

### Crimean-Congo hemorrhagic fever

First discovered in 1944 in Crimea

(CCHF) is caused by infection with a tickborne virus (Nairovirus) in the family Bunyaviridae. Crimean-Congo hemorrhagic fever is found in Eastern Europe, particularly in the former Soviet Union, throughout the Mediterranean, in northwestern China, central Asia, southern Europe, Africa, the Middle East, and India. Ixodid (hard) ticks, especially those of the genus, *Hyalomma*, are both a reservoir and a vector for the CCHF virus.



Transmission to humans occurs through contact with infected ticks or animal blood. CCHF can be transmitted from one infected human to another by contact with infectious blood or body fluids. Animals become infected by the bite of infected ticks and the virus remains in their bloodstream for about one week after infection, allowing the tick-animal-tick cycle to continue when another tick bites.

Incubation period: 1–3 day following a tick bite (5–6 days after exposure to infected blood or tissues).

The onset of CCHF is sudden (75% cases are symptomatic), with initial signs and symptoms including headache, high fever, back pain, joint pain, stomach pain, and vomiting, petechiae on the palate are common. As the illness progresses, large areas of severe bruising, severe nosebleeds, and uncontrolled bleeding at injection sites can be seen, beginning on about the fourth day of illness and lasting for about two weeks. In documented outbreaks of CCHF, fatality rates in hospitalized patients have ranged from 9% to as high as 50%, and 30% of the cases result in death by the end of the second week of illness. Risk of Exposure slaughterhouse workers in endemic areas are at risk of CCHF. Healthcare workers in endemic areas are at risk of infection through unprotected contact with infectious blood and body fluids.

Diagnosis Laboratory tests that are used to diagnose CCHF include antigen capture enzyme-linked immunosorbent assay (ELISA), real time polymerase chain reaction (RT-PCR), virus isolation attempts, detection of antibody by ELISA (IgG and IgM), and cell culture.

### Treatment

Treatment for CCHF is primarily supportive. Care should include careful attention to fluid balance and correction of electrolyte, oxygenation and hemodynamic support, and appropriate treatment of secondary infections. antiviral drug ribavirin. It has been used in the treatment of CCHF patients with some benefit.

### Prevention

Agricultural workers and others working with animals should use insect repellent on exposed skin and clothing. Insect repellants containing DEET (N, N-diethyl-m-toluamide) are the most effective in preventing ticks. Wearing gloves and other protective clothing is recommended. Individuals should also avoid contact with the blood and body fluids of humans who show symptoms of infection. It is important for healthcare workers to use proper infection control precautions to prevent occupational exposure.

WHO guide for prevention:

- Reducing the risk of tick-to-human transmission: wear protective clothing (long sleeves, long trousers); wear light coloured clothing to allow easy detection of ticks on the clothes; use approved repellent on the skin and clothing; regularly examine clothing and skin for ticks; if found. seek to eliminate or control tick infestations on animals or in stables avoid areas where ticks are present.
- Reducing the risk of animal-to-human transmission: wear gloves and other protective clothing while handling animals or their tissues in endemic areas, notably during slaughtering, butchering and culling procedures in slaughterhouses or at home; quarantine animals before they enter slaughterhouses or routinely treat animals with pesticides two weeks prior to slaughter.
- Reducing the risk of human-to-human transmission in the community: avoid close physical contact with CCHF-infected people; wear gloves and protective equipment when taking care of ill people; o wash hands regularly after caring for or visiting ill people.

