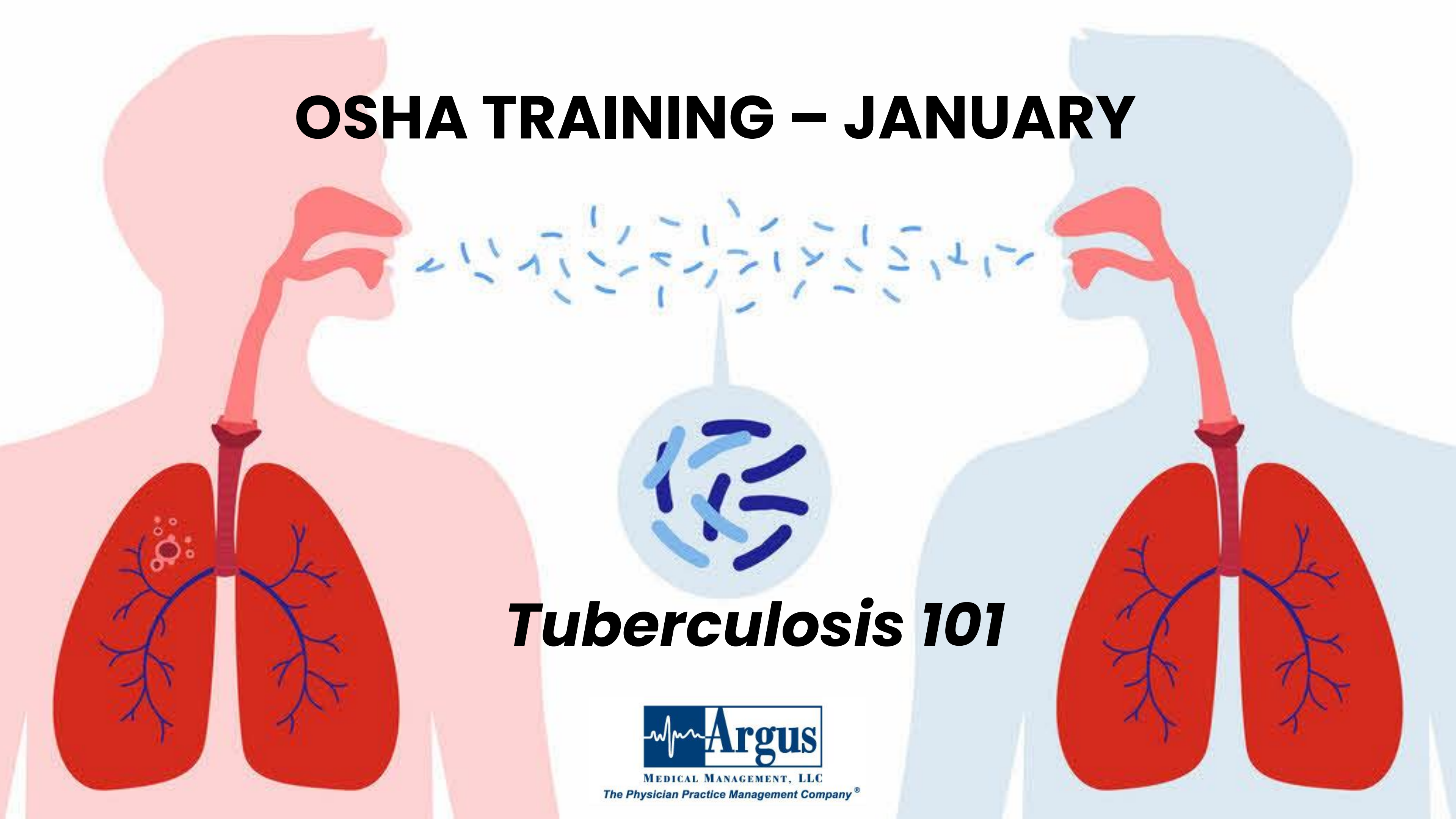


# OSHA TRAINING – JANUARY

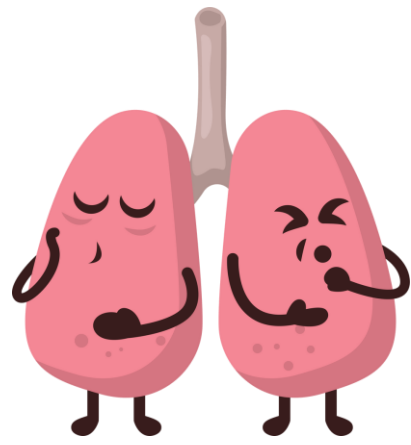


## ***Tuberculosis 101***



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# What is Tuberculosis (TB) ?

