

MEFLOQUINE

- Veterans Affairs Canada is committed to the health and well-being of Veterans, the Royal Canadian Mounted Police and their families.
- Veterans are reminded that they may claim any condition related to taking mefloquine with supporting medical information from their treating physician.
- A link between the medical condition and mefloquine must be present.
- Veterans who believe they have a disability related to their military service are encouraged to contact Veterans Affairs Canada for assistance.
- Every situation is unique and we work with Veterans on a case-by-case basis.

BACKGROUND - Mefloquine

Q1) Since 2001, how many medical claims have been filed related to mefloquine? Q2) What have been the outcome of these claims? (Approved/Denied)

A1/2) Any Veteran or member who believes they have a disability related to their military service is encouraged to contact Veterans Affairs Canada for assistance. It is important to note that Veterans Affairs Canada does not diagnose medical conditions. The Veteran's health care practitioner is responsible for providing a diagnosis. Veterans may apply for any condition they believe related to mefloquine with supporting medical information from their treating physician.

However, while a Veteran may claim any condition related to the ingestion of mefloquine with supporting medical information, Veterans Affairs Canada tracks medical claims by health condition and program, not by the cause of the claimed condition. That is to say, we track Disability Benefits, but we do not capture the specific cause of the mental or physical health condition associated with that Benefit. As this is the case, we are unable to provide the requested statistics.

Q3) How many were awarded based on service in a Special Duty Area?

A3) As mentioned above, Veterans Affairs Canada tracks medical claims by health condition and program, not by the cause of the claimed condition. As this is the case, we are unable to provide the requested statistics.

General background:

Malaria is a potentially life-threatening parasitic disease that occurs in many tropical and sub-tropical areas of the world. It presents a risk to Canadian Armed Forces personnel who travel to endemic areas, whether for operational or leisure purposes. Prevention of malaria relies on multiple tactics, including avoiding mosquito bites, and using malaria medication (called malaria chemoprophylaxis) to eliminate parasites that are inoculated through mosquito bites.

Mefloquine is an approved anti-malarial drug that is structurally related to quinine and quinidine. It is indicated for the prevention of infection with the malarial parasites *P. falciparum* and *P. vivax*, including chloroquine –resistant strains of *P. falciparum*.

Veterans Affairs Canada thanks Health Canada for their Safety Review on Mefloquine and also the Surgeon General for his report released June 1, 2017.

The Surgeon General released his report on 1 June 2017 on the review of use of mefloquine in the Canadian Armed Forces.

The Surgeon General's review found that compared to currently recommended alternatives (doxycycline and Atovaquone-Proguanil), the body of evidence suggests mefloquine is not consistently associated with an excess overall risk of adverse effects, nor is it associated with an excess risk of not being able to perform occupational duties (low to very low quality evidence). In summary:

- The Surgeon General concluded that mefloquine will now be considered a second-line treatment for the prevention of malaria among Canadian Armed Forces personnel because there are good alternatives available. It will only be recommended for use in people who cannot use other treatments for any reason (such as drug allergies), or for people who have used it in the past and experienced no side effects.
- The Surgeon General stated that: Mefloquine is extremely effective at preventing malaria, and because it requires weekly doses instead of daily ones, is more effective in an operational theatre where there are fewer chances to miss a dose.
- He also stated that while the side effects of mefloquine can vary, even the most minor ones – nausea and dizziness – can limit operational performance. More serious side effects such as anxiety, nervousness, and depression are rare, but can pose risks to a member's long-term health.
- In spite of the potential side effects of mefloquine, they are less serious than complications from malaria. Canadian Armed Forces members will not be deployed into operational theatres where malaria is present, without sufficient protection to prevent malaria.

Following their spring 2017 appearance at the Standing Parliamentary Committee on Veterans Affairs, Health Canada was directed to conduct a review of mefloquine.

Health Canada released its report on the Safety Review they launched on mefloquine on 1 June 2017. They concluded that:

- Although some cases have been reported, there is no conclusive evidence that mefloquine can cause long-lasting and permanent neurological and psychiatric adverse events;
- some individuals were prescribed mefloquine even though they had contraindications against its use such as past or ongoing neurological or psychiatric conditions; and
- there were a small number of reported cases of permanent damage to the vestibular system in the inner ear, which controls balance.

Claims at Veterans Affairs Canada

Veterans or members who believe they have a disability related to their military service are encouraged to apply to Veterans Affairs Canada for assistance and can contact the department through our toll free line (1-866-522-2122), or our Web site (<http://www.veterans.gc.ca>).

A Veteran or member may claim any condition related to the ingestion of mefloquine with supporting medical information from their treating physician. Claims linked to mefloquine are adjudicated on a case-by-case basis by Veterans Affairs Canada's Medical Advisory unit. Veterans Affairs Canada's Medical Advisory Unit would then do the research required (to link the medical condition to mefloquine). Historically, the most common claims have been for psychiatric conditions.

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Surgeon General Review on the Operational Use of Mefloquine in the Canadian Armed Forces

On 1 June 2017, the CAF released the Surgeon General's Review on the Operational Use of Mefloquine. The review examined the available literature on mefloquine use and how it is used in an operational setting. This report was produced to better inform the Surgeon General and his Clinical Council regarding the current body of evidence concerning use of mefloquine for malaria prevention in military populations.

The report found that the Canadian Clinical Practice Guidelines for malaria prevention are consistent with other national and international guidelines in that mefloquine is considered a first-line option. However, some militaries consider mefloquine as a less preferred malaria prevention option because of their unique operational requirements.

Compared to currently recommended alternatives, the body of evidence suggests mefloquine is not consistently associated with an excess overall risk of adverse effects, nor is it associated with an excess risk of not being able to perform occupational duties.

However, the evidence reviewed is of low quality. No evidence was found (that met the inclusion criteria) addressing potential long term adverse effects of mefloquine or other malaria prevention agents on health.

The report identified operational challenges related to appropriately screening CAF members for mefloquine use and following them up for side effects while on deployment. As such, the report recommended that the CAF develop policies and procedures to enhance screening for contraindications related to mefloquine and other malaria prevention agents.

The report also recommended that atovaquone-proguanil and doxycycline (and, depending on resistance patterns, chloroquine) be used as the preferred malaria prevention medications. Further, it was recommended that mefloquine be viewed as a second line medication. Mefloquine may be considered when alternatives are unsuitable, e.g., due to contraindications to or intolerance of alternatives, or for persons who have previously tolerated mefloquine, indicate a preference for it and do not have contraindications to its use.

The report notes that there are aspects of the military operational context that merit taking a precautionary approach to using mefloquine. The deployment of large numbers of personnel within a short period of time can pose challenges for adequately screening individuals for potential contraindications. Additionally, the dispersed deployment of personnel, limiting access to physicians on operations, may reduce opportunities to assess for adverse effects and if necessary to provide alternative medications to CAF personnel taking mefloquine. Also, the nature of the short term side effects associated with mefloquine could impact an individual's performance and could be confused with usual responses to the operational situations, which would in turn complicate the management of adverse effects.

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