

# Adult Immunizations

Immunizations are not just for kids. There are many important immunizations for adults some of them are just boosters for those received as a kid, but some are new to adults. The following is a list of the all immunizations needed for people over 18 along with an explanation of some that are primarily for adults.

## Pneumococcal (Pneumovax)

**-What does it prevent against?** Pneumococcal disease, a serious disease caused by bacteria that can lead to meningitis, pneumonia, and bacterial infection of the blood.

**How important is it?** According to the Centers for Disease Control pneumococcal disease kills more people in the United States each year than all other vaccine preventable diseases combined. About 1 out of every 20 people who get pneumococcal pneumonia dies from it, as do about 2 people out of 10 who get infection of the blood and 3 people out of 10 who get meningitis. Drugs such as penicillin were once effective in treating these infections; but the disease has become more resistant to these drugs, making treatment of pneumococcal infections more difficult. This makes prevention of the disease through vaccination even more important.

**Who needs it?** Anyone can get pneumococcal disease. However, some people are at greater risk from the disease. These include people 65 and older and people with special health problems such as alcoholism, heart or lung disease, kidney failure, diabetes, HIV infection, or certain types of cancer (see below)

### 1 dose for:

- Persons age 65yrs and older.
- Persons who have chronic illness or other risk factors – lung disease, heart disease, liver disease, alcoholism, diabetes, CSF leak, as well as people living in special environments or social settings (including Alaska Natives and certain American Indian populations).
- As well as those at highest risk of fatal pneumococcal infection, including persons who:
  - have anatomic asplenia, functional asplenia, or sickle cell disease
  - have an immunocompromising condition, including HIV infection, certain cancers, or kidney disease
  - are receiving immunosuppressive chemotherapy (including corticosteroids)
  - have received an organ or bone marrow transplant
  - are candidates for or recipients of cochlear implants.

**A second dose should be given 5 yrs later if the 1<sup>st</sup> dose was given before age 65.**

## Herpes zoster (shingles) vaccine (Zostavax)

**What does it prevent against?** Shingles, a painful skin rash caused by a reactivation of the virus that causes chicken pox, the varicella zoster virus (VZV). It can cause pain, itching or tingling of the skin which is followed by a painful skin rash of blister-like lesions, usually localized to a small area on one side of the body, and often the face or trunk. Other symptoms can include fever, headache, chills and upset stomach.

**How important is it?** Aside from the extreme pain that can remain for long periods of time even after the rash has gone away, a shingles infection can lead to pneumonia, hearing problems, blindness, brain inflammation (encephalitis) even death.

**Who needs it?** Anyone who has recovered from chickenpox may develop shingles. However, shingles is more common in people 60 years old or older, people who have medical conditions that keep the immune system from working properly, or people who receive immunosuppressive drugs.

**1 dose for:**

- all persons age 60yrs and older who do not have signs of acute zoster infection

## **HPV or Human Papillomavirus (Gardasil)**

**What does it prevent against?** Human papillomavirus, the most common sexually transmitted virus in the United States, and leading cause of genital warts and cervical cancer.

**How important is it?** About 20 million people in the U.S. are infected and about 6.2 million more get infected each year. HPV most important as it can cause cervical cancer in women. Every year in the U.S. about 10,000 women get cervical cancer and 3,700 die from it. It is the 2nd leading cause of cancer deaths among women around the world. It can also cause genital warts and warts in the upper respiratory tract. More than 50% of sexually active men and women are infected with HPV at sometime in their lives, and there is no treatment for HPV infection. The HPV vaccine protects against the 4 major types of HPV. These include 2 types that cause about 70% of cervical cancer and 2 types that cause about 90% of genital warts. ***The HPV vaccine can prevent most genital warts and most cases of cervical cancer***

**Who needs it?** HPV vaccine is routinely recommended for girls 11-26 years of age. Doctors may give it to girls as young as 9 years. Ideally it is given to girls before their first sexual contact because they have not been exposed to HPV. For these girls, the vaccine can prevent almost 100% of disease caused by the 4 types of HPV targeted by the vaccine which cause 70% of cervical cancer and 90% of genital warts. However, if a girl or woman is already infected with a type of HPV, the vaccine will not prevent disease from that type, but will prevent against the other types and may help her own immune system fight off those with which she may already be infected.

**3 doses at 0, 2 and 6mo for:**

- All previously unvaccinated women through age 26yrs.

## **Flu (Influenza)**

**1 dose every fall for:**

- All persons who want to reduce the likelihood of becoming ill with influenza or of spreading it to others.
- Persons age 50yrs and older.
- Persons with medical problems
  - heart disease
  - lung disease – including asthma
  - diabetes
  - renal dysfunction
  - immunosuppression
- Persons with any condition that compromises respiratory function or the handling of respiratory secretions or that can increase the risk of aspiration (e.g., cognitive dysfunction, spinal cord injury, seizure disorder, or other neuromuscular disorder)
- Persons living in chronic care facilities
- Persons who work or live with high-risk people.
- Women who will be pregnant during the influenza season
- All healthcare personnel and other persons who provide direct care to high-risk people.
- Household contacts and out-of-home caregivers of children age 0–59m.