TB is a disease caused by bacterium called mycobacterium tuberculosis (M. tuberculosis).

The bacteria usually attack the lungs, but can attack any part of the body such lymph nodes, bones and joints, the brain and other organs.

- If TB is treated properly, most people can be cured of TB
- If TB is **NOT** treated properly, people can die from TB or develop drug-resistant forms of TB.



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# The Global Threat of TB

Although TB is preventable and treatable, it is still one of the world's deadliest infectious diseases.

According to the World Health Organization in 2023, an estimated **10.8 million people** were diagnosed with tuberculosis (TB) worldwide. This is a record number.

- An estimated 1.25 million people died from tuberculosis (TB) in 2023 (including 161 000 people with HIV).
- TB is a global pandemic that kills someone about every 20 seconds.



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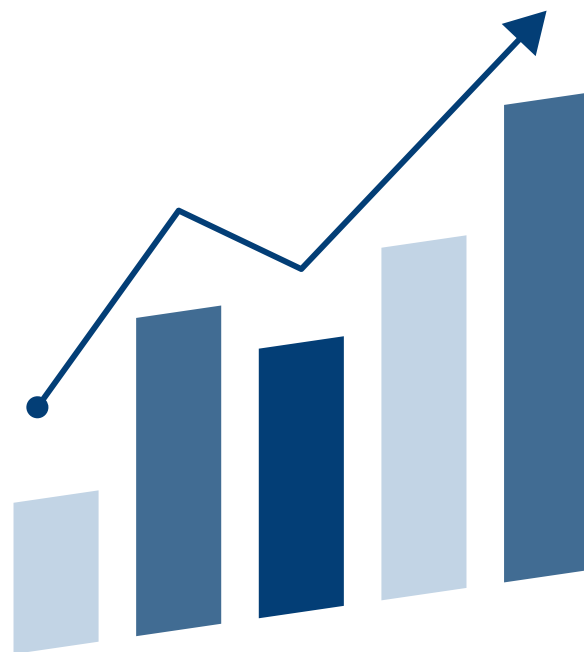
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# TB Trends

The states with the **most** tuberculosis (TB) cases in the **United States** are **California, Texas, New York, and Florida.**

- Worldwide, TB has probably returned to being the world's leading cause of death from a single infectious agent, following three years in which it was replaced by coronavirus disease (COVID-19).
- Multidrug-resistant TB (MDR-TB) is a form of TB caused by bacteria that do not respond to isoniazid and rifampicin, the two most effective first-line TB drugs.
  - Only about 2 in 5 people with multidrug resistant TB accessed treatment in 2023.



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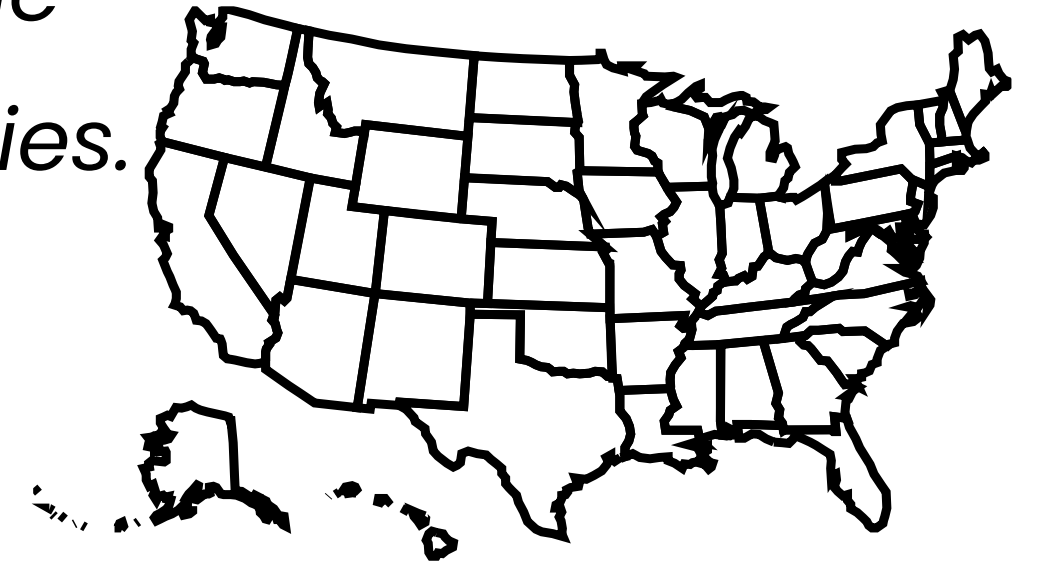
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# TB in the United States

*The United States has one of the lowest TB case rates in the world, thanks to investments in domestic TB control activities.*

Although the lowest cases, ***TB is still an issue in the U.S.***

- Up to 13 Million people are infected with TB
- In 2023, the US reported 9,615 TB cases, a *16% increase from 2022*. California reported the most cases in 2023, and Alaska reported the highest rate.



