recognize and manage severe allergic conditions, unless receiving egg-free ccIIV or RIV4.</p> <p><b>Precautions</b></p> <ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever.</li> <li>History of Guillain-Barré syndrome (GBS) within 6wks following previous influenza vaccination.</li> <li>For LAIV only: Chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, neurologic, hematologic or metabolic (including diabetes) disorders).</li> </ul>
<p><b>Td, Tdap</b> (Tetanus, diphtheria, pertussis) <i>Give IM</i></p>	<p>For people through age 18yrs, consult “Summary of Recommendations for Child/Teen Immunization” at <a href="http://www.immunize.org/catg.d/p2010.pdf">www.immunize.org/catg.d/p2010.pdf</a>.</p> <ul style="list-style-type: none"> <li>All people who lack written documentation of a primary series consisting of at least 3 doses of tetanus- and diphtheria-toxoid-containing vaccine.</li> <li>A booster dose of Td or Tdap may be needed for wound management, so consult ACIP recommendations.</li> <li>Adults who have not received Td or Tdap in the past 10 years or whose Tdap history is not known.</li> </ul>	<ul style="list-style-type: none"> <li>For people who are unvaccinated or behind, complete a 3-dose series with Tdap as the first dose, followed by Td or Tdap (observe intervals of 1–2m between dose #1 and #2, and an interval of 6–12m between dose #2 and #3).</li> <li>Give Tdap to pregnant women during each pregnancy (preferred during the early part of gestational weeks 27 through 36), regardless of the interval since prior Td or Tdap.</li> <li>Give Td or Tdap booster every 10yrs after the primary series has been completed.</li> <li>If Tdap is indicated, Tdap should be given regardless of interval since previous Td.</li> </ul>	<p><b>Contraindications</b></p> <ul style="list-style-type: none"> <li>History of severe allergic reaction (e.g., anaphylaxis) to a previous dose or to a vaccine component.</li> <li>For Tdap only, history of encephalopathy not attributable to an identifiable cause, within 7d following DTP/DTaP, or Tdap.</li> </ul> <p><b>Precautions</b></p> <ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever.</li> <li>History of Guillain-Barré syndrome within 6wks following previous dose of tetanus-toxoid containing vaccine.</li> <li>History of Arthus-type reaction following a prior dose of tetanus- or diphtheria-toxoid containing vaccine (including MenACWY); defer vaccination until at least 10yrs have elapsed since the last tetanus toxoid-containing vaccine.</li> <li>For pertussis-containing vaccines only, progressive or unstable neurologic disorder, uncontrolled seizures, or progressive encephalopathy until a treatment regimen has been established and the condition has stabilized.</li> </ul>

\* This document was adapted from the vaccine recommendations of the Advisory Committee on Immunization Practices (ACIP) and also *General Best Practice Guidelines on Immunization of the ACIP*. To view the full vaccine recommendations and guidelines, visit CDC’s website at [www.cdc.gov/vaccines/hcp/ACIP-recs/index.html](http://www.cdc.gov/vaccines/hcp/ACIP-recs/index.html).

**This table is revised periodically.** Visit IAC’s website at [www.immunize.org/catg.d/p2011.pdf](http://www.immunize.org/catg.d/p2011.pdf) to make sure you have the most current version.

For the purposes of calculating intervals between doses, 4 weeks = 28 days. Intervals of 4 months or greater are determined by calendar months.  
A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses.

