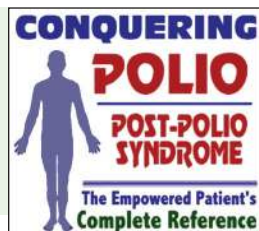


CHAPTER 19 MORE ABOUT LIFE AFTER POLIO

Part of the physical aftereffect of polio is a gradual weakening of any muscles that were once paralyzed. People who had some degree of disability from polio when they were young are now finding that those body parts are declining more quickly than the rest of their body. This condition is called Post-Polio Syndrome. (See Figure 19.1.) This has led to advancements in rehabilitation therapies, which help revive the use of a paralyzed or damaged limb. Additionally, programs are available for those who need them but would not otherwise be able to afford them.

Figure 19.1
Modern resource guide for people who have Post-Polio Syndrome



Because so many people were left disabled from the polio epidemics, new procedures were developed to help disabled people function in society as normally as possible. These include better rehabilitation therapies, wheelchair-friendly buildings and trans-

portation, and laws to protect the rights of a disabled person. The demands for improved conditions have helped anyone with a disability, not just those who had polio.

Many of the changes made to assist people in wheelchairs only happened after the 1950s, when a significant number of people were permanently crippled. Ramps on sidewalks and buildings (see Figure 19.2), wide-door public bathroom facilities, elevators, and mechanical devices used to board buses are just a few changes that make getting around in public easier for people in wheelchairs. These practices are now part of the law, required whenever a new public building or vehicle is made.

A greater number of disabled people in the population have also brought awareness to the discrimination that occurs against them. The disability rights movement demands certain rights for disabled people, including accessibility and safety in public buildings and transportation; the same opportunities as a non-disabled

person has for jobs, education, and housing; and freedom from

abuse, neglect, or violation

of a patient's rights. Many

of these demands have

become law under the

Americans with Disabil-

ities Act of 1990, such as

with the building codes, but

those in the movement feel there

is more work to be done.

Figure 19.2
Wheelchair access ramp



CHAPTER 20 MORE ABOUT IMMUNIZATION AND VACCINES

People have observed for centuries that once a person comes down with and recovers from a certain disease, that person will not get that disease again. With the development of modern medicine, it became known that what is happening in the body of the infected person is a process called immunization because of the formation of antibodies in the blood.

Antibodies are made by types of white blood cells that fight invading viruses and some bacteria. Specific antibodies are made to fight specific viruses. Once antibodies are made in the body, they never go away. So, if such people are exposed to those viruses again, they have the right antibodies in place to fight off the invading viruses, and will not become sick again. This is known as having resistance.

Immunization can also be accomplished with vaccines that are made from viruses and bacteria. A vaccine is usually given as an injection, containing small amounts of parts of the disease-causing organism, called antigens. Once injected, the antigens fool the body into thinking it's being invaded. The immune system creates antibodies to fight the antigens, just as it would if the person were getting sick. (See Figure 20.1.) If a person is later exposed to the real disease, they already have the antibodies to fight it off and probably won't even show any symptoms of the illness.

The first successful vaccine was created in 1796 by English scientist Edward Jenner. (See Figure 20.2.) It immunized people

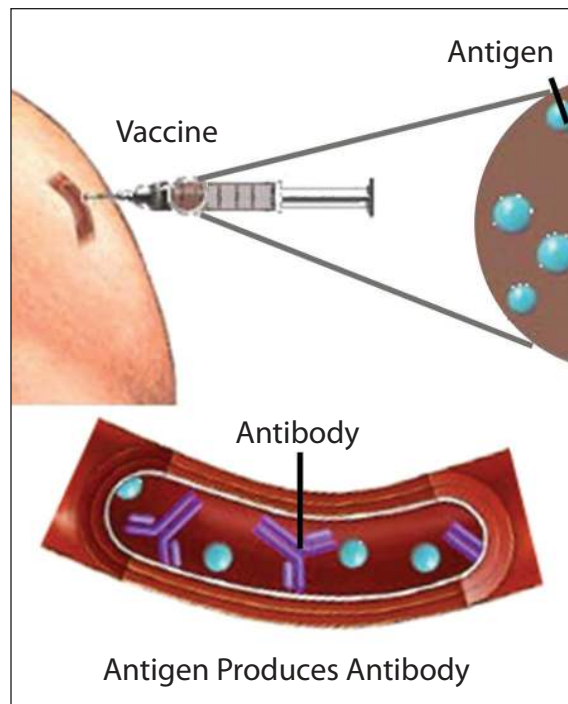


Figure 20.1
Vaccination with an antigen

against smallpox, a disease that is now considered eradicated because the last case in the world happened in 1977. There were just three other vaccines in use when polio was being studied: those for smallpox, rabies, and yellow fever. Today there are vaccines for about 30 different diseases. Vaccines are considered the primary reason why diseases that once affected so many people are now almost completely eliminated in the human population.



Figure 20.2
Portrait of Edward Jenner

3.

How is helping people through medical research different from being a doctor who works with individual patients?

4.

Why did Salk encounter difficulty finding good work opportunities in research laboratories?

5.

What is an inactive virus, and why did this kind become important to Salk's research?

6.

What is a humanitarian?
