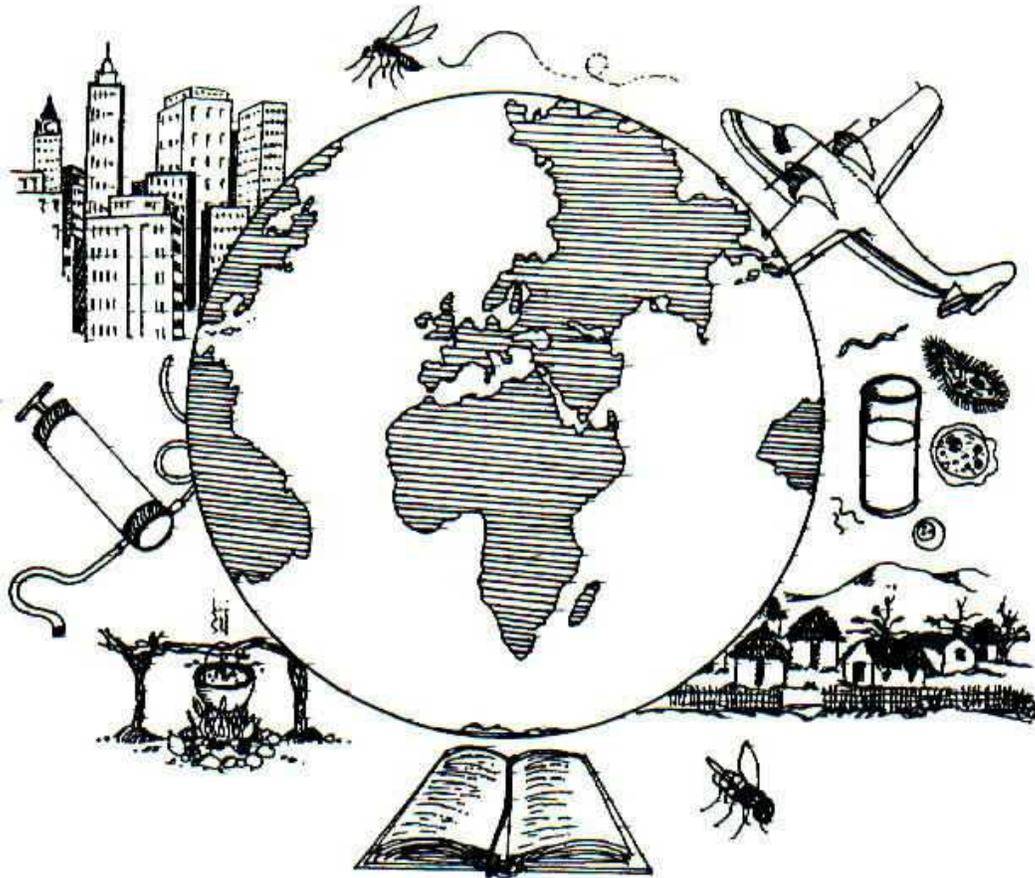


# Treatment of Dangerous Illnesses

Preventative Healthcare



Training Pac

## INSTRUCTIONS

This Training Pac has a text and a separate Workbook that contains the exercises for the text. Follow these steps:

1. Read through the entire text to obtain an overview of the text content.
2. Become familiar with the Objectives at the beginning of each section.
3. Then reread the text while completing the exercises in the Workbook.

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## OBJECTIVES

When you have successfully completed this Training Pac, you will be able:

- To learn to recognize warning signs of dangerous illnesses
- To understand when and how to seek medical help
- To learn how to move a badly injured person
- To learn how to recognize and effectively treat some serious illnesses.

## I. SIGNS OF DANGEROUS ILLNESS

A person who has one or more of the following signs is probably too sick to be treated at home without skilled medical help. His life may be in danger. Seek medical help as soon as possible.

1. Loss of large amounts of blood from anywhere in the body
2. Coughing up blood
3. Marked blueness of lips and nails (if it is new)
4. Great difficulty in breathing: does not improve with rest
5. The person cannot be wakened (coma)
6. The person is so weak he faints when he stands up
7. A day or more without being able to urinate
8. A day or more without being able to drink any liquids
9. Heavy vomiting or severe diarrhea that lasts for more than one day or more than a few hours in babies
10. Black stools like tar, or vomit with blood or feces
11. Strong, continuous stomach pains with vomiting in a person who does not have diarrhea or cannot have a bowel movement
12. Any strong continuous pain that lasts for more than 3 days
13. Stiff neck with arched back, with or without a stiff jaw
14. More than one fit (convulsions) in someone with fever or serious illness
15. High fever (above 39°C) that cannot be brought down or that lasts more than 4 or 5 days
16. Weight loss over an extended time
17. Blood in urine
18. Sores that keep growing and do not go away with treatment
19. A lump in any part of the body that keeps getting bigger
20. Problems with pregnancy and childbirth:
  - Any bleeding during pregnancy
  - Swollen face and trouble seeing in the last months
  - Long delay once the water have broken and labor has begun
  - Severe bleeding

## II. WHEN AND HOW TO LOOK FOR MEDICAL HELP

Seek medical help at the first sign of dangerous illness. Do not wait until the person is so sick that it becomes difficult or impossible to take him to a health center or hospital.

If a sick or injured person's condition could be made worse by the difficulties in moving him to a health center, try to bring a health worker to the person. But in an emergency when very special attention or an operation maybe needed (for example, appendicitis), do not wait for the health worker. Take the person to the health center or to the hospital at once.

When you need to carry a person on a stretcher, make sure he is as comfortable as possible and cannot fall out. If he has any broken bones, splint them before moving him. If the sun is very strong, rig a sheet over the stretcher to give shade yet allow fresh air to pass underneath.



For a health worker or doctor to recommend treatment or prescribe medicine wisely, she should see the sick person. If the sick person cannot be moved, have the health worker come to him. If this is not possible, send a responsible person who knows the details of the illness. Never send a small child or a fool.

