### Bacteria / Virus

<table>
<thead>
<tr>
<th>Influenza (Flu)</th>
<th>Tetanus</th>
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#### How It Spreads
- *Influenza (Flu)*: Respiratory virus that spreads through droplets — from coughing, sneezing, or talking — that land on other people or objects they then touch.
- *Tetanus*: Bacteria that enters the body through a deep flesh wound.

#### Symptoms Can Include
- *Fever/feeling feverish*
- *Cough*
- *Sore throat*
- *Runny or stuffy nose*
- *Muscle or body aches*
- *Headaches*
- *Fatigue*
- *Vomiting or diarrhea (mostly in kids)*
- *Spasms & stiffness of jaw, neck, and stomach muscles*
- *Difficulty swallowing*
- *Painful body spasms*
- *Fever & sweating*
- *Raised blood pressure*
- *Rapid heart rate*
- *Locking of neck & jaw muscles*

#### Complications
- *Most recover in several days to less than 2 weeks*
- *Some may develop pneumonia, bronchitis, and sinus & ear infections*
- *Can worsen existing diseases*
- *Can lead to hospitalization and even death*
- *Bacteria produces a powerful toxin that impairs the nervous system*
- *Complications persist until toxins clear — sometimes taking several months*
- *Can interfere with ability to breathe and lead to death*
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| **Diphtheria**         | Bacteria that spreads through droplets — from coughing, sneezing, or talking | ● Weakness  
● Sore throat  
● Fever  
● Swollen glands in neck | ● Bacteria attaches to the lining of the respiratory system and produces toxins  
● Toxins destroy healthy tissue and form coating that builds up and makes it hard to breathe and swallow  
● Can cause lung infections  
● Toxins can get into blood stream and damage heart, kidneys, and nerves  
● Can cause paralysis and death |
| **Pertussis** (Whooping cough) | Respiratory bacteria that spreads through droplets — from coughing, sneezing, talking, and even sharing breathing space | ● Weakness  
● Sore throat  
● Fever  
● Swollen glands in neck | ● Bacteria attaches to the lining of upper respiratory system and produces toxins  
● Can be very serious, especially in babies  
● Weight loss  
● Passing out  
● Rib fractures  
● Convulsions  
● Apnea  
● Brain infection  
● Hospitalization and death |
| **Varicella** (Chicken pox) | Virus that is spread by touching or breathing in particles spread from coughing or talking | ● Rash that turns into fluid-filled blisters, sometimes over the entire body  
● Itching  
● Tiredness  
● Fever  
● Loss of appetite  
● Headache | Can be very serious, especially in babies, adults, and people with weakened immune systems, and can lead to:  
● Bacterial infections of skin and soft tissues  
● Pneumonia  
● Brain infection  
● Bleeding problems  
● Blood stream infections like sepsis  
● Dehydration  
● Hospitalization and death |
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| Varicella zoster      | Chicken pox virus that lies dormant and can be reactivated many years later as a shingles infection | Pain, itching, or tingling before rash appears  
Rash that commonly occurs as stripe around left or right side of body, on side of face, or near eye  
Fever  
Headache  
Chills  
Upset stomach | Post-herpetic neuralgia (PHN) — often severe and debilitating pain where rash occurred  
Loss of vision and blindness  
Pneumonia  
Hearing problems  
Brain inflammation  
Death |
| Pneumococcus          | Bacteria or virus that is spread by breathing in germs and is more common in people who are already sick with the cold or flu | Fever and chills  
Cough  
Rapid breathing or difficulty breathing  
Chest pain  
Confusion or low alertness in older adults | Lung infections  
Sinus and ear infections  
Blood stream infection  
Infection of brain and spinal cord lining (meningitis)  
Heart infection (pericarditis)  
Blockage of airway to lungs  
Lung collapse  
Abscess in lungs  
Hospitalization and death |

**People with certain risk factors** due to health, job, or lifestyle that are not listed here, may be at risk for other infectious diseases including meningococcal (meningitis), hepatitis A, hepatitis B, and Hib (haemophilus influenza type b) vaccines. Talk to your healthcare professional to see if you need vaccines to protect against these diseases.
## RECOMMENDED IMMUNIZATIONS FOR ADULTS AGE 60–64 AND 65+

