

## AT A GLANCE

# How to Administer Rabies Post-Exposure Prophylaxis

The purpose of this document is to provide detailed instructions on how to administer rabies post-exposure prophylaxis. It describes:

1. wound care
2. administering rabies immune globulin (Rablg) for those who have not been previously vaccinated against rabies
3. administering rabies vaccine

A fillable form to assist with outlining a specific post-exposure plan for your patient can be found in [Appendix A](#).

## Wound Care

Wound care is very important for patients with an acute animal bite or scratch. The Canadian Immunization Guide recommends the following with regard to wound care.

“Immediate and thorough cleaning and flushing of the wound with soap and water is imperative and is probably the most effective procedure in the prevention of rabies. Care should be taken to clean the wound to its full depth. Flushing for approximately 15 minutes is suggested. Some guidelines also suggest the application of a viricidal agent, such as iodine-containing or alcohol solutions. Suturing the wound should be avoided if possible, and tetanus prophylaxis and antibiotics should be given as appropriate.”<sup>1</sup>

**Table 1: Determining What Rabies Biologics to Administer**

Patient is	Day 0	Day 3	Day 7	Day 14	Day 28
<b>Not previously</b> vaccinated against rabies AND <b>immunocompetent</b>	Rabies vaccine Rablg	Rabies vaccine	Rabies vaccine	Rabies vaccine	<b>STOP</b>
<b>Not previously</b> vaccinated against rabies AND <b>immunocompromised or on antimalarial drugs*</b>	Rabies vaccine and Rablg	Rabies vaccine	Rabies vaccine	Rabies vaccine	Rabies vaccine
<b>Previously</b> appropriately vaccinated against rabies**	Rabies vaccine	Rabies vaccine	<b>STOP</b>	<b>No further action</b>	<b>No further action</b>

\* See the testing for immunity section for those who are immunocompromised or taking chloroquine.  
 \*\* Previously received a documented, appropriate course of rabies vaccine (either for pre-exposure or post-exposure prophylaxis). See the [Canadian Immunization Guide](#) for criteria for appropriate previous rabies vaccination.<sup>1</sup> Note that [Ontario guidance](#) does not require post-exposure prophylaxis if a previous course of pre-exposure or post-exposure prophylaxis was completed within the preceding three months.<sup>2</sup>

- Rabies post-exposure prophylaxis should be started as soon as possible after it is identified that post-exposure prophylaxis is required. The date that prophylaxis starts is considered Day 0.
- It is important to give the rabies vaccine as close as possible to the recommended schedule. If a dose is missed or delayed, give it as soon as possible. The whole schedule then shifts so that the correct interval between the remaining doses is maintained. Testing for immunity should be considered if there has been substantial deviation from the schedule.
- See rabies immune globulin section and rabies vaccine section for details on administration.
- Appendix A provides a form to outline the specific post-exposure plan for your patient.

## Administering Rabies Immune Globulin (RabIg)

What you will receive:

You will receive several packages\* of one of the following products:

- HyperRAB®      **1 ml vial containing 300 IU/ml; OR**
- Imogam®        2 ml vial containing 150 IU/ml; OR
- KamRAB®        2 ml vial containing 150 IU/ml.

\*very small children will only need one package

You will receive the appropriate number of vials based on the weight of the person. The volume to be administered depends on the patient's weight (20 IU/kg) and the concentration of the product that you receive. See dosing and Appendix A. Any additional RabIg left in the last vial should be discarded



For illustration purpose only

## Dosing

**The dose of Rablg is 20 IU/kg for all patients and should not be exceeded.** Giving too much Rablg can suppress the response to the vaccine. (See Appendix A for dosing calculations).

## How to Administer Rablg

- Rablg should be given as soon as possible, preferably on the same day as the vaccine is started.
- Do NOT give Rablg if it is after day 7 (i.e., 8 or more days) since the first dose of the rabies vaccine.
- Rablg comes as a liquid so should not be reconstituted.

## At the Wound Site

Thoroughly infiltrate as much Rablg as possible into the wound, to the full depth and around the wound edges. (Note that you must use a different needle and syringe than used to administer the vaccine).

