Vaccinations across the lifespan

An introduction to the routinely recommended adult vaccines

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December 1, 2022
Measles
Diphtheria
Pertussis
Influenza
Pneumonia
Hepatitis A
COVID-19
Meningitis
- **Learn** basic facts about vaccine preventable diseases
- **Recognize** key populations who may need certain vaccines
- **Understand** how vaccines are important throughout a person’s life
This presentation does **NOT** cover:

- Dosing schedules or regimens
- Trade names of vaccines
- Vaccines recommended for travel
- All nuances of certain medical conditions that may warrant vaccines
- Best practices to encourage vaccine uptake
- Details in the 2023 Adult Immunization Schedule
Recommended Adult Immunization Schedule for ages 19 years or older

How to use the adult immunization schedule

1. Determine recommended vaccinations by age (Table 1)
2. Assess need for additional recommended vaccinations by medical condition or other indication (Table 2)
3. Review vaccine types, frequencies, intervals, and considerations for special situations (Notes)
4. Review contraindications and precautions for vaccine types (Appendix)

Vaccines in the Adult Immunization Schedule*

*Administer recommended vaccines if vaccination history is incomplete or unknown. Do not restart or add doses to vaccine series if there are extended intervals between doses. The use of trade names is for identification purposes only and does not imply endorsement by the ACIP or CDC.

https://www.cdc.gov/vaccines/schedules/hcp/imz/adult.html
Vaccines recommended for **EVERYONE** based on AGE
<table>
<thead>
<tr>
<th>Age Group</th>
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<tbody>
<tr>
<td>19-26 years</td>
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<tr>
<td>27-49 years</td>
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Vaccines recommended for EVERYONE

- Influenza
- Tdap
- HPV
- Hepatitis B
- COVID-19
Vaccines recommended for EVERYONE

- Administer once EVERY YEAR
- Multiple types of flu vaccines:
  - Quadrivalent inactivated influenza vaccine [IIV4]
  - Recombinant influenza vaccine [RIV4]
  - Live attenuated influenza vaccine (LAIV4)
Vaccines recommended for EVERYONE

- Combination vaccine of Tetanus, Diphtheria, and Pertussis

- Tetanus “Lockjaw”

- Diphtheria

- Pertussis “Whooping Cough”
Vaccines recommended for EVERYONE

- Combination vaccine of Tetanus, Diphtheria, and Pertussis
Vaccines recommended for EVERYONE

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Vaccines recommended for EVERYONE

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19-26 years
Vaccines recommended for EVERYONE

• Combination vaccine of Tetanus, Diphtheria, and Pertussis
• Administer Td or Tdap once EVERY 10 YEARS
• May need to administer Td or Tdap for a “dirty wound”
• Administer 1 Tdap during 3rd trimester of each pregnancy
Vaccines recommended for EVERYONE

- Human Papillomavirus. Very common, sexually transmitted disease that can lead to cervical, penile, anal, vulvar, vaginal, and throat cancer.
- Everyone up through age 26 years needs to be vaccinated!
- HPV vaccines can prevent over 90% of these cancers!
- Preteens should be vaccinated! Number of doses needed depends on age when they started the series, or if they have any medical conditions.

General rule of thumb:
- 2 dose series if started at age 9-14 years
- 3 dose series if started at 15 years or older
Vaccines recommended for EVERYONE

- Causes chronic liver infection, liver failure, and liver cancer
- Causes up to 80% of liver cancers
- Recommended for all adults up through age 59 years
- Multiple types and dosing regimens of Hepatitis B vaccines
Vaccines recommended for EVERYONE

• Recommended for all persons 6 months of age and older

• Primary series:
  • 2-dose series at 0, 4-8 weeks (Moderna)
  • 2-dose series at 0, 3-8 weeks (Novavax, Pfizer-BioNTech)

• Stay up-to-date on vaccines!
19-26 years | 27-49 years | 50-64 years | 65+ years
Vaccines recommended for EVERYONE

- Influenza
- Tdap
- Hepatitis B
- COVID-19
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Vaccines recommended for EVERYONE

- Influenza
- Tdap
- Hepatitis B*
- COVID-19
- Zoster
Vaccines recommended for EVERYONE

- Recommended for all adults up through age 59 years
- Risk-based recommendations for adults 60 years of age and older
Vaccines recommended for EVERYONE

