

TB that is more difficult to treat

TB is a common illness of the lungs, but it can also cause illness of other body parts. This is seen more often in people living with HIV. You still get the general symptoms of TB like weight loss, a temperature or night sweats, but you might not have the cough usually associated with TB.

TB of the space between the lung and ribs is called TB pleural effusion

This form of TB usually causes a dry cough and a bad chest pain on one side. The sputum direct and TB culture will usually be negative. Either a careful examination by the health worker or an x-ray can result in a diagnosis. Sometimes the water in the ribcage squashes the lungs. A doctor can put a needle between the ribs and allow a litre of fluid to drain. You will usually feel better afterwards.



TB of the space around the heart is called TB pericardial effusion

This form of TB can be diagnosed with an x-ray. The best diagnosis is made with a sonar machine (ultra-sound).

TB can cause disease of the lymph glands



Many people living with HIV have swollen glands. This is usually not serious. The glands should be tested for TB if they are larger than a thumb, if the glands only appear on one side of the neck or if dirty fluid leaks out of the glands. A doctor should stick a needle into the glands and suck out some cells to test them under a microscope. This test does not help to treat the glands. It only helps the doctor to make a definite diagnosis of the problem.

TB of the space around the brain is called TB meningitis or TBM

TB of the space around the brain can be very serious, especially in children and people living with HIV. TBM causes general TB symptoms, headache and sometimes confusion. The health worker should examine your neck for pain and stiffness. The best way to diagnose TBM is with a lumbar puncture. A needle is placed into your spine and some fluid is taken from it for testing. This test is crucial to distinguish between the different germs that can cause meningitis. TB can cause an abscess inside the brain called tuberculoma. This can cause bad headaches, a fit or a stroke. The diagnosis is made with a CT scan: an x-ray done at specialised hospitals.

TB of the tummy is called abdominal TB

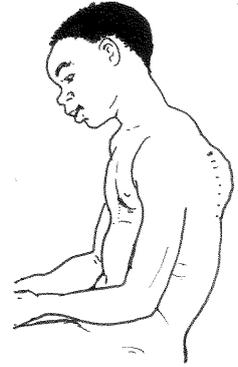
TB of the tummy can either cause chronic pain of your tummy, or it can cause swelling with loose fluid inside the tummy.



This form of TB is best diagnosed with an ultrasound examination (sonar).

TB in the backbone is called spinal TB

Spinal TB can cause the backbone to break. It can bend the backbone and make a pointed lump on the back. If the spinal cord gets damaged the legs can be paralysed. TB can also infect other bones and joints. The diagnosis is made with x-rays.



Other forms of TB

TB can infect many other body parts. It can occur in the ear, the voice box and vocal chords, the kidneys and bladder, the womb (causing infertility), the testicles, the skin or the eye. All forms of TB that do not involve the lungs are called extra-pulmonary TB. They cannot be diagnosed with a TB microscopy unless TB infects both the lungs and another body part. If TB occurs in more than one body part it is called disseminated TB. If it infects the blood and spreads to all body parts at the same time it is called miliary TB. This is diagnosed by X-ray, examination of the eye or a needle examination of the bone marrow. If any of these forms of TB occur in a person living with HIV it is classified as stage four. It is treated in the same way as TB of the lungs.

Problems of DOTS

Our National TB Program is based on the DOTS strategy. According to DOTS patients with TB of the lungs should be prioritised, as they are the ones that can infect other patients. Someone with TB of the glands, heart or another body part, who does not have TB in the sputum will not infect others. Such a person can easily be neglected according to the present TB program.

TB is one of the biggest killers of people living with HIV

TB causes more deaths amongst people living with HIV than any other opportunistic infection. TB is responsible for about 70% of hospitalisations of people living with HIV. In many areas the number of TB patients has increased three times due to HIV. The World Health Organisation (WHO) regards TB as a serious epidemic if more than 400 people out of a 100 000 get TB every year. In South Africa many townships now have an infection rate of more than 1000 people per 100 000. In some mines it is as high as 4000 per 100 000 workers.



TB can be prevented

As TB is so common and serious it is better to prevent TB. The TB treatment program is designed to be a TB prevention program. If you treat people with TB successfully they will infect less people. All children should be immunised with BCG. This gives them a partial protection against TB. Children



younger than five years should get medicines to prevent TB if their family members have TB. Adults living with HIV can use INH tablets for six months. This can prevent the inactive TB germs in your body from becoming active TB. However, it cannot prevent you from becoming infected with new TB germs. Antiretrovirals are ten times more effective than INH to prevent TB. People on antiretrovirals reduce their chances of getting TB by 80%. Most clinics do not provide antiretrovirals. Antiretrovirals should be used when the CD4 count is below 200. If you cannot get antiretrovirals or if your CD4 count is above 200 you should ask your doctor about using INH.

It is crucial to make sure you do not have active TB at the time when you take the INH. INH on its own does not treat TB. If INH is used on its own while you have active TB, the TB germs grow used to INH and it becomes ineffective. This is called resistance. The same can happen if you do not complete the six months of TB treatment or if you interrupt the TB treatment several times.