Approximately 80% of TB cases in the United States are estimated to result from progression from untreated Latent Tuberculosis Infection (LTBI) to active TB disease. People with LTBI can be treated to prevent the development of TB disease.



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# How TB is Transmitted

TB is **spread through the air** from person to person. Tiny particles containing *M. tuberculosis* (TB bacteria) may be expelled into the air when a person with infectious TB of the lungs, airway, or larynx:

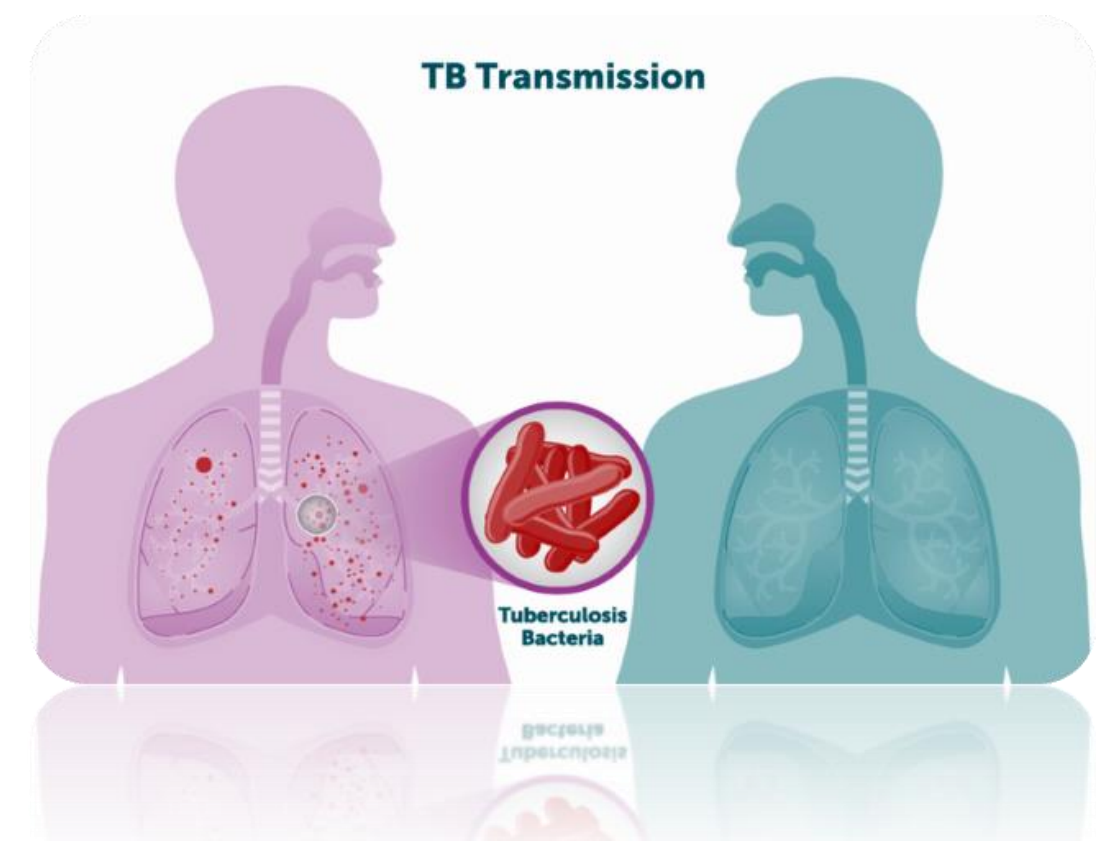
- ***Coughs, Speaks, or Sings.***

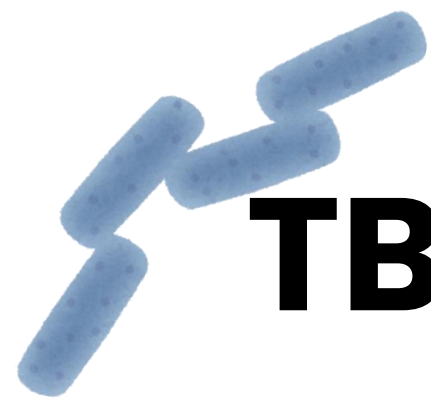
If people are within the vicinity of an infected person they may breathe in the **airborne droplet nuclei** that can remain in the air for ***SEVERAL HOURS***, depending on the environment.