- If there are multiple wounds, a separate needle should be used for each wound.
- If there are multiple or extensive wounds requiring more than the weight-based volume of Rablg, dilute to infiltrate all wounds as follows:
  - HyperRAB® can be diluted with an equal volume of 5% dextrose (D5W) (see product monograph)
  - Imogam® can be diluted up to two- to three-fold with sterile saline (0.9% sodium chloride) (see product monograph)
  - KamRAB® can be diluted up to two- to three-fold with sterile saline (0.9% sodium chloride) (as per communication with the manufacturer).

## Remainder Intramuscularly (IM)

If you cannot infiltrate the entire calculated weight-based dose of Rablg into the wound, (e.g., a small wound in a finger or earlobe may not accommodate the entire dose without an increased risk of compartment syndrome), the remainder of the calculated dose should be given intramuscularly (IM), using a new needle.

**Ensure the Rablg is NOT given in the same anatomical site as the vaccine.**

## Exposure to Bats

**If there is a wound site:** Administer as much of the weight-based Rablg into the wound site and the remainder intramuscularly, as described above.

**For direct contact with a bat but no obvious wound:** Infiltrate as much Rablg as possible into the location(s) of direct contact and the remainder intramuscularly, as described above.

**No obvious exposure site for bats:** If there is no obvious wound site and no site of direct contact with the bat and rabies post-exposure prophylaxis is felt to be indicated (note that it is generally not indicated in these circumstances), the entire calculated dose of Rablg should be given intramuscularly. As noted above, do NOT give the Rablg in the same anatomical site as the vaccine.



## How to Reconstitute the Vaccine

- Attach the reconstitution needle to the syringe.
- Inject the diluent that is in the syringe into the vial with the powder. Mix / swirl gently. Draw the mixture back into the syringe.
- Change to the needle for intramuscular injection of the mixture to the patient.
- Follow the specific instructions in the product monograph of the vaccine product you receive.

## Where to Administer the Rabies Vaccine

The 1.0 ml intramuscular (IM) dose of rabies vaccine should be given as follows:

- 2 years of age and over: In the deltoid
- 1 year to less than 2 years of age: In the anterolateral thigh or deltoid if there is sufficient muscle mass
- Less than 1 year of age: In the anterolateral thigh

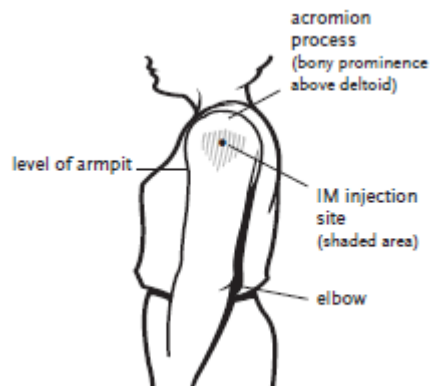
**Do not give** the rabies vaccine in the same anatomical site as the Rablg on day 0. The limb with the intramuscular Rablg can be used for subsequent doses of rabies vaccine in the vaccination series after day 0.

**Never administer the rabies vaccine in the gluteal muscle.**

**Anterolateral thigh for less than 1 or 2 years of age.**



**Deltoid for 1 or 2 years of age or older.**



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Source: Immunization Action Coalition. How to administer intramuscular and subcutaneous vaccine injections [Internet]. St. Paul, MN: Immunization Action Coalition; 2020 [cited 2020 Feb 06]. Available from: <https://www.immunize.org/catg.d/p2020.pdf>

## When to Test for Immunity

Rabies antibody titres should be measured 7 to 14 days after the rabies vaccine series is completed if:

- substantial deviations from the vaccine schedule have occurred.
- the patient is immunocompromised.
- the patient is taking chloroquine.