TB can be cured

TB treatment is difficult, but TB can be cured. Tuberculosis of all body parts is treated using the same combination of drugs. You must complete the full TB course of six or eight months to make sure the germs are all killed.

First time treatment

If you are treated for TB for the first time you need to take medicines for six months in order to cure the tuberculosis.

Second time treatment

If you've had tuberculosis before, you should receive medicines for eight months.

Multi Drug Resistant TB – MDR TB

If you were treated for TB before, the usual TB treatments might not be effective for your TB anymore. Therefore, a test must be done to check the effectiveness of the medicines against the germs. For this test the laboratory must grow the TB germs in



your sputum. This is called a TB culture. The effectiveness of TB medicines can be tested on this TB culture. If INH and Rifampicin do not stop the germs from growing they have become resistant to these medicines. The two main medicines usually used to treat TB will thus not be effective for you. This is called multi-drug resistant TB or MDR

TB. Patients with MDR TB often have to take a handful of medicines for two years. Only 50% of patients get cured. The treatment is very expensive as the medicines are still under patent right – South African companies are not allowed to produce these medicines at cheaper prices. We must campaign for price reduction of TB medicines.

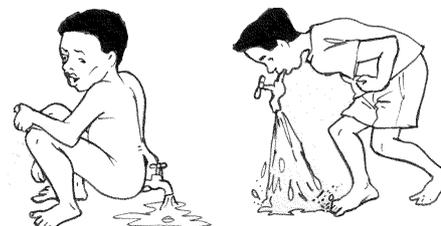


What does it feel like?

Anybody can get diarrhoea. You have diarrhoea if you have to go to the toilet frequently and your stool is watery or slimy. If this lasts for more than a week or if it happens several times in the same month, you should consult a doctor. Sometimes diarrhoea comes with abdominal pains and sometimes it comes with vomiting.

Losing water can be dangerous

With diarrhoea your body is losing fluids (mainly water) all the time. This is called dehydration. Dehydration can be particularly dangerous for children.



Long lasting diarrhoea also causes weight loss. Firstly you do not feel like eating when you have diarrhoea. Secondly the food that you eat runs through the intestines and is not properly absorbed. It is important that people living with HIV should try and prevent dehydration and losing weight.

Who gets it?

All people can get diarrhoea, especially babies. The more nasty forms of diarrhoea occur in HIV positive people with a CD4 count below 200 or in young HIV positive babies.

What is it medically speaking?

Most often diarrhoea is caused by germs (an infection), but it may also be caused by poor absorption or food intolerance. Sometimes laxatives or traditional remedies cause diarrhoea. Diarrhoea can also occur as the side effect of antibiotic medicines such as Ampicillin or Erythromycin or antiretrovirals like Nelfinavir. Diarrhoea caused by infection of the large intestine results in massive loss of water. Diarrhoea of the small intestine is associated with poor absorption of nutrients.

If you always get diarrhoea when drinking milk, then you probably have milk (lactose) intolerance. You should try to rather drink *maas* or yoghurt. If this also causes diarrhoea you might have to cut down on all milk products. If eating fatty food gives you diarrhoea, cut down on fats, but continue to eat proteins in the form of meat, beans or lentils.

Making the diagnosis

With all forms of diarrhoea the most important steps are to stop loss of water and to improve food intake. If a specific germ is found, the diarrhoea can be treated more effectively. In order to find the germ a fresh stool specimen is sent to a laboratory in a plastic jar. Microbiologists search for germs by looking at the stool under a microscope. They put it into a dish with a chemical jelly culture to grow the germs.



Which germs can cause diarrhoea?

- Germs that generally cause diarrhoea and that are not specific to people with weakened immune systems are: Shigella, Salmonella, Campylobacter, Entamoeba and Giardia.
- Germs that only cause diarrhoea in people with weak immune systems are: Cryptosporidium (not to be confused with Cryptococcus), Microsporidium, Isospora or MOTT (Mycobacterium other than TB). All of these are classified as HIV stage four.
- Some viruses also cause diarrhoea in people with HIV. They are CMV, herpes and HIV itself.

How can diarrhoea be prevented?

Germs usually get into your intestine

- when drinking water that is not 100% clean,
- when eating food with germs on it,
- from hands that are not properly washed after going to the toilet.
- In babies diarrhoea can also be caused by germs on a bottle that was not properly washed before preparing new formula milk.

To prevent diarrhoea remember to do the following:

- Use **clean drinking water**: Always drink tap water. If there are no taps in your area demand from government to provide tap water. In the meantime boil all water before drinking it.
- **Food preparation**: Wash your hands before preparing foods and before eating. Rinse vegetables and fruit with clean water before eating them fresh. Cover

unfinished cooked food that you keep for later and store it in a cool place. Flies spread germs and warm places help germs to grow faster. If you want to reheat cooked food you have stored, make sure to bring it to boiling point again to kill germs that might have grown in the meantime. Add a tablespoon of jik to your dishwater when washing dishes and when wiping your kitchen surfaces to ensure there are no germs. Let your dishes drip dry, rather than wiping them dry.