<table>
<thead>
<tr>
<th>Disease</th>
<th>Ages 60–64</th>
<th>Ages 65+</th>
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<tbody>
<tr>
<td>Influenza (Flu)</td>
<td>• 1 dose every year</td>
<td>• 1 dose every year</td>
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<td><em>Note that there are a number of vaccines available for different age groups and that change each year</em></td>
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<tr>
<td>Tetanus</td>
<td>• 1 Td (tetanus &amp; diphtheria combined) booster every 10 years</td>
<td>• 1 Td booster every 10 years</td>
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<tr>
<td></td>
<td>• 1 dose of Tdap (tetanus, diphtheria, and pertussis combined) if you haven’t had one as an adult</td>
<td>• 1 dose of Tdap if you haven’t had one as an adult</td>
</tr>
<tr>
<td>Diphtheria</td>
<td></td>
<td></td>
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<tr>
<td>Pertussis (Whooping cough)</td>
<td>• 1 or 2 doses if haven’t been vaccinated yet AND haven’t had a past chicken pox or shingles infection</td>
<td>• 1 or 2 doses if haven’t been vaccinated yet AND haven’t had a past chicken pox or shingles infection</td>
</tr>
<tr>
<td>Varicella (Chicken pox)</td>
<td>• 1 dose if haven’t yet been vaccinated (previous infections are not relevant)</td>
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<tr>
<td>Varicella zoster (Shingles)</td>
<td>• 1 dose pneumococcal conjugate for persons with risk factor</td>
<td>• 1 dose pneumococcal conjugate if haven’t yet been vaccinated</td>
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<tr>
<td>Pneumococcal (Pneumonia)</td>
<td>• 1 or 2 dose pneumococcal polysaccharide depending on indication — for persons with risk factor</td>
<td>• 1 dose pneumococcal polysaccharide if haven’t yet been vaccinated</td>
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</table>

- **RECOMMENDED FOR YOU**: This vaccine is recommended for you unless your healthcare professional tells you that you don’t need it, or that you can’t safely receive it.

- **MAY BE RECOMMENDED FOR YOU**: This vaccine is recommended for you if you have certain risk factors because of your health, job, or lifestyle. Talk to your healthcare professional to find out if you need the vaccine.

**People with certain risk factors** due to health, job, or lifestyle that are not listed here, may need additional vaccines including meningococcal (meningitis), hepatitis A, hepatitis B, and Hib (haemophilus influenza type b) vaccines. Talk to your healthcare professional to see if you need these vaccines.

**If you are traveling outside of the U.S.**, you may need additional vaccines. Ask your healthcare professional about which vaccines you need at least 6 weeks before you travel.
### Vaccine Tracker

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Vaccine Type</th>
<th>Date</th>
<th>Next Dose Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tdap</td>
<td></td>
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<tr>
<td>Td booster</td>
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<td></td>
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<tr>
<td>Shingles</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Varicella</td>
<td>(chicken pox)</td>
<td></td>
<td></td>
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<tr>
<td>Pneumonia</td>
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### Influenza Tracker

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### Helpful Resources
- Learn more about what vaccines are recommended for you, how they work, and more at [www.cdc.gov/vaccines](http://www.cdc.gov/vaccines).
- Report vaccine reactions to the Vaccine Adverse Event Reporting System (VAERS) at [www.vaers.hhs.gov](http://www.vaers.hhs.gov) or by phone at 800-822-7967.
- Watch a helpful film on vaccination in older adults and learn more at [www.agingresearch.org/vaccines](http://www.agingresearch.org/vaccines).
- Access helpful resources on vaccination for all ages at the National Foundation for Infectious Diseases at [www.nfid.org](http://www.nfid.org).

The Alliance for Aging Research is the leading non-profit organization dedicated to accelerating the pace of scientific discoveries and their application in order to vastly improve the universal human experience of aging and health.