

## **COMMON INFECTIOUS DISEASES- SERIES 5**

This article is the fifth in a series of educational material on specific Infectious Diseases.

**Tuberculosis:** Tuberculosis (TB) is an infectious disease caused by the bacterium, *Mycobacterium tuberculosis*. Tuberculosis is primarily a respiratory disease but can affect other organs like the brain, kidneys, and spine.

It is spread through droplet infection from person to person when inhaled through coughing, sneezing, speaking, singing, and even laughing. It is not easy to catch; one needs to spend a lot of time in close contact with someone who is contagious with TB.

There are two types of TB: Latent and Active. In the latent or “sleeping” stage, a person is infected with the TB bacteria and harbor it but does not have symptoms. Individuals with latent TB can become symptomatic and active. In the active stage, a person develops symptoms and is contagious.

**Symptoms:** include cough for more than 2 weeks, bloody sputum (mucous coughed up), fever, fatigue, night sweats, loss of appetite, weight loss, weakness, and chest pain.



**Risks:** Individuals most at risk for developing tuberculosis includes: 1) those with a weakened immune system, diabetes, and kidney disease; 2) taking medications to treat cancer, rheumatoid arthritis, psoriasis, anti-rejection of organ transplant; 3) the very young and elderly; 4) malnutrition and low body weight. Additional risks include people working in healthcare, living/working in residential care and correctional facilities as well as homeless shelters, use of illicit IV drugs and excessive alcohol intake, tobacco use, traveling in countries where TB is prevalent, ie Africa, Asia, East Europe, Russia, and Latin America, and living with someone who is infected.

**Diagnosis:** TB is diagnosed by a physical exam, blood test, samples of sputum and lung fluids, chest x-ray and CT scan. TB skin testing is available but used less often in the US.

**Treatment:** Tuberculosis is curable but can be deadly if not treated. It is important to take all the medications prescribed and for the full length of time, sometimes up to 9 months. Medications to treat TB include Isoniazid (Hyzyd), Rifampin (Rifadin), T-thambutol (Myambutol), Pryazenamide (Zinamide), and Rifanpentine (Priftin). A vaccine is available for children in countries with high rates of tuberculosis but not in the US.

**Complications:** There are a number of complications that can result from TB infection, depending on the organ involved: back pain /stiffness, arthritis in the hips and knees, liver or kidney impairment, meningitis with intermittent or continued headaches and possible mental changes. Heart disease can result but is rare.

**Prevention:** Several measures can be taken to prevent an infection with TB. Avoid close or prolonged contact with someone known to have active TB. If traveling, get tested before and after travel.

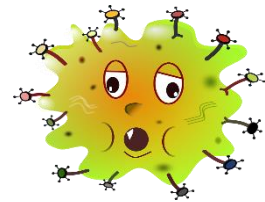
If undergoing treatment for TB, stay home during the first weeks to protect others, ventilating your room by opening windows when feasible. Cover your mouth by wearing a face mask.

*Resources: [mayoclinic.org](http://mayoclinic.org); [clevelandclinic.org](http://clevelandclinic.org); [cdc.gov](http://cdc.gov)*

**Noroviruses:** These are a group of viruses that attack the intestinal tract and are highly contagious. They are a leading cause of food-borne illness, most often in the food service industry from infected workers not wearing gloves. Noroviruses are very common in closed, crowded environments such as daycare centers, nursing homes and residential care facilities, hospitals, schools, and cruise ships. According to the Mayo Clinic, noroviruses can stay on surfaces and objects for days to weeks, and can withstand hot and cold temperatures and many disinfectants.

Sources of infection include:

- Ingesting tiny particles of feces or vomit from an infected person.
- Direct contact with an infected person through the sharing of food or utensils.
- Touching contaminated surfaces and putting fingers in the mouth.
- Eating or drinking contaminated foods or liquids. One example is eating oysters harvested from contaminated water. June 1, 2022 there was a multi-state outbreak (not in WI) linked to raw oysters from British Columbia.
- Septic tank leaks into the well.
- An infected person vomits or poops in the water. Water treatments are ineffective!



Outbreaks are most common from November to April.

**Symptoms:** Nausea, vomiting and diarrhea that can result in dehydration, abdominal pain, headache, fever, body aches. Symptoms develop 12-48 hours following exposure with recovery in about 1-3 days. A person can spread the virus up to 2 weeks or more after feeling better.

**Diagnosis:** Diagnosis is through history taking by a healthcare provider and a stool specimen.

**Treatment:** There is no specific treatment for noroviruses. Drink plenty of fluids to prevent dehydration. Sports drinks and caffeine-free/alcohol-free beverages or oral rehydration products with nutrients and minerals are good choices. Avoid consuming dairy products, fatty or spicy foods. In the case of severe dehydration, a hospital visit may be needed and treatment with IV fluids. Anti-nausea medications may be used. Antibiotics are not given to treat a norovirus.

**Prevention:** To avoid being infected with a norovirus, the CDC recommends the following steps:

- Use proper hand washing technique for 20 seconds with soap & water (**not hand sanitizer**).
- Wash fruits and vegetables.
- Cook oysters and other filter-feeding shellfish to 145 degrees (quick steam is not enough).
- Do not prepare food or care for others while sick and for 2 days after symptoms have subsided.
- Sanitize kitchen utensils, counters, and surfaces before food preparation.
- Clean and disinfect surfaces with rubber or disposable gloves and a bleach-based cleaner. Leave on the surface for at least 5 minutes then wash with soap and hot water.
- Clean soiled laundry: wear gloves, don't shake, use highest temperature for washing and drying with the maximum time.
- Avoid travel until 2-3 days after symptoms are gone.

*Resources: cdc.gov; mayoclinic.org*