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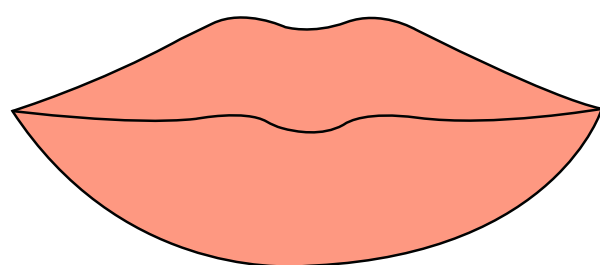


**TB is NOT spread**

**by:**



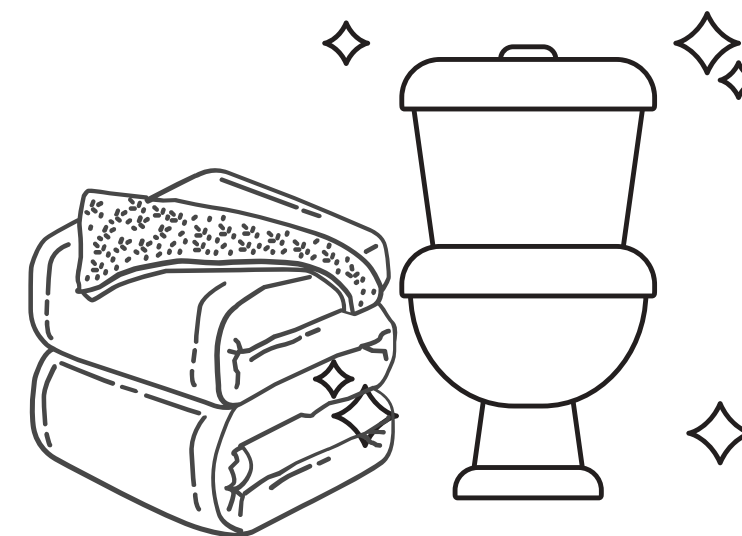
Shaking hands



Saliva from kissing



Sharing food,  
drink or utensils



Touching bed  
linens or toilets



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# People with Latent TB Infection (LTBI):

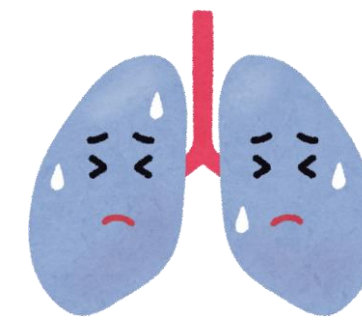
- Do not feel sick
- Do not have any symptoms
- Cannot spread TB bacteria to others
- Can have latent TB infection for years
- ***Are at risk for developing TB disease***
- Have a small amount of TB germs in their body that are alive but inactive
- Usually have a positive TB blood test (interferon-gamma release assay [IGRA]) or TB skin test (Mantoux tuberculin skin test [TST]) result indicating TB infection
- Should consider treatment for LTBI to prevent TB disease



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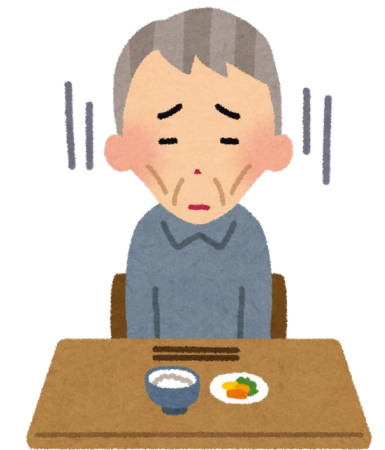
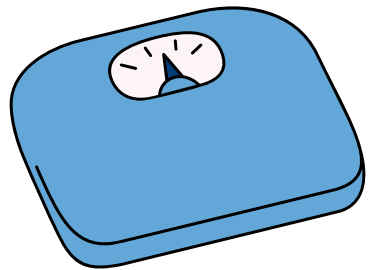
# People with TB Disease:



Usually have one or more symptoms:

- A chronic cough that lasts three weeks or more
- Coughing up blood or phlegm
- Chest pain
- Weakness or fatigue
- Weight loss
- Loss of appetite
- Chills
- Fever
- Night sweats
- Have a large amount of active TB germs in their body
- Usually have a positive TB skin test or TB blood test result indicating TB infection
- Need treatment for TB disease

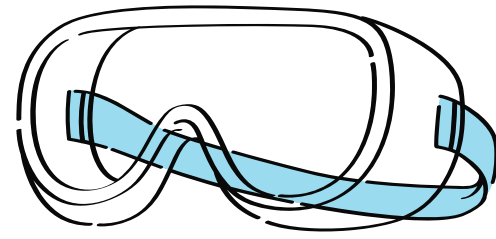
*May be able to spread TB bacteria to others*



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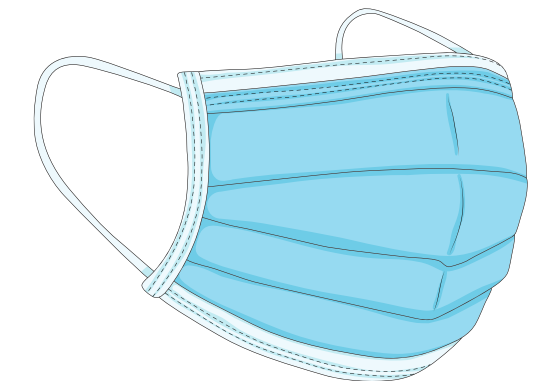
# Infection Control



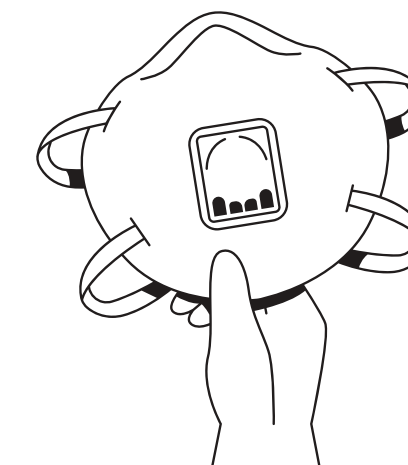
Since TB is an airborne disease that is easily transmittable from one person another, it is important to implement the infection control procedures to protect others from contracting TB.

It is particularly vital for health care facilities and other congregate setting to implement an infection control program that is designed to ensure:

- Prompt detection of TB
- Airborne precautions to prevent TB
- Treatment of persons who have suspected or confirm TB disease



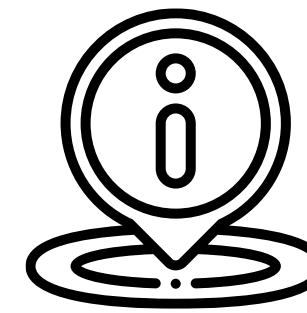
Personal respirators should be worn by health care workers to prevent inhalation of droplet nuclei. Surgical masks should be worn by infectious TB patients to prevent spread of nuclei droplets in the air.



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# TB 101 Review



- TB is spread through the air from person to person.
- Persons become infected with TB when they inhale tubercle bacilli and the bacilli multiply in the small air sacs of the lungs.
- Usually, the immune system intervenes, preventing further spread and at this point the person now has *latent TB infection*.
- If immune system cannot keep the tubercle bacilli under control, the bacilli multiply and destroy tissue and the person now has *TB disease*.

**Persons with latent TB**, generally do not feel sick, have no symptoms, cannot spread TB to others but are at risk for developing TB disease.

**Persons with TB Disease**, usually feel sick, have more than one symptom and may be able to spread TB bacteria to others

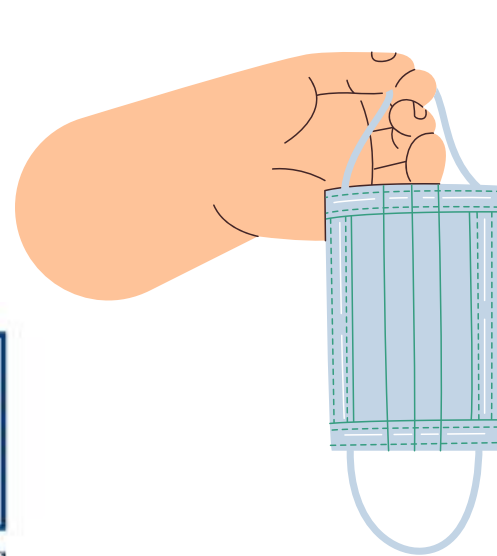


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# TB Prevention Basics

- TB screening for medical office staff at hire and annually
- Educate patients and staff on TB and on Cough Etiquette
- Offer masks to coughing patients, provide masks to staff interacting with coughing patients.
- Separation of possibly infected individuals, disinfection after visit
- Means of informing people entering facility of source control measures



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