

# Science Media Centre Fact Sheet

## Ebola virus

Ebola virus disease, also called Ebola haemorrhagic fever, occurs in humans and primates.

### The virus

- Five strains of Ebola virus have been identified, four of which are known to cause disease in humans.
- The virus is in the *Filoviridae* family, all of which cause severe haemorrhagic fever.
- The natural reservoir is unknown though the strongest evidence points towards fruit bats; non-human primates develop fatal symptoms so are unlikely to be the reservoir.
- Since being discovered the virus has been genetically stable (unlike, e.g., the flu virus) indicating it is unlikely to mutate into a form that spreads more easily.

### Outbreaks

- First emerging in 1976 disease outbreaks have been occurring with increasing frequency in the last two decades.
- Outbreaks primarily occur in villages close to rainforests in Central and West Africa and are likely to initiate via contact with animals carrying the virus.
  - Infection has been documented through the handling of infected chimpanzees, gorillas, fruit bats, monkeys, forest antelope and porcupines.

### Symptoms & mortality

- The virus incubates for 2-21 days before a sudden onset of symptoms which have killed 25-89% of cases in previous outbreaks (average 67%; see [this table](#) for all data).
  - The mortality rate in the current outbreak is 56% (from [this data](#)).
- Early symptoms – fever, headache, muscle pain, sore throat, weakness – are similar to many other diseases so recognising infection early is difficult.
  - Tests exist for early diagnosis when there is reason to believe a person is infected.
- Later symptoms include diarrhoea, vomiting, rash, impaired kidney and liver function, stomach pain, internal and external bleeding.

### Transmission

- Ebola is only transmitted by direct contact with the blood, secretions, organs or other bodily fluids of infected persons or animals, including via objects e.g. needles or clothing.
- Those at highest risk of infection are health workers, family members and others in close contact with ill or deceased patients.
- Sexual transmission (from men) can occur after recovery from the disease as the virus is maintained for up to seven weeks in semen.
- Pig farms can help amplify infection when farms are in the territory of fruit bats since pigs carry the virus without symptoms and can infect humans.

### Treatment, vaccines & prevention

- No treatments or vaccines are currently licensed though several vaccines, monoclonal antibodies and drugs are in clinical trial in animals, and in some early human study.
- Testing new treatments in humans is difficult due to the brief duration of outbreaks.
- Strict medical infection control and prompt burial are the best means of prevention.

**Sources / further information**

[Public Health England information page \(including table and map of outbreaks\)](#)

[Centers for Disease Control and Prevention information page](#)

[World Health Organization fact sheet](#)

[Mayo Clinic information page](#)

**This is a fact sheet issued by the Science Media Centre to provide background information on science topics relevant to breaking news stories. This is not intended as the 'last word' on a subject, but rather a summary of the basics and a pointer towards sources of more detailed information. These can be read as supplements to our roundups and/or briefings.**

**For more information about our fact sheets, please contact Robin Bisson at the Science Media Centre on 020 7611 8345 or email [robin@sciencemediacentre.org](mailto:robin@sciencemediacentre.org)**