

Assignment 1

Topic:

Polio

Polio, or poliomyelitis, is a disabling and life-threatening disease caused by the poliovirus.

The virus spread from person to person and can infect a person's spinal cord, causing paralysis (can not move parts of the body).

Symptoms

Most people who get infected with poliovirus will not have any visible symptoms.

About 1 out of 4 people (or 25 out of 100) with poliovirus infection will have flu-like symptoms that

can include:

→ Sore throat

→ Fever

→ Tiredness

→ Nausea

→ Headache

→ Stomach pain

These symptoms usually last 2 to 5 days, then go away on their own

A smaller proportion of people with poliovirus infection will develop other, more serious symptoms that affect the brain and spinal cord:

- Meningitis (infection of the covering of the spinal cord and brain) occurs in about 1-5 out of 100 people with poliovirus infection, depending on virus type

- Paralysis (Can not move parts of the body) or weakness in the arms, legs or both occurs in about 1 out of 200 people to 1 in 2000 people, depending on virus type

Paralysis is the most severe symptom associated with poliovirus because it can lead to permanent disability and death. Between 2 and 10 out of 100 people who have paralysis from poliovirus infection

die, because the virus affects the muscles that help them breathe.

Even children who seem to fully recover can develop new muscle pain, weakness or paralysis as adults, 15 to 40 years later. This is called post-polio syndrome.

Causes of Polio

The polio virus enters the body through a person's mouth, usually through poor handwashing and hygiene habits, eating or drinking contaminated food or water, or through the saliva of an infected person.

Other ways to transmit the disease include:

- Droplet spread (via a sneeze or cough from an infected person)
- Contact with an object (such as a toy contaminated with an infected person's stool/feces or saliva/droplet)

spread, that is put into the mouth.

The polioviruses can spread to others right before symptoms start, about 3-6 days after exposure. It can live in a person's feces for several weeks, contaminating water and food in unsanitary conditions. The most dangerous time for polio to be transmitted is before symptoms have occurred because others are unaware that the disease is present.

Treatment

There's no known effective treatment for polio, other than palliative treatment (keeping a person comfortable) and prevention of complications. This is the reason that getting fully vaccinated is so important. Supportive treatment may include:

→ ventilators (to enable normal breathing)

→ pain medication

→ physical therapy (to prevent loss of muscle function)

Prevention

There are two different types of vaccinations that can prevent Polio. The first is called the oral Poliovirus vaccine (OPV), which is taken by mouth, and the second is the inactivated Poliovirus vaccine (IPV) which is injected into the bloodstream.

In the United States, only the IPV form of the vaccine has been used since the year 2000; however, in other parts of the world, the OPV is still used.

According to the CDC, 99 out of 100 children who are fully vaccinated with the oral polio vaccine will be protected against getting polio.

This means that for children, getting fully vaccinated before travelling abroad is imperative (and a booster maybe recommended for adults before travelling to areas such as Central and South America, Africa and Asia).

Adults who have been vaccinated who plan to travel to an area where polio is occurring should receive a booster dose of inactivated poliovirus vaccine (IPV). After a booster shot, a person will receive a lifetime immunity to the disease.