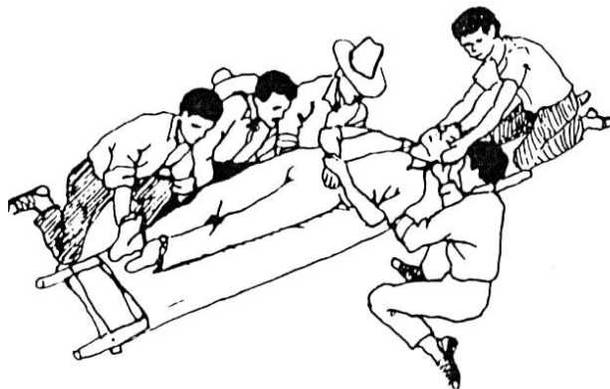
Before sending for medical help, examine the sick person carefully and completely. Then write down the details of his disease and general condition.

On the next page is a form on which you can make a PATIENT REPORT.

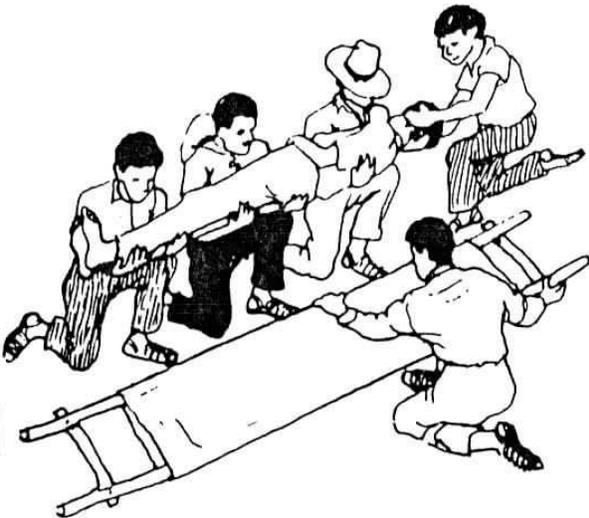
*When you send for medical help,  
always send a completed  
information from with him.*

## HOW TO MOVE A BADLY INJURED PERSON

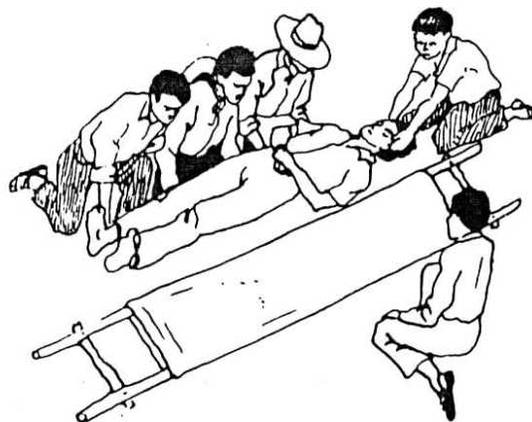
With care, lift the injured person without bending him anywhere. Take special care that the head and neck do not bend.



Have another person put the stretcher in place.



With everyone, place the injured person carefully on the stretcher.



If the neck is injured or broken, put tightly folded clothing or sandbags on each side of the head to keep it from moving.



When carrying, try to keep the feet up, even on hills.

### III. SERIOUS ILLNESSES THAT NEED SPECIAL MEDICAL ATTENTION

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 Illnesses.

#### Tuberculosis (TB, Consumption)

The 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 have AIDS, or who are weak, poorly nourished, or live with someone who has TB.

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. Therefore, you should know the signs of tuberculosis and be on the lookout for them.

#### Most frequent signs of TB:

- Chronic cough, often worse just after waking up.
- Mild fever in the afternoon 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:

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

Tuberculosis is usually only in the lungs. But it can affect any part of the body. In young children it may cause meningitis.

*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 give you a skin test, take an X-ray, and examine the stuff you cough up (*phlegm or sputum*) to see if you have TB or not. Many governments give the medicines free.

Ask the nearest health center. You will probably be given 2,3, or 4 of the following:

- Isoniazid (INH) pills
- Rifampin pills
- Pyrazinamide pills
- Ethambutol pills
- Streptomycin injections
- Thiacetazone pills

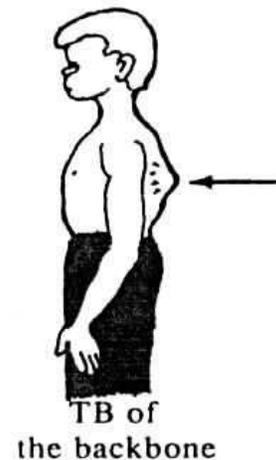
It is very important to take the medicines as directed. At least 2 must be taken at the same time. Continue taking the medicines until the health worker says you are cured. Do not stop taking the medicines just because you feel better. To cure tuberculosis completely usually takes from 6 months to more than 1 year.

Eat well as possibly: plenty of energy foods and also foods rich in proteins and vitamins.

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. This includes TB in the glands of the neck, TB of the abdomen, TB of the skin, and TB of a joint (like the knee). A child with severe TB of the backbone may also need surgery to prevent paralysis.

Tuberculosis is very contagious. Persons (especially children) who live with someone who has TB, run 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 children, should eat plenty of nutritious food.
- The person with TB should eat and sleep separately from the children, if possible on a different room, as long as he has any cough at all.
- Also, ask him 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. If possible, weigh each person, especially children, once a month, until the danger is past.

TB in the 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.

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.

### 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. A lot of thick, sticky saliva.
- The person is alert, but very nervous or excitable. Fits of anger can occur.
- As death nears, fits (convulsions) and paralysis.



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

- Tie or cage 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 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

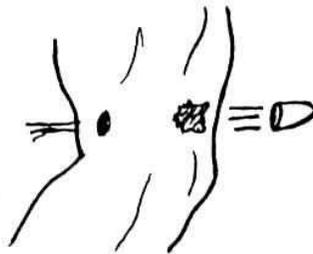
Tetanus results when a germ that lives in the feces of animals or people enters the body through a wound. Deep or dirty wounds are especially dangerous.

### 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.

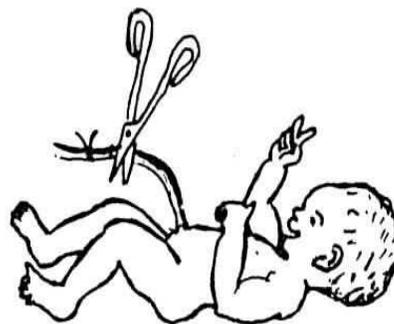


### Causes of Tetanus in the Newborn Child

Tetanus germs enter through the *umbilical cord* of the 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.