• Recommended for all adults 50 years of age or older
• Reactivation of the virus that causes chickenpox, causing a painful skin rash. Can develop nerve pain that lasts for months or years, called postherpetic neuralgia.
• 1 out of 3 people in the United States will develop shingles!
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Vaccines recommended for EVERYONE

- Influenza
- Tdap
- COVID-19
- Zoster
- Pneumococcal
Vaccines recommended for EVERYONE

- Recommended for all adults 65 years of age or older
- Caused by a bacteria called *streptococcus pneumoniae*. Can cause multiple infections:
  - Pneumonia: Lung infection
  - Bacteremia: Blood infection
  - Sinusitis: Sinus infection
  - Meningitis: Infection of the lining of the brain and spinal cord
  - Otitis media: Ear infection
- Spreads via respiratory secretions, like saliva or mucus
- Pneumococcal pneumonia causes **150,000 hospitalizations**. Pneumococcal meningitis and bacteremia kills more than **3,000 people**.
Vaccines recommended for EVERYONE

- High dose or adjuvanted influenza vaccines are preferred
  - Quadrivalent high-dose inactivated influenza vaccine (HD-IIV4)
  - Quadrivalent recombinant influenza vaccine (RIV4)
  - Quadrivalent adjuvanted inactivated influenza vaccine (aIIV4)

- If none of these vaccines is available, any other age-appropriate influenza vaccine should be used
Vaccines recommended for SOME based on certain conditions
Vaccines recommended for SOME

- Live vaccine. Protects against Measles, Mumps and Rubella.

**MMR**
- Varicella
- Zoster
- HPV
- Pneumococcal
- Hepatitis A
- Hepatitis B
- Meningococcal
- Hib
Vaccines recommended for SOME

- Live vaccine. Protects against Measles, Mumps and Rubella.
Vaccines recommended for SOME

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Vaccines recommended for SOME

- Live vaccine. Protects against Measles, Mumps and Rubella.
- Do NOT give to immunocompromised adults or pregnant women!
- No evidence of immunity to measles, mumps, or rubella: 1 dose
- Evidence of immunity:
  - Born before 1957*
  - Documented receipt of MMR
  - Laboratory evidence of immunity or disease.

*For healthcare personnel, see 2023 adult immunization schedule for details.
Vaccines recommended for SOME

- Live vaccine. Protects against chickenpox
- Do NOT give to immunocompromised adults or pregnant women!
- No evidence of immunity to varicella: 2 doses
- Evidence of immunity:
  - Born in the U.S. before 1980*
  - Documented receipt of 2 doses
  - Documentation of history of disease
  - Laboratory evidence of immunity or disease.

*For excluded groups, please see 2023 adult immunization schedule for details.
Vaccines recommended for SOME

- Only give to immunocompromised adults aged 19 years or older
- Reminder: EVERYONE aged 50 years or older gets Zoster vaccine
Vaccines recommended for SOME

- Only SOME adults aged 27 through 45 years may need HPV vaccines.
- Talk to your health care provider to figure out if you need an HPV vaccine
- Reminder: EVERYONE up through 26 years of age needs HPV vaccine!
Vaccines recommended for SOME

Only SOME adults less than 65 years need pneumococcal vaccines:

- Alcoholism
- Chronic heart disease
- Chronic liver disease
- Chronic lung disease
- Cigarette smoking
- Diabetes mellitus
- Cochlear implant
- Cerebrospinal fluid leak
- Not having a spleen
- Sickle cell disease
- Chronic renal failure

Reminder: ALL adults 65 years and older need pneumococcal vaccines!
Vaccines recommended for SOME

Only SOME adults at risk for Hepatitis A infection should get vaccinated:

- Chronic liver disease
- HIV infection
- IV drug use
- Homelessness
- Lab work with hepatitis A virus
- Travel to countries with endemic hepatitis A
- Close, personal contact with international adoptee
- Pregnancy (if at risk for infection or severe outcome from infection)
- Other settings for exposure, including healthcare settings, group homes, day care facilities for developmentally disabled persons

Anyone who is NOT at risk but still wants protection from Hepatitis A can still be vaccinated.
Vaccines recommended for SOME

Risk-based recommendations for adults 60 years of age and older:

- Chronic liver disease
- HIV infection
- Sexual exposure risk
- Current or recent injection drug use
- Exposure to blood or body fluids
- Incarcerated persons
- Travel to countries with endemic hepatitis B

Anyone 60 years of age or older without known risk factors may still complete a HepB vaccine series.
Vaccines recommended for SOME

Only SOME adults at risk for meningococcal infection should get vaccinated:

- Not having a spleen
- HIV infection
- Certain immunodeficiencies
- Travel to countries with endemic or epidemic meningococcal disease
- First-year college students living in residential housing
- Military recruits
- Lab work with *Neisseria meningitidis*

Meningococcal disease can often cause severe (and sometimes deadly) infections of the lining of the brain and spinal cord (meningitis) and bloodstream.

