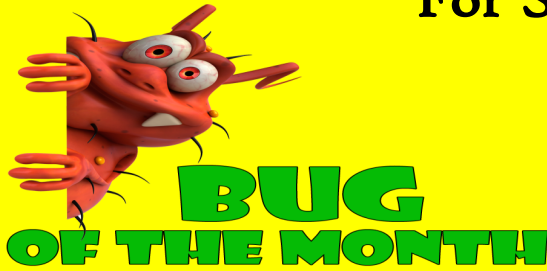


## For Staff /Patient Education



# Mycobacterium Tuberculosis

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### What is it?

- **Mycobacterium tuberculosis** (MTB) is a [pathogenic bacterial](#) species in the family [Mycobacteriaceae](#) and the causative agent of most cases of [tuberculosis](#) (TB).
- MTB has an unusual, waxy coating on its cell surface (primarily [mycolic acid](#)), which makes the cells impervious to [Gram staining](#). [Acid-fast](#) detection techniques are used instead. The physiology of MTB is highly [aerobic](#) and requires high levels of oxygen. Primarily a pathogen of the mammalian respiratory system.
- TB germs (MTB) can live in your body without making you sick. This is called [latent TB infection](#). This means you have only inactive (sleeping) TB germs in your body. The inactive germs cannot be passed onto anyone else. However, if these germs wake up or become active in your body and multiply, you will get sick with TB disease.
- When TB germs are active (multiplying in your body), this is called [TB disease](#). These germs usually attack the lungs. They can also attack other parts of the body such as the kidneys, brain or spine.
- TB disease may spread the germs to people they spend time with everyday.
- Symptoms of TB disease include: a bad cough that lasts 3 weeks or longer, pain in the chest, coughing up blood or sputum, weakness or fatigue, weight loss, no appetite, chills, fever, sweating at night.

### How is it spread?

- Person -to -person spread by infectious aerosols
- TB germs are passed through the air when someone who is sick with TB disease of the lungs or throat coughs, speaks, laughs, sings or sneezes. Anyone near the sick person with TB disease can breathe TB germs into their lungs.

### Where is it found?

- Humans are the only natural reservoir

### Prevention and Control:

- [AIRBORNE PRECAUTIONS](#) for all [suspected or confirmed TB Disease](#) of the lungs, airway or larynx.
- Patient is placed in a single negative pressure room. Ensure that doors & windows are closed at all times to maintain negative pressure. Signage is placed on the door written in Arabic & English.
- If negative pressure room is not possible, patient is placed on isolation, away from other patients. Ensure that the door is closed at all times but may open the windows. Patient is transferred to a facility where infectious disease unit is available.
- All person entering the Airborne Infection Isolation (AII) room should wear at least N95 disposable respirator.
- Limit number of individuals entering the room. Visitors should be restricted to immediate family only.
- Maintain patient in his/her room at all times. If patient must leave the room (for essential purposes only), ask the patient to wear a surgical mask.
- Educate all Healthcare Workers & visitors regarding the importance of adherence to isolation procedures.
- Use appropriate signage advising respiratory hygiene & cough etiquette.
- Keep your health in good shape, (eat well-balanced diet, adequate rest and sleep, exercise).
- Coordinate efforts with local or state health department (MOH).



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#### Source:

CDC MMWR.December 30,2005/  
Vol.54/No. RR-17. Guidelines for  
Preventing the Transmission of MTB  
in Healthcare Setting, 2005



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Concept adapted from Public Health Ontario-Regional Infection Control Network