

TB

A guide to tuberculosis treatment and services



WAKE COUNTY
Public Health

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Important phone numbers

About tuberculosis (TB)



TB is caused by germs (TB bacteria) that spread through the air. This happens most often when someone who has active TB of the lungs or throat coughs, sneezes, or sings. TB germs can stay in the air for several hours, depending on the environment. Others can become infected when they breathe in the TB germs.

TB is more likely to spread in closed spaces that don't have good air circulation (like indoors or in a closed car). People who are likely to get infected are family members, roommates, friends, or close co-workers.

TB does not spread by

- shaking hands,
- kissing,
- sex,
- sharing glasses, plates, and eating utensils, or
- touching bed linens or toilet seats.

TB usually affects the lungs, but it can affect other parts of the body. It can also affect more than one part of the body, like the kidneys and spine.

TB in parts of the body like the kidneys or spine does not usually spread to other people.

About tuberculosis (TB)



People who are infected with TB germs don't always get sick. There are 2 conditions related to TB, latent tuberculosis infection (inactive TB) and active TB.

Latent tuberculosis infection (LTBI or inactive TB)

Someone with LTBI has TB germs in their body. People with LTBI

- do not spread TB to others,
- do not feel sick, and
- do not have symptoms of active TB.

Doctors recommend preventive treatment for people with LTBI to prevent active TB disease.

Active TB Disease (Active TB)

A person can have LTBI for weeks, months, or years without feeling sick while their immune system fights the TB germs. They develop TB disease if their immune system gets weak and can no longer fight the TB germs. The germs grow and multiply and cause damage to the lungs and/or other parts of the body. Untreated TB can be fatal.

People with active TB disease

- have symptoms of TB,
- feel sick, and
- can spread TB to others.

About tuberculosis (TB)



Symptoms of TB depend on the part of the body affected by the TB germs.

- Lungs
 - A bad cough that lasts more than 3 weeks
 - Chest pain
 - Coughing up blood or phlegm (sputum) from deep inside the lungs
- Lymph nodes
 - Firm red or purple swelling under the skin
- Kidney
 - Blood in the urine
- Brain (TB meningitis)
 - Headache and confusion
- Spine
 - Back pain
- Larynx (voice box)
 - Hoarseness

Other symptoms of active TB include:

- tiredness,
- weakness,
- loss of appetite,
- weight loss (not intended)
- chills,
- fever, and
- night sweats.

TB can be cured with the right treatment.

TB reporting in NC



Doctors in North Carolina must, by law, report cases of TB to their local health department. In Wake County, TB Control follows up with people who have TB to help make sure they get treatment.

You may have had TB disease for a while before you knew you had it. Other people may have gotten TB from you when you didn't know you were sick. You will need to tell your TB nurse the names, addresses, and phone numbers of people you spend time with like family members, roommates, friends, close co-workers, etc. This will help the nurse make sure that those who might be at risk for TB infection get the testing and treatment they need.

It is our job to tell people who could have gotten TB from you that they need to be tested for TB. We will not tell them your name, only that they were around someone with TB and need to be tested.

How doctors diagnose TB



Our TB doctor uses the following tools to help diagnose TB disease.

Medical history

Your medical history helps the doctor know if you

- have symptoms of TB,
- have spent time with someone who has active TB,
- had a positive TB blood test or skin test, and
- had TB in the past.

Chest x-ray

A chest x-ray tells the doctor if you have signs of TB in your lungs.

TB blood test

TB blood tests are also called IGRAs (interferon-gamma release assays). We use the QuantiFERON®-TB Gold Plus (QFT-Plus).

HIV test

HIV (human immunodeficiency virus) makes it hard for the body to fight disease. The virus spreads by contact with infected blood or body fluids. This could happen during sex, sharing needles, and from a mother to her child during birth or breastfeeding.

We test everyone with TB infection for HIV because

How doctors diagnose TB



- you can have HIV for a long time without knowing it
- people with LTBI are at greater risk of developing TB disease if they have HIV, and
- HIV can change the way TB is treated.

Sputum smears

Sputum smears are done on mucus coughed up from the lungs (sputum). The lab uses a microscope to see if there are TB germs in the mucus. Please read the section in this guide (page 15) on how to collect a sputum sample.

Sputum culture

Sometimes the lab cannot see TB germs in the mucus, but you could still have active TB. This is why a sputum culture is done. If TB germs grow on the culture, then you have TB disease. *It usually takes 2 months for TB to grow on a sputum culture.*

Drug sensitivities

Drug sensitivity tests are done to make sure the medicines will kill your TB germs. It takes two more weeks to get the results of the drug sensitivities. This is why TB treatment is often started **BEFORE** getting the lab results.