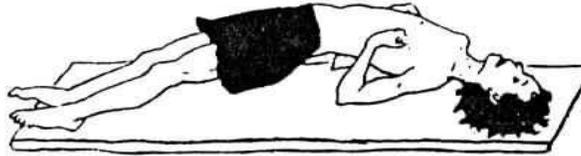
- When the cord has been cut with an instrument that has not been boiled and kept completely clean or
- When the cord has not been cut close to the body or
- When the newly cut cord is tightly covered or is not kept dry.



## Signs of tetanus:

- An infected wound (sometimes no wound can be found)
- Discomfort and difficulty swallowing
- The jaw gets stiff (lockjaw), then the muscles of the neck and other parts of the body. The person has difficulty walking normally.
- Painful *convulsions* (sudden tightening)) of the jaw and finally of the whole body 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 appears 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.

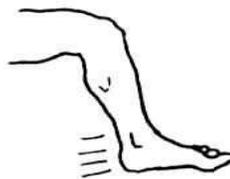
It is very important to start treating tetanus at the first sign. If you suspect tetanus (or is a newborn cries continuously or stops nursing), make this test:

### 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 poisons).



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.

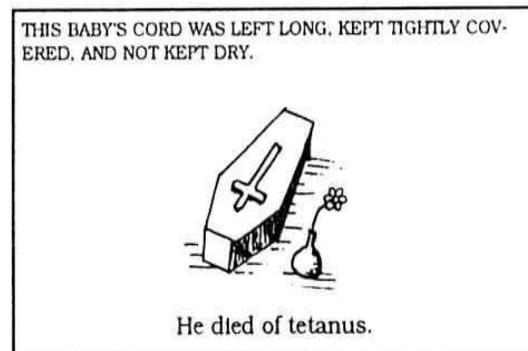
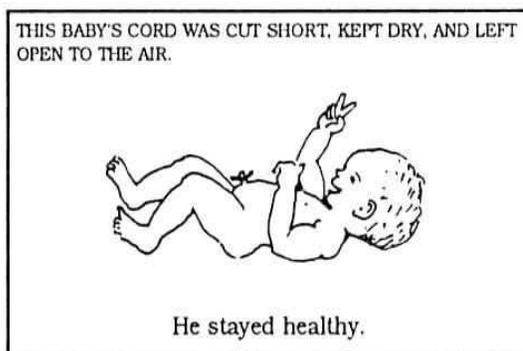
## What to do when there are signs of tetanus (continued)

- Inject 1 million units of procaine penicillin at once and repeat every 12 hours. (For newborn babies crystalline penicillin is better.) If there is no penicillin, use another antibiotic, like tetracycline.
- If you can get it, inject 5,000 units of Human Immune Globulin or 40,000 to 50,000 units Tetanus Antitoxin. Be sure to follow all the precautions. Human Immune Globulin has less risk of severe allergic reaction, but may be more expensive and harder to obtain.
- As long as the person can swallow, give nutritious liquids in frequent small sips.
- To control convulsions, inject Phenobarbital according to prescribed directions.
- 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 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. 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.
- When you have a wound, especially a dirty or deep wound, be sure it is cleaned and taken care of properly.
- If the wound is very big, deep, or dirty, seek medical help. If you have not been vaccinated against tetanus, take penicillin. Also consider getting an injection of an antitoxin for tetanus.
- In newborn babies, cleanliness is very important to prevent tetanus. The instrument used to cut the umbilical cord should be sterilized; the chord should be cut short, and the umbilical area kept clean and dry.

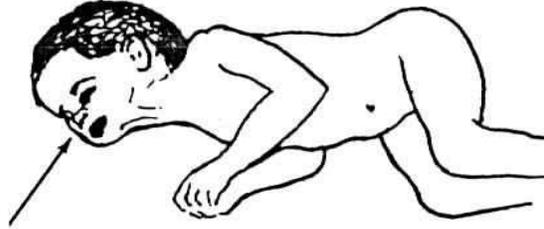


## Meningitis

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, 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 maybe 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 fits (convulsions) or strange movements.
- The child often gets worse and worse 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 the hospital. Meanwhile:

- Inject ampicillin, 500 mg. Every 4 hours. Or inject crystalline penicillin, 1,000,000 U, every 4 hours. If possible, also give chloramphenicol.
- If there is high fever (more than 40°), lower it with wet cloths and acetaminophen or aspirin.
- If the mother has tuberculosis or if you have any other reason to suspect that the child has tubercular meningitis, inject him with 0.2 ml. Of streptomycin for each 5 kilos he weighs and get medical help at once. Also, use ampicillin or penicillin in case the meningitis is not from TB.

### Prevention:

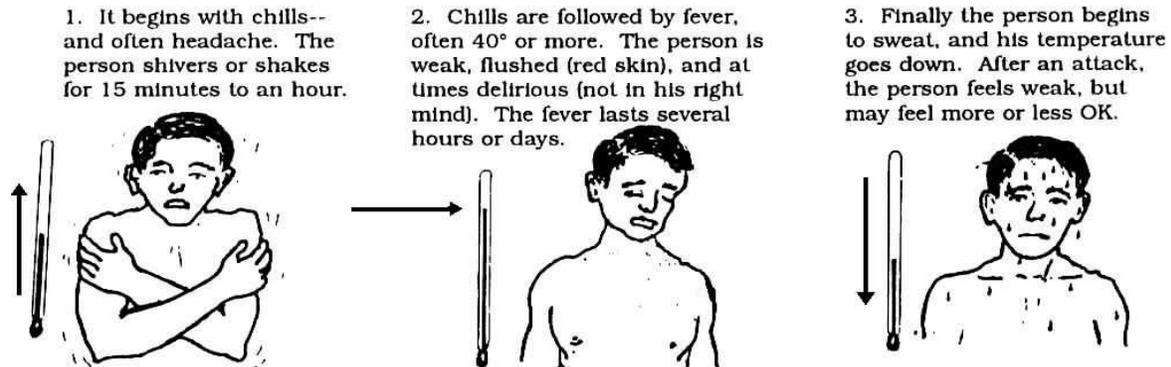
For prevention of tubercular meningitis, newborn babies of mothers with tuberculosis should be vaccinated with B.C.G. vaccine at birth. Dose of the newborn is 0.05 ml. (half the normal dose of 0.1 ml.).

## Malaria

Malaria is an infection of the blood that causes chills and high fever. Malaria is spread by mosquitoes. The mosquito sucks up the malaria parasites in the blood of an infected person and injects them into the next person it bites.

