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Recommended Immunizations to Reduce Respiratory Morbidity and Mortality Among U.S. Adults with Asthma, by Age

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Respiratory infections, including some that are preventable by vaccination, can trigger asthma attacks. The figure is a summary of some vaccines recommended for US adults with asthma. These recommendations largely parallel recommendations for adults without asthma. For example:

- A 2024–2025 COVID-19 vaccination is recommended for all adults to protect against severe COVID-19-associated illness and death.^{1,2} A second dose of 2024–2025 COVID-19 vaccine is recommended for people 65 years and older and people with moderate or severe immunocompromise.³ Footnote 2 (Figure) has more information on COVID-19 vaccination.
- To protect against pertussis, all adults should receive one dose of Tdap vaccine if they did not receive Tdap on or after the age of 10 years. A Td or Tdap booster every 10 years is recommended for all adults to prevent tetanus and diphtheria.¹
- Routine annual influenza vaccination is recommended for all persons aged ≥6 months who have no contraindications. All persons should receive an age-appropriate influenza vaccine (i.e., one approved for their age). The exception is that solid organ transplant recipients aged 18–64 years receiving immunosuppressive medication regimens may receive trivalent high-dose inactivated influenza vaccine (HD-IIV3) or trivalent adjuvanted inactivated influenza vaccine (aIIV3) as acceptable options, without a preference over other age-appropriate inactivated or recombinant influenza vaccines.^{1,4} Trivalent high-dose inactivated influenza vaccine (HD-IIV3), trivalent recombinant influenza vaccine (RIV3), and trivalent adjuvanted inactivated influenza vaccine (aIIV3) are preferentially recommended for persons aged ≥65 years.

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There are notable exceptions relevant to all adult patients with asthma. These include:

- Precautions for live attenuated influenza vaccine (LAIV3), approved for persons 2–49 years, include asthma in persons aged ≥ 5 years.^{1,4} When a precaution is present, vaccination should generally be deferred but might be indicated if the benefit of protection from the vaccine outweighs the risk for an adverse reaction.^{1,4} Footnote 3 (Figure) has more information on influenza vaccination.
- Asthma is a risk factor for severe respiratory syncytial virus (RSV) disease among adults aged 60–74 years. A single dose of an RSV vaccine (Arexvy [GSK]; Abrysvo [Pfizer]; or mResvia [Moderna]) is recommended for all adults aged ≥ 75 years and for adults aged 60–74 years who are at increased risk for severe RSV disease, including adults with asthma.^{1,5}
- CDC recommends pneumococcal vaccination for adults 50 years and older. CDC also recommends pneumococcal vaccination for adults at increased risk for pneumococcal disease, including adults with chronic lung disease. Footnote 4 (Figure) has more information on pneumococcal vaccination.^{1,6}

Tdap and RSV vaccination during pregnancy (Figure) can prevent severe pertussis and RSV, respectively, among young babies after they are born.^{7,8}

This figure is not comprehensive. It does not include vaccine recommendations, contraindications, and precautions for adults with other health considerations including HIV infection, immunodeficiency, or history of severe allergic reaction to a vaccine or component of a vaccine. Recommendations for *Haemophilus influenzae* type b (Hib) vaccine are not in the figure. Hib vaccine is recommended for adults with anatomic or functional asplenia (including sickle cell disease) or hematopoietic stem cell transplant.¹

Nevertheless, healthcare providers can use this figure for information on some currently recommended vaccinations to protect adults with asthma. This article reflects current knowledge. CDC recommendations may change as knowledge increases. Providers can stay informed about the latest CDC immunization recommendations at <https://www.cdc.gov/vaccines/hcp/imz-schedules>, and encourage patients to stay up-to-date with recommended vaccines to protect health.