Vaccine name and route	People for whom vaccination is recommended	Schedule for vaccination administration (any vaccine can be given with another unless otherwise noted)	Contraindications and precautions (mild illness is not a contraindication)
<p><b>MMR</b> (Measles, mumps, rubella) <i>Give Subcut</i></p>	<p>For people through age 18yrs, consult “Summary of Recommendations for Child/Teen Immunization” at <a href="http://www.immunize.org/catg.d/p2010.pdf">www.immunize.org/catg.d/p2010.pdf</a>.</p> <ul style="list-style-type: none"> <li>• People born in 1957 or later (especially those born outside the U.S.) should receive at least 1 dose of MMR if they have no laboratory evidence of immunity to each of the 3 diseases or documentation of a dose given on or after the first birthday.</li> <li>• People in high-risk groups, such as healthcare personnel (paid, unpaid, or volunteer), students entering college and other post-high school educational institutions, and international travelers, should receive a total of 2 doses.</li> <li>• People born before 1957 are usually considered immune, but evidence of immunity (serology or documented history of 2 doses of MMR) should be considered for healthcare personnel.</li> <li>• Women of childbearing age who do not have acceptable evidence of rubella immunity or vaccination.</li> </ul>	<ul style="list-style-type: none"> <li>• Give 1 or 2 doses (see criteria in 1st and 2nd bullets in box to left).</li> <li>• If dose #2 is recommended, give it no sooner than 4wks after dose #1.</li> <li>• If woman of childbearing-age is found to be rubella susceptible and is not pregnant, give 1 dose of MMR; if she is pregnant, the dose should be given postpartum. This includes women who have already received 1 or 2 doses of rubella-containing vaccine.</li> <li>• If 2 or more of the following live virus vaccines are to be given – MMR, LAIV, Var, ZVL, and/or yellow fever – they should be given on the same day. If they are not given on the same day, space them by at least 28d (30d for yellow fever). May use as post-exposure prophylaxis if given within 3d of exposure.</li> </ul>	<p><b>Contraindications</b></p> <ul style="list-style-type: none"> <li>• History of severe allergic reaction (e.g., anaphylaxis) to a previous dose or to a vaccine component.</li> <li>• Pregnancy or possibility of pregnancy within 4wks.</li> <li>• Severe immunodeficiency (e.g., hematologic and solid tumors; receiving chemotherapy; congenital immunodeficiency; long-term immunosuppressive therapy); people with human immunodeficiency virus (HIV) infection who are severely immunocompromised.</li> </ul> <p><b>NOTE:</b> HIV infection is NOT a contraindication to MMR for those who are not severely immunocompromised (see ACIP recommendations at <a href="http://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/immunocompetence.html">www.cdc.gov/vaccines/hcp/acip-recs/general-recs/immunocompetence.html</a>).</p> <p><b>Precautions</b></p> <ul style="list-style-type: none"> <li>• Moderate or severe acute illness with or without fever.</li> <li>• If blood, plasma, and/or immune globulin were given in past 11m, see ACIP’s <i>General Best Practice Guidelines for Immunization*</i> regarding time to wait before vaccinating.</li> <li>• History of thrombocytopenia or thrombocytopenic purpura.</li> <li>• Need for tuberculin skin testing (TST) or interferon-gamma release assay (IGRA) testing. <b>NOTE:</b> If TST or IGRA and MMR are both needed but not given on same day, delay TST or IGRA for at least 4wks after MMR.</li> </ul>