### Signs of Malaria:

- The typical attack has 3 stages:



- 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, 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.
- In young children, anemia and paleness can begin within a day or two. In children with malaria affecting the brain (cerebral malaria), 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 breast fed 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, treat any unexplained high fever as malaria. Take the malaria medicine known to work best in your area.
- If you get better with the medicine, but after several days the fever starts again, you may need another medicine. Get advice from the nearest health center.
- If a person who possibly has malaria begins to have fits or other signs of meningitis he may have cerebral malaria. If possible, inject malaria medicine at once.

## 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 sheet. Cover the baby's cradle with a mosquito netting or a thin cloth.



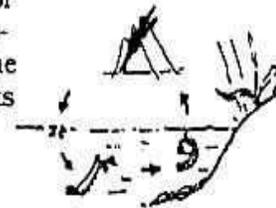
2. Cooperate with the malaria control workers when they come to your village. Tell them if anyone in the family has had fevers and let them take blood for testing.



3. If you suspect malaria, get treatment quickly. After you have been treated, mosquitos that bite 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. Drain or put a little oil on pools or marshes where mosquitos breed. Fill the tops of bamboo posts with sand.



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

## Dengue (Breakbone, Dandy Fever)

This illness is sometimes confused with malaria. It is caused by a virus that is spread by mosquitoes. 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. Repeated illnesses are often worse. To prevent dengue, control mosquitoes and protect against their bites, as described above.

### Signs:

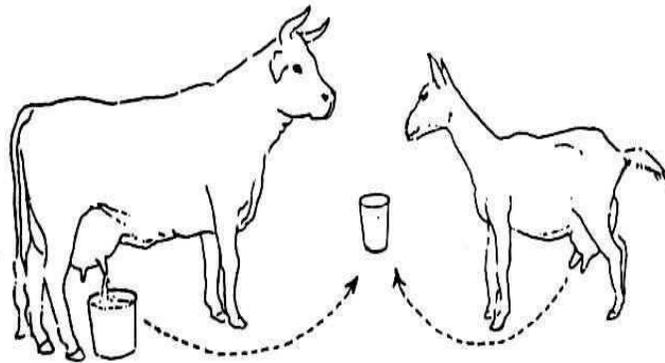
- Sudden fever with chills
- Severe body aches, headaches, sore throat.
- Person feel very ill, weak, miserable.
- After 3 to 4 days person feels better for a few hours to 2 days.
- Then illness returns for 1 or 2 days, often with a rash that begins on hands and feet.
- The rash then spreads to arms, legs, and finally the body (usually not the face).
- In Southeast Asia, a severe form of dengue may cause bleeding into the skin (small dark spots), or dangerous bleeding inside the body.

### Treatment:

- No medicine cures it, but the illness goes away by itself in a few days.
- Rest, lots of liquids, acetaminophen (but not aspirin) for fever and pain.
- In case of severe bleeding, treat for shock, if necessary.

### Brucellosis (Undulant Fever, Malta Fever)

This 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 by breathing it into the lungs.



PREVENT BRUCELLOSIS:  
NEVER DRINK  
UNBOILED MILK

### 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.

### 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. Or use co-trimoxazole.

### 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 health.

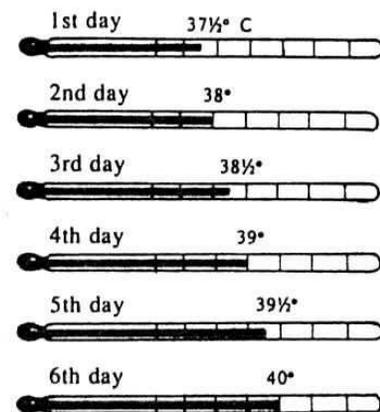
### Typhoid Fever

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'. Typhoid is one of the most dangerous.

### Signs of Typhoid:

#### First week:

- It begins like a cold or flu.
- Headache, sore throat, and often 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.
- Sometimes there is vomiting, diarrhea, or constipation.



#### Second week:

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

#### Third week:

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

### Treatment:

- Seek medical help.
- In areas where typhoid has become resistant to chloramphenicol and ampicillin, give co-trimoxazole for at least 2 weeks.
- Or, try chloramphenicol, adults: 3 capsules of 250 mg. 4 times a day for at least 2 weeks. If there is not chloramphenicol, use ampicillin or tetracycline.

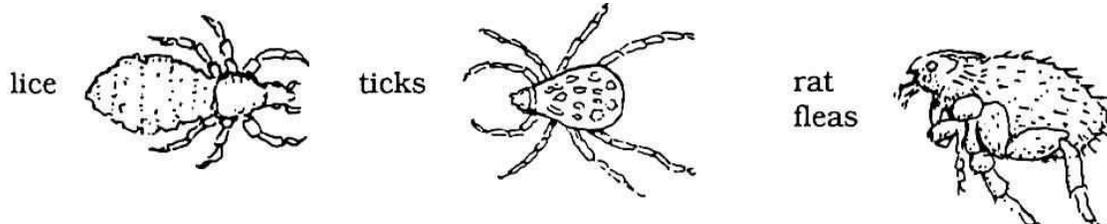
- Lower the fever with cool wet cloths.
- Give plenty of liquids: soups, juices, and Rehydration Drink to avoid dehydration.
- Give nutritious foods, in liquid form if necessary.
- The person should stay in bed until the fever is completely gone.
- If the person defecates blood or develops signs of peritonitis or pneumonia, 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. 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 the contaminated water or food.
- 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 last 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. Chloramphenicol also works, but is riskier.

Prevention:

- Keep clean. De-louse 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.



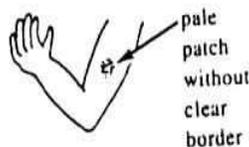
Leprosy (Hansen's Disease)

This mildly infectious disease develops slowly, often over many years. It can only spread from persons who have untreated leprosy, to person's 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.

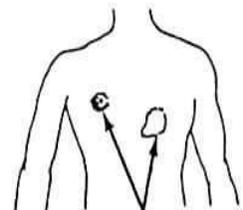
Signs: Leprosy can cause a variety of skin problems, loss of feeling, and paralysis of the hands and feet.

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 it is probably leprosy.

