



Polio

Polio is a contagious viral illness that in its most severe form causes paralysis, difficulty breathing and sometimes death.

The virus spreads by:

- Direct person-to-person contact
- Contact with infected mucus or phlegm from the nose or mouth
- Contact with infected feces

The virus enters through the mouth and nose, multiplies in the throat and intestinal tract, and then is absorbed and spread through the blood and lymph system.

Risks include:

- Lack of immunization against polio
- Travel to an area that has experienced a polio outbreak

Outbreaks can still occur in the developed world, usually in groups of people who have not been vaccinated. Polio often occurs after someone travels to a region where the disease is common. As a result of a massive, global vaccination campaign over the past 20 years, polio exists only in a few countries in Africa and Asia.

Symptoms

There are three basic patterns of polio infection: subclinical infections, non-paralytic, and paralytic. Most people have subclinical infection, and may not have symptoms.

Subclinical Infection Symptoms

- General discomfort or uneasiness
- Headache
- Red throat
- Slight fever
- Sore throat
- Vomiting

People with subclinical polio infection might not have symptoms, or mild symptoms may last 72 hours or less. Polio affects the central nervous system (brain and spinal cord), and is divided into non-paralytic and paralytic forms. It may occur after recovery from a subclinical infection.

Signs and tests

The health care provider may find:

- Abnormal reflexes
- Back stiffness
- Difficulty lifting the head or legs when lying flat on the back
- Stiff neck
- Trouble bending the neck

Tests include:

- Cultures of throat washings, stools, or spinal fluid
- Spinal tap and examination of the spinal fluid
- Test for levels of antibodies to the polio virus

Treatment

The goal of treatment is to control symptoms while the infection runs its course. People with severe cases may need lifesaving measures, especially breathing help. Symptoms are treated based on their severity. Treatment may include:

- Antibiotics for urinary tract infections
- Moist heat (heating pads, warm towels) to reduce muscle pain and spasms
- Painkillers to reduce headache, muscle pain, and spasms (narcotics are not usually given because they increase the risk of breathing trouble)
- Physical therapy, braces or corrective shoes, or orthopedic surgery to help recover muscle strength and function

Expectations (prognosis)

The outlook depends on the form of the disease (subclinical or paralytic) and the body area affected. Most of the time, complete recovery is likely if the spinal cord and brain are not involved.

Brain or spinal cord involvement is a medical emergency that may result in paralysis or death (usually from respiratory problems). Disability is more common than death. Infection that is located high in the spinal cord or in the brain increases the risk of breathing problems.

Complications

- Aspiration pneumonia
- A form of heart failure found on the right side of the circulation system
- Lack of movement
- Lung problems
- Myocarditis
- Paralytic ileus (loss of intestinal function)
- Permanent muscle paralysis, disability, deformity
- Pulmonary edema
- Shock
- Urinary tract infections

Post-polio syndrome is a complication that develops in some patients, usually 30 or more years after they are first infected. Muscles that were already weak may get weaker. Weakness may also develop in muscles that were not affected before.

The Centers for Disease Control and Prevention (CDC) advises taking precautions to protect against polio if you are traveling anywhere there is a risk of polio. If you are a previously vaccinated adult who plans to travel to an area where polio is occurring, you should receive a booster dose of inactivated poliovirus (IPV). Immunity following a booster dose lasts a lifetime.

Polio Vaccination:

Polio vaccination is one of the recommended childhood immunizations and vaccination should begin during infancy. In most parts of the United States, polio immunization is required before a child can start school.

Who should receive this vaccine?

Children should receive four doses of the IPV; one dose each at each of the following ages:

- 2 months (no earlier than 6 weeks)
- 4 months
- 6 - 18 months
- 4 - 6 years

Children who have received three doses of the IPV before age 4 should receive a fourth dose before or at the time they first start school. The fourth dose is not needed if the third dose is given after age 4. Adults are not given a booster polio shot unless they are likely to be in places where the disease is known to occur.

The following people should not receive IPV:

- People who have had severe allergic reactions after receiving this vaccine
- People who have had severe allergic reactions to the antibiotics streptomycin, polymyxin B, or neomycin

Who can get this vaccine?

- Children with diarrhea
- Anyone who:
 - Has minor upper respiratory illness, with or without fever
 - Has had mild to moderate local reactions to a previous dose of vaccine
 - Is taking antimicrobial therapy
 - Is getting better after having an acute illness

People who are moderately or severely ill should usually wait until they have recovered before receiving the vaccine.

Benefits:

Polio is rare in the United States. For almost everyone, the benefits of vaccination far outweigh the risks.

Side Effects:

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PV may cause mild soreness and redness at the site of the injection. This is usually not severe and lasts only a few days. There are usually no other symptoms and no other care is needed after immunization.

For more information about this subject please check:

The Center for Disease Control at www.cdc.gov/

The American Academy of Pediatrics at www.aap.org