<p><b>Varicella</b> (chickenpox) (Var) <i>Give Subcut</i></p>	<p>For people through age 18yrs, consult “Summary of Recommendations for Child/Teen Immunization” at <a href="http://www.immunize.org/catg.d/p2010.pdf">www.immunize.org/catg.d/p2010.pdf</a>.</p> <ul style="list-style-type: none"> <li>• All adults without evidence of immunity.</li> </ul> <p><b>NOTE:</b> Evidence of immunity is defined as written documentation of 2 doses of varicella vaccine; a history of varicella disease or herpes zoster (shingles) based on healthcare-provider diagnosis; laboratory evidence of immunity or confirmation of disease; and/or birth in the U.S. before 1980, with the exceptions that follow:</p> <ul style="list-style-type: none"> <li>– Healthcare personnel (HCP) born in the U.S. before 1980 who do not meet any of the criteria above should be tested or given the 2-dose vaccine series. If testing indicates they are not immune, give the 1st dose of varicella vaccine immediately. Give the 2nd dose 4–8 wks later.</li> <li>– Pregnant women born in the U.S. before 1980 who do not meet any of the criteria above should either 1) be tested for susceptibility during pregnancy and if found susceptible, given the 1st dose of varicella vaccine postpartum before hospital discharge, or 2) not be tested for susceptibility and given the 1st dose of varicella vaccine post-partum before hospital discharge. Give the 2nd dose 4–8wks later.</li> </ul>	<ul style="list-style-type: none"> <li>• Give 2 doses.</li> <li>• Dose #2 is given 4–8wks after dose #1.</li> <li>• If dose #2 is delayed, do not start over. Just give dose #2.</li> <li>• If 2 or more of the following live virus vaccines are to be given – MMR, LAIV, Var, ZVL, and/or yellow fever – they should be given on the same day. If they are not given on the same day, space them by at least 28d (30d for yellow fever).</li> <li>• May use as postexposure prophylaxis if given within 5d of exposure.</li> </ul>	<p><b>Contraindications</b></p> <ul style="list-style-type: none"> <li>• History of severe allergic reaction (e.g., anaphylaxis) to a previous dose or to a vaccine component.</li> <li>• Pregnancy or possibility of pregnancy within 4wks.</li> <li>• People on long-term immunosuppressive therapy or who are immunocompromised because of malignancy and primary or acquired immunodeficiency, including HIV/AIDS (although vaccination may be considered if CD4+ T-lymphocyte counts are greater than or equal to 200 cells/μL).</li> <li>• People with isolated B-lymphocyte deficiency may receive varicella vaccine.</li> </ul> <p><b>Precautions</b></p> <ul style="list-style-type: none"> <li>• Moderate or severe acute illness with or without fever.</li> <li>• If blood, plasma, and/or immune globulin (IG or VZIG) were given in past 11m, see ACIP’s <i>General Best Practice Guidelines for Immunization*</i> regarding time to wait before vaccinating.</li> <li>• Receipt of specific antivirals (i.e., acyclovir, famciclovir, or valacyclovir) 24hrs before vaccination, if possible; delay resumption of these antiviral drugs for 14d after vaccination.</li> <li>• Use of aspirin or aspirin-containing products.</li> </ul>

Vaccine name and route	People for whom vaccination is recommended	Schedule for vaccination administration (any vaccine can be given with another unless otherwise noted)	Contraindications and precautions (mild illness is not a contraindication)
<p><b>Hepatitis A</b> (HepA; Havrix, Vaqta)</p> <p><i>Give IM</i></p> <p>Brands may be used interchangeably.</p>	<p>For people through age 18yrs, consult “Summary of Recommendations for Child/Teen Immunization” at <a href="http://www.immunize.org/catg.d/p2010.pdf">www.immunize.org/catg.d/p2010.pdf</a>.</p> <ul style="list-style-type: none"> <li>All adults who want to be protected from hepatitis A virus (HAV) infection.</li> <li>People who travel or work anywhere EXCEPT the U.S., most, but not all of Western Europe, New Zealand, Australia, Canada, and Japan.</li> <li>People with chronic liver disease; injecting and non-injecting drug users; people who have HIV infection; men who have sex with men; people who are homeless or live in temporary housing (e.g., a shelter); people who work with HAV in lab settings.</li> <li>People who anticipate close personal contact with an international adoptee from a country of high or intermediate endemicity during the first 60d following the adoptee’s arrival in the U.S.</li> <li>Postexposure: adults with recent (within 2wks) exposure to HAV, give HepA. Vaccine may be used in conjunction with IG at the provider’s discretion in adults older than age 40 or immunocompromised.</li> </ul>	<ul style="list-style-type: none"> <li>Give 2 doses, spaced 6–18m apart (depending on brand).