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



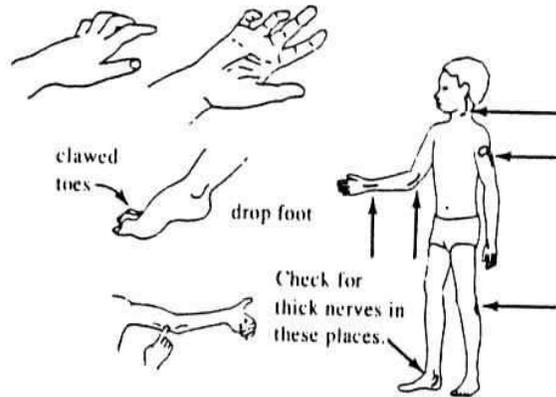
Patches are a different color from surrounding skin, but never completely white or scaly.



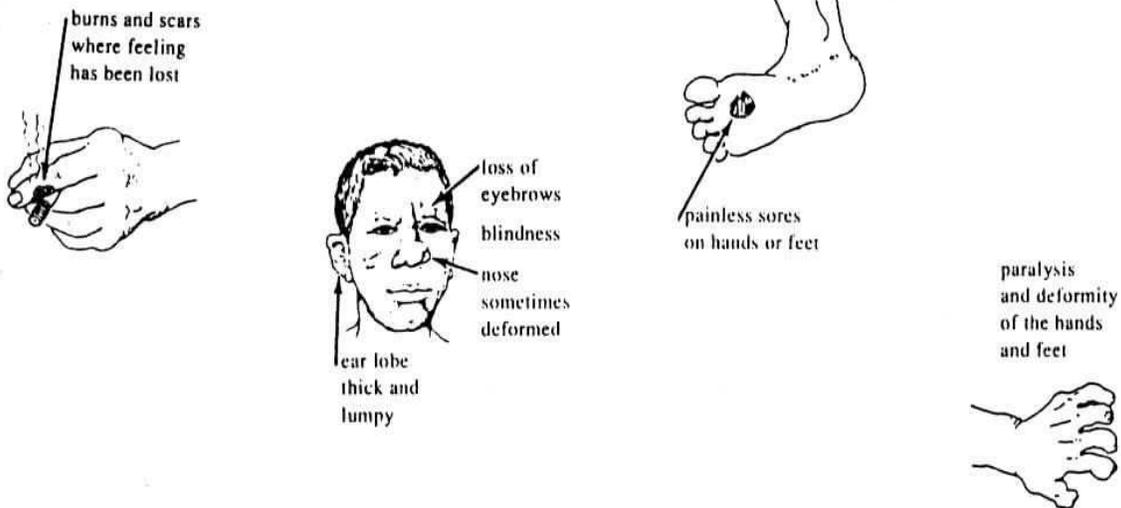
ringworm-like patch with or without ringed border

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 signs may include:



Treatment of leprosy:

Leprosy is usually curable, but medicine must usually be taken for years. The best medicine is dapsone, if possible combined with rifampin and clofazimine. If a 'lepra reaction' (fever, 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.

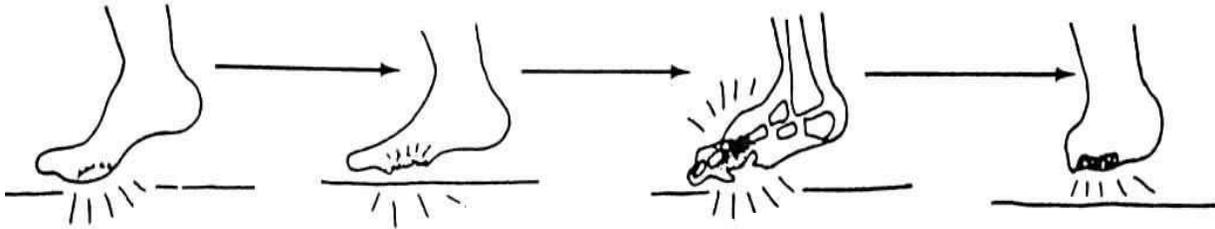
For example, if a person with normal feeling walks a long way and gets a blister, it hurts, so he stops walking or limps.

But when a person with leprosy gets a blister, it does not hurt.

So he keeps walking until the blister bursts and becomes infected.

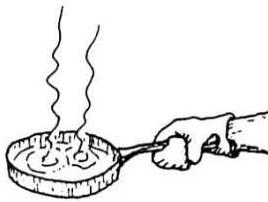
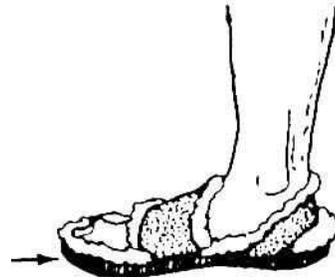
Still without pain, the infection gets deeper and attacks the bone.

In time the bone is destroyed and the foot becomes more and more deformed.



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.

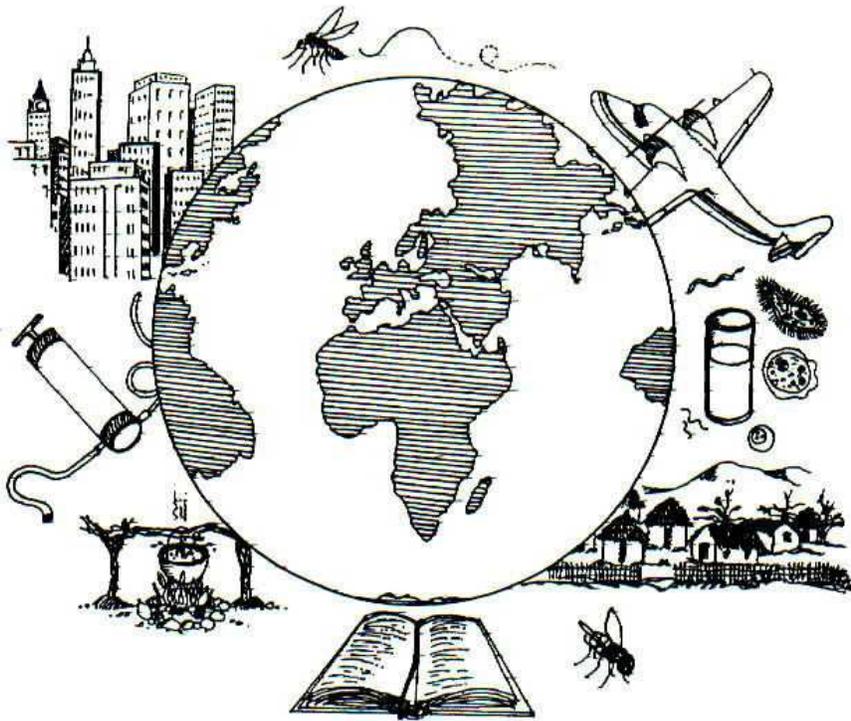
If you do these things and begin treatment early, most deformities with leprosy can be prevented.

