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## Information about Nontuberculous mycobacteria infections associated with heater-cooler devices

Health Canada has alerted hospitals that a device used to heat and cool the blood during open-chest surgery has been linked to a rare bacterial infection caused by *Mycobacterium chimaera*, a type of bacteria known as *nontuberculous mycobacteria* (NTM). [View the Health Canada alert](#)

Hamilton Health Sciences is notifying patients who have had specific open-chest surgeries using a heater-cooler device about the potential infection risk related to their surgery. The information below will assist in answering questions you may have.

### Why is the heater-cooler device needed during surgery?

Heater-cooler devices are used during certain cardiac surgeries that require the use of a heart/lung bypass machine to maintain the appropriate temperature of a patient's blood and organs. The benefits of temperature control during surgery outweigh the small risk of infection associated with these devices.

### What type of bacteria is involved in infections with heater-coolers?

*Nontuberculous Mycobacterium* (NTM) bacteria are commonly found in the environment, such as in water and soil. There is the potential for NTM to be present and grow inside the heater-cooler device. It is important to note that the water in the heater-cooler unit does not come into contact with the patient's blood or body fluids. However, it has been determined that contaminated water droplets from the tank may transmit bacteria through the air (aerosolize) and escape from the heater-cooler unit into the operating room environment. The aerosolized NTM may then find its way into the open-chest cavity or a sterile implant.

### Are certain groups of individuals at higher risk of NTM infection?

NTM organisms may cause infections in very ill people such as those: with compromised immune systems, underlying lung disease, diabetes; or undergoing chemotherapy or certain invasive healthcare procedures, or receiving organ/tissue transplant.

### If I've been exposed to NTM during surgery, what are the chances that I have or will get infected?

While rare, NTM infections can and do occur. Most often they appear in patients who have undergone open-chest surgery. Patients who have underlying lung disease or a weakened immune system may also be susceptible to NTM infections. There are no known cases at Hamilton Health Sciences.

### What are the symptoms of NTM infections?

Some NTM bacteria can grow rapidly, but most NTM species associated with heater-cooler infections are slow-growing. Because these bacteria grow slowly, it can take several months to over a year for an infection to develop.

Signs of a possible NTM infection may include:

- Fatigue
- Fever
- Pain
- Redness, heat or pus at the surgical site

- Muscle pain
- Joint pain
- night sweats
- weight loss
- abdominal pain
- nausea
- vomiting
- new diagnosis of sarcoidosis after cardiac surgery

#### **What should I do if I am experiencing symptoms?**

Contact your health care provider if you are experiencing symptoms and inform them that you have had open-chest surgery.

#### **Can NTM infection be treated?**

NTM infections can be treated with combinations of specific antibiotics. Some patients who become infected may need prolonged treatment (from months to years). Additionally, although rare, some heart valve patients who develop NTM infections after having cardiac surgery may require additional surgery. If untreated, NTM infection could be potentially fatal.

#### **Can I become infected through contact with someone who is infected with NTM?**

No, NTM infection is not contagious. It is not spread from person-to-person.

#### **What should I discuss with my doctor prior to open-chest surgery?**

Discuss the benefits and risks of your surgical procedure with your doctor. For most patients, the benefit of undergoing a surgical procedure recommended by their doctor outweighs the risk of infection. Ask your doctor what to expect following your procedure and when to seek medical attention. Ask your doctor what measures are being taken to minimize your risk of infection.

#### **Should I postpone my surgical procedure?**

Patients with concerns about infection risks should consult with their doctor. However, life-saving surgical procedures should not be delayed. Patients should ask their doctor what to expect following their procedure and when to seek medical attention.

#### **Who can I speak with if I have further questions?**

If you wish to speak with someone at Hamilton Health Sciences, you may also call the Patient Experience Office at 905-521-2100 ext. 75740. You will be asked to leave your name, date of birth and phone number and a nurse will return your call within two business days.

*Source:* [Centers for Disease Control and Prevention](#)