</li> <li>If dose #2 is delayed, do not repeat dose #1. Just give dose #2.</li> </ul> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>For Twinrix (hepatitis A and B combination vaccine [GSK]) for patients age 18yrs and older only: give 3 doses on a 0, 1, 6m schedule. There must be at least 4wks between doses #1 and #2, and at least 5m between doses #2 and #3.</p> <p>An alternative schedule can also be used at 0, 7d, 21–30d, and a booster at 12m.</p> </div>	<p><b>Contraindication</b> History of severe allergic reaction (e.g., anaphylaxis) to a previous dose or to a vaccine component.</p> <p><b>Precautions</b> Moderate or severe acute illness with or without fever.</p>
<p><b>Hepatitis B</b> (Engerix-B, Recombivax HB; Heplisav-B)</p> <p><i>Give IM</i></p> <p>Brands may be used interchangeably; however, a 2-dose series may only be comprised of 2 doses of Heplisav-B</p>	<p>For people through age 18yrs, consult “Summary of Recommendations for Child/Teen Immunization” at <a href="http://www.immunize.org/catg.d/p2010.pdf">www.immunize.org/catg.d/p2010.pdf</a>.</p> <ul style="list-style-type: none"> <li>All adults who want to be protected from hepatitis B virus infection.</li> <li>Household contacts and sex partners of HBsAg-positive people; injecting drug users; sexually active people not in a long-term, mutually monogamous relationship; men who have sex with men; people with HIV; people seeking STD evaluation or treatment; hemodialysis patients and those with renal disease that may result in dialysis; diabetics younger than age 60yrs (diabetics age 60yrs and older may be vaccinated at the clinician’s discretion); healthcare personnel and public safety workers who are exposed to blood; clients and staff of institutions for the developmentally disabled; inmates of long-term correctional facilities; certain international travelers; and people with chronic liver disease. Adults with chronic liver disease include, but are not limited to, those with 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.</li> </ul> <p><b>NOTE:</b> Provide serologic screening for immigrants from endemic areas. If patient is chronically infected, assure appropriate disease management. For sex partners and household contacts of HBsAg-positive people, provide serologic screening and administer initial dose of HepB vaccine at same visit.</p>	<ul style="list-style-type: none"> <li>For Heplisav-B, give 2 doses 1m apart.</li> <li>For Engerix-B and Recombivax HB, give 3 doses on a 0, 1, 6m schedule. <ul style="list-style-type: none"> <li>Alternative timing options for vaccination include 0, 2, 4m; 0, 1, 4m; and 0, 1, 2, 12m (Engerix brand only).</li> <li>There must be at least 4wks between doses #1 and #2, and at least 8wks between doses #2 and #3. Overall, there must be at least 16wks between doses #1 and #3.</li> </ul> </li> <li>For adults on hemodialysis or with other immunocompromising conditions, give either 1 dose of 40 µg/mL Recombivax HB at 0, 1, 6m, 2 doses of 20 µg/mL Engerix-B given simultaneously at 0, 1, 2, 6m, or 2 doses Heplisav-B 1m apart.</li> </ul> <p><b>Schedule for those who have fallen behind:</b> If the series is delayed between doses, DO NOT start the series over. Continue from where the schedule was interrupted.</p>	<p><b>Contraindication</b> History of severe allergic reaction (e.g. anaphylaxis) to a previous dose or to a vaccine component.</p> <p><b>Precaution</b> Moderate or severe acute illness with or without fever.</p>
<p><b>Hib</b> (<i>Haemophilus influenzae</i> type b)</p> <p><i>Give IM</i></p>	<p>For people through age 18yrs, consult “Summary of Recommendations for Child/Teen Immunization” at <a href="http://www.immunize.org/catg.d/p2010.pdf">www.immunize.org/catg.d/p2010.pdf</a>.</p> <ul style="list-style-type: none"> <li>Not routinely recommended for healthy adults.</li> <li>Those adults at highest risk of serious Hib disease include people who 1) have anatomic or functional asplenia, 2) are undergoing an elective splenectomy, or 3) are recipients of hematopoietic stem cell transplant (HSCT).</li> </ul>	<ul style="list-style-type: none"> <li>Give 1 dose of any Hib conjugate vaccine to adults in categories 1 or 2 (see 2nd bullet in column to left) if no history of previous Hib vaccine.</li> <li>For HSCT patients, regardless of Hib vaccination history, give 3 doses, at least 4wks apart, beginning 6–12m after transplant.</li> </ul>	<p><b>Contraindication</b> History of severe allergic reaction (e.g., anaphylaxis) to a previous dose or to a vaccine component.</p> <p><b>Precautions</b> Moderate or severe acute illness with or without fever.</p>

