

# Serious Illnesses that Need Special Medical Attention

## CHAPTER 14

**The diseases covered in this chapter are often difficult or impossible to cure without medical help. Many need special medicines that are difficult to get in rural areas. Home remedies will not cure them. If a person has one of these illnesses, THE SOONER HE GETS MEDICAL HELP, THE BETTER HIS CHANCE OF GETTING WELL.**

**CAUTION:** Many of the illnesses covered in other chapters may also be serious and require medical assistance. See the **Signs of Dangerous Illness**, p. 42.

## TUBERCULOSIS (TB, CONSUMPTION)

Tuberculosis of the lungs is a *chronic* (long-lasting), *contagious* (easily spread) disease that anyone can get. But it often strikes persons between 15 and 35 years of age—especially those who are weak, poorly nourished, have HIV, or live with someone who has TB. Because so many people with HIV (p. 399) get very sick with TB, all people with HIV should get a TB test. People with HIV can take isoniazid (see p. 360) to prevent TB from developing. Encourage people with TB to also be tested for HIV and find help with a treatment program if they are positive.

Tuberculosis is curable. Yet thousands die needlessly from this disease every year. Both for prevention and cure, it is very important to **treat tuberculosis early. Be on the lookout for the signs of tuberculosis.** A person may have one or many of them.

### *Most frequent signs of TB:*

- A cough that lasts longer than 3 weeks, often worse just after waking up.
- Slight fever in the evening and sweating at night.
- There may be pain in the chest or upper back.
- Chronic loss of weight and increasing weakness.

### *In serious or advanced cases:*

- Coughing up blood (usually a little, but in some cases a lot).
- Pale, waxy skin. The skin of a dark skinned person tends to get lighter, especially the face.
- Voice grows hoarse (very serious).

### *In young children:* The cough may come late. Instead, look for:

- Steady weight loss.
- Frequent fever.
- Lighter skin color.
- Swellings in the neck (lymph nodes), or the belly (p. 20).



TB is usually only in the lungs. But it can affect any part of the body. In young children it may cause meningitis (see p. 185). For skin problems from TB, see p. 212.

*If you think you might have tuberculosis:*

Seek medical help. At the first sign of tuberculosis, go to a health center where the workers can examine you, and test the stuff you cough up (*phlegm or sputum*) to see if you have TB or not. Many governments give TB medicines free. Ask at the nearest health center. You will probably be given some of the following medicines:

- ◆ Isoniazid (INH) pills (p. 360)
- ◆ Rifampin pills (p. 360).
- ◆ Pyrazinamide pills (p. 361)
- ◆ Ethambutol pills (p. 361)
- ◆ Streptomycin injections (p. 361)

It is very important to take the medicines as directed. Treatments may be different in different countries, but usually the treatment has 2 parts. You will take 4 medicines for 2 months and then test your sputum. If you are getting better, you will take 2 or 3 medicines for another 4 months. Then you will be tested again to make sure you are cured. **Do not stop taking the medicines, even if you feel better.** This can lead to the illness coming back and infecting you and other people, with a form of TB that is much harder to cure, *multi-drug resistant tuberculosis* (see p. 359). **To cure TB completely can take from 6 months to more than a year.**

Eat as well as possible: plenty of energy foods and also foods rich in proteins and vitamins (pages 110 to 111). Rest is important. If possible, stop working and take it easy until you begin to get better. From then on, try not to work so hard that you become tired or breathe with difficulty. Try to always get enough rest and sleep.

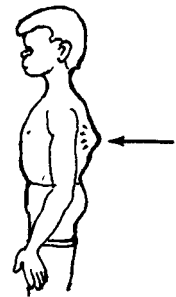
Tuberculosis in any other part of the body is treated the same as TB of the lungs, but the treatment may be longer. This includes TB in the glands of the neck, TB of the abdomen (see picture on p. 20), TB of the skin (see p. 212), and TB of a joint (like the knee). A child with severe TB of the backbone may also need surgery to prevent paralysis (see *Disabled Village Children*, Chapter 21).

**Tuberculosis is very contagious.** It spreads when someone with TB coughs germs into the air. Anyone, especially a child, who lives with someone who has TB runs a great risk of catching the disease.

*If someone in the house has TB:*

- ◆ If possible, see that the whole family is tested for TB (Tuberculin test).
  - ◆ Have the children vaccinated against TB with B.C.G. vaccine.
  - ◆ Everyone, especially the children, should eat plenty of nutritious food.
  - ◆ The person with TB should eat and sleep separately from the children, if possible in a different room, as long as he has any cough at all.
  - ◆ Ask the person with TB to cover his mouth when coughing and not spit on the floor.
  - ◆ Watch for weight loss and other signs of TB in members of the family.
- Weigh each person, especially the children, once a month, until you are sure no one in the household is sick with TB.