Shared by respiratory and throat secretions (saliva or spit)
Only SOME adults at risk for meningococcal infection should get vaccinated:

- Not having a spleen
- Having a hematopoietic stem cell transplant

Caused by a bacteria (*Haemophilus influenzae* type b) that can lead to pneumonia, bloodstream infections, and meningitis

Spread by respiratory droplets
The Adult Vaccine Assessment Tool

What Vaccines do You need?

Adults need vaccines too! Answer a few quick questions to find out which vaccines you may need.

Vaccines are recommended for adults based on age, health conditions, job, and other factors. No personal information will be retained by CDC.

*This vaccine assessment tool applies to adults 19 years or older.

COVID-19 Vaccination

- Everyone 6 months and older is now eligible to get a free COVID-19 vaccination.
- COVID-19 vaccines are safe and effective.
- To find COVID-19 vaccine locations near you, search vaccines.gov, text your zip code to 438829, or call 1-800-232-0233.
- Healthcare providers can find ACIP recommendations for the use of COVID-19 vaccines on the ACIP Vaccine Recommendations and Guidelines page.
Instructions:

1. Answer the questions below.
2. Get a list of vaccines you may need based on your answers. (This list may include vaccines you've already had).
3. Discuss the list with your doctor or health care professional.

Questions:

1. Are you male or female?
   - Male
   - Female

2. What year were you born? (some vaccines are age-related)
   - 2004

3. Have you ever had the chickenpox vaccine?
   OR
   Has a healthcare provider diagnosed you with chickenpox ever in your life, or do you have laboratory results showing that you had chickenpox sometime in your life?
   - Yes
   - No
   - Not Sure

4. Will you be traveling outside the U.S. in the near future?
   - Yes
   - No

5. Are you a first-year college student who lives in a college dormitory or a new military recruit?
   - Yes
   - No
Your Vaccine Assessment Results

Your answers to the Adult Vaccine Assessment suggest that you may need the following vaccines if you have not had them before or are not already immune.

Suggested Vaccines

- MMR
- Hepatitis B
- Influenza
- Meningococcal
- Tdap, Td
- HPV

The table below provides more information on each of the vaccines you may need. Click on the vaccine name for more details. The links at the bottom of the page will allow you to print these results and take them to your next medical appointments.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Suggested because...</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMR - Measles-mumps-rubella</td>
<td>Your age indicates that you might need the MMR vaccine.</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>Your age indicates that you might need hepatitis B vaccine.</td>
</tr>
<tr>
<td>Seasonal Flu (Influenza)</td>
<td>People 6 months of age or older should get the flu vaccine.</td>
</tr>
<tr>
<td>Meningococcal</td>
<td>Your age indicates that you might need meningococcal vaccine.</td>
</tr>
<tr>
<td>Tdap, Td - Tetanus, Diphtheria, and Pertussis</td>
<td>You might need 1 dose of tetanus, diphtheria, and pertussis vaccine (Tdap). Tdap may be given regardless of when you last received a tetanus and diphtheria vaccine (Td). After you receive your Tdap, you will need a Td booster every 10 years.</td>
</tr>
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</table>
HPV - Human Papillomavirus

Your age indicates that you might need HPV vaccine.

Next Steps... Share this information with your doctor or other health care professional, along with your vaccination record. If you do not have a vaccination record, now is a good time to start one.

Tell your doctor if you have already had any of these vaccines or diseases. To make sure you get the vaccines you need, your doctor will also need to know your allergies and history of disease.

More Information
Call CDC-INFO, in English or Spanish: 1-800-CDC-INFO or 1-800-232-4636

Related Pages

Adults Need Vaccines Too

Adult Immunization Schedule

Adolescent and Adult Vaccine Quiz web buttons

https://www.cdc.gov/nip/adultimmsched
Vaccine Administration
General Rule of Thumb

• Don’t miss an opportunity to vaccinate!

• Most non-live vaccines can be administered at any time before or after a different non-live vaccine or live vaccine.

• Live vaccines must be administered at the same visit or be separated by 28 days.

• Talk to a healthcare provider
Acknowledgments

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