

## Required immunizations – Student Health Services (SHS)

**Tetanus** (within past 10 years) - Tetanus (lockjaw) is a serious disease that causes painful tightening of the muscles, usually all over the body. It can lead to "locking" of the jaw so the victim cannot open his mouth or swallow. Tetanus leads to death in about 1 in 10 cases. Several vaccines are used to prevent tetanus among children, adolescents, and adults including DTaP, Tdap, DT, and Td.

**Td** is a tetanus-diphtheria vaccine given to adolescents and adults as a booster shot every 10 years, or after an exposure to tetanus under some circumstances. SHS maintains a minimal amount of the vaccine in the clinic that is usually for emergencies.

**MMR (2)** – Measles, Mumps, Rubella or \*serologic testing indicating you have had the two MMR vaccinations.

**Measles** are a respiratory disease caused by a virus. The virus normally grows in the cells that line the back of the throat and in the cells that line the lungs. It presents itself with a rash, high fever, cough, runny nose, and red, watery eyes (lasts about a week). Complications include diarrhea, ear infections, pneumonia, encephalitis, seizures, and death.

**Mumps** are an acute viral illness caused by the mumps virus. It presents with a fever, headache, muscle aches, tiredness, and loss of appetite followed by swelling of salivary glands. The parotid salivary glands (which are located within your cheek, near your jaw line, below your ears) are most frequently affected.

Severe complications are rare. However, mumps can cause:

- inflammation of the brain and/or tissue covering the brain and spinal cord (encephalitis/meningitis)
- inflammation of the testicles (orchitis)
- inflammation of the ovaries and/or breasts (oophoritis and mastitis)
- spontaneous abortion
- deafness, usually permanent

The mumps virus replicates in the upper respiratory tract and is spread through direct contact with respiratory secretions or saliva or through fomites.

**Rubella- German measles** - The rubella vaccine is a live attenuated (weakened) virus. Although it is available as a single preparation, it is recommended that in most cases rubella vaccine be given as part of the MMR vaccine (protecting against measles, mumps, and rubella). MMR is recommended at 12-15 months (not earlier) and a second dose when the child is 4-6 years old (before kindergarten or 1st grade).

Rubella vaccination is particularly important for non-immune women who may become pregnant because of the risk for serious birth defects if they acquire the disease during pregnancy.

Rubella is an acute viral disease that causes fever and rash for two to three days (mild disease in children and young adults). Birth defects if acquired by a pregnant woman: deafness, cataracts, heart defects, mental retardation, and liver and spleen damage (at least a 20% chance of damage to the fetus if a woman is infected early in pregnancy).

Rubella is spread by contact with an infected person, through coughing and sneezing.

Children should get 2 doses of MMR vaccine:

- The first dose at 12-15 months of age
- The second dose at 4-6 years of age

**\*Here is a question that was answered on the CDC website for MMR vaccines.**

***I have adult patients going back to school who must show proof of MMR vaccine and are unable to retrieve their immunization records. What are my options?***

CDC: Your options are to either bring the person into compliance with the school entry requirement by vaccinating or to perform serologic testing for all the antigens for which documented immunity is required. There is no evidence that adverse reactions are increased when MMR is given to a person who is already immune to one or more of the components of the vaccine.

## **Recommended vaccines –**

**Meningococcal vaccine** - Meningococcal disease is a serious bacterial illness. It is a leading cause of **bacterial meningitis** in children 2 through 18 years old in the United States. Meningitis is an infection of the fluid surrounding the brain and spinal cord. Meningococcal disease also causes blood infections.

Meningococcal vaccines protect against most types of meningococcal disease, although they do not prevent all cases. There are two vaccines against *Neisseria meningitidis* available in the United States. Meningococcal vaccine is especially recommended for college freshmen living in dormitories.

**(Series of 3) Hepatitis B** - Hepatitis B is a serious disease that affects the liver. It is caused by the hepatitis B virus (HBV). This can be very serious, and often leads to:

- liver damage (cirrhosis)
- liver cancer
- death

Hepatitis B vaccine can prevent Hepatitis B, and the serious consequences of HBV infection, including liver cancer and cirrhosis. Hepatitis B vaccine is made from a part of the Hepatitis B virus. It cannot cause HBV infection. Hepatitis B vaccine is usually given as **a series of 3 or 4 shots**. This vaccine series gives long-term protection from HBV infection, possibly lifelong.

**Varicella (Chickenpox)** – Varicella vaccine can prevent this chickenpox. Currently, the Center for Disease Control recommends two doses of vaccine for children, adolescents, and adults.

A skin rash of blister-like lesions, covering the body but usually more concentrated on the face, scalp, and trunk. Most, but not all, infected individuals have fever, which develops just before or when the rash appears. If exposed, persons who have been vaccinated against the disease may get a milder illness, with less severe rash (sometimes involving only a few red bumps that look similar to insect bites) and mild or no fever. Chickenpox is spread by coughing and sneezing (highly contagious), by direct contact, and by aerosolization of virus from skin lesions.

**PPD (TB)** - The TB skin test is used to find out if you are infected with TB bacteria. A health care worker will inject a small amount of testing fluid (called tuberculin or PPD) just under the skin on the lower part of your arm. After 2 or 3 days (48 – 72 hours), you must return to have your skin test read by the health care worker. You may have a swelling where the tuberculin was injected. The health care worker will measure this swelling and tell you if your reaction to the test is positive or negative. A positive reaction usually means that you have been infected by someone with active TB disease.

If you have recently been infected with TB bacteria, your TB skin test reaction may not be positive yet. You may need a second skin test 8 to 10 weeks after the last time you spent time with the person with active TB disease. This is because it can take several weeks after infection for your immune system to react to the TB skin test. If your reaction to the second test is negative, you probably do not have TB infection.

SHS maintains a small amount of this vaccine in its clinic.

Resources: Center for Disease Control

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Immunization clarification