



Canada's source for
HIV and hepatitis C
information

La source canadienne
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le VIH et l'hépatite C

From *HIV in Canada: A primer for service providers*

Tuberculosis

Key Points

- There were 1,639 active tuberculosis cases in Canada in 2015.
- The majority of new tuberculosis cases are among foreign-born Canadians and Aboriginal peoples.
- People with HIV are at higher risk for contracting tuberculosis.
- An estimated 1.6% to 5.8% of people living with HIV have active tuberculosis.
- People with HIV are more likely to progress from latent tuberculosis to active tuberculosis.
- People with HIV are more likely to develop extrapulmonary tuberculosis.
- Aboriginal people and immigrants to Canada from countries with higher rates of tuberculosis and HIV are at greater risk for co-infection.

Mycobacterium tuberculosis is a bacterium spread from a person with active, infectious tuberculosis (TB) of the lungs or airways to another person through the air. TB is not as contagious as some other airborne infections — exposure must be sustained for infection to occur. When exposure to TB occurs, the body's immune system can sometimes eliminate the infection. If this does not occur, the bacterium can remain alive but inactive in the body, resulting in a latent TB infection. There are no symptoms associated with latent TB infection and it does not make the person infectious. However, latent TB infection can develop into active TB when the immune system is compromised or becomes weak. If this occurs, symptoms develop and the person becomes infectious to others.

TB can spread outside of the lungs through the blood to other parts of the body (extrapulmonary TB), such as the kidneys, bones and joints, intestines, brain and spinal cord. TB can also infect the entire body (disseminated or miliary TB). TB outside the lungs is usually not infectious to others because they do not spread TB into the air through coughing.

The Bacille Calmette-Guérin (BCG) vaccine partially protects against TB infection. In Canada, this vaccine is not universal and is only provided to infants of First Nations and Inuit communities with high rates of TB.

TB is diagnosed through a TB skin test. Positive results should be followed up with a chest X-ray and a sputum smear to determine if the individual has active TB. TB outside the lungs can be more difficult to diagnose because the chest X-ray and sputum culture will be negative. False-positive skin test results can occur if someone has been vaccinated with BCG or infected with other TB-like illnesses. A false-negative skin test can occur if the immune system is weak, such as in people with HIV. New blood tests are being investigated as alternative methods for diagnosing latent TB.

Both latent and active TB can be cured with antibiotics taken for at least six months. Individuals who fail to fully adhere to the drug regimen can develop drug-resistant TB, making their care more complicated and increasing the chances that they will transmit drug-resistant TB to others. Multi-drug-resistant TB results in increased complications for treatment and care. Extensively drug-resistant TB is almost universally fatal.

In Canada, there were 1,639 active TB cases in 2015 (or a rate of 4.6 TB cases per 100,000 people). The majority of all reported TB cases in 2015 were among foreign-born Canadians (71%). In addition, 17% were among Canadian-born Aboriginal people and 11% among Canadian-born non-Aboriginal people. There are pronounced disparities in TB rates between the provinces, with Nunavut having the highest rate of new reported cases in Canada.

People with HIV are at greater risk of contracting TB because of their weakened immune system (the risk is estimated to be between 20 to 37 times greater in people living with HIV than among those without HIV infection). Furthermore, people with HIV are 10 times more likely to develop active TB than people without HIV. People with HIV are also more likely to have active TB outside the lungs.

There is uncertainty regarding the level of co-infection in Canada. The estimates of the percentage of people with HIV who also have active TB range from 1.6% to 5.8%. The estimates of the number of people with TB who are also HIV positive range from 3.8% to 13.8%. Aboriginal people and immigrants to Canada from countries with higher rates of TB and/or HIV are at greater risk for co-infection. Research also suggests that the risk of developing TB increases with the duration of untreated HIV infection.

Because of the close links between HIV and TB, screening policies recommend testing of all TB-infected people for HIV and all HIV-positive people for TB. It is estimated that only 21% of HIV-positive people have been screened for TB.

Resources

[Tuberculosis & HIV—background information](#) - *CATIE News*

[Tuberculosis fact sheets](#) - PHAC

Sources

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