TB treatment



TB can be cured with the right treatment. The drugs most often used to treat TB are

- Isoniazid (INH),
- Rifampin (RIF),
- Ethambutol (EMB), and
- Pyrazinamide (PZA).

All four of these medicines are given while waiting for the results of the sputum cultures and drug sensitivities. You may only need three of the medicines when we get the results of your drug sensitivities. After 8 weeks, you may only need two of these medicines.

It takes a long time to kill TB germs. You may have to take TB medicine for 6 months or more. You will likely feel much better before you finish the medicine. *Even when you feel better, you must keep taking your medicine as long as the doctor tells you.*

If you miss any of your medicine or stop taking it too soon

- you may get sick again, and
- you may infect others.

Missing medicine may also make it harder to treat your TB because the medicine won't be able to kill your TB germs anymore (drug resistance).

DOT & VDOT

Directly
observed
therapy & video
directly
observed
therapy



It is not always easy to keep taking medicine once you start feeling better. Your TB nurse will help make sure you take all the medicines you need by watching you take them. This is called directly observed therapy (DOT). North Carolina law requires DOT while taking TB medicines. This helps you take your TB medicine the right way and for the right amount of time.

You can come into the clinic for your DOT. Your TB nurse will watch you take your TB medicine and talk with you about any questions or concerns you have.

OR

You can get our video directly observed therapy (VDOT) app, Spotlight.

Using Spotlight, you

- record a video of yourself at home taking your TB medicine, and
- send the video to your TB nurse along with any questions or concerns you may have.

Your TB nurse will:

- call you if there are questions or concerns about your TB medicine or your video, and
- arrange for you to talk with the TB doctor if you want to discuss private information.

DOT & VDOT



You can change to DOT at any time you or your nurse thinks it would be better for you to do so.

Please let the TB nurse know if you are going to use DOT or VDOT. The Spotlight app section in the back of this guide (page 18) tells you how to get and use the app.

Your TB drugs



You can spread TB until you have taken enough medicine to control the TB germs in your body. The amount of time it takes for the medicine to control the germs is different for each person.

You start by taking your medicines daily for at least 8 weeks. After that, your medicines may be changed to 3 times a week. Your sputum smears tell the TB doctor how well the medicines are working.

Your TB nurse will collect 2–3 sputum samples every 1–2 weeks. The time it takes your sputum samples to change from positive to negative helps the doctor

Your TB drugs



decide how long you will have to take your TB medicines.

During this time, your TB nurse will help you with all of your questions and concerns and help the doctor get the best treatment for you.

Rifampin

- Rifampin may make your urine (pee), tears, stool (poop), and sweat turn orange. It may cause staining of soft contact lenses.
- Rifampin and pyrazinamide may make your skin more likely to sunburn. Use sunscreen or clothes that cover skin, so you won't get sunburned.
- Taking rifampin while taking methadone can cause withdrawal symptoms. Talk with the doctor who put you on methadone about this.

Birth control and pregnancy

Women should not get pregnant while taking their TB medicines.

- Birth control methods with hormones (pills, patches, rings, implants, shots, etc.) don't work as well with rifampin.

Your TB drugs



- Use an extra method of birth control (condoms) so you will not get pregnant.
- *Tell the TB nurse right away if you get pregnant while taking TB medicine.*

TB drugs and other drugs you may be taking

Some drugs can affect or be affected by your TB medicines.

- Bring a list of all your drugs (vitamins, herbs, prescriptions, and drugs you can buy without a prescription) when you go to any healthcare provider.
- Tell the TB nurse or doctor before taking any new drugs.

TB drugs and alcohol

Drinking alcohol while taking TB medicines can damage your liver. Keep your liver healthy! *Never drink wine, beer or other liquor while you are taking TB drugs.*

When you should call the TB nurse

Most people can take TB medicine with no problems. Sometimes the drugs used to treat TB can cause problems.

Call the TB nurse right away if any of these things happen:

- ✓ You never feel hungry

When you should call the TB nurse



- ✓ You always feel tired or weak
- ✓ You have nausea, vomiting, bloating or stomach pain for no reason
- ✓ Your skin or eyes turn yellow
- ✓ You have urine (pee) the color of tea or cola
- ✓ You have a fever
- ✓ Your stomach hurts
- ✓ Your fingers or toes tingle (like pins and needles)
- ✓ You get a rash or your skin itches
- ✓ You bleed or bruise for no reason
- ✓ Your joints ache
- ✓ You feel dizzy or confused
- ✓ Your mouth has no feeling (numb)
- ✓ Your vision gets blurry or changes
- ✓ Anything that is bothering or concerning you

If you have any of these symptoms at night or on weekends, call your doctor or go to the emergency room. Take a list of all your medicines or the actual medicines with you.