Sources of Information:

Where There Is No Doctor – David Werner

# Treatment of Dangerous Illnesses

Preventative Healthcare



## Workbook

Name: \_\_\_\_\_

Read section I on page 2 of the Training Pac

Fill in the blanks

1. List five signs of dangerous illnesses.
  - (a) \_\_\_\_\_
  - (b) \_\_\_\_\_
  - (c) \_\_\_\_\_
  - (d) \_\_\_\_\_
  - (e) \_\_\_\_\_

Read section II on page 3 of the Training Pac

Fill in the blanks

2. Seek medical help at the \_\_\_\_\_ of a dangerous illness.
3. If he has any broken bones \_\_\_\_\_ them before moving him.
4. When sending someone for medical help, always send a responsible person who knows the \_\_\_\_\_.
5. When moving a badly injured person, take special care that the \_\_\_\_\_ and \_\_\_\_\_ do not bend.
6. When carrying try to keep the \_\_\_\_\_ up, even on hills.
7. It is dangerous to have any \_\_\_\_\_ during pregnancy.
8. When moving someone with an injured or broken neck, put tightly folded \_\_\_\_\_ or \_\_\_\_\_ on each side of the head to keep it from moving.

STOP! Score exercises 1 – 8

DO NOT look back at the Training Pac while completing the Review.

REVIEW #1  
(16 points each question)

Answer the following questions

1. List three signs of dangerous illnesses.
  - (a) \_\_\_\_\_
  - (b) \_\_\_\_\_
  - (c) \_\_\_\_\_
2. \_\_\_\_\_ help must be sought at the first sign of dangerous illness.
3. If a person has broken bones, what must you do before moving that person?  
\_\_\_\_\_
4. What is a danger sign during pregnancy? \_\_\_\_\_
5. When moving someone with an injured or broken neck, how can you prevent their neck from moving? \_\_\_\_\_  
\_\_\_\_\_
6. \_\_\_\_\_ When carrying a person always keep the head up. (True or False)

STOP! Score exercises 1 – 6

Read section III on page 5 of the Training Pac

Fill in the blanks

1. What are the four most frequent signs of Tuberculosis?
  - (a) \_\_\_\_\_
  - (b) \_\_\_\_\_
  - (c) \_\_\_\_\_
  - (d) \_\_\_\_\_
2. Coughing up \_\_\_\_\_ is a symptom in serious or advance cases.
3. TB may cause \_\_\_\_\_ in young children.
4. You must take at least \_\_\_\_\_ different medicines at one time.
5. Eat plenty of foods rich in \_\_\_\_\_ and \_\_\_\_\_ and get plenty of \_\_\_\_\_.
6. Tuberculosis is very \_\_\_\_\_.
7. \_\_\_\_\_ and \_\_\_\_\_ treatment is a key part of prevention.
8. \_\_\_\_\_ come from the bite of a rabid or “mad” animal.
9. \_\_\_\_\_ at the mouth is a sign of rabies in an animal.
10. The animal dies within \_\_\_\_\_ to \_\_\_\_\_ days.
11. \_\_\_\_\_ breathing is a sign of rabies in a person.
12. Tie or cage an animal for a \_\_\_\_\_ if it is suspected to have rabies.
13. Treatment for a human must begin before the \_\_\_\_\_ signs of rabies begin.
14. Tetanus results when a \_\_\_\_\_ that lives in the feces of animals or people enters the body through a \_\_\_\_\_.
15. List three wounds that are likely to cause tetanus.
  - (a) \_\_\_\_\_
  - (b) \_\_\_\_\_
  - (c) \_\_\_\_\_

16. How does a newborn baby get tetanus? \_\_\_\_\_
17. \_\_\_\_\_ A newly cut umbilical cord must be covered tightly. (True or False)
18. List two signs of tetanus.
  - (a) \_\_\_\_\_
  - (b) \_\_\_\_\_
19. In a newborn, the first signs of tetanus are the child begins to \_\_\_\_\_ continuously and is unable to \_\_\_\_\_.
20. When a person has signs of tetanus, inject 1 million units of \_\_\_\_\_ and repeat every \_\_\_\_\_ hours.
21. As long as the person can swallow, give \_\_\_\_\_ in frequent small sips.
22. \_\_\_\_\_ is the surest protection against tetanus.

STOP! Score exercises 1 – 22

23. \_\_\_\_\_ is a serious infection of the brain.
24. Fever, severe \_\_\_\_\_ and stiff \_\_\_\_\_ are all signs of meningitis.
25. \_\_\_\_\_ meningitis develops slowly over days or weeks, while other forms develop in hours or days.
26. To treat meningitis inject \_\_\_\_\_ ampicillin every 4 hours.
27. Malaria is an infection of the \_\_\_\_\_ that cause chills and high fever.
28. How is malaria spread? \_\_\_\_\_  
\_\_\_\_\_
29. What are the three stages of a typical malaria attack?
  - (a) \_\_\_\_\_
  - (b) \_\_\_\_\_
  - (c) \_\_\_\_\_
30. Chronic malaria causes a large \_\_\_\_\_ and \_\_\_\_\_.
31. In children with cerebral malaria, fits maybe followed by periods of \_\_\_\_\_.

32. If you have malaria, what kind of malaria medicine should you take?  
\_\_\_\_\_
33. What time of year does malaria occur most? \_\_\_\_\_
34. Sleep where there are no mosquitoes or underneath a \_\_\_\_\_.
35. Dengue is also called \_\_\_\_\_ or \_\_\_\_\_.
36. \_\_\_\_\_ You cannot get dengue more than once. (True or False)
37. What are three signs of dengue?  
(a) \_\_\_\_\_  
(b) \_\_\_\_\_  
(c) \_\_\_\_\_
38. \_\_\_\_\_ There are many different medicines that cure dengue. (True or False)
39. What is brucellosis caused from? \_\_\_\_\_
40. \_\_\_\_\_ A person may get brucellosis by breathing it into the lungs. (True or False)
41. Without treatment \_\_\_\_\_ may last for years.
42. Drink only cow's or goat's milk that has been \_\_\_\_\_ or \_\_\_\_\_.
43. Be careful when holding sick \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ especially if you have any cuts or scrapes.
44. What is typhoid? \_\_\_\_\_
45. It is spread from \_\_\_\_\_ - to - \_\_\_\_\_ in contaminated food and water.

