

Rabies Vaccine and Rabies Immune Globulin

Vaccines and immune globulins have saved more lives in Canada in the last 60 years than any other medical intervention. They help your immune system to recognize and fight bacteria and viruses that cause diseases.

What is rabies and how is it spread?

- **Rabies** is a disease of the nervous system caused by a virus and is a disease of warm-blooded animals, most commonly found in foxes, skunks, bats, cattle, dogs and cats.
- The incubation period for rabies varies in different species.
- Exposure to rabies is considered to have occurred when:
 - An infected animal's teeth penetrate the skin as in a bite; and/or
 - The saliva or other potentially infectious material (brain tissue) of an infected animal comes into contact with scratches, abrasions, cuts or mucous membranes of an individual.

What are the signs and symptoms of rabies?

- Rabies is an acute illness that progresses from anxiety, difficulty swallowing, seizures, to eventual death, typically within a very short period of time.
- Without treatment, rabies invariably causes death.

When should you be concerned about rabies?

- When an animal bites a person or another animal for no reason.
- When the bite is severe and the skin is broken.
- If the animal cannot be confined and put under observation.
- If direct contact with a bat cannot be ruled out.

What should you do if you suspect someone has been exposed to rabies?

- **Flush and wash the wound immediately with lots of soap and water and seek medical attention immediately.**
- If the animal is domestic (dog, cat or ferret), confine it and place it under observation if possible.
- Report the incident immediately to the Medical Health Officer within your health region for recommendations.
- If you plan to destroy the animal, take care to not damage the head so testing for rabies can be done.

What is the treatment for rabies after an exposure?

- An investigation by your physician and the medical health officer will determine the level of risk.
- When risk is high, rabies vaccine should be started as soon as possible after the exposure. **Once symptoms develop, there is no treatment as most cases are fatal.**
- In most cases, the full treatment course includes rabies immune globulin and a series of four doses of rabies vaccine over a 14-day period for healthy individuals. Individuals who are immunocompromised will require an additional dose on day 28.
- For those who have received rabies vaccine previously, 2 doses of vaccine are required.

Are there precautions or contraindications to getting the rabies vaccine?

- **Following significant exposure to a proven rabid animal, there is no contraindication that supersedes the need for rabies vaccine.**
- Persons who have experienced a severe allergic reaction to previous rabies vaccine doses should be vaccinated only under strict medical supervision.
- If you have questions or concerns, talk with your doctor or a public health official.

What are common reactions to rabies vaccine and rabies immune globulin?

- These products are very safe and effective to prevent rabies. It is much safer to get these products than to **risk getting rabies, which is a fatal disease.**

Rabies vaccine:

- Temporary pain, redness, swelling and itching at injection site.
- Fever, nausea, headache, muscle aches, abdominal pain, fatigue, and dizziness.

Rabies immune globulin:

- Temporary tenderness, soreness or stiffness at the injection site.
- Fever, headache, malaise, rash, chills.

What does rabies vaccine contain?

To make rabies vaccine, the rabies virus is harvested from infected human diploid cells. The human albumin is heat-treated to inactivate viruses and to further reduce the risk of transmission of blood-borne viruses.

IMOVAX® Rabies contains rabies virus (WISTAR Rabies PM/WI 38 1503-3M Strain), human albumin, neomycin, phenol red and may contain traces of beta propiolactone. Preservative and thimerosal-free.

RabAvert® contains freeze-dried rabies antigen, polygeline, human serum albumin, neomycin, chlortetracycline, amphotericin B, ovalbumin, potassium glutamate, sodium EDTA and may contain traces of beta propiolactone. Grown in chick embryos. Preservative and thimerosal-free.

What does rabies immune globulin contain?

Rabies immune globulin is a sterile solution of antibodies that provides individuals with immediate short-term protection against rabies. Human immune globulin products are among the safest blood-derived products available. The method of preparation includes one or more steps that exclude or inactivate hepatitis B, C and HIV; therefore the risk of transmission is extremely low. However, it is possible, that unknown infectious agents may be present in such products.

HYPERRAB™ S/D contains glycine, sodium chloride, IgA 16.5%. It is heat-treated to inactivate viruses to further reduce the risk of transmission of blood-borne viruses. It is prepared from pooled human plasma from persons who have been immunized. Preservative and thimerosal-free.

IMOGAM® Rabies Pasteurized contains antirabies immunoglobulin (10-18% protein) for intramuscular administration. It is prepared by cold alcohol fractionation from pooled venous plasma of individuals immunized with Rabies Vaccine prepared from human diploid cells (HDCV). It may contain traces of sodium hydroxide or hydrochloric acid. Preservative and thimerosal-free.

Immune globulin can interfere with some vaccines. Speak with a public health nurse, nurse practitioner or physician if you have been vaccinated for measles, mumps, rubella, chickenpox or shingles within the past 14 days or receive these vaccines in the future.

For more information contact your local public health office, your physician, nurse practitioner, HealthLine online or by calling 811.

Who should you report reactions to?

- Report any adverse or unexpected reactions to your local public health nurse, your doctor or nurse practitioner as soon as possible.

Talk to your public health nurse if:

- You have questions or concerns about your or your child's reaction to an immunization; or
- You had to take your child to a doctor, hospital or health centre with an illness that might be related to immunization.

It is important to stay in the clinic for 15 minutes after getting these products because there is an extremely rare possibility of a life-threatening allergic reaction called anaphylaxis. This may include hives, difficulty breathing, or swelling of the throat, tongue or lips. **If this happens after you leave the clinic, call 911 or the local emergency number.** This reaction can be treated, and occurs in less than one in one million people who get these products.

Acetaminophen (Tylenol, Tempra) may be given for fever or soreness. ASA (Aspirin) must NOT be given to anyone younger than 18 years old because of the risk of Reye syndrome.

Mature Minor Consent

It is recommended that parents/guardians discuss consent for treatment with their children. Efforts are first made to get parental/guardian consent for treatment. However, children at least 13 years of age up to and including 17 years of age, who are able to understand the benefits and possible reactions for each product and the risks of not getting treatment, can legally consent to or refuse treatment in Saskatchewan by providing mature minor informed consent to a healthcare provider.

To ensure that a complete immunization record is maintained, every immunization administered to an individual will be documented by Public Health into the electronic provincial immunization registry, known as Panorama. Panorama is a secure electronic system used in Saskatchewan to record and manage immunization records and the health information related to immunization for all Saskatchewan residents. Immunization records may be shared with other health care professionals to provide public health services; assist with diagnosis and treatment; and to control the spread of vaccine preventable diseases. Information about Panorama is detailed in the "Protecting the Privacy of Your Immunization Record" fact sheet.

References: Product monographs (HYPERRAB™ S/D 2012, IMOGAM® Rabies 2015, IMOVAX® Rabies 2006, RabAvert® 2017).