TB in family members often starts very slowly and quietly. If anyone in the family shows signs of TB, have tests done and **begin treatment at once.**



TB of  
the backbone

**Early and full treatment is a key part of prevention.**

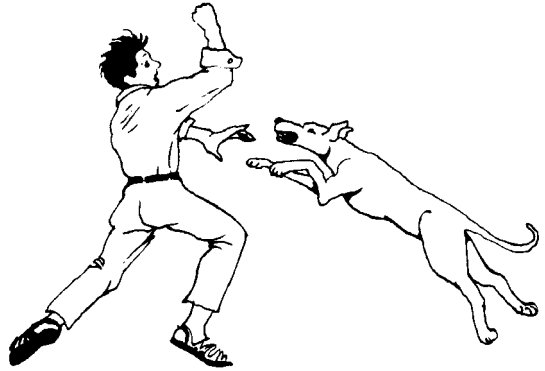
## RABIES

Rabies comes from the bite of a rabid or 'mad' animal, usually a rabid dog, cat, fox, wolf, skunk, or jackal. Bats and other animals may also spread rabies.

### *Signs of rabies:*

#### **In the animal:**

- Acts strangely—sometimes sad, restless, or irritable.
- Foaming at the mouth, cannot eat or drink.
- Sometimes the animal goes wild (mad) and may bite anyone or anything nearby.
- The animal dies within 5 to 7 days.



#### **Signs in people:**

- Pain and tingling in the area of the bite.
- Irregular breathing, as if the person has just been crying.
- Pain and difficulty swallowing, and fear of liquids. A lot of thick, sticky saliva.
- The person is alert, but very nervous or excitable. Fits of anger can occur.
- As death nears, seizures (convulsions) and paralysis.

### *If you have any reason to believe an animal that has bitten someone has rabies:*

- ◆ Tie or cage the animal for a week.
- ◆ Clean the bite well with soap, water, and hydrogen peroxide. Do not close the wound; leave it open.
- ◆ If the animal dies before the week is up (or if it was killed or cannot be caught), take the bitten person at once to a health center where he can be given a series of anti-rabies injections.

The first symptoms of rabies appear from 10 days up to 2 years after the bite (usually within 3 to 7 weeks). Treatment must begin before the first signs of the sickness appear. Once the sickness begins, no treatment known to medical science can save the person's life.

### *Prevention:*

- ◆ Kill and bury (or cage for one week) any animal suspected of having rabies.
- ◆ Cooperate with programs to vaccinate dogs.
- ◆ Keep children far away from any animal that seems sick or acts strangely.

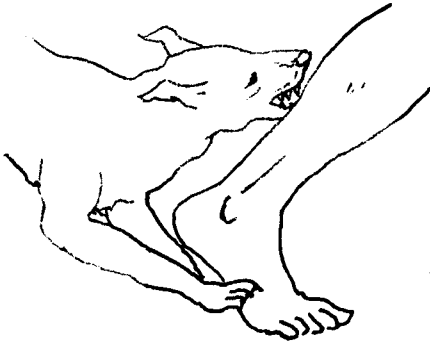
**Take great care in handling any animal that seems sick or acts strangely. Even if it does not bite anyone, its saliva can cause rabies if it gets into a cut or scratch.**

# TETANUS (LOCKJAW)

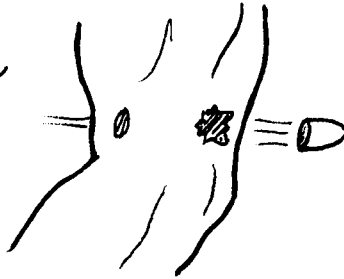
Tetanus results when a germ that lives in the feces of animals or people enters the body through a wound. Deep or dirty wounds are especially dangerous.

