



Just the Facts... **Rift Valley Fever**



- Rift Valley fever is a fever-causing viral disease that affects livestock and humans in Africa. It is most common during years of heavy rainfall.
- People get Rift Valley fever mainly from the bite of an infected mosquito. The disease can also be spread by contact with the blood or body fluids of an infected animal.
- Rift Valley fever can cause serious eye infection, inflammation of the brain, severe bleeding (hemorrhage), and death.
- To prevent Rift Valley fever, travelers to Africa should take precautions against insect bites: 1) use insect repellent, 2) wear long sleeves and pants, and 3) use bed nets. Travelers should also avoid contact with livestock in areas where outbreaks of Rift Valley fever are occurring.

and possibly other biting insects, can also become infected and spread the disease.

What are the signs and symptoms of Rift Valley fever?

People with Rift Valley virus infections typically have a flu-like illness with fever, weakness, back pain, dizziness, and weight loss. Infected people usually get better in 2 days to 1 week after the start of the illness. Sometimes, however, the infection can cause hemorrhage (severe bleeding), encephalitis (inflammation of the brain), or severe eye complications.

How is Rift Valley fever diagnosed?

Diagnosis can be made by use of several types of laboratory tests.

Who is at risk for Rift Valley fever?

- People who sleep outdoors at night in areas where outbreaks occur
- Animal herdsman, slaughterhouse workers, veterinarians, and others who handle tissues of infected animals in areas where the virus is present
- International travelers who visit areas where the virus is present during periods when outbreaks or epidemics are occurring

What is Rift Valley fever?

Rift valley fever is a fever-causing disease that affects livestock (including cattle, buffalo, sheep, and goats) and humans in Africa. It is named after a trough stretching 4,000 miles from Jordan through eastern Africa to Mozambique. Rift Valley fever is spread mainly by infected mosquitoes and appears most often during years of heavy rainfall.

Where is Rift Valley fever found?

Rift Valley fever is most common in the livestock-raising regions of eastern and southern Africa. The disease is also found in most countries of sub-Saharan Africa and in Madagascar.

What is the infectious agent that causes Rift Valley fever?

The disease is caused by the Rift Valley fever virus.

How do people get Rift Valley fever?

- People can get Rift Valley fever from the bite of mosquitoes and possibly other blood-sucking insects. The virus usually lies dormant in the eggs of *Aedes* mosquitoes. During heavy rains and floods, the eggs hatch large numbers of infected mosquitoes that feed on livestock and spread the virus. Other species of mosquitoes,

What is the treatment for Rift Valley fever?

The drug ribavirin is being studied for its effectiveness against Rift Valley fever.

What complications can result from Rift Valley fever?

The most common complication is inflammation of the retina (a structure connecting the nerves of the eye to the brain). About 1% to 10% of affected persons might have some resulting vision problems or partial blindness. Approximately 1% of infected people die of the disease. Those who die are usually malnourished, sick with other diseases, or far from good medical care. Death rates are much higher for infected animals.

Is Rift Valley fever an emerging infectious disease?

The Rift Valley virus was first isolated in 1931 in livestock on a farm in Kenya. The most notable epizootic resulted in the

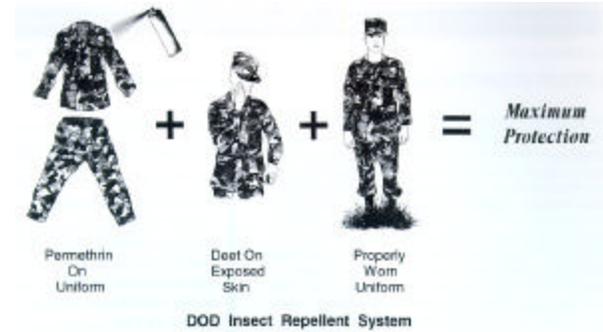
death of an estimated 100,000 sheep. In 1978, the virus was detected in Egypt and caused a large outbreak of illness in animals and humans. The first epidemic of Rift Valley fever in West Africa was reported in 1987. It was linked to construction of the Senegal River Project, which caused flooding in the lower Senegal River area. In late 1997, after exceptionally heavy rains, an epidemic resulted in the deaths of at least 300 people and large numbers of animals in remote parts of northeastern Kenya, southern Kenya, and southern Somalia.

How can Rift Valley fever be prevented?

No licensed vaccine or virus-killing medicine is available for human use. Travelers to Africa should always wear long sleeves and pants and use insect repellents and bed nets to protect against bites from mosquitoes and other blood-sucking insects. Persons who work with animals in areas where the virus is present should avoid exposure to the blood or tissues of potentially infected animals.

- Use mosquito repellents on skin and clothing
- Use insect repellents that have been approved by the Environmental Protection Agency (EPA). They are safe and effective.
- For your skin, use a product that contains 20-50% **DEET** (N<N-diethyl-meta-toluamide). **DEET** in higher concentrations is no more effective. Do not use **DEET** on infants (children under 3 years old).
- Use **DEET** sparingly on children, and don't apply to their hands, which they often place in their mouths.
- Apply **DEET** lightly and evenly to exposed skin; do not use underneath clothing. Avoid contact with eyes, lips, and broken irritated skin.
- To apply to your face, first dispense a small amount of **DEET** onto your hands and then carefully spread a thin layer.
- Do not inhale aerosol formulations.
- Wash **DEET** off when exposure to mosquitoes ceases.
- For your clothing, use an insect repellent spray to help prevent bites through the fabric. Use a product that contains either **permethrin** or **DEET**. **Permethrin** is available commercially as 0.5% spray formulations.
- **Permethrin** should only be used on clothing; never on skin.
- When using any insect repellent, always FOLLOW LABEL DIRECTIONS.

For optimum protection, soldiers should utilize the **DOD INSECT REPELLENT SYSTEM**. In addition to proper wear of the battle dress uniform (BDUs), which provides a physical barrier to insects, this system includes the



concurrent use of both skin and clothing repellents:

Standard military skin repellent: 33% **DEET**, long-acting formulation, one application lasts up to 12 hours, **NSN 6840-01-284-3982**. Standard military clothing repellents, either: aerosol spray, 0.5% **permethrin**, one application lasts through 5-6 washes **NSN 6840-01-278-1336**; or impregnation kit, 40% **permethrin**, one application lasts the life of the uniform, **NSN 6840-01-345-0237**. Factory repellent-treated BDUs are also available through the military supply system.

Where can I get more information on Rift Valley fever and other forms of mosquito-borne viral encephalitis?

Contact the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM), Aberdeen Proving Ground, Maryland 21010-5403: DSN 584-3613; CM (410) 436-3613; FAX -2037; or visit our website at: <http://chppm-www.apgea.army.mil/ento>. Additional information can also be obtained from your local, county or state health departments, your health care provider or by contacting the CDC email: dvbid@cdc.gov, or visit their website <http://www.cdc.gov/ncidod/dvbid/arbor/arboinfo.htm>.

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