Vaccine name and route	People for whom vaccination is recommended	Schedule for vaccination administration (any vaccine can be given with another unless otherwise noted)	Contraindications and precautions (mild illness is not a contraindication)	
<b>Zoster</b> (shingles) (RZV: Shingrix; ZVL: Zostavax) <i>For RZV, give IM</i> <i>For ZVL, give Subcut</i>	<ul style="list-style-type: none"> <li>• People age 50yrs and older.</li> </ul> <p><b>NOTE:</b> Do not test people age 50yrs or older for varicella immunity prior to zoster vaccination. Persons born in the U.S. prior to 1980 can be presumed to be immune to varicella for the purpose of zoster vaccination, regardless of their recollection of having had chickenpox.</p>	<ul style="list-style-type: none"> <li>• Give 2 doses of RZV, separated by 2–6m, regardless of previous history of herpes zoster (shingles) or chickenpox.</li> <li>• If previously vaccinated with ZVL, give 2 doses of RZV at least 2m after ZVL.</li> <li>• A 1-time dose of ZVL may be given to previously unvaccinated immunocompetent adults age 60y and older; however, RZV is preferred.</li> <li>• If 2 or more of the following live virus vaccines are to be given – LAIV, MMR, Var, ZVL, and/or yellow fever – they should be given on the same day. If they are not, space them by at least 28d (30d for yellow fever).</li> </ul>	<p><b>Contraindications</b></p> <ul style="list-style-type: none"> <li>• History of severe allergic reaction (e.g., anaphylaxis) to a previous dose of either zoster vaccine or to a vaccine component.</li> <li>• For ZVL only:             <ul style="list-style-type: none"> <li>– Primary cellular or acquired immunodeficiency.</li> <li>– Receipt of specific antivirals (i.e., acyclovir, famciclovir, or valacyclovir) 24hrs before vaccination, if possible; delay resumption of these antiviral drugs for 14d after vaccination.</li> <li>– Pregnancy.</li> </ul> </li> </ul> <p><b>Precautions</b></p> <ul style="list-style-type: none"> <li>• Moderate or severe acute illness with or without fever.</li> <li>• For RZV only, consider delaying vaccination in pregnant or lactating women.</li> </ul>	
<b>Human papillomavirus (HPV)</b> <i>Give IM</i>	<p>For people through age 18yrs, consult “Summary of Recommendations for Child/Teen Immunization” at <a href="http://www.immunize.org/catg.d/p2010.pdf">www.immunize.org/catg.d/p2010.pdf</a>.</p> <ul style="list-style-type: none"> <li>• For unvaccinated or partially vaccinated adults through age 26yrs: Complete a 3-dose series of HPV.</li> <li>• Unvaccinated adults age 27 through 45yrs may be vaccinated based on shared clinical decision-making.</li> <li>• <b>Other guidance:</b> Pregnancy is neither a contraindication nor a precaution to HPV vaccine.</li> </ul>	<ul style="list-style-type: none"> <li>• Give 3 doses on a 0, 1–2, 6m schedule.</li> <li>• There must be at least 4wks between doses #1 and #2 and at least 12wks between doses #2 and #3. Overall, there must be at least 5m between doses #1 and #3.</li> <li>• If the type of HPV vaccine previously given is not known or not available, any available HPV vaccine should be used to complete the series.</li> </ul>	<p><b>Contraindication</b></p> <p>History of severe allergic reaction (e.g., anaphylaxis) to a previous dose or to a vaccine component, including yeast.</p> <p><b>Precautions</b></p> <p>Moderate or severe acute illness with or without fever.</p>	
