

Just the Facts...

Rift Valley fever (RVF) is a livestock virus that can be transmitted to humans by contact with infected animals and mosquitoes. The virus was named after the Rift Valley in Kenya, where it was first reported by veterinarians in the 1910s. RVF is found in all sub-Saharan African countries and on the island of Madagascar, but is most common in areas of Africa that maintain herds of livestock, including cattle, sheep, goats, and camels.

How do people become infected with Rift Valley fever virus?

While there is no known person-to-person transmission of Rift Valley fever, personnel can become infected with RVF by handling infected animals or by the bite of an infected mosquito. RVF virus is transmitted by contact with the blood, body fluids, and tissue of infected animals; this places herdsmen, slaughter-house workers, and veterinarians at risk for animal-transmitted RVF.

Even if personnel avoid contact with animals, the disease can also be transmitted through the bite of an infected mosquito. Adult female mosquitoes, most commonly those belonging to the genus *Aedes*, become infected by feeding on sick animals, and can pass the disease to humans by biting them. The disease also passes from a female mosquito to her offspring, resulting in large numbers of infected mosquitoes in a short period of time. Because mosquitoes need water to hatch and grow to adulthood, mosquito transmission of RVF virus also increases after heavy rains and flooding.



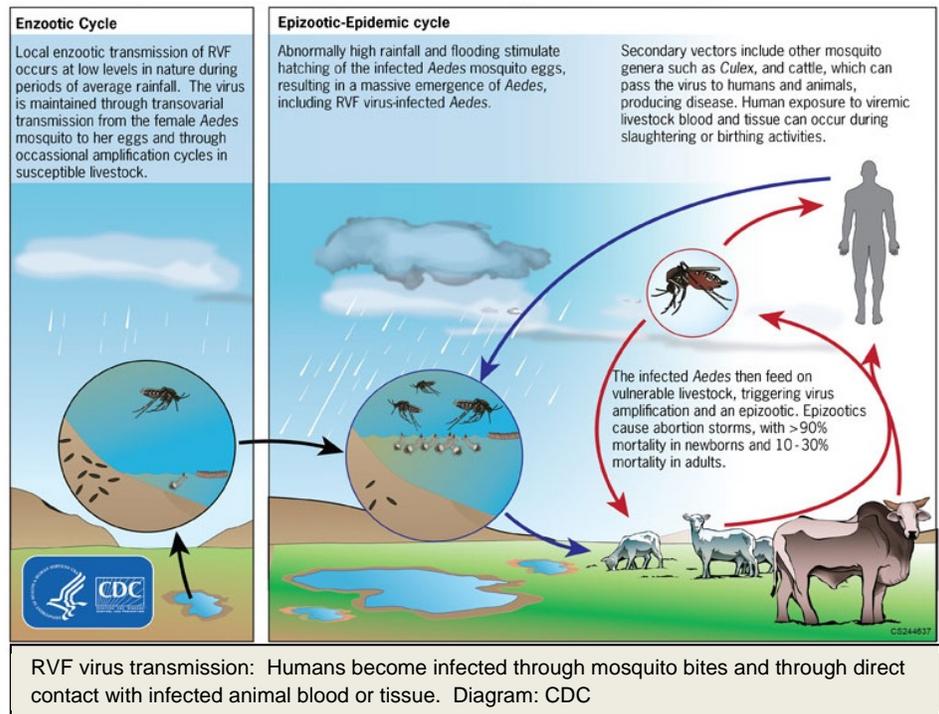
A female *Aedes spp.* mosquito, known to transmit Rift Valley fever, feeds on a human.
Photo: Graham Snodgrass APHC

What are the symptoms of Rift Valley fever virus infection?

People with RVF infections typically have a flu-like illness with fever, weakness, back pain, dizziness, and weight loss. Infected people usually get better in two days to one week after the start of the illness. However, the infection can sometimes cause hemorrhaging (severe bleeding), encephalitis (inflammation of the brain), or permanent vision loss.

Is there treatment for a Rift Valley fever virus infection?

Seek medical attention if you experience the symptoms described above and have traveled to or in an area where RVF virus occurs. There is no specific vaccine, treatment, or medication for RVF. However, the symptoms and complications of the disease can be treated. Most people who get this illness recover from it. In more severe cases, individuals require professional medical help where treatment may include intravenous fluids, help with breathing, and nursing care.