## WOUNDS VERY LIKELY TO CAUSE TETANUS

animal bites, especially those of dogs and pigs



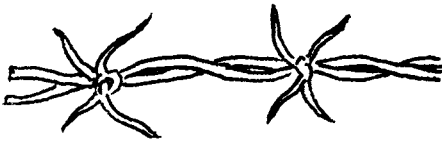
gunshot and knife wounds



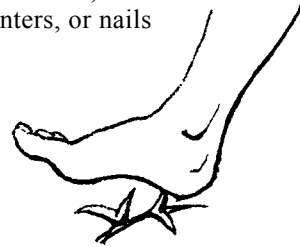
holes made with dirty needles



injuries caused by barbed wire



puncture wounds from thorns, splinters, or nails

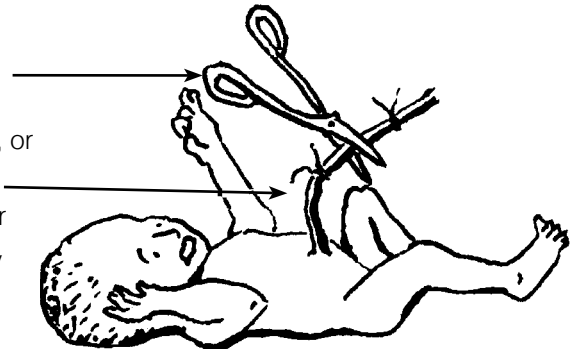


## CAUSES OF TETANUS IN THE NEWBORN CHILD

Tetanus germs enter through the *umbilical cord* of a newborn baby because of lack of cleanliness or failure to take other simple precautions. The chance of tetanus is greater . . .

WHEN THE CORD IS CUT A LONG WAY FROM THE BODY, LIKE THIS, THE CHANCE OF TETANUS IS GREATER.

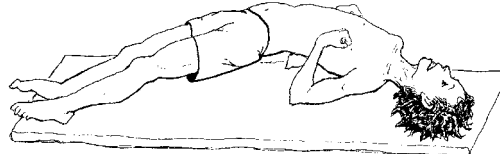
- when the cord has been cut with an instrument that has not been boiled and kept completely clean, or
- when the cord has not been cut **close** to the body (see p. 262), or
- when the newly cut cord is tightly covered or is not kept dry.



*Signs of tetanus:*

- An infected wound (sometimes no wound can be found).
- Discomfort and difficulty in swallowing.
- The jaw gets stiff (lockjaw), then the muscles of the neck and other parts of the body get stiff. The person has difficulty walking normally.
- Painful *convulsions* (sudden tightening) of the jaw and finally of the whole body. Moving or touching the person may trigger sudden *spasms* like this:

Sudden noise or bright light may also bring on these spasms.



**In the newborn**, the first signs of tetanus generally appear 3 to 10 days after birth. The child begins to cry continuously and is **unable to suck**. Often the umbilical area is dirty or infected. After several hours or days, lockjaw and the other signs of tetanus begin.

It is very important to start treating tetanus at the first sign. If you suspect tetanus (or if a newborn child cries continuously or stops nursing), make this test:

**TEST OF KNEE REFLEXES**

With the leg hanging freely, tap the knee with a knuckle just below the kneecap.

If the leg jumps just a little bit, the reaction is normal.

If the leg jumps high, this indicates a serious illness like tetanus (or perhaps meningitis or poisoning with certain medicines or rat poison).



This test is especially useful when you suspect tetanus in a newborn baby.

*What to do when there are signs of tetanus:*

Tetanus is a deadly disease. Seek medical help at the first sign. If there is any delay in getting help, do the following things:

- ◆ Examine the whole body for infected wounds or sores. Often the wound will contain pus. Open the wound and wash it with soap and cool, boiled water; completely remove all dirt, pus, thorns, splinters, etc.; flood the wound with hydrogen peroxide if you have any.

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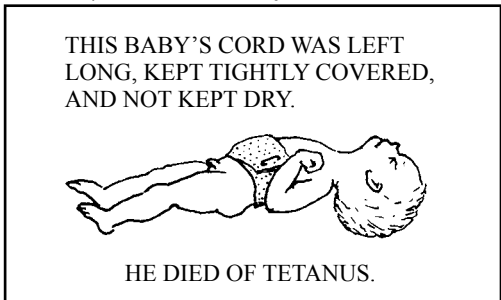
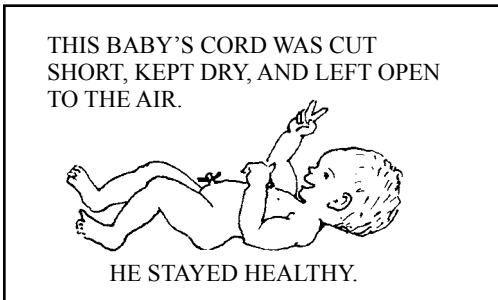
*What to do when there are signs of tetanus: (continued)*