<p>Adults who initiated the HPV vaccination series before age 15yrs and received 2 doses at least 5m apart are considered adequately vaccinated and do not need an additional dose of HPV vaccine (immunocompromised adults should receive a 3-dose series).</p>	<b>Inactivated Polio</b> (IPV) <i>Give IM or Subcut</i>	<p>For people through age 18yrs, consult “Summary of Recommendations for Child/Teen Immunization” at <a href="http://www.immunize.org/catg.d/p2010.pdf">www.immunize.org/catg.d/p2010.pdf</a>.</p> <ul style="list-style-type: none"> <li>• Not routinely recommended for U.S. residents age 18yrs and older.</li> </ul> <p><b>NOTE:</b> Adults living in the U.S. who never received or completed a primary series of polio vaccine need not be vaccinated unless they intend to travel to areas where exposure to wild-type virus is likely. Adults with documented prior vaccination can receive 1 booster dose if traveling to polio endemic areas or to areas where the risk of exposure is high.</p>	<p>For unique situations, schedules, and dosing information, see ACIP inactivated polio vaccine recommendations on pages 829–830 at <a href="http://www.cdc.gov/mmwr/PDF/wk/mm5830.pdf">www.cdc.gov/mmwr/PDF/wk/mm5830.pdf</a>.</p>	<p><b>Contraindication</b></p> <p>History of severe allergic reaction (e.g., anaphylaxis) to a previous dose of this vaccine or to any of its components.</p> <p><b>Precautions</b></p> <ul style="list-style-type: none"> <li>• Moderate or severe acute illness with or without fever.</li> <li>• Pregnancy.</li> </ul>

Vaccine name and route	People for whom vaccination is recommended	Schedule for vaccination administration (any vaccine can be given with another unless otherwise noted)	Contraindications and precautions (mild illness is not a contraindication)
<p><b>Pneumococcal polysaccharide</b> (PPSV23; Pneumovax 23) <i>Give IM or Subcut</i></p> <hr/> <p><b>Pneumococcal conjugate</b> (PCV13; Prevnar13) <i>Give IM</i></p>	<p>For people through age 18yrs, consult “Summary of Recommendations for Child/Teen Immunization” <a href="http://www.immunize.org/catg.d/p2010.pdf">www.immunize.org/catg.d/p2010.pdf</a>.</p> <p><b>All people age 65yrs or older should receive</b></p> <ul style="list-style-type: none"> <li>1 dose of PPSV23; PCV13, if not previously received, can be considered for a 1-time dose based on shared clinical decision-making.</li> </ul> <p><b>People younger than age 65yrs should receive</b></p> <ul style="list-style-type: none"> <li>1-time dose of PCV13 and 1st dose of PPSV23 if they have anatomic or functional asplenia, immunocompromising condition (see below), CSF leak, or are a candidate for or recipient of a cochlear implant.</li> <li>2nd dose of PPSV23 if at highest risk of serious pneumococcal infection, including those who                             <ul style="list-style-type: none"> <li>– have anatomic or functional asplenia, including sickle cell disease.</li> <li>– have an immunocompromising condition, including HIV infection, leukemia, lymphoma, Hodgkin’s disease, multiple myeloma, generalized malignancy, chronic renal failure, or nephrotic syndrome.</li> <li>– are receiving immunosuppressive chemotherapy (including high-dose corticosteroids).</li> <li>– have received an organ or bone marrow transplant.</li> </ul> </li> <li>PPSV23 only (not PCV13) if younger than 65 yrs and they have chronic liver, cardiac or pulmonary disease (including asthma), alco-holism, diabetes, or smoke tobacco. American Indian/Alaska Natives age 50 through 64yrs may be recommended by local public health authorities if increased risk exists in their community.</li> </ul>	<ul style="list-style-type: none"> <li>When recommended (see column at left), give PCV13 and/or PPSV23 if unvaccinated or if previous vaccination history is unknown.</li> <li>For healthy people age 65yrs and older, if PCV13 is to be administered based on shared clinical decision-making, give PCV13 first followed by PPSV23 in 1yr.</li> <li>When both PCV13 and PPSV23 are indicated (anatomical or functional asplenia, immunocompromising condition, CSF leak, or cochlear implant), give PCV13 followed by PPSV23 in 8wks. If previously vaccinated with PPSV23, give PCV13 at least 12m after PPSV23.</li> <li>Give another dose of PPSV23 to people                             <ul style="list-style-type: none"> <li>– age 65 yrs and older. If PPSV23 was given prior to age 65yrs, give another PPSV23 at least 5yrs later. Only one dose of PPSV23 is recommended at age 65yrs or older.