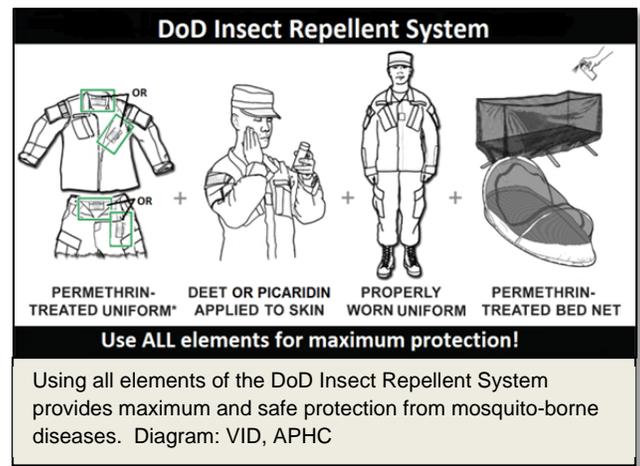
What can I do to reduce my risk of becoming infected with Rift Valley fever virus?

AVOID MOSQUITO BITES! Using the DoD Insect Repellent System provides the best protection from mosquito bites. It incorporates permethrin repellent on the uniform, DEET or picaridin repellent on exposed skin, a properly worn uniform and sleeping inside a permethrin-treated bed net.

Another important preventive measure is to eliminate mosquito breeding sites. Do not allow water to accumulate in outdoor containers, especially old tires. Keep stock tanks clean. Stay in air-conditioned areas or make sure door and window screens are in place and do not have holes. Minimize time outdoors after dawn and before dusk, which are the peak biting times for the *Aedes* mosquitoes that transmit RVF.

How do I know if my uniform is treated with permethrin repellent?

Factory-treated permethrin Army Combat Uniforms (ACU Permethrin) are now available to all Soldiers. The ACU Permethrin trouser and coat will have a sewn-in label indicating the uniform is factory-treated with permethrin. If not factory-treated, Soldiers can field-treat using either the IDA Kit (NSN 6840-01-345-0237), which can last up to 50 washings, or the 0.5% aerosol spray can (NSN 6840-01-278-1336), which should be reapplied after six weeks and the sixth washing. When applying permethrin, always read and follow the label directions. Permanently mark the uniform label with the permethrin field-treatment date. **Never apply permethrin to the skin.** Aerosol products containing 0.5% permethrin and clothing factory-treated with permethrin are also commercially available for civilian use.



What standard military insect repellent products are available for exposed skin?

Approved military insect repellents for use on exposed skin come in a variety of formulations. Always refer to the label to determine frequency of repellent application based on activity. **Do not apply repellent to eyes, lips or sensitive/damaged skin.** Available military repellents are:

- **Ultrathon™** (NSN 6840-01-284-3982) contains 33% controlled-release DEET lotion; one application protects for 12 hours.
- **Ultra 30™ Insect Repellent Lotion** (NSN 6840-01-584-8393) contains 30% Lipo DEET; one application protects for up to 12 hours.
- **Cutter® pump spray** (NSN 6840-01-584-8598) contains 25% DEET; one application protects for up to 10 hours.
- **Sunsect** combination sunscreen & repellent (NSN 6840-01-288-2188) contains 20% DEET with SPF 15 sun protection.
- **Natrapel® pump spray** (NSN 6840-01-619-4795) contains 20% picaridin; one application protects for up to 8 hours.



All standard approved skin repellents contain the active ingredient DEET or picaridin, and are registered by the U.S. Environmental Protection Agency (USEPA). These products are safe to use and effectively repel mosquitoes, sand flies, fleas, ticks and other potential disease vectors and pests. Photo: VID, APHC

What is considered a “properly worn combat uniform”?

Worn properly, military combat uniforms act as a physical barrier against insects, ticks and other disease transmitters and biting nuisance pests. Wear uniforms with the sleeves rolled down; tuck pants into boots and undershirt into pants. Wear uniform loosely since mosquitoes can bite through fabric that is pulled tight against the skin. A permethrin-treated uniform does not provide protection to exposed skin; protect exposed skin with an approved skin repellent.

What standard bed nets are available to help protect Soldiers from mosquito bites while sleeping?

Treated bed nets provide a barrier between a sleeping Soldier and pests (e.g. mosquitoes/ticks). Lightweight, self-supporting, pop-up bed nets factory-treated with permethrin are available in coyote brown (NSN 3740-01-518-7310) or green camouflage (NSN 3740-01-516-4415) or the Egret bed net (NSN 3740-01-644-4953). Untreated mosquito bed nets (NSN 7210-00-266-9736) should be treated with 0.5% permethrin aerosol spray and assembled properly on a cot. Check for holes in the netting and keep loose edges off the ground by tucking them under the sleeping bag.

Where can I get more information on Rift Valley fever virus and protection from insect-borne diseases?

- Armed Forces Pest Management Board’s Technical Guide-36, Personal Protective Measures Against Insects and Other Arthropods of Military Significance: <http://www.acq.osd.mil/eie/afpmb/docs/techguides/tg36.pdf>
- Centers for Disease and Control and Prevention (CDC): <http://www.cdc.gov/vhf/rvf/>

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