## References

1. Public Health Agency of Canada. Rabies vaccine: Canadian immunization guide [Internet]. Ottawa, ON: Government of Canada; 2015 [modified 2020 Feb 21; cited 2020 Aug 20]. Available from: <https://www.canada.ca/en/public-health/services/publications/healthy-living/canadian-immunization-guide-part-4-active-vaccines/page-18-rabies-vaccine.html>
2. Ontario. Ministry of Health. Management of potential rabies exposures guideline, 2020. Toronto, ON: Queen's Printer for Ontario; 2020. Available from: [http://health.gov.on.ca/en/pro/programs/publichealth/oph\\_standards/docs/protocols\\_guidelines/Mgt\\_of\\_Potential\\_Rabies\\_Exposures\\_2020.pdf](http://health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/protocols_guidelines/Mgt_of_Potential_Rabies_Exposures_2020.pdf)

# Appendix A

## Rabies Post Exposure Prophylaxis Patient Schedule

Patient First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_  
Date of birth (YYYY/MM/DD): \_\_\_\_\_ Patient Weight: \_\_\_\_\_ kg  
Rablg Calculated dose: \_\_\_\_\_ ml (See calculation below)

### Clean Wound

Ensure prompt and thorough wound cleaning of the wound to its depth using soap and water for 15 minutes. See [wound cleaning](#) and the [Canadian Immunization Guide](#).

### Rabies Immune Globulin (Rablg)

#### Rablg DOSE CALCULATION

The dose of Rablg is **20 IU/kg** and should not be exceeded. Giving too much can suppress the response to the vaccine.

- For **300 IU/ml** concentrations (HyperRAB®):  
 $20 \text{ IU/kg} \times \text{weight in kg} \div 300 \text{ IU/ml} = \text{ml dose}$
- For **150 IU/ml** concentrations (Imogam® or KamRAB®):  
 $20 \text{ IU/kg} \times \text{weight in kg} \div 150 \text{ IU/ml} = \text{ml dose}$

#### DAY TO GIVE Rablg

Rablg Administered: \_\_\_\_\_ Day 0 (YYYY/MM/DD): \_\_\_\_\_

#### HOW TO GIVE Rablg

Thoroughly infiltrate as much Rablg as possible into the wound to the full depth and around the wound edges.

If there are multiple wounds, a separate needle should be used for each wound.

If you cannot infiltrate the entire calculated weight-based dose into the wound, the remainder of the calculated dose should be given intramuscularly using a new needle.

Do **NOT** give Rablg in the same anatomical site as the rabies vaccine.

See [Administering Rabies Immune Globulin](#) section for additional information, including information on diluting Rablg if more volume is needed for large wounds.

## Rabies Vaccine Schedule

Patient	Check One Row	Day 0	Day 3	Day 7	Day 14	Day 28
<b>Not previously vaccinated AND immunocompetent</b>		YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	<b>STOP</b>
<b>Not previously vaccinated AND immunocompromised or on antimalarial drugs</b>		YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD
<b>Previously appropriately vaccinated *</b>		YYYY/MM/DD	YYYY/MM/DD	<b>STOP</b>	<b>No further action required</b>	<b>No further action required</b>

\*Previously received a documented, appropriate course of rabies vaccine (either for pre-exposure or post-exposure prophylaxis). See the Canadian Immunization Guide for criteria for appropriate previous rabies vaccination.

\* Note that Ontario guidance does not require post-exposure prophylaxis if a previous course of pre-exposure or post-exposure prophylaxis was completed within the preceding three months.

- The **1.0 ml intramuscularly (IM)** dose of rabies vaccine should be given as follows:
  - **2 years of age and over:** In the deltoid
  - **1 year to less than 2 years of age:** In the anterolateral thigh or deltoid if there is sufficient muscle mass
  - **Less than 1 year of age:** In the anterolateral thigh
- **NEVER GIVE** the rabies vaccine in the gluteal muscle.
- Do **NOT** give the rabies vaccine in the same anatomical site as the RabIg.
- Testing the patient for immunity is recommended if a substantial deviation from the schedule has occurred or if the patient is immunocompromised or taking chloroquine. Testing for immunity is done with a blood test to check for rabies antibody titres 7 to 14 days after the vaccine series is completed.



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## At a Glance

An *At a Glance* is a brief document offering an overview of a topic or steps in a process, in a concise manner.

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