

Emergencies preparedness, response

Persistent virus in people recovering from Ebola virus disease

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A growing volume of data from careful clinical observation and testing of people who have recovered from acute Ebola virus disease indicates that the Ebola virus can persist at various sites in the body for many months in some people. Such sites include the inside of the eye, semen, amniotic fluid, the placenta, breast milk and the central nervous system.



WHO/P. Desloovere

A preliminary study on Ebola virus persistence in the semen of male survivors in Sierra Leone, has found that some men still produce semen that test positive on real time – polymerase chain reaction (RT-PCR), a test used to detect Ebola virus genetic material (RNA) - for nine months or longer.

These results, reported on 14 October 2015 in the online version of the *New England Medical Journal*, are from "baseline" samples provided by 93 men participating in the study being jointly conducted by the Sierra Leone Ministry of Health and Sanitation, the World Health Organization and the U.S. Centers for Disease Control and Prevention.

All of the men who were tested in the first three months after their illness began were positive (9/9; 100 percent). More than half of men (26/40; 65 percent) who were tested between four to six months after their illness began were positive, while one quarter (11/43; 26 percent) of those tested between seven to nine months after their illness began also tested positive.

The study is following this group of men, retesting at intervals to understand how long virus persists in semen, and will explore which factors may be associated with persistence of virus. After each test, the men are provided with their test results along with counselling, advice about appropriate hygiene and practising safe sex, and condoms.

Based on current results, the presence of virus in semen decreases in the months after recovery from Ebola virus disease. However, one participant was still positive 9.5 months after his illness began. It is still not known how long the virus can persist in semen but this study will yield more information about how long it takes for men to clear Ebola virus from semen.

While it is now clear that virus persists longer in semen than previously thought, the risk of people being infected with Ebola by those who have survived the disease is probably low. Although sexual transmission by survivors with persistent virus is a possibility, it appears to be rare. In areas of Sierra Leone – Kailahun and Kenema - that had very large outbreaks and have high numbers of survivors, there have been no new cases of Ebola for 300 days.

Ebola survivors need comprehensive support

However, survivors need comprehensive support to minimize the risk of re-emergence of the virus. Survivors, their partners and families, should receive support, appropriate and continuing counselling, and follow up testing. All survivors should be provided information and support to enable them to apply correct hygiene measures and practise safe sex.

WHO currently recommends that male Ebola survivors should be offered semen testing at 3 months after onset of disease, and then, for those who test positive, every month thereafter until their semen tests negative for virus twice by RT-PCR, with an interval of one week between tests.

Based on further analysis of ongoing research and consideration by the WHO Advisory Group on the Ebola Virus Disease Response, WHO recommends that male survivors of Ebola virus disease practice safe sex and hygiene for 12 months from onset of symptoms or until their semen tests negative twice for Ebola virus.

Survivors should practise good hand and personal hygiene by immediately and thoroughly washing with soap and water after any physical contact with semen, including after masturbation. During this period used condoms should be handled safely, and safely disposed of, so as to prevent contact with seminal fluids.

Survivors and their families should have access to the support they need to re-establish their livelihoods and to obtain care for their residual medical needs (such as joint pain and eye problems). Understanding and responding to community concerns is essential.

The study will be widened to examine viral persistence in other body fluids, in both women and men, post-Ebola. This will also be led by the Sierra Leone Government, supported by WHO, US CDC and Chinese CDC.

[Ebola RNA persistence in semen of Ebola virus disease survivors](#)
The New England Journal of Medicine, preliminary report

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