Home isolation

The TB doctor will put you on “home isolation” if you are not sick enough to need hospital care but can still spread TB to other people. Home isolation helps prevent TB from spreading because you stay home and away from other people while you are contagious.

Home isolation



What do I have to do while on home isolation?

- You must not have visitors. Stay away from people who do not live with you. Babies, young children, and people with weak immune systems (cancer patients, people with HIV, people who have had an organ transplant) can catch TB easily.
- You must not ride in taxis, buses, trains, or airplanes.
- You must not go to school, work, church, the store, or any other public place.
- You must wear a mask if you are around other people.
- You may be outside without a mask.
- You should air out the rooms you are staying in by opening the window (if the weather allows). You can also put a fan in the open window backwards so that the air is blowing outside.

How long will I need to be on home isolation?

Home isolation is different for each person. Home isolation may last days, weeks, or months. Taking every dose of your TB drugs can help shorten the time you are on home isolation. That is why

Home isolation



taking your TB drugs is so important! Your TB doctor or nurse will tell you when it is safe to go back to your normal routine.

What if I need to go somewhere?

You must stay at home unless you need medical care. You should put off all appointments (like the dentist, the hairdresser, etc.) until you can no longer spread TB.

If you must go to the doctor, wear a mask and tell the doctor's office staff you have TB. If you have to ride in an ambulance, tell them you have TB.

How to collect a sputum sample

Sputum Sample Supplies

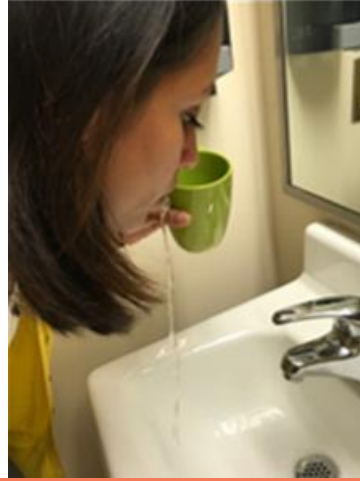
- Plastic specimen tube
- Plastic specimen bag



When you first get up in the morning. . .



1. Rinse your mouth with water.



2. Spit the water into the sink.



3. Take a deep breath.
Cough deeply.



4. Spit what you cough up into the plastic tube.



5. Repeat steps 3 and 4 until you fill the plastic tube to the first line.

6. Screw the lid on tightly.



7. Wipe off the outside of the tube with a tissue. Put the plastic tube in the plastic bag and return it to the clinic.

Please call the TB nurse if you have any questions.

Spotlight App Quick Guide

Download the app.

Spotlight is a Wake County approved phone app for Public Health. It lets you record a video when you take your medicine (VDOT), then send the video to your nurse.

App download for **iPhone**



App download for **Android**



1

Get started.

- Your nurse will text or email you a link to Spotlight. Use the link to enroll.
- Create a user name and password OR log in using Facebook, Google, or Apple credentials.
- Set up Touch ID, Face ID or a pin to make it easier to log in each time.

2

Get ready
for your
VDOT.

- Find a quiet, private place with good light to record your VDOT.
- Get your medicine ready to take.
- Have a beverage ready to help swallow your medicine.

3

Record
your
VDOT.

- Open the Spotlight App.
- Tap on your username to log in. Use Face/Touch ID or your PIN to land on the home page.
- Tap **Check In** to begin.
- Select any symptoms or side effects that you are having. Tap **Next** to continue.
- Your medicines show on the next screen. Make sure you have all the medicine you are about to take. Tap **Next** to continue.
- Press the **Record** button when you are ready. A 3-second count down appears before the recording starts.
- Clearly show all the medicine you are going to take.
- Say your name. Hold the medicine in front of the camera before you put it in your mouth. Show the medicine in your mouth before you swallow it. Take a drink of your beverage and swallow your medicine.

- Open your mouth to show you have swallowed the medicine.
- Tap the **Stop** button when you are done. Your video automatically submits.
- **Repeat steps 2 and 3 for each VDOT.**



**More
information
about
Spotlight**

Spotlight Training Guide for Mobile App Users

- Detailed instructions with pictures
- More about app features
- Frequently asked technical questions
- Privacy policy

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