

# Polio

## The Disease

Polio was one of the most dreaded childhood diseases of the 20<sup>th</sup> Century in the United States. An epidemic in 1916 killed 6,000 people and left 27,000 more paralyzed. In the 1950's, parents refused to let their children go to movies or go swimming for fear of catching the disease.

Most of us don't remember how terrified parents were that polio would leave their children unable to walk or force them to spend the rest of their life in an iron lung. Since polio vaccine became available in 1955 the disease has disappeared from the U.S., and may soon be gone from the rest of the world as well. The number of cases of paralytic polio in the United States has fallen from more than 20,000 in 1952 to only a few cases a year today. The few cases that have occurred in recent years have not been caused by the natural disease, but by one type of polio vaccine - as we will explain below.

But even though there is no polio in the United States - or in fact in the Western hemisphere - it is still common in some parts of the world. A single infection brought into the country by someone traveling from one of these regions could lead to polio epidemics all over again if we were not protected. That is why we continue to vaccinate.

Polio is caused by a virus that lives in the throat and intestinal tract. It is spread through contact with the bowel movements of an infected person (for instance, by changing diapers).

Some children who get polio don't feel ill at all. For others, polio simply feels like a cold, with symptoms appearing about 6-20 days after exposure. Sometimes these children will also feel some pain and stiffness in their neck, back, and legs, but this soon goes away.

However, some children who get polio become paralyzed — that is, they lose the use of their muscles. This is called *paralytic polio*. Paralytic polio can start like a common cold, but often with severe muscle pain. Paralysis usually comes within the first week. Most often it affects the child's legs, but sometimes it affects other muscles including those that control breathing. Some children recover from their paralysis, but many will be permanently disabled. There is no treatment for polio, and some children die from it.

Polio is most contagious from about 7-10 days before symptoms appear till about 7-10 days afterward.

**Polio Fact:** The "March of Dimes" began in 1938 as a fund-raising campaign for polio. People were asked to send one dime directly to the White House to help fight the disease. In the first 3 days, the White House received 230,000 dimes. President Franklin D. Roosevelt, whose profile is now on the dime, was himself paralyzed by polio.

## Polio Immunization

There are two types of polio vaccine: Inactivated (killed) polio vaccine (**IPV**), which is a shot; and live oral polio vaccine (**OPV**), which is a liquid that is swallowed.

*CDC recommends only **IPV**, except in very limited circumstances. Children should get 4 doses of IPV at these ages:*

A dose at 2 months of age

A dose at 4 months of age

A dose at 6-18 months of age

A booster dose at 4-6 years of age

### What happened to Oral Polio Vaccine?

Most of you probably remember getting the oral polio vaccine, and may even have gotten it for your older children quite recently.

OPV is an excellent vaccine. Without it we could not have eliminated polio from the western hemisphere, and would not be so close to eliminating it from the rest of the world. Until recently, OPV was recommended for most children in the U.S.

But OPV can also, in some situations, actually cause polio. This is rare - about once in every 2.4 million doses. When the vaccine was *preventing* thousands of cases of polio a year, having it occasionally cause a case was a small price to pay. But now that the risk of getting polio is extremely low, and because IPV is available, experts have decided that routinely using the oral vaccine in the U.S. is no longer worth the small risk. OPV is still used in parts of the world where the risk of polio disease is much higher.

Four doses of polio vaccine will protect most children for life. However for certain people - for instance, those traveling to countries where polio is still common - a booster dose is recommended.

## Side Effects from Polio Immunization

Inactivated polio vaccine is a very safe vaccine. It is not known to produce any side effects other than a little soreness and redness where the shot is given. Like any vaccine, or medicine, IPV could theoretically trigger a serious reaction in someone who is allergic to one of its components. But severe allergic reactions to childhood vaccines are very rare (estimated at around one per million doses), and no child is ever known to have died from an allergic reaction to a vaccine.

## Precautions

There are several reasons a doctor might want to delay giving a child an IPV vaccination, or not give it at all:

- A child who is known to have a **severe allergy** to the antibiotics neomycin, streptomycin, or polymyxin B should not get IPV.
- A child who has had a severe (life-threatening) **allergic reaction** after a dose of IPV should not get another dose.
- A child who has a **moderate or severe illness** on the day an IPV (or any) vaccination is scheduled should probably delay the vaccination until he or she has recovered.

Your doctor or nurse can give you more details.

## After Getting Polio Vaccine

If a child has **any** serious or unusual problem after getting polio vaccine, or any other vaccine, call a doctor or get the child to a doctor right away.