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RABIES WHAT YOU SHOULD KNOW

WHAT IS RABIES?

Rabies is a virus that spreads from an infected animal to another animal or to a person. Most people are infected after being bitten, but on rare occasions infection can follow a scratch, inhalation or transplant of infected tissues.

WHAT ANIMALS TRANSMIT RABIES?

Since 1960, in the United States, most cases of rabies in animals have been in those that live in the wild. Most cases of rabies in people occur following bites by rabid wildlife, especially bats. Other animals that transmit rabies in the U.S. include wolves, foxes, coyotes, jackals, raccoons, ferrets and skunks. In developing countries, the major source of rabies infections is dogs.

WHAT ARE THE SYMPTOMS OF RABIES?

The virus is transmitted by the bite of an animal that is already showing symptoms of the disease. Because rabies infections have a long incubation period (the time from bite to symptoms), the best chance for rapid diagnosis is to test the animal that bit the person. The incubation period in people is about two months on average. Early symptoms include achiness, lack of appetite, tiredness, headache and fever. After two to 10 days, central nervous system symptoms begin. These can include hyperactivity, disorientation, hallucinations, seizures, paralysis and coma. In virtually all cases, central nervous system symptoms are followed by death. Once symptoms appear, the disease is invariably fatal.

IS THERE A VACCINE TO PREVENT RABIES?

Yes. Two rabies vaccines are currently available in the United States. Both vaccines are made by growing the virus in cells and killing it with a chemical. One of the two versions (Imovax®) is grown in human fetal cells. The other version (RabAvert®) is grown in chick cells. Both vaccines are administered according to the same schedule and are most often given after exposure. Because of the long incubation period, vaccination can protect against disease even after exposure to the virus. In this way, rabies vaccination is different from most other vaccines, which need to be given before exposure. However, because the disease is often fatal, it is imperative to begin the vaccine series as soon as possible after exposure.

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WHO SHOULD GET THE RABIES VACCINE?

Most people recommended to get rabies vaccine are those who have been, or were possibly, exposed to rabies virus. In the absence of an exposure, rabies vaccine is recommended for high-risk groups, including veterinarians and their staff, animal handlers, spelunkers, people who frequently handle bats, travelers likely to be exposed to rabid animals, and laboratory workers who may come in contact with rabies virus.

People who should get vaccinated in the absence of exposure

These people should get two doses with the second dose given seven days after the first. Depending on which of five categories they are classified in, they may need to get their antibody titers checked periodically. If their titers drop below a certain level over time, they may need a third dose. People in this category should check with the person administering the vaccine to see whether they need to get their antibody titers checked and if so, when.

People who have been exposed or potentially exposed to rabies

Even before vaccination, individuals should thoroughly cleanse the wound. When seeking medical care, they may also be advised to get rabies immune globulin. Vaccine and immune globulin recommendations depend upon whether or not the person was previously vaccinated.

- **Not previously vaccinated against rabies** — Individuals who were not previously vaccinated should get immune globulin and four doses of rabies vaccine. The first dose of vaccine should be administered intramuscularly as soon as possible after exposure (day 0). Additional doses should then be administered on days 3, 7 and 14 after the first vaccination. A fifth dose is recommended on day 28 for individuals with an altered immune system.
- **Previously vaccinated against rabies** — Individuals who were previously vaccinated do not typically require immune globulin, but they are recommended to receive two doses of vaccine. The first dose of vaccine should be given intramuscularly as soon as possible after exposure (day 0), and the second dose should follow three days later.

IS THE RABIES VACCINE SAFE?

Yes. Individuals may experience a sore arm, headache, tiredness or nausea. Up to 1 in 10,000 people may experience a severe allergic reaction characterized by swelling of the mouth, difficulty breathing, low blood pressure or shock. This reaction typically occurs within 15 minutes of receiving the vaccine, so it is appropriate to stay at the doctor's office for about 15 to 30 minutes after getting vaccinated.

DO THE BENEFITS OF THE RABIES VACCINE OUTWEIGH THE RISKS?

Yes. Because almost everyone with rabies will die without treatment, the benefits of this vaccine clearly outweigh the risks for people who have been exposed or who are at high risk for exposure.