



Occurrence and treatment of rabies-related animal exposures among Canadian Armed Forces personnel

Canadian Armed Forces (CAF) follows advice in the Canadian Immunization Guide, i.e. prevention = animal avoidance, preexposure vaccination (PrEP), wound cleaning and postexposure vaccination (PEP).

CANADA

- One human case every 10 years
- NO canine variant rabies
- Rate and nature of exposures similar to civilians

Globally

- 60,000 human cases/year
- 99% of cases are due to dog bites
- Higher rate of exposure and likelihood of use of PEP outside Canada

CAF personnel can be deployed to areas where rabies risk is much higher than in Canada

Animals involved in exposures

Dogs were most commonly involved

Location(s) of exposure

- Head 5.2%
- Arm 17.5%
- Hand 56.6%
- Leg 19.5%
- Foot 1.3%

Hands were most often bitten, likely resulting from intentional interactions with animals

Breakdown of reports by origin

Relative rate of reported exposure was higher for international deployments, perhaps indicating increased concern about bites/reporting in this situation

- Leisure inside Canada 68%
- Deployed outside Canada 17%
- Leisure outside Canada 8%
- Other 7%

Most reports were from off-duty exposure in Canada

How has use of PEP differed inside and outside of Canada?

Proportion of CAF members receiving PEP after a dog exposure

Proportion exposures PEP used

Deviations from the recommended PEP treatment schedule

Off-duty Canada | Deployed outside Canada | Off-duty International

PEP was used for the majority of reported overseas exposures, compared to about 50% of the time for exposures inside Canada

Deviations from PEP schedule (usually dose timing) were fairly frequent, inside and outside of Canada

PEP was used more frequently following overseas dog exposures, than for dog exposures inside Canada

85% of patients cleaned wounds

3% had previously received PEP or PrEP

Large majority of CAF personnel did not have a history of receiving PrEP (including international exposures). This suggests animal exposures among those receiving PrEP, despite their risk being assessed as higher, are relatively uncommon.

Reports of exposures are made **electronically** using the **CAF Form** for Post-Exposure Management of Potential Rabies Exposure

Reports are required for all animal exposures which lead to an assessment for risk of rabies whether or not PEP is used

Animal exposure reports discussed herein were submitted from **2011–2019**

References

- Government of Canada (2018). Surveillance of rabies. Retrieved from <https://www.canada.ca/en/public-health/services/diseases/rabies/surveillance.html>
- National Defence Department, Government of Canada (2019). Rabies Prevention in the Canadian Armed Forces. Retrieved from <http://cmp-cpm.mil.ca/en/health/policies-direction/policies/6636-58.page>
- World Health Organization (2020). Rabies Epidemiology and burden of disease. Retrieved from <https://www.who.int/rabies/epidemiology/en/>