

Rabies Vaccine and Rabies Immune Globulin

Vaccines and immune globulins have saved more lives compared to any other medical intervention. They help the immune system recognize and fight bacteria and viruses that cause serious diseases.

What is rabies and how is it spread?

- **Rabies** is a disease of the nervous system caused by a virus most commonly found in foxes, skunks, bats, cattle, dogs and cats.
- **Once rabies symptoms begin, almost 100% of people will die.**
- Exposure to rabies occurs when:
 - An infected animal's teeth penetrate the skin as in a bite; and/or
 - The saliva or other potentially infectious material (e.g. 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.

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 there has been direct contact with a bat and a bite, scratch or saliva exposure into a wound or scratch 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 a healthy domestic (dog, cat or ferret), confine it and place it under observation if possible.
- 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 treatment 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 where the needle was given, fever, nausea, headache, joint or muscle aches, fatigue, dizziness, swollen lymph glands.

Rabies immune globulin:

- Temporary tenderness, soreness, pain or stiffness where the needle was given, fever, headache, malaise, rash, chills, nausea, joint or muscle aches.

Who should you report reactions to?

- Report any adverse or unexpected reactions to your local public health nurse, your doctor, nurse practitioner or call 811 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 or your child had to go to a doctor, hospital or health centre with an illness that might be related to immunization.

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 latex-free.

RABAVERT® contains freeze-dried rabies antigen, disodium edetate, hydrogen chloride, polygeline, potassium L-glutamate, sodium chloride, sucrose, trometamol, water for injection. Residues from the manufacturing process: amphotericin B, chlortetracycline, human serum albumin, neomycin, and ovalbumin. Grown in chick embryos. Preservative and latex-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 viruses; therefore the risk of transmission is extremely low. However, it is possible, that unknown infectious agents may be present in such products.

HyperRAB™ contains glycine, sodium cholate, IgA 16.5%. Preservative and thimerosal-free.

KamRAB® contains anti-rabies immunoglobulin, glycine, sodium hydroxide, and water for intramuscular injection. Preservative and latex-free.

Immune globulins can interfere with some vaccines.

Speak with a public health nurse, nurse practitioner or physician if you have been vaccinated for measles, mumps, rubella, varicella (chickenpox), or other live vaccines within the past 14 days or if you 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.

- Only treat a fever (at least 6 to 8 hours after immunization) if you / your child are uncomfortable and not sleeping.

Use **Acetaminophen** (all ages; Tylenol®, Tempra®) or **Ibuprofen** (6 months & older; Advil®, Motrin®) to treat fevers and pain. **Never give ASA** (Aspirin®) to children younger than 18 years old because of the serious risk of Reye's syndrome.

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. This reaction can be treated, and occurs in less than one in one million people who get these products. **If this happens after you leave the clinic, get medical attention or call 911 right away.**

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.

References: [Canadian Immunization Guide](#). Product monographs (HyperRAB™ 2021, IMOVAX® Rabies 2021, KamRAB® 2018, RABAVERT® 2021).