- Travelers at risk for complications of influenza who go to areas where influenza activity exists or who may be among people from areas of the world where there is current influenza activity (e.g., on organized tours )
- Students or other persons in institutional settings (e.g., residents of dormitories or correctional facilities).

Those who are over 50, pregnant, have chronic disease, or are immunosuppressed should not receive the live inactivated nasal spray, but the inactivated injection.

Those who are allergic to eggs should never have the vaccine.

## **Hepatitis B**

### **3 doses at 0,1, 6mo for:**

- All adults wishing to obtain immunity against hepatitis B virus infection.
- High-risk persons - household contacts and sex partners of Hepatitis B positive persons; injecting drug users; sexually active persons not in a long-term, mutually monogamous relationship; men who have sex with men; persons with HIV; persons seeking evaluation or treatment for an STD; patients receiving hemodialysis and patients with renal disease that may result in dialysis; 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; and international travelers.
- All persons with chronic liver disease.

## **Hepatitis A**

### **2 doses greater than 6mo apart for:**

- All persons wishing to obtain immunity to hepatitis A virus infection.
- Persons who travel or work anywhere EXCEPT the U.S., Western Europe, New Zealand, Australia, Canada, and Japan.
- Persons with chronic liver disease; injecting and non-injecting drug users; men who have sex with men; people who receive clotting-factor concentrates; persons who work with hepatitis A virus in experimental lab settings (not routine medical laboratories); and food handlers when health authorities or private employers determine vaccination to be appropriate

## **Td (tetanus and diphtheria)**

### **1 dose given every 10 years for:**

- All adults who lack written documentation of a primary series consisting of at least 3 doses of Td.
- A booster dose of Td may be needed as early as 5yrs in the case of wound management
- In pregnancy, when indicated, may be given in 2nd or 3rd trimester

## **TDap (tetanus diphtheria and pertussis)**

### **1 dose to replace Td for:**

- All adults younger than age 65yrs who have not already received Tdap.

## **MMR(measles mumps and rubella)**

### **1 dose for:**

- Persons born in 1957 or later (especially those born outside the U.S.) or if there is no serologic proof of immunity or documentation of a dose given on or after the first birthday.
- Persons in high-risk groups, such as healthcare personnel, students entering college and other post-high school educational institutions, and international travelers, who have only had 1 previous dose
- Persons born before 1957 are usually considered immune, but proof of immunity (serology or vaccination) may be desirable for healthcare personnel.
- Women of childbearing age who do not have acceptable evidence of rubella immunity or vaccination.

## Varicella (chicken pox)

### **2 doses given greater than 4wks apart for:**

- All adults born in the US after 1980 without written documentation of 2 doses of varicella vaccine or a history of varicella disease or herpes zoster based on healthcare-provider diagnosis; laboratory evidence of immunity (health care workers or those wishing to become pregnant need laboratory documented immunity or healthcare-provider diagnosis)

### **Those who should not receive the vaccine are those who are:**

- Pregnant or may become pregnant within 4wks.
- Persons immunocompromised because of malignancy and primary or acquired cellular immunodeficiency, including HIV/AIDS (although vaccination may be considered if CD4+ T-lymphocyte counts are greater than or equal to 200 cells/ $\mu$ L.)

## Meningococcal (meningitis)

### **1 dose for:**

- All persons age 11 through 18yrs.
- College freshmen or military recruits living in a dormitory
- Persons with anatomic or functional asplenia or with terminal complement component deficiencies.
- Persons who travel to or reside in countries in which meningococcal disease is hyperendemic or epidemic (e.g., the "meningitis belt" of Sub-Saharan Africa).
- Microbiologists routinely exposed to isolates of *N. meningitidis*.

**May need revaccination after 5 years if the MPSV vaccine was received.**

**Those who have a history of Guillan-Barre or an allergy to the diphtheria toxoid should not receive the MCV4 version of the vaccine.**

## References

Centers for Disease Control Website - [www.cdc.gov/vaccines/pubs/vis/default.htm](http://www.cdc.gov/vaccines/pubs/vis/default.htm)

Immunization Action Coalition "Recommendations of the Advisory Committee on Immunization Practices (ACIP) April 2008" - [www.immunize.org/catg.d/p2011.pdf](http://www.immunize.org/catg.d/p2011.pdf).

Up to Date, "Vaccinations in Adults" – [www.uptodate.com](http://www.uptodate.com)

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