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Rabies immune globulin and vaccine

What are rabies immune globulin and rabies vaccine?

Rabies immune globulin (RabIg) provides immediate, short-term protection against the virus that causes rabies. RabIg contains large amounts of antibodies taken from donated human blood. Antibodies are proteins that a person's immune system makes to fight germs, such as bacteria and viruses.

Rabies vaccine provides long lasting protection against infection from the rabies virus. The vaccine is made from killed rabies virus and cannot cause rabies. In B.C., the rabies vaccine is provided free to those who have been exposed to an animal that may have rabies. It is also provided free to students attending a Canadian Veterinary College or Animal Health Training Centre.

RabIg and rabies vaccine are approved by Health Canada.

Are rabies immune globulin and rabies vaccine safe?

Yes, both of these products are very safe. It is much safer to get immunized with these products than to get rabies. People usually have only minor reactions that may last a couple of days after being immunized.

RabIg is prepared from donated human blood that is tested for safety. All blood donors are screened for exposure to viruses such as HIV and hepatitis. Each blood donation is also tested for the presence of blood-borne viruses before being used to make RabIg. Many chemical and physical steps are included when preparing RabIg. These steps include inactivating and removing viruses and bacteria that can cause disease. The final preparation of RabIg undergoes more testing to ensure that there are no known infectious viruses present. However, there is an extremely small risk of passing some blood-borne infections through the use of RabIg. Since blood screening and testing began, there have been no reports of blood-borne infections such as HIV, hepatitis B or hepatitis C in people who received RabIg.

Who should get rabies immune globulin and rabies vaccine?

If an animal that may have rabies has bitten or scratched you, get RabIg and rabies vaccine as soon as possible. If you have already had a complete series of rabies vaccine you do not need to get RabIg. RabIg is given by injection into the area(s) surrounding the wound. It is given at the same time as the 1st dose of rabies vaccine.

Rabies vaccine is usually given as a series of 4 doses over a period of 14 days. You will receive the remaining doses of vaccine 3, 7 and 14 days later. If you have a weakened immune system or are taking chloroquine, you will get a 5th dose of the vaccine 28 days after the 1st dose.

For those with a weakened immune system, you need a blood test 7 to 14 days after the 5th dose of vaccine to determine that you are protected. If the blood test indicates that you are not protected you will need a second series of vaccine.

If you completed a rabies vaccine series before being exposed to the rabies virus you should get 2 doses of the vaccine. These doses are given 3 days apart.

Who else should get the rabies vaccine?

The rabies vaccine can also be given to prevent rabies before exposure to the rabies virus. The vaccine is recommended, but not provided free, for those at risk of being exposed to the rabies virus, including:

- Veterinarians and their staff
- Laboratory and other workers who routinely handle rabies virus
- Animal control and wildlife workers
- Hunters and trappers in areas where rabies is common, such as the far north

- Those who explore or study caves
- Travellers who will be spending 1 month or more in countries where rabies is common

The vaccine is given as a series of 3 doses. The 2nd dose is given 7 days after the 1st dose. The 3rd dose is given 21 to 28 days after the 1st dose.

What are the benefits of rabies immune globulin and rabies vaccine?

RabIg and rabies vaccine prevent rabies disease, which is almost always fatal. RabIg provides immediate, short-term protection against infection with the rabies virus. The rabies vaccine provides long lasting protection against infection.

What are the possible reactions after rabies immune globulin and rabies vaccine?

Common reactions to RabIg may include soreness and stiffness of local muscles where the immunization was given. Fever, skin reactions and allergic reactions (hives or swelling) may also occur.

Some immune globulins may be associated with a risk of thrombosis (blood clots) within 24 hours of receiving them, especially when large volumes are given. The risk of thrombosis is increased in those:

- 45 years of age and older
- With a history of thrombosis; or
- With risk factors for thrombosis

Common reactions to rabies vaccine may include soreness, redness, swelling and itching where the vaccine was given. Headache, fever, muscle or joint soreness, nausea, dizziness and fatigue may also occur.

Acetaminophen (e.g. Tylenol®) or ibuprofen* (e.g. Advil®) can be given for fever or soreness. ASA (e.g. Aspirin®) should not be given to anyone under 18 years of age due to the risk of

*Ibuprofen should not be given to children under 6 months of age without first speaking to your health care provider.

For more information on Reye syndrome, see HealthLinkBC File #84 Reye syndrome.

It is important to stay in the clinic for 15 minutes after getting any immunization because there is a rare possibility, less than 1 in a million, of a life-threatening allergic reaction called anaphylaxis. This may include hives, difficulty breathing or swelling of the throat, tongue or lips. Should this reaction occur, your health care provider is prepared to treat it. Emergency treatment includes administration of epinephrine (adrenaline) and transfer by ambulance to the nearest emergency department. If symptoms develop after you leave the clinic, call **9-1-1** or the local emergency number.

It is important to always report serious or unexpected reactions to your health care provider.

Who should not get rabies immune globulin and rabies vaccine?

Anyone who has been exposed to the rabies virus who has not received an approved rabies vaccine series should get RabIg and rabies vaccine. If you received a rabies vaccine series you do not need to get RabIg but should still get the rabies vaccine.

Speak with your health care provider if you are receiving the rabies vaccine and have had a life threatening allergic reaction to a previous dose of rabies vaccine or any part of the vaccine including: neomycin, chlortetracycline, amphotericin B, gelatin or egg protein.

If you are receiving rabies immune globulin speak with your health care provider if you have:

- Had a life threatening allergic reaction to a previous dose of any immune globulin product or any part of rabies immune globulin
- A condition called isolated immunoglobulin A deficiency
- A history of thrombosis or risk factors for thrombosis; or
- Have been immunized against measles, mumps, rubella or chickenpox within the past 14 days

There is no need to delay getting immunized because of a cold or other mild illness. However, if you have concerns speak with your health care provider.

What is rabies?

Rabies is a very serious and almost always fatal disease caused by the rabies virus. People can be infected with the virus if they are bitten or scratched by an animal that has rabies. The virus infects the brain and nervous system and is fatal in humans if the disease is not prevented by immunization soon after exposure. Symptoms of rabies include headache, fever, increased difficulty swallowing, excessive drooling, muscle spasm or weakness and strange behavior.

For more information on rabies see HealthLinkBC File #07a Rabies.

Mature minor consent

It is recommended that parents or guardians and their children discuss consent for immunization. Children under the age of 19, who are able to understand the benefits and possible reactions for each vaccine and the risk of not getting immunized, can legally consent to or refuse immunizations. For more information on mature minor consent see HealthLinkBC File #119 The Infants Act, mature minor consent and immunization.

BC Centre for Disease Control
Provincial Health Services Authority