</li> <li>– age 19–64yrs who are at highest risk of pneumococcal infection and at least 5yrs following the 1st dose.</li> </ul> </li> <li>PPSV23 and PCV13 should not be given at the same visit.</li> </ul>	<p><b>Contraindication</b></p> <p>Previous severe allergic reaction (e.g., anaphylaxis) to this vaccine, including (for PCV13) to any diphtheria toxoid-containing vaccine, or to any of its components, including yeast.</p> <p><b>Precaution</b></p> <p>Moderate or severe acute illness with or without fever.</p>
<p><b>Meningococcal conjugate</b> (MenACWY; Menactra, Menveo, MenQuadfi) <i>Give IM</i></p>	<p>For people through age 18yrs, consult “Summary of Recommendations for Child/Teen Immunization” at <a href="http://www.immunize.org/catg.d/p2010.pdf">www.immunize.org/catg.d/p2010.pdf</a>.</p> <ul style="list-style-type: none"> <li>People with anatomic or functional asplenia, HIV infection, persistent complement component deficiency, or complement inhibitor use.</li> <li>People who travel to or reside in countries in which meningococcal disease is hyperendemic or epidemic (e.g., the “meningitis belt” of Sub-Saharan Africa).</li> <li>Microbiologists routinely exposed to isolates of <i>N. meningitidis</i>.</li> <li>For first year college students living in a residence hall, regardless of age,                             <ul style="list-style-type: none"> <li>– if unvaccinated, give 1 dose.</li> <li>– if history of 1 dose given when younger than age 16, give dose #2.</li> <li>– if most recent dose given after 16th birthday and more than 5 years have elapsed, give 1 dose.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Give 2 initial doses of MenACWY separated by 2m to adults with risk factors listed in 1st bullet in column to left.</li> <li>Give 1 initial dose of MenACWY to all other adults with risk factors (see 2nd–4th bullets in column to left).</li> <li>Give booster doses of MenACWY every 5yrs to adults with continuing risk (see the 1st–3rd bullets in column to left).</li> </ul>	<p><b>Contraindication</b></p> <p>Previous severe allergic reaction (e.g., anaphylaxis) to this vaccine or to any of its components.</p> <p><b>Precaution</b></p> <ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever.</li> <li>For MenB only: pregnancy</li> </ul>
<p><b>Meningococcal serogroup B</b> (MenB; Bexsero, Trumenba) <i>Give IM</i></p>	<ul style="list-style-type: none"> <li>People with anatomic or functional asplenia persistent complement component deficiency, or complement inhibitor use.</li> <li>Microbiologists routinely exposed to isolates of <i>N. meningitidis</i>.</li> <li>People identified as at increased risk because of a serogroup B meningococcal disease outbreak.</li> <li>Young adults through age 23yrs may be vaccinated routinely.</li> </ul>	<ul style="list-style-type: none"> <li>Give 2 doses of either MenB vaccine: Bexsero, spaced 1m apart; Trumenba, spaced 6m apart.</li> <li>The brands of MenB vaccine are not interchangeable. If the brand of MenB vaccines used for the primary series is unknown or unavailable, complete a primary series with the available brand.</li> <li>For people with risk (see 1st–3rd bullets in column to left), give either 2 doses of Bexsero, 1m apart, or 3 doses of Trumenba on a 0, 1–2, and 6m schedule. If risk continues, give a booster 1 year after completing the primary series, followed by a booster every 2–3 years as long as risk continues. Booster doses must be same brand as primary series.</li> <li>MenB vaccine may be given concomitantly with MenACWY vaccine.</li> </ul>	

People at highest risk of serious pneumococcal infection include those who

- have anatomic or functional asplenia, including sickle cell disease.
- have an immunocompromising condition, including HIV infection, leukemia, lymphoma, Hodgkin’s disease, multiple myeloma, generalized malignancy, chronic renal failure, or nephrotic syndrome.
- are receiving immunosuppressive chemotherapy (including high-dose corticosteroids).
- have received an organ or bone marrow transplant.