STOP! Score exercises 23 – 45

46. Typhoid begins like a \_\_\_\_\_ or \_\_\_\_\_.
47. Weakness, weight loss, and \_\_\_\_\_ are also signs of typhoid fever.
48. After about \_\_\_\_\_ weeks the symptoms go away.
49. To prevent typhoid be sure \_\_\_\_\_ are safe distance from where people get drinking water.

50. \_\_\_\_\_ After recovering from typhoid the person is free from the disease. (True or False)
51. Typhus is transmitted from the bites of \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.
52. Typhus begins like a bad \_\_\_\_\_ and then a typical \_\_\_\_\_ appears.
53. \_\_\_\_\_ The fever lasts for one week. (True or False)
54. \_\_\_\_\_ is given for typhus.
55. To prevent typhus keep \_\_\_\_\_, kill \_\_\_\_\_ and rat \_\_\_\_\_.
56. Leprosy is a \_\_\_\_\_ infectious disease also called \_\_\_\_\_.
57. Leprosy can only spread from persons with \_\_\_\_\_ leprosy, to persons who have “\_\_\_\_\_” to the disease.
58. What is the first sign of leprosy? \_\_\_\_\_  
\_\_\_\_\_
59. \_\_\_\_\_ Leprosy usually curable. (True or False)
60. The best medicine is \_\_\_\_\_, combined with \_\_\_\_\_ and \_\_\_\_\_.
61. Large open sores occur because the person has lost \_\_\_\_\_.
62. \_\_\_\_\_ Most deformities with leprosy can be prevented. (True or False)

STOP! Score exercises 46 – 62

DO NOT look back at the Training Pac while completing the Review.

REVIEW #2  
(5 points each question)

1. What is a symptom in serious or advance cases of tuberculosis?  
\_\_\_\_\_
2. \_\_\_\_\_ is very contagious.
3. How does a person get rabies? \_\_\_\_\_
4. \_\_\_\_\_ results when a germ that lives in the feces of animals or people enters the body through a wound.
5. List two signs of tetanus.  
(a) \_\_\_\_\_  
(b) \_\_\_\_\_
6. \_\_\_\_\_ The surest protection against tetanus is vaccination. (True or False)
7. What are the three symptoms of meningitis?  
(a) \_\_\_\_\_  
(b) \_\_\_\_\_  
(c) \_\_\_\_\_
8. What sickness is spread from person to person by mosquitoes? \_\_\_\_\_
9. Malaria occurs during \_\_\_\_\_ seasons most.
10. One sign of \_\_\_\_\_ is sudden fever with chills.
11. What is brucellosis caused from? \_\_\_\_\_  
\_\_\_\_\_
12. Brucellosis can also be contracted from working with sick \_\_\_\_\_,  
\_\_\_\_\_, and \_\_\_\_\_.
13. Typhoid is an infection of the \_\_\_\_\_ that affects the whole body.
14. How is typhoid spread? \_\_\_\_\_
15. \_\_\_\_\_ After recovering from typhoid, the person may still be a carrier of it. (True or False)

16. How is typhus transmitted? \_\_\_\_\_
17. What is the best way to prevent typhus? \_\_\_\_\_
- \_\_\_\_\_
18. Leprosy is a \_\_\_\_\_ infectious disease that can only spread from persons with \_\_\_\_\_ leprosy, to persons who have “\_\_\_\_\_” to the disease.
19. A slowly growing patch on the skin that does not \_\_\_\_\_ or \_\_\_\_\_ is the first sign of leprosy.
20. \_\_\_\_\_ Most deformities with leprosy cannot be prevented. (True or False)

STOP! Score exercises 1 – 20

STOP!

You must now prepare yourself for the Pre-Test. In Preparation, you may want to follow one or more of these suggestions:

1. Review the Objectives.
2. Rewrite every incorrect exercises in the Reviews.
3. Reread each section of the Training Pac.
4. Relearn each section you still do not completely understand.

PRE-TEST  
(4 points each question)

Match the definition with the word

- |                       |                                                                             |
|-----------------------|-----------------------------------------------------------------------------|
| 1. ____ Tuberculosis  | (a) also called Hansen's Disease                                            |
| 2. ____ Tetanus       | (b) transmitted by the bites of lice, ticks<br>rats, and fleas.             |
| 3. ____ Malaria       | (c) an infection of the gut                                                 |
| 4. ____ Brucellosis   | (d) caused from drinking fresh milk<br>from infected cows or goats          |
| 5. ____ Typhus        | (e) sometimes confused with malaria                                         |
| 6. ____ Rabies        | (f) infection of the blood                                                  |
| 7. ____ Meningitis    | (g) an infection of the brain                                               |
| 8. ____ Dengue        | (h) caused from the feces of animals<br>and enters the body through a wound |
| 9. ____ Typhoid fever | (i) a disease contracted from a bite of an<br>animal                        |
| 10. ____ Leprosy      | (j) a chronic, contagious disease of the<br>lungs                           |

Answer the following questions

11. List three signs of dangerous illnesses.
- (a) \_\_\_\_\_
- (b) \_\_\_\_\_
- (c) \_\_\_\_\_
12. When moving a person with broken bones, the bones must be \_\_\_\_\_ first.
13. \_\_\_\_\_ When moving someone with an injured or broken neck, it is not necessary to prevent their neck from moving. (True or False)

14. Coughing up \_\_\_\_\_ is a symptom in serious or advanced cases of tuberculosis.
15. Tuberculosis is very \_\_\_\_\_.
16. What is the surest protection against tetanus? \_\_\_\_\_
17. \_\_\_\_\_, severe \_\_\_\_\_ and stuff \_\_\_\_\_ are three symptoms of meningitis.
18. How is malaria spread? \_\_\_\_\_
19. What is one sign of dengue? \_\_\_\_\_
20. From what three animals can you get brucellosis? \_\_\_\_\_  
\_\_\_\_\_
21. Typhoid is spread from \_\_\_\_\_ - to - \_\_\_\_\_ in contaminated \_\_\_\_\_ and \_\_\_\_\_.
22. After recovering from typhoid, a person may still be a \_\_\_\_\_ of it.
23. Keeping clean and cleaning rats and rat fleas is the best way to prevent \_\_\_\_\_.
24. What is the first sign of leprosy? \_\_\_\_\_  
\_\_\_\_\_
25. Most deformities with leprosy can be \_\_\_\_\_.