- ◆ Inject 1 million units of procaine penicillin at once and repeat every 12 hours for 7 to 10 days (p. 352). (For newborn babies crystalline penicillin is better.) After using injected penicillin for 2 days, you can switch to penicillin by mouth (penicillin V, p. 351). If there is no penicillin, use another antibiotic, like tetracycline.
- ◆ If you can get it, inject 5000 units of **Antitetanus Immunoglobulin** (human tetanus immune globulin, HTIG), 1 time only. Be sure to follow all the precautions (see pages 70 and 388).
- ◆ As long as the person can swallow, give nutritious liquids in frequent small sips.
- ◆ To control convulsions, give diazepam (*Valium*) by mouth or in the rectum (for dosages see pages 388 to 390).
- ◆ Touch and move the person as little as possible. Avoid noise and bright light.
- ◆ If necessary, use a *catheter* (rubber tube) connected to a syringe to suck the mucus from the nose and throat. This helps clear the airway.
- ◆ For the newborn with tetanus, if possible, have a health worker or doctor put in a nose-to-stomach tube and feed the baby the mother's breast milk. This provides needed nutrition and fights infection.

*How to prevent tetanus:*

Even in the best hospitals, half the people with tetanus die. It is much easier to prevent tetanus than to treat it.

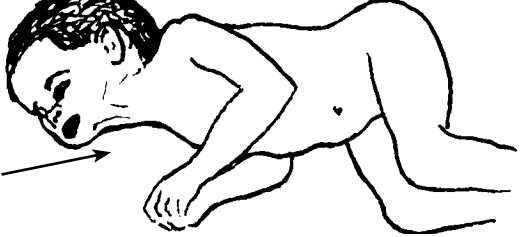
- ◆ **Vaccination:** This is the surest protection against tetanus. Both children and adults should be vaccinated. Vaccinate your whole family at the nearest health center (see p. 147). For complete protection, the vaccination should be repeated once every 10 years. **Vaccinating women against tetanus each time they are pregnant will prevent tetanus in newborn infants** (see p. 250).
- ◆ When you have a wound, especially a dirty or deep wound, clean and take care of it in the manner described on page 89.
- ◆ If the wound is very big, deep, or dirty, seek medical help. If you have not been vaccinated against tetanus, get the vaccination and also get an injection of antitetanus immunoglobulin (see p. 388).
- ◆ In newborn babies, cleanliness is very important to prevent tetanus. The instrument used to cut the umbilical cord should be sterilized (p. 262); the cord should be cut short, and the umbilical area kept clean and dry.



## MENINGITIS

This is a very serious infection of the brain, more common in children. It may begin as a *complication* of another illness, such as measles, mumps, whooping cough, malaria, or an ear infection. Children of mothers who have tuberculosis sometimes get tubercular meningitis in the first few months of life.

### Signs:

- Fever
- Severe headache.
- Stiff neck. The child looks very ill, and lies with his head and neck bent back, like this: 
- The back is too stiff to put the head between the knees.
- In babies under a year old: the fontanel (soft spot on top of the head) bulges out.
- Vomiting is common.
- In babies and young children, early meningitis may be hard to recognize. The child may cry in a strange way (the 'meningitis cry'), even when the mother puts the child on her breast. Or the child may become very sleepy.
- Sometimes there are seizures (fits, convulsions) or strange movements.
- The child often gets worse and worse and only becomes quiet when he loses consciousness completely.
- Tubercular meningitis develops slowly, over days or weeks. Other forms of meningitis come on more quickly, in hours or days.

### Treatment:

**Get medical help fast—every minute counts!** If possible take the person to a hospital. Meanwhile:

- ◆ Inject ampicillin every 6 hours, 500 mg for children or 1 g for adults (see p. 353). Also give ceftriaxone or gentamicin (see p. 358).
- ◆ If there is high fever (more than 40°), lower it with wet cloths and acetaminophen or aspirin (see pages 378 to 379).
- ◆ If the mother has tuberculosis or if you have any other reason to suspect that the child has tubercular meningitis, inject him with 20 mg of streptomycin for each kg. he weighs and get medical help at once. Also, use ampicillin in case the meningitis is not from TB.
- ◆ If you know the meningitis came from malaria, give an injection of artesunate or quinine at once (see p. 366).

### Prevention:

For prevention of tubercular meningitis, newborn babies of mothers with tuberculosis should be vaccinated with B.C.G. at birth. Dose for the newborn is 0.05 ml (half the normal dose of 0.1 ml). For other suggestions on prevention of TB, see pages 179 to 180.

## MALARIA

Malaria is an infection of the blood that causes chills and high fever. Malaria is spread by mosquitos. The mosquito sucks up the malaria parasites in the blood of an infected person and injects them into the next person it bites. People with HIV are twice as likely to catch malaria.

