

FAQ: Ebola

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Personal Healthcare Information



What is Ebola?

- Ebola belongs to the family “Filoviridae”
- 5 virus “species” of virus- the current outbreak is “Zaire” named because the Democratic Republic of Congo was once Zaire
- Many people infected with Zaire will die
- Other important viruses in this family are Sudan and Marburg
- Reston virus, infects but does not cause disease

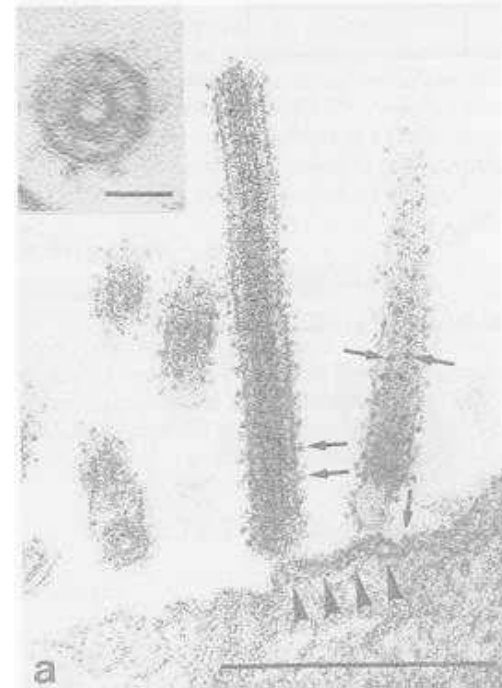
<http://www.who.int/mediacentre/factsheets/fs103/en/>

Serena A, et al. J. Virol. 2013, 87(5):2608.



What does Ebola look like?

- Long, stringy virus .08 (μm) in diameter, 1.4 (μm) long
- Has a lipid (fat) covering, which helps it infect cells
 - Easier to disinfect
 - Less virus needed to infect you
- Has RNA as genetic material which means it will be constantly evolving and changing



Is it a new virus the government created as a weapon?

- No, ebola has been known to be endemic in central Africa since 1976, probably also lives in an animal, like bats, in the Congo, making it very hard to eradicate
- It's cousin Marburg has been around even longer

<http://www.cdc.gov/vhf/ebola/about.html>



So why is there a big epidemic all of a sudden?

- Although the virus has been endemic in parts of Africa, new areas unfamiliar with ebola have been recently had an outbreak
- Infected individuals are traveling to other countries around the globe, including the US
- Liberia, and Sierra Leone, recently had political unrest, leading to disturbances in infrastructure. Healthcare resources are low in these areas.

<http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/distribution-map.html#areas>

Forrester JD, et al. MMWR. 2014 Oct 10;63(40):891-893.



Areas in West Africa Affected



**Total Cases:
8997**

**Laboratory-
Confirmed
Cases:
5006**

**Total Deaths:
4493**

As of 10/15/14
per CDC

Cases are
doubling every
three weeks

<http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/index.html>



What are the symptoms of Ebola?

- Fever (greater than 38.6°C or 101.5°F)
- Severe headache
- Muscle pain
- Weakness
- Diarrhea
- Vomiting
- Abdominal (stomach) pain
- Unexplained hemorrhage (bleeding or bruising)

Symptoms may appear anywhere from 2 to 21 days after exposure to ebola virus, but the average is 8 to 10 days

You are contagious once symptoms appear, because it takes about 2-3 days for virus to replicate and spill in your blood and body fluids

<http://www.cdc.gov/vhf/ebola/symptoms>



How can I keep from getting Ebola?

- Avoid direct contact (through broken skin or mucous membranes in, for example, the eyes, nose, or mouth) with blood or body fluids of an infected person,
- Not limited to: sweat, feces, saliva, urine, vomit, sputum, and semen
- Study from an isolation ward in Africa showed that casual contact and environmental contact (sheets, bedding, dishes, etc) did not cause transmission
- Still some unknown cases of infection
- Airplanes- **only close contact**

<http://www.cdc.gov/vhf/ebola/transmission/index.html>

Bausch DG, et al. [J Infect Dis](#). 2007 Nov 15;196 Suppl 2:S142-7.

<http://www.cdc.gov/ncidod/dvrd/spb/outbreaks/qaEbolaRestonPhilippines.htm>



How does Ebola kill you?

- No one knows the exact mechanism
- Starts with flu-like symptoms and fever, and rapidly declines into hemorrhage and death
- One theory is virus causes “disseminated intravascular coagulation”
 - Activation of clotting cascade is normal in viral infection
 - If overactive, clotting factors get used up
 - Widespread internal bleeding ensues

Is there a vaccine for Ebola?

- There is no FDA-approved vaccine, but that may change soon
- Scientists have been working on ebola vaccines for a decade or more
- One of the things that has slowed testing is the inability to do ethical challenges, so efficacy has only been shown so far in primates
- The first people eligible for the vaccine will likely be the healthcare workers caring for the infected

Sullivan NJ. [Nature](#). 2000 Nov 30;408(6812):605-9; Sullivan NJ. [Nature](#). 2003 Aug 7;424(6949):681-4 .;Jones SM.

[Nat Med](#). 2005 Jul;11(7):786-90. ;Geisbert TW. [Vaccine](#) 2008; 26: 6894–900.



Is there a cure for Ebola?

- There is a drug that can help the body fight ebola infection
- The drug ZMapp, uses monoclonal antibody technology
- The drug was recently approved for emergency use by the FDA
- Two other drugs, brincidofovir and TKM-Ebola are also being evaluated by the FDA

<http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/qa-experimental-treatments.html>



Summary: this is NOT the zombie apocalypse



<http://www.keepcalm-o-matic.co.uk/p/keep-calm-and-kill-zombies-379/>





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<http://personalhealthinfo.weebly.com/>

