Poliomyelitis
Information for Travelers

Poliomyelitis is a sudden onset viral infection. It involves the bowel (*gastrointestinal tract*). It also sometimes involves the brain and spinal cord (*central nervous system*). It is acquired by fecal-oral transmission. This means you get it by eating or drinking something that is contaminated with human waste.

RISK FOR TRAVELERS

Travelers to countries where polio is epidemic or still endemic should be fully immunized. Polio elimination efforts have decreased the number of countries where travelers are at risk for polio. The number of polio-endemic countries decreased from more than 120 in 1988 to about 10 in 2001. Most of the world's population lives in areas now considered free of wild poliovirus circulation. This includes the Western Hemisphere, the Western Pacific Region (which includes China), and the European region. Most of the world's remaining poliovirus transmission is in five countries:

- Afghanistan.
- India.
- Pakistan.
- Nigeria.
- Niger.

SYMPTOMS

Symptoms of this infection range from asymptomatic (having no symptoms) to symptomatic. This includes:

- Acute paralysis of a single limb to quadriplegia.
- Respiratory failure.
- Rarely, death.

PREVENTION

A person is considered to be fully immunized if he or she has received:

- A primary series of at least three doses of inactivated poliovirus vaccine (IPV).
- Live oral poliovirus (OPV).
- Four doses of any combination of IPV and OPV.

To eliminate the risk of vaccine-associated paralytic poliomyelitis, OPV is no longer recommended for routine immunization in the U.S. as of January 1, 2000. But it continues to be used for global polio elimination.

Infants and Children

OPV is no longer recommended for routine immunization in the United States. All infants and children should receive four doses of IPV at 2, 4, 6 - 18 months of age, and 4 - 6 years of age.

If extra protection is needed, the minimum interval between doses is 4 weeks. The preferred interval between the second and third doses is 2 months.

The youngest age for IPV use is 6 weeks. Infants and children who have started the polio virus vaccination series with one or more doses of OPV should get IPV to complete the series.

Adults

Adults who are traveling to polio-endemic areas and are not vaccinated or whose vaccination status is unknown should get IPV. Two doses of IPV should be given at intervals of 4 - 8 weeks. A third dose should be given 6 - 12 months after the second. If three doses of IPV cannot be given within the recommended intervals before protection is needed, the following options are recommended:

- If greater than 8 weeks is available before protection is needed, three doses of IPV should be given at least 4 weeks apart.

- If less than 8 weeks but greater than 4 weeks is available before protection is needed, two doses of IPV should be given at least 4 weeks apart.
- If less than 4 weeks is available before protection is needed, a single dose of IPV is recommended.

The remaining doses of the vaccine should be given later at the recommended intervals if the person remains at increased risk for poliovirus exposure. Adults who are traveling to polio-endemic areas and have received a primary series with either IPV or OPV can receive another dose of IPV. For adults, there is no need for more than a single lifetime booster dose with IPV.

ADVERSE REACTIONS

Minor local allergic *reactions* can occur following IPV. These include pain and redness. No serious reactions to IPV have been documented.

IPV should not be given to persons who have experienced a severe allergic reaction after a previous dose of IPV, streptomycin, polymyxin B, or neomycin. IPV contains trace amounts of these three antibiotics. So hypersensitivity reactions can occur among persons sensitive to them.

Pregnancy. No adverse events of IPV have been documented among pregnant women or their fetuses. But vaccination of pregnant women should be avoided. Though if a pregnant woman is unvaccinated and requires immediate protection against polio, IPV can be given as recommended in the adult schedule. Breast-feeding is not a reason not to immunize against polio.

PRECAUTIONS AND CONTRAINDICATIONS

IPV may be given to persons with:

- Diarrhea.
- Minor upper respiratory illnesses with or without fever.
- Mild to moderate local reactions to a previous dose of IPV.
- Current antimicrobial therapy.
- The convalescent phase of acute illness.

IMMUNOSUPPRESSION

Giving IPV to travelers who have difficulty fighting disease is safe. IPV is the only polio vaccine recommended for use in these travelers and their household contacts. A protective immune response cannot be ensured. But IPV might offer some protection.

Information courtesy of the CDC.

Document Released: 11/30/2005 Document Re-Released: 01/09/2011
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