
Infection risk - cardiac surgery and mycobacteria

Summary

- There is a risk of infection after heart bypass surgery linked to heater cooler units contaminated by the bacteria *Mycobacterium chimaera*.
 - Health services and the Department of Health and Human Services have been working to minimise exposure to this bacteria and reduce the risk of infection.
 - The risk of infection is extremely low although most likely to occur in patients that have had surgery involving artificial (prosthetic) heart valve or other prosthetic material.
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Mycobacterium chimaera is a type of bacterium known as a non-tuberculous mycobacterium (NTM). There is a risk that heater cooler units, medical devices used in cardiac (heart) surgery, may be contaminated with *Mycobacterium chimaera*. There is therefore also a risk that patients exposed to the exhaust from these units in the operating theatre may develop a serious infection up to several years post-surgery.

A small number of cases of serious *Mycobacterium chimaera* infection have been reported in the United States, Europe and the United Kingdom and Australia.

Infection and cardiac surgery

Infection is a possible **complication of surgery**. A small number of people who have cardiac surgery (between three and six per cent) will develop an infection. This may happen shortly after surgery or many months, even years, later.

A possible source of infection in a very small number of people who have open heart surgery is a bacterium called *Mycobacterium chimaera*. This bacterium has been found to contaminate the water tanks of a medical device called a heater cooler unit. This device is used to regulate body temperature during open heart surgery.

The risk of the bacteria being transferred from the heater cooler unit to the person having heart surgery is extremely low. Fewer than 100 people worldwide have contracted the infection when having heart surgery. This risk is further minimised with regular changing of the water in the heater cooler unit tanks and through enhanced disinfection measures.

What is *Mycobacterium chimaera*?

Mycobacterium chimaera is a type of bacterium known as a non-tuberculous mycobacterium (NTM). NTM are commonly found in the environment, including in soil and water.

NTM are generally not harmful, although in very rare cases they can cause infection in surgical patients, especially in people with weakened immune systems. They can also cause **NTM lung disease** if inhaled. These infections may be treated with antibiotics.

Who is at risk of *Mycobacterium chimaera* infection?

People who have had open heart surgery during which an artificial (prosthetic) heart valve or other prosthetic material has been inserted are at the highest risk of *Mycobacterium chimaera* infection.

If you have had this type of heart surgery and you have the following symptoms, contact your doctor or call the hospital where the surgery was performed without delay:

- prolonged fever
 - unexplained fever
 - night sweats
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- unintentional weight loss
- marked fatigue
- increased shortness of breath
- joint or muscle pain
- nausea, vomiting or abdominal pain
- pain, redness, heat or pus around the surgical site.

What if I am scheduled for cardiac surgery?

If you are scheduled for cardiac surgery, the risk of surgical complications, including infections, will be discussed with you as part of the informed consent process.

It is important to note that the risk for mycobacterial infection from heater cooler units is considered to be very low compared to the overall risk of surgical and valve infection.

If you have particular questions about *Mycobacterium chimaera* infection, or any other type of infection, discuss these with your specialist surgeon during your pre-admission appointments.

What is being done to protect people from *Mycobacterium chimaera* infection?

Victorian health services where open heart surgery is performed, and the Department of Health and Human Services, have been working together to further minimise the risk of *Mycobacterium chimaera* infection.

Health services have been testing and monitoring heater cooler units and are continuing with strict maintenance and hygiene measures. Some of the older units thought to be more prone to contamination have already been replaced.

More information

- Contact your treating health service for further information, if required.

This page has been produced in consultation with and approved by:

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