STOP! Score exercises 1 – 25

STOP!

You must now prepare yourself for the Final Test. In preparation, you may want to follow one or more of these suggestions:

1. Review the Objectives.
2. Rewrite every incorrect exercise in the Pre-Test.
3. Reread each section of the Training Pac.
4. Relearn each section you still do not completely understand.
5. Review the Reviews and Pre-Test.

# Treatment of Dangerous Illnesses

Score Key

TREATMENT OF DANGEROUS ILLNESSES  
SCORE KEY

Page A

- 1) (a) loss of large amounts of blood from anywhere in the body.  
(b) coughing up blood  
(c) marked blueness of lips and nails (if it is new)  
(d) great difficulty in breathing; does not improve with rest  
(e) the person cannot be wakened (coma) *or the person feels so weak he faints or a day or more without being able to urinate or heavy vomiting or severe diarrhea that lasts for more than one day or more than a few hours in babies or black stools like tar, or vomit with blood or feces*  
*see page 2 of Training Pac for more*
- 2) first...sign
- 3) splint
- 4) details of the illness
- 5) head...neck
- 6) feet
- 7) bleeding
- 8) clothes...sandbags

Page B

- 1) (a) loss of large amounts of blood from anywhere in body.  
(b) Coughing up blood  
(c) Marked blueness of lips and nails (if it is new)  
*or great difficulty in breathing; does not improve with rest*  
*or the person cannot be wakened (coma)*  
*or the person feels so weak he faints*  
*or a day or more without being able to urinate*  
*or heavy vomiting or severe diarrhea that lasts for more than one day or more than a few hours in babies*  
*or black stools like tar, or vomit with blood or feces*  
*see page 2 of Training Pac for more*
- 2) Medical
- 3) Splint the broken bones
- 4) Any bleeding at all
- 5) By putting tightly folded clothing or sandbags on each side of the head
- 6) False

Page C

- 1) (a) Chronic cough, often worse just after waking up  
(b) mild fever in the afternoon and sweating at night  
(c) there may be pain in the chest and upper back  
(d) chronic loss of weight and increasing weakness
- 2) blood
- 3) meningitis
- 4) two
- 5) proteins...vitamins...rest
- 6) contagious
- 7) Early...full
- 8) Rabies
- 9) Foaming
- 10) Five...seven
- 11) Irregular
- 12) Week
- 13) First
- 14) Germ...wound
- 15) (a) animal bites, especially those of dogs and pigs  
(b) gunshot and knife wounds  
(c) holes made with dirty needles or injuries caused by barbed wire, or punctured wounds from thorns, splinters or nails.

Page D

- 16) through the umbilical cord
- 17) False
- 18) (a) an infected wound (sometimes no wound can be found)  
(b) discomfort and difficulty swallowing  
*or the jaw gets stiff (lockjaw), then the muscles of the neck and other parts of the body. The person has difficulty walking normally*  
*or painful convulsions (sudden tightening) of the jaw and finally the whole body*
- 19) cry...suck
- 20) procaine penicillin...twelve
- 21) nutritious...liquids
- 22) Vaccination

- 23) Meningitis
- 24) Headache...neck
- 25) Tubercular
- 26) 500 mg
- 27) blood
- 28) The mosquito sucks up the malaria parasites in the blood of an infected person and injects them into the next person it bites.
- 29) (a) it begins with chills and often headache  
(b) chills are followed by fever, often 40° or more  
(c) Finally, the person begins to sweat, and his temperature goes down
- 30) Spleen...anemia
- 31) Unconsciousness

Page E

- 32) One that is known to work best in your area
- 33) During, hot rainy season
- 34) Sheet
- 35) Dandy fever...Breakbone
- 36) False
- 37) (a) sudden high fever with chills  
(b) severe body aches, headaches, sore throat  
(c) person feels very ill, weak, miserable
- 38) False
- 39) Drinking fresh milk from infected cows or goats
- 40) True
- 41) Brucellosis
- 42) Boiled...pasteurized
- 43) Cattle...goats...pigs
- 44) And infection of the gut that affects the whole body
- 45) Feces...mouth
- 46) Cold...flu
- 47) Dehydration
- 48) Three
- 49) Latrines

Page F

- 50) False
- 51) Lice...ticks...rats...fleas
- 52) Cold...rash
- 53) False
- 54) Tetracycline
- 55) Clean...rats...fleas
- 56) Mildly...Hansen's disease
- 57) Untreated...low resistance
- 58) A slowly growing patch on the skin that does not itch or hurt
- 59) True

- 60) Dapsone...rifampin...clofazamine
- 61) feeling
- 62) True

Page G

- 1) Coughing up blood
- 2) Tuberculosis
- 3) From the bite of a rabid or "mad" dog
- 4) Tetanus
- 5) (a) an infected wound (sometimes no wound can be found)  
(b) discomfort and difficulty swallowing *or the jaw gets stiff (lockjaw), then the muscles of the neck and other parts of the body. The person has difficulty walking normally*  
*or painful convulsions (sudden tightening) of the jaw and finally the whole body*
- 6) True
- 7) (a) fever  
(b) severe headache  
(c) stiff neck
- 8) malaria
- 9) hot, rainy
- 10) dengue
- 11) drinking fresh milk from infected cows or goats
- 12) cattle...goats...pigs
- 13) gut
- 14) from feces to mouth in contaminated food and water
- 15) True
- 16) The bites of lice, ticks and rat fleas

Page H

- 17) Keep clean and kill rats and rat fleas
- 18) Mildly...untreated...low resistance
- 19) Itch...hurt
- 20) False

Page I

- 1) j
- 2) h
- 3) f
- 4) d
- 5) b
- 6) i
- 7) g
- 8) e

- 9) c  
10) a  
11) (a) loss of large amounts of blood from  
anywhere in body.  
(b) Coