

VARICELLA

GENERAL INFORMATION

Introduction

Varicella (chickenpox) is a highly contagious infection caused by varicella zoster virus (VZV). Chickenpox is usually mild in healthy children, but can be serious, especially in young infants, adolescents, adults, and persons who are immune compromised. Varicella vaccine can prevent chickenpox.

After a person has chickenpox, the varicella virus lies dormant in nerve endings and can later be reactivated, causing shingles; see *Herpes Zoster (Shingles)*.

Transmission

The virus spreads from person to person by sneezing, coughing, or contact with fluid from the chickenpox blisters.

Epidemiology

Varicella is endemic in most countries; however, varicella vaccination is used routinely in very few countries. In tropical countries, chicken pox is as common in young adults as it is in children.

Risk

All persons without evidence of immunity are at risk for varicella. (See below for evidence of immunity.) Persons at highest risk for severe chickenpox or complications include: newborns and premature infants, children with leukemia or lymphoma, pregnant women, and persons who are immunocompromised or have HIV or AIDS.

Evidence of immunity includes any of the following:

- Persons born before 1980 in the U.S. (except health care workers, pregnant women, and immune compromised persons)
- Persons born after 1980 if they have had:
 - 2 doses of vaccine
 - A health care provider diagnose or verify that they had chickenpox
 - Laboratory evidence of immunity or laboratory confirmation of chickenpox
 - Shingles diagnosed by a health care provider

Symptoms

The incubation period is usually about 2 weeks. Persons are most contagious about 1-2 days before the rash appears. Symptoms include a rash, "blisters," itching, fever, and tiredness, usually lasting about 4-5 days. The rash appears first on the head, chest, and back before spreading to the rest of the body. The most common complications are infections of the blisters in children and pneumonia in adults.

Need for Medical Assistance

Susceptible persons (especially pregnant women and immunocompromised persons) who have been exposed to varicella should seek medical attention. Vaccine can prevent or lessen the severity of disease if given within 5 days of exposure. Varicella zoster immune globulin (VZIG) can be given to exposed persons who cannot receive the vaccine.

PREVENTION

Non-vaccine: Practice good handwashing and cough and sneeze etiquette.

Vaccine: In the U.S. and a few other countries, varicella vaccine is a routine childhood immunization and also recommended for persons such as susceptible travelers. All persons (travelers and non-travelers) should be immune to chickenpox.

- Varicella vaccine is a live (weakened) virus vaccine for persons ages 12 months and older. The vaccine is given as an injection under the skin; 2 doses can prevent chickenpox in most people.
 - Varicella vaccine is also effective in preventing or lessening the severity of illness if used within 3-5 days after exposure to varicella virus.
- Combined varicella, measles, mumps, and rubella vaccine (MMRV) is a combination vaccine that protects children ages 12 months to 12 years against measles, mumps, rubella, and varicella (chickenpox). This is a live (weakened) virus vaccine and is given as an injection under the skin.

Who Should Receive the Vaccine

Varicella vaccine is recommended for:

- Non-immune persons (travelers and non-travelers) ages 12 months and older

Varicella vaccine can be considered for:

- Some persons with impaired immunity or HIV if not severely immune suppressed

The combined varicella, measles, mumps, and rubella vaccine (MMRV) can be used for:

- Children who need the first doses of varicella and MMR vaccines
- Children who need the second dose of MMR vaccine and either the first or second dose of varicella vaccine

Who Should Not Use the Vaccine

Persons who are moderately or severely ill usually should wait until they recover before getting this vaccine.

Varicella-containing vaccines should not be given to:

- Women who are pregnant or will become pregnant within 1 month of receiving the vaccine
- Persons with untreated tuberculosis
- Persons with severe immune deficiency (e.g., from HIV infection, long-term use of immunosuppressive therapy, chemotherapy, etc.)
- Persons with blood dyscrasia, leukemia, lymphoma, or other cancers affecting the bone marrow or lymph system
- Persons who have had a life-threatening allergic reaction to gelatin, neomycin, or a previous dose of varicella-containing vaccine.

Persons with the following situations should discuss with their health care provider the risks and benefits of vaccination:

- Children or adolescents undergoing aspirin therapy
- Recent had blood transfusion or other blood products
- HIV/AIDS or another disease that affects the immune system
- Receiving certain antivirals
- Persons with cancer or who are receiving cancer treatment with x-rays or drugs

Risks and Side Effects

There is a rare chance that serious problems or even death could occur after receiving any medicine or vaccine. If a significant or unusual problem occurs after receiving the vaccine, the patient should call or visit the health care provider.

Varicella (Chickenpox) Vaccine

Side effects are mild and may include:

- Fever
- Soreness, redness, or swelling at the injection site
- Rash at the injection site
- Generalized rash, usually within 3 weeks of vaccination

Rare side effects include severe allergic reaction, low blood count, and various neurological conditions.

MMRV Vaccine

Mild side effects may include:

- Pain, tenderness, and soreness at the injection site
- Measles-like rash

In children aged 1-2 years (and possibly also in children aged 2-4 years) receiving the first dose of MMRV vaccine, there is a risk of fever and seizures 5-12 days after vaccination.

Timing

Varicella (Chickenpox) Vaccine

- Children ages 1-12 years: 2 doses, given at least 3 months apart (although 28 days apart is acceptable)
 - The first dose is usually given at age 12 months and the second dose at age 4-6 years.
- Persons ages 13 years and older: 2 doses, given at least 28 days apart

MMRV Vaccine

One dose of MMRV is given. See the article *Measles, Mumps, Rubella*.