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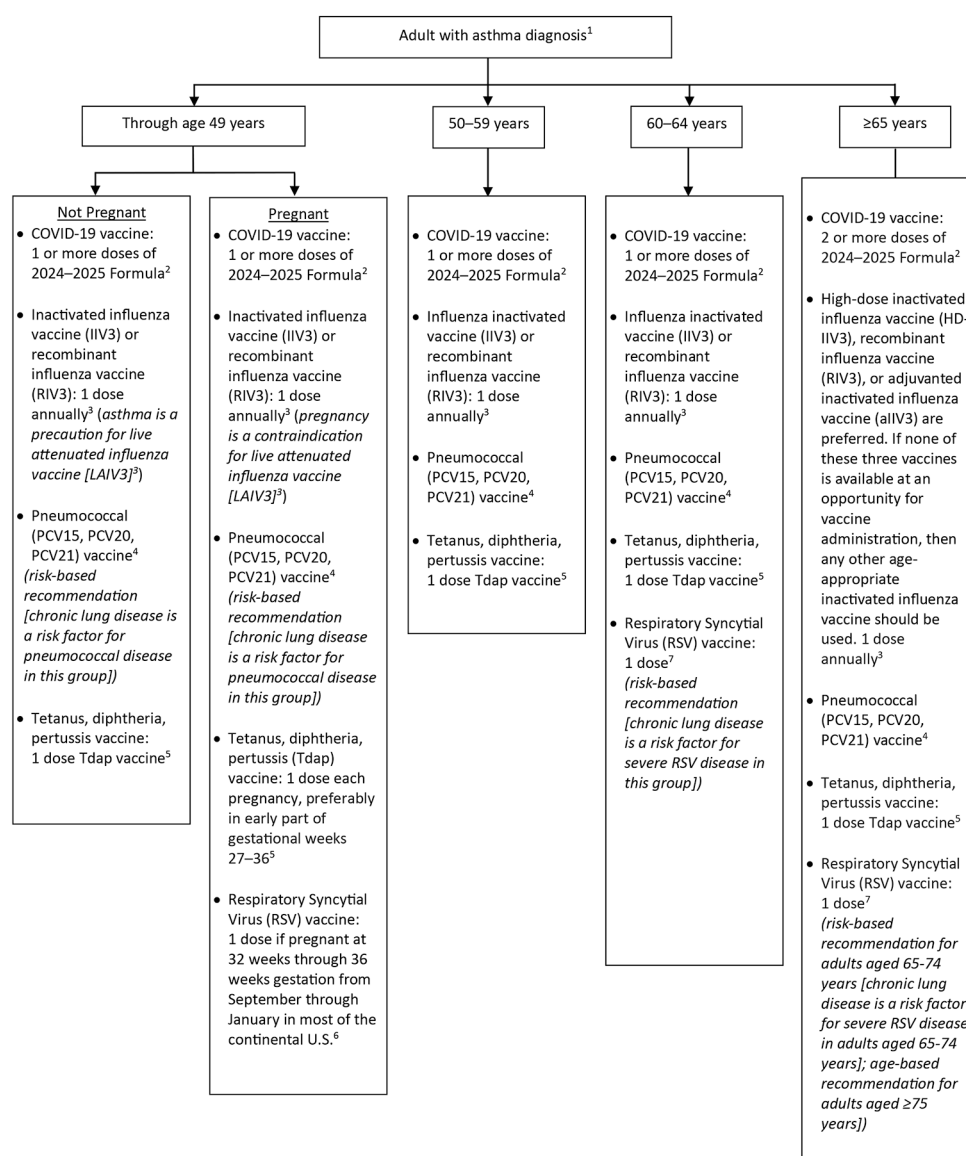


Figure 1. Recommended Immunizations to Reduce Respiratory Morbidity and Mortality Among U.S. Adults with Asthma, by Age¹ (as of January 10, 2025)

¹ This flow chart includes vaccinations related to prevention of respiratory infections and is not a comprehensive immunization schedule for all adults with asthma. This flow chart does not include vaccination recommendations, contraindications, and precautions for adults with asthma and other health considerations including HIV infection, immunodeficiency, or history of severe allergic reaction to a vaccine or component of a vaccine. Additionally, vaccination recommendations for *Haemophilus influenzae type b* are not included but would be recommended in patients with anatomical or functional asplenia (including sickle cell disease) or hematopoietic stem cell transplant. This information and other details are available for healthcare providers at [Immunization Schedules | Vaccines & Immunizations | CDC](#).

² One dose of 2024–2025 Formula COVID-19 vaccine is recommended for all adults ages 18–64 years; previously unvaccinated adults ages 18–64 years who initiate vaccination with 2024–2025 Novavax vaccine are recommended to receive 2 doses of Novavax vaccine 3–8 weeks apart. Two doses of the 2024–2025 COVID-19 vaccine, spaced 6 months apart (minimum interval 2 months) are recommended for people 65 years and older; adults ages 65 years and older who are previously unvaccinated and receive Novavax are recommended to receive 2 doses of Novavax followed by a third dose of any COVID-19 vaccine 6 months (minimum interval 2 months) later. Adults ages 18 years and older who are moderately or severely immunocompromised should receive a multidose initial series of COVID-19 vaccine and 1 dose of any age-appropriate COVID-19 vaccine 6 months (minimum interval 2 months) after completion of the initial series. Adults ages 18 years and older who previously completed the multidose initial series should receive 2 age-appropriate doses of 2024–2025 COVID-19 vaccine 6 months (minimum interval 2 months) apart. Additional doses (i.e., three or more) for people who are moderately or severely immunocompromised may be administered under shared clinical decision-making. More information is available in [Use of COVID-19 Vaccines for Persons Aged ≥6 Months: Recommendations of the Advisory Committee on Immunization Practices — United States, 2024–2025 | MMWR \(cdc.gov\)](#), [Adult Immunization Schedule Notes | Vaccines & Immunizations | CDC](#), and [CDC Recommends Second Dose of 2024–2025 COVID-19 Vaccine for People 65 Years and Older and for People Who are Moderately or Severely Immunocompromised | CDC Newsroom](#); additional information is forthcoming in 2025.

