Vaccines & the Importance of Immunization

According to the New York State Department of Health, more than two centuries have passed since the first successful vaccine for smallpox was developed. We've come a long way since that time. Today's vaccines are among the 21st century's most successful and cost-effective public health tools when it comes to preventing disease and death. Thanks to immunizations, debilitating and often-fatal diseases such as polio that were once common are now only distant memories for most Americans. Today, there are vaccines available to protect children and adults against at least 17 diseases, which cause serious afflictions such as paralysis, loss of hearing, infertility and even death. The Centers for Disease Control states that, for everyone from infants to senior citizens, timely immunizations are one of the most important ways we can protect ourself and others from serious diseases and infections.

We Vaccinate to Protect our Future

We do not vaccinate just to protect our children. We vaccinate to protect our grandchildren and their grandchildren. If we keep vaccinating now, parents in the future may be willing to trust that diseases like polio and meningitis will not infect others, or have devastating outcomes like they have in the past. Vaccinations are one of the best ways to put an end to the serious effects of certain diseases.

Influenza

What is influenza?

The flu is a contagious respiratory illness caused by influenza viruses that infect the nose, throat, and lungs. It can cause mild to severe illness, and at times can lead to death. The best way to prevent the flu is by getting a flu vaccine each year.

Signs and symptoms of the flu

People who have the flu often feel some or all of these signs and symptoms:

- Fever* or feeling feverish/chills
- Cough
- Sore throat
- Runny or stuffy nose
- Muscle or body aches
- Headaches
- Fatigue (very tired)
- Some people may have vomiting and diarrhea, though this is more common in children than adults.

*It’s important to note that not everyone with flu will have a fever.
How flu spreads

Most experts believe that flu viruses spread mainly by droplets made when people with flu cough, sneeze or talk. These droplets can land in the mouths or noses of people who are nearby. Less often, a person might also get flu by touching a surface or object that has flu virus on it and then touching his or her own mouth, eyes and possibly nose.

How serious is the flu?

Flu is unpredictable and its severity can vary widely from one season to the next. During a period of 30 years, between 1976 and 2006, estimates of flu-associated deaths in the United States range from a low of about 3,000 to a high of about 49,000 people.

Flu vaccine

Everyone who is at least 6 months of age should get a flu vaccine this season. This recommendation has been in place since 2010 when CDC’s Advisory Committee on Immunization Practices (ACIP) voted for “universal” flu vaccination in the United States to expand protection against the flu to more people. While everyone should get a flu vaccine this season, it is especially important for some people to get vaccinated. Certain people are at greater risk for serious complications if they get the flu. They include:

- older people greater than 65 years old
- young children
- pregnant women
- people with certain health conditions, such as asthma, diabetes, & heart disease
- people with weakened immune systems
- residents of nursing homes
- health care personnel

A flu shot is administered during a recent district clinic.
**Vaccines are needed throughout your lifespan**

Vaccines are not just for infants and toddlers. Vaccines are necessary throughout our lifetime. Their effectiveness can continue to keep us healthy and free from disease.

**Vaccines for School Age Children**

In New York, Public Health Laws mandate that all children have received the required immunizations prior to entering school unless there is a religious or medical exemption. This law is to protect public health and to ensure that every child has been adequately protected against certain diseases.

### New York State Immunization Requirements for School Entrance/Attendance

<table>
<thead>
<tr>
<th>Vaccines</th>
<th>Pre-kindergarten (Day Care, Nursery, Head Start, or Pre-K)</th>
<th>School (k-12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphtheria Toxoid-Containing Vaccine</td>
<td>3 doses (New York City Schools — 4 doses)¹</td>
<td>3 doses (New York City schools — 4 doses — required for kindergarten only)</td>
</tr>
<tr>
<td>Tetanus Toxoid-Containing Vaccine and Pertussis</td>
<td>3 doses if born on or after 1/1/2005</td>
<td>3 doses if born on or after 1/1/2005 or 1 dose of Tdap for previously unvaccinated students 7 years of age or older¹</td>
</tr>
<tr>
<td>Vaccine (DTaP, DTP)</td>
<td></td>
<td>Born on or after 1/1/1994 and enrolling in grades 6 through 12 for the 2013-2014 school year ²</td>
</tr>
<tr>
<td>Measles, Mumps and Rubella (MMR)</td>
<td>1 dose</td>
<td>2 doses of measles-containing vaccine and 1 dose each of mumps and rubella (preferably as MMR)</td>
</tr>
<tr>
<td>Polio (IPV or OPV)</td>
<td>3 doses²</td>
<td>3 doses</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>3 doses</td>
<td>3 doses³</td>
</tr>
<tr>
<td>Haemophilus influenza type b (Hib)</td>
<td>3 doses if less than 15 months of age or 1 dose administered on or after 15 months of age ³</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Pneumococcal Conjugate Vaccine (PCV)</td>
<td>Born on or after 1/1/2008 4 doses by 15 months of age, given at age-appropriate times and intervals⁵</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Varicella (Chickenpox)</td>
<td>1 dose</td>
<td>1 dose⁶</td>
</tr>
</tbody>
</table>

**Vaccines for Young Adults and College Students**

- Seasonal flu vaccine
- Tdap vaccine, which protects against Tetanus, Diphtheria, and Pertussis (also known as whooping cough).
- HPV vaccine, which protects against the human papilloma viruses that causes most cervical cancers, anal cancer, and genital warts. This vaccine is suggested for women up to age 26 years and men up to age 21 years
- Meningococcal vaccine, which protects against most types of meningococcal disease, but does not prevent all cases. Students heading off to college should receive this vaccine. Some may require a booster if received early in adolescence.

**Vaccines for Adults and the Elderly**
Some adults incorrectly assume that the vaccines they received as children will protect them for the rest of their lives. Generally this is true, except that some adults were never vaccinated as children, newer vaccines were not available when some adults were children, immunity can begin to fade over time and especially as we age, we become more susceptible to serious disease caused by common infections.

Recommended Immunizations are:

- Seasonal flu vaccine
- Shingles vaccine, which prevents against Shingles, a painful skin rash that can occur in people older than 50.
- Tdap vaccine
- Pneumococcal vaccine, which helps prevent pneumonia, a serious respiratory illness; anyone older than 65 should receive this.

**Vaccines for Travelers**

Individuals planning to travel outside of the United States should always consider the need to possibly vaccinate against diseases that they may be at risk for in the traveling country. The CDC website has an enormous amount of information on its traveler’s page. This site allows you to enter your destination, whether or not you will be traveling with children, and any specific health related travel alerts. Your physician office may be willing to obtain the vaccines recommended for travel if not; a local company Workplace Vitality can assist you. Workplace Vitality collaborates with Passport Health of New York State to ensure that all travel related immunizations and concerns are addressed.

**Tuberculosis**

Tuberculosis (TB) is a disease caused by a bacterium called *Mycobacterium tuberculosis*. This bacterium is spread through the air from one person to another. TB usually attacks the lungs, but can attack any part of the body such as the kidney, spine, and brain. If not treated properly, TB disease can be fatal. TB disease was once the leading cause of death in the United States. TB bacteria can live in the body without making a person sick. This is called *latent TB infection*. People with latent TB infection do not feel sick, do not have TB symptoms, and cannot spread TB bacteria to others. Some people with latent TB infection go on to develop *TB disease*. People with TB disease can spread the bacteria to others, feel sick, and can have symptoms including fever, night sweats, cough, and weight loss. People, who frequently travel out of the country, should be careful that their destination is not a place that has a high population infected with TB. Countries that are considered endemic to tuberculosis can be accessed through the CDC website. Testing for TB involves a simple skin test. The Mantoux tuberculin skin test is a test to check if a person has been infected with TB bacteria.