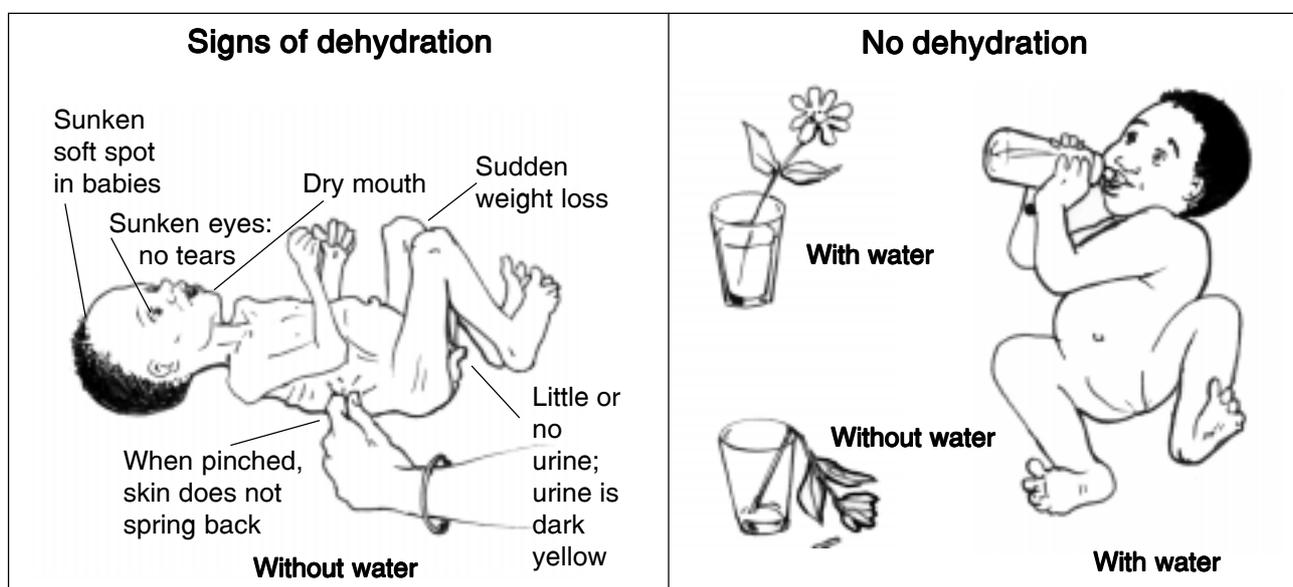
The vicious circle of malnutrition and diarrhoea takes many childrens lives.



- ❑ **Clean sanitation:** Make sure you wash your hands every time after going to the toilet. Where there are no toilets, make sure that the toilet wastes do not contaminate the drinking water.
- ❑ For women who are HIV positive it is best to formula feed their babies. However, this is only better than breastfeeding if you have **clean water** and if you **wash the bottle thoroughly** every time before feeding your child.

How to prevent dehydration

It is very important to prevent the body from losing too much water while having diarrhoea. It is not necessary to get a drip to prevent dehydration. A simple “glucose drink” you can mix at home is just as effective. The widespread use of this “glucose drink” has saved more lives in the 20th century than any other medical intervention. It saved more lives than Penicillin during the Second World War, it saved more lives than malaria or TB treatment, it saved more lives than childhood vaccinations.



The glucose drink – the best medication of the century

- ❑ Fill a clean one-litre bottle with clean water;
- ❑ Use water from a tap, or boiled water if from a dirty river;
- ❑ Add eight teaspoons of sugar;
- ❑ Add half a teaspoon of salt;
- ❑ Taste. It should taste like tears;
- ❑ Drink two large cups of this “glucose drink” after every loose stool you have, or after vomiting. Take small sips slowly.
- ❑ Give your baby one large cup of this “glucose drink” after every loose stool it has, or after vomiting.



Try to eat as much as possible

Dry toast is easy to eat while your tummy is upset. Eat any food you can tolerate.

How to stop diarrhoea

Usually it will go away on its own within a week. If it carries on for longer than a week use antibiotic medicines to kill the germs that might cause the diarrhoea. Take

Metronidazole tablets three times a day for a week and **Cotrimoxazole** tablets, two tablets two times a day for five days. If the diarrhoea carries on get the stool specimen tested at a laboratory to identify the germ. Blood in diarrhoea is called dysentery. Then Ofloxacin or Ciprofloxacin should be added to the Metronidazole.

Some medicines stop the diarrhoea by stopping the movement of the intestines. However, they do nothing about the cause of the diarrhoea. **Loperamide** is used or **Codeine** which also relieves pain.

Take **medicines against worms every six months**. Mebendazole or Albendazole is good. Worms are a chronic infection and cause the HIV to reproduce faster.



Sick children – especially those who have diarrhea or fever – need lots of food to fight the illness and get back their strength.

Give sick children plenty to drink and eat!