³ Routine annual influenza vaccination is recommended for all persons aged ≥6 months who do not have contraindications. All 2024–25 influenza vaccines are trivalent. All persons should receive an age-appropriate influenza vaccine (i.e., one approved for their age), with the exception that solid organ transplant recipients aged 18 through 64 years who are receiving immunosuppressive medication regimens may receive trivalent high-dose inactivated influenza vaccine (HD-IIV3) or trivalent adjuvanted inactivated influenza vaccine (aIIV3) as acceptable options, without a preference over other age-appropriate inactivated or recombinant influenza vaccines. Live attenuated influenza vaccine (LAIV3) is not recommended for certain populations and is not approved for children aged <2 years or adults >49 years. The Advisory Committee on Immunization Practices lists asthma or a history of wheezing in the previous 12 months as a contraindication for LAIV3 for children aged 2–4 years. Adults aged ≥65 years should preferentially receive any one of the following higher dose or adjuvanted influenza vaccines: trivalent high-dose inactivated influenza vaccine (HD-IIV3), trivalent recombinant influenza vaccine (RIV3), or trivalent adjuvanted inactivated influenza vaccine (aIIV3). More information, including contraindications and precautions for use of seasonal influenza vaccines, is available at [Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices — United States, 2024–25 Influenza Season | MMWR \(cdc.gov\)](#).

⁴ A single dose of a pneumococcal conjugate vaccine (PCV15, PCV20, or PCV21) is a recommended vaccination for all PCV-naïve adults ages 50 years and older. Adults younger than 50 years who have a risk condition are recommended to receive pneumococcal conjugate vaccine, including adults younger than 50 years with chronic lung disease. If PCV15 is administered, a single dose of 23-valent pneumococcal polysaccharide vaccine (PPSV23) should be administered ≥1 year after the PCV15 dose. A minimum interval of 8

weeks can be considered if PCV15 is used in adults who also have an immunocompromising condition, cochlear implant, or cerebrospinal fluid leak. Additional guidance exists for adults who have previously received a pneumococcal vaccine. Contraindications and precautions for PCV15, PCV20, PCV21, and PPSV23 exist. More information is available in [Adult Immunization Schedule Notes | Vaccines & Immunizations | CDC](#). For guidance on determining which pneumococcal vaccines a patient needs and when, please refer to the mobile app, which can be downloaded here: [PneumoRecs VaxAdvisor App for Vaccine Providers | Pneumococcal | CDC](#).

⁵ To protect against pertussis, all adults should receive one dose of Tdap vaccine if they did not receive Tdap on or after the age of 10 years. A Td or Tdap booster every 10 years is recommended for all adults to prevent tetanus and diphtheria. Additional Tdap or Td doses may be indicated for adults who are under-vaccinated. Contraindications and precautions for Tdap and Td vaccines exist. More information is available in [Adult Immunization Schedule Notes | Vaccines & Immunizations | CDC](#).

⁶ Either maternal RSV vaccination or infant immunization with nirsevimab (RSV monoclonal antibody) is recommended to prevent RSV lower respiratory tract infection in infants. For most of the continental United States, maternal RSV vaccination (Pfizer's Abrysvo™) should only be provided from September through January to pregnant women 32 through 36 weeks gestation. Administer RSV vaccine regardless of previous RSV infection. Providers should not administer maternal RSV vaccine outside of September through January unless the individual lives in an area where RSV circulation is less predictable and peak activity may vary including Alaska and tropical climates (including but not limited to southern Florida, Guam, Hawaii, Puerto Rico, U.S.-affiliated Pacific Islands, and the U.S. Virgin Islands). At this time, if a pregnant woman has already received a maternal RSV vaccine during any previous pregnancy, CDC does not recommend another dose of RSV vaccine during subsequent pregnancies. If their mother was **not** vaccinated during the **current** pregnancy, the infant should receive nirsevimab during October–March (ideally, in October if born during April–September or at birth if born during October–March). CDC continues to evaluate data to determine whether there is sufficient benefit of revaccination in subsequent pregnancies. Contraindications and precautions for RSV vaccination exist. More information is available in [RSV Vaccine Guidance for Pregnant People | RSV | CDC](#), [Immunizations to Protect Infants | RSV | CDC](#), <https://www.cdc.gov/mmwr/volumes/72/wr/mm7241e1.htm>, and [Adult Immunization Schedule Notes | Vaccines & Immunizations | CDC](#).

⁷ Asthma is a risk factor for severe respiratory syncytial virus (RSV) disease among adults aged 60–74 years. A single dose of any Food and Drug Administration–approved RSV vaccine (Arexvy [GSK]; Abrysvo [Pfizer]; or mResvia [Moderna]) is now recommended for all adults aged ≥75 years and for adults aged 60–74 years who are at increased risk for severe RSV disease. Adults who have previously received RSV vaccine should not receive another dose. Contraindications and precautions for RSV vaccine exist. More information is available in [Healthcare Providers: RSV Vaccination for Adults 60 Years of Age and Over | CDC](#) and [Use of Respiratory Syncytial Virus Vaccines in Adults Aged ≥60 Years: Updated Recommendations of the Advisory Committee on Immunization Practices — United States, 2024 | MMWR \(cdc.gov\)](#).