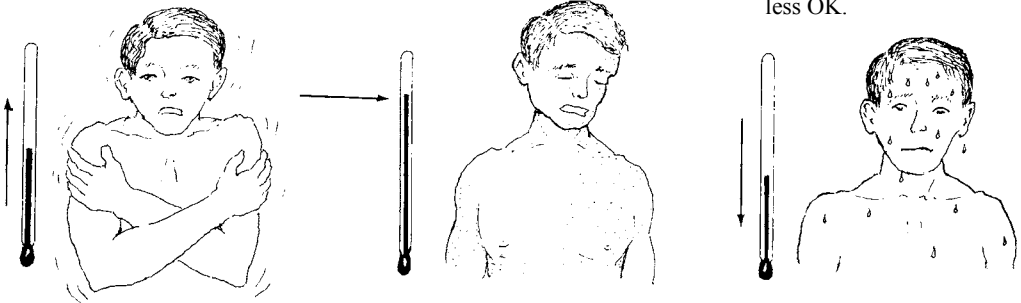
### Signs of malaria:

- The typical attack has 3 stages:

1. It begins with chills—and often headache. The person shivers or shakes for 15 minutes to an hour.

2. Chills are followed by fever, often 40° or more. The person is weak, flushed (red skin), and at times delirious (not in his right mind). The fever lasts several hours or days.

3. Finally the person begins to sweat, and his temperature goes down. After an attack, the person feels weak, but may feel more or less OK.



- Usually malaria causes fevers every 2 or 3 days (depending on the kind of malaria), but in the beginning it may cause fever daily. Also, the fever pattern may not be regular or typical. For this reason anyone who suffers from unexplained fevers should have his blood tested for malaria.
- Chronic malaria often causes a large *spleen* and anemia (see p. 124). For people with HIV (p. 399) it can cause them to get sick faster.
- In young children, anemia and paleness can begin within a day or two. In children with malaria affecting the brain (cerebral malaria), seizures (fits) may be followed by periods of unconsciousness. Also, the palms may show a blue gray color, and breathing may be rapid and deep. (**Note:** Children who have not been breastfed are more likely to get malaria.)

### Analysis and treatment:

- ◆ If you suspect malaria or have repeated fevers, if possible go to a health center for a blood test. In areas where an especially dangerous type of malaria called falciparum occurs, seek treatment immediately.
- ◆ In areas where malaria is common and blood tests are not available, treat any unexplained high fever as malaria. Take the malaria medicine known to work best in your area. (See pages 363 to 367 for dosages and information on malaria medicines.)
- ◆ If you get better with the medicine, but after several days the fevers start again, you may need another medicine. Get advice from the nearest health center.
- ◆ If a person who possibly has malaria begins to have seizures or other signs of meningitis (p. 185) he may have cerebral malaria. If possible, inject quinine or artesunate at once (see p. 366).



## HOW TO AVOID MALARIA (AND DENGUE)

Malaria occurs more often during hot, rainy seasons. If everyone cooperates, it can be controlled. All these control measures should be practiced at once.

### 1. Avoid mosquitos.

Sleep where there are no mosquitos or underneath a bed net treated with insecticide or under a sheet. Cover the baby's cradle with treated mosquito netting or a thin cloth.



### 2. Cooperate with the malaria control workers

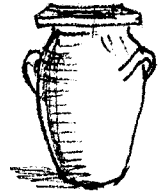
when they come to your village. Tell them if anyone in the family has had fevers and let them take blood for testing.



3. If you suspect malaria, get treatment quickly. After you have been treated, mosquitos that bite you will not pass malaria on to others.



4. Destroy mosquitos and their young. Mosquitos breed in water that is not flowing. Clear ponds, pits, old cans, or broken pots that collect water. Raise mosquito-eating fish in ponds or lakes. Fill the tops of bamboo posts with sand and keep water containers covered.



5. Malaria can also be prevented, or its effects greatly reduced, by taking anti-malaria medicines on a regular schedule. See pages 363 to 367.

## DENGUE (BREAKBONE FEVER, DANDY FEVER)

This illness is sometimes confused with malaria. It is caused by a virus that is spread by mosquitos. In recent years it has become much more common in many countries. It often occurs in epidemics (many persons get it at the same time), usually during the hot, rainy season. A person can get dengue more than once. Repeat illnesses are often worse. *To prevent dengue*, control mosquitos and protect against their bites, as described above.

### Signs:

- Sudden high fever with chills.
- Severe body aches, headache, sore throat.
- Person feels very ill, weak, miserable.
- After 3 to 4 days person feels better for a few hours to 2 days.
- Then illness returns for 1 or 2 days, often with a rash that begins on hands and feet.
- The rash then spreads to arms, legs, and finally the body (usually not the face).

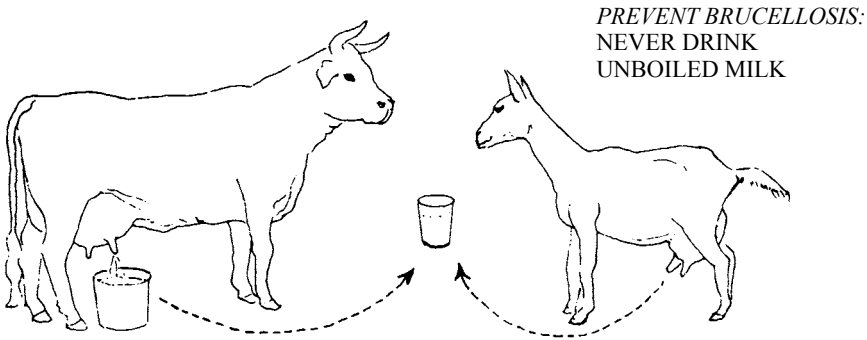
A severe form of dengue may cause bleeding into the skin (small dark spots), or dangerous bleeding inside the body. Go to a hospital immediately.

### Treatment:

- ◆ No medicine cures it, but the illness goes away by itself in a few days.
- ◆ Rest, lots of liquids such as rehydration drink, fruit juice, or milk, acetaminophen (but **not** aspirin or ibuprofen) for fever and pain.
- ◆ In case of severe bleeding, treat for shock, if necessary (see p. 77).

## BRUCELLOSIS (UNDULANT FEVER, MALTA FEVER)

This is a disease that comes from drinking fresh milk from infected cows or goats. It may also enter the body through scrapes or wounds in the skin of persons who work with sick cattle, goats, or pigs, or by breathing it into the lungs.



### Signs:

- Brucellosis may start with fever and chills, but it often begins very gradually with increasing tiredness, weakness, loss of appetite, headache, stomach ache, and sometimes joint pains.
- The fevers may be mild or severe. Typically, these begin with afternoon chills and end with sweating in the early morning. In chronic brucellosis, the fevers may stop for several days and then return. Without treatment, brucellosis may last for years.
- There may be swollen lymph nodes in the neck, armpits, and groin (p. 88).

### Treatment:

- ◆ If you suspect brucellosis, get medical advice, because it is easy to confuse this disease with others, and the treatment is long and expensive.
- ◆ Treat with tetracycline, adults: two 250 mg. capsules 4 times a day for 3 weeks. For precautions, see page 357. Or use cotrimoxazole. (For dosage and precautions, see p. 357.)

### Prevention:

- ◆ **Drink only cow's or goat's milk that has been boiled or pasteurized.** In areas where brucellosis is a problem, it is safer not to eat cheese made from unboiled milk.
- ◆ Be careful when handling cattle, goats, and pigs, especially if you have any cuts or scrapes.
- ◆ Cooperate with livestock inspectors who check to be sure your animals are healthy.

## TYPHOID FEVER

Typhoid is an infection of the gut that affects the whole body. It is spread from *feces-to-mouth* in contaminated food and water and often comes in *epidemics* (many people sick at once). Of the different infections sometimes called 'the fever' (see p. 26), typhoid is one of the most dangerous.

*Signs of typhoid:***First week:**

- It begins like a cold or flu.
- Headache, sore throat, and often a dry cough.
- The fever goes up and down, but rises a little more each day until it reaches 40° or more.
- Pulse is often relatively slow for the amount of fever present. Take the pulse and temperature every half hour.

**If the pulse gets slower when the fever goes up, the person probably has typhoid** (see p. 26).

- Sometimes there is vomiting, diarrhea, or constipation.

**Second week:**

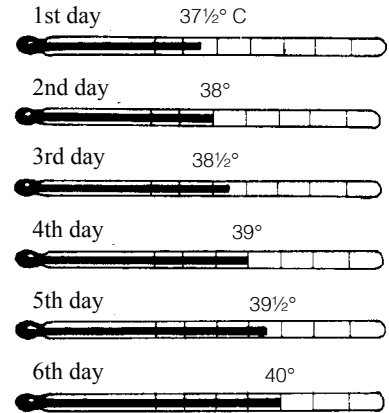
- High fever, pulse relatively slow.
- A few pink spots may appear on the body.
- Trembling.
- Delirium (person does not think clearly or make sense).
- Weakness, weight loss, dehydration.

*Treatment:*

- ◆ Seek medical help.
- ◆ Give ciprofloxacin (p. 356), chloramphenicol (p. 356), ampicillin (p. 352), or cotrimoxazole (p. 357). Ask a health worker which medicine works best where you live.
- ◆ Lower the fever with cool wet cloths (see p. 76).
- ◆ Give plenty of liquids: soups, juices, and Rehydration Drink to avoid dehydration (see p. 152).
- ◆ Give nutritious foods, in liquid form if necessary.
- ◆ The person should stay in bed until the fever is completely gone.
- ◆ If the person shits blood or develops signs of peritonitis (p. 94) or pneumonia (p. 171), take her to a hospital at once.

*Prevention:*

- ◆ To prevent typhoid, care must be taken to avoid contamination of water and food by human feces. Follow the guidelines of personal and public hygiene in Chapter 12. Make and use latrines. Be sure latrines are a safe distance from where people get drinking water.
- ◆ Cases of typhoid often appear after a flood or other disaster, and special care must be taken with cleanliness at these times. Be sure drinking water is clean. If there are cases of typhoid in your village, all drinking water should be boiled. Look for the cause of contaminated water or food.

**Third week:**

- If there are no complications, the fever and other symptoms slowly go away.

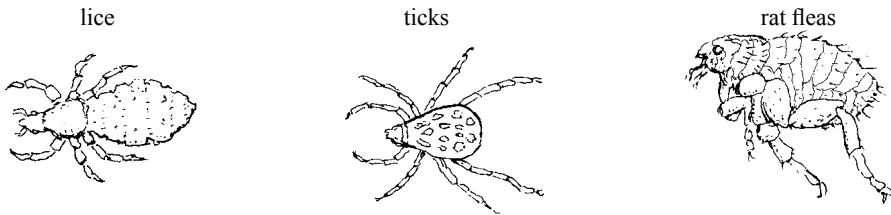
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*Prevention of typhoid: (continued)*

- ◆ To avoid the spread of typhoid, a person who has the disease should stay in a separate room. No one else should eat or drink from the dishes he uses. His stools should be burned or buried in deep holes. Persons who care for him should wash their hands right afterwards.
- ◆ After recovering from typhoid some persons still carry the disease and can spread it to others. So anyone who has had typhoid should be extra careful with personal cleanliness and should not work in restaurants or where food is handled. Sometimes ampicillin is effective in treating typhoid carriers.

## TYPHUS

Typhus is an illness similar to but different from typhoid. The infection is transmitted by bites of:



*Signs:*

- Typhus begins like a bad cold. After a week or more fever begins, with chills, headache, and pain in the muscles and chest.
- After a few days of fever a typical rash appears, first in the armpits and then on the body, then the arms and legs (but not on the face, palms of the hands, or soles of the feet). The rash looks like many tiny bruises.
- The fever lasts 2 weeks or more. Typhus is usually mild in children and very severe in old people. An epidemic form of typhus is especially dangerous.
- In typhus spread by ticks, there is often a large painful sore at the point of the bite, and the lymph nodes near the bite are swollen and painful.

*Treatment:*

- ◆ If you think someone may have typhus, get medical advice. Special tests are often needed.
- ◆ Give tetracycline, adults: 2 capsules of 250 mg, 4 times a day for 7 days (see p. 355). Chloramphenicol also works, but is riskier (p. 356).

*Prevention:*

- ◆ Keep clean. De-lice the whole family regularly.
- ◆ Remove ticks from your dogs and do not allow dogs in your house.
- ◆ Kill rats. Use cats or traps (not poison, which can be dangerous to other animals and children).
- ◆ Kill rat fleas. Do not handle dead rats. The fleas may jump off onto you. Drown and burn the rats and their fleas. Put insecticide into rat holes and nests.



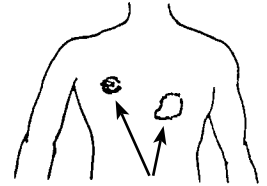
## LEPROSY (HANSEN'S DISEASE)

This mildly infectious disease develops slowly, often over many years. It can only spread from persons who have untreated leprosy, to persons who have low resistance to the disease. In areas where leprosy is common, children should be checked every 6 to 12 months—especially children living with persons who have leprosy.

**Signs:** Leprosy can cause a variety of skin problems, loss of feeling, and paralysis of the hands and feet.

**The first sign** of leprosy is often **a slowly growing patch on the skin that does not itch or hurt.** At first, feeling inside the patch may be normal. Keep watching it. If feeling in the patch becomes reduced or absent (see p. 38) it is probably leprosy.

Examine the whole body for skin patches, especially the face, arms, back, butt, and legs.

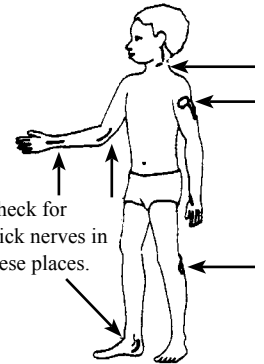


Patches are a different color from surrounding skin, but never completely white or scaly.

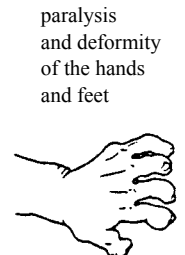
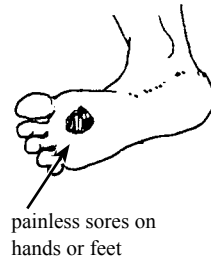
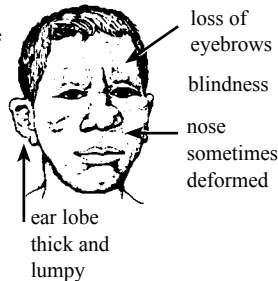
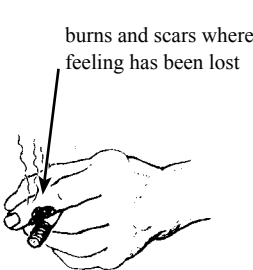
ringworm-like patch with or without raised border

**Later signs** differ according to the person's natural resistance to the disease. Watch out for:

- Tingling, numbness or loss of feeling in hands or feet. Or deformities or loss of feeling in skin patches.
- Slight weakness or deformities in the hands and feet.
- Swollen nerves that form thick cords under the skin. Nerves may or may not be painful when you press them.



**Advanced sign may include:**

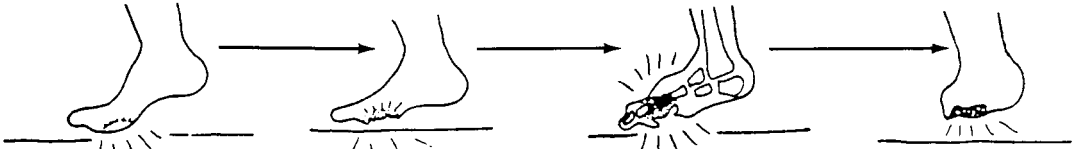


**Treatment of leprosy:** Leprosy is usually curable, but medicine must usually be taken for years. The best medicine is dapsone, combined with 1 or 2 other medicines (see pages 362 to 363). If a 'lepra reaction' (fever, a rash, pain and perhaps swelling of hands and feet, or eye damage) occurs or gets worse while taking the medicine, keep taking it but get medical help.

**Prevention of damage to hands, feet, and eyes:** The large open sores often seen on the hands and feet of persons with leprosy are not caused by the disease itself and can be prevented. They result because, when feeling has been lost, a person no longer protects himself against injury.

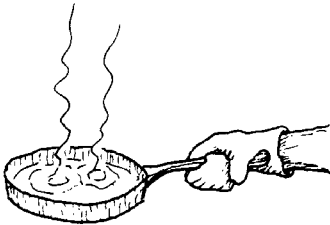
For example, if a person with normal feeling walks a long way and gets a blister, it hurts, so he stops walking or limps.

But when a person with leprosy gets a blister, it does not hurt.	So he keeps walking until the blister bursts and becomes infected.	Still without pain, the infection gets deeper and attacks the bone.	In time the bone is destroyed and the foot becomes more and more deformed.
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1. Protect hands and feet from things that can cut, bruise, blister, or burn them:

Do not go barefoot, especially not where there are sharp stones or thorns. Wear shoes or sandals. Put soft padding inside shoes and under straps that may rub.



When working or cooking meals, wear gloves. Never pick up an object that **might** be hot without first protecting your hand with a thick glove or folded cloth. If possible, avoid work that involves handling sharp or hot objects. Do not smoke.

2. At the end of each day (or more often if you work hard or walk far) examine your hands and feet very carefully—or have someone else examine them. Look for cuts, bruises, or thorns. Also look for spots or areas on the hands and feet that are red, hot, swollen or show the beginnings of blisters. If you find any of these, rest the hands or feet until the skin is completely normal again. This will help callous and strengthen the skin. Sores can be prevented.

3. If you have an open sore, keep the part with the sore very clean and at rest until it has completely healed. Take great care not to injure the area again.

4. Protect your eyes. Much eye damage comes from not blinking enough, because of weakness or loss of feeling. Blink your eyes often to keep them wet and clean. If you cannot blink well, close your eyes tightly often during the day, especially when dust blows. Wear sun glasses with side shades, and maybe a sun hat. Keep eyes clean and flies away.



If you do these things and begin treatment early, **most deformities with leprosy can be prevented.** For more information about Hansen’s disease, see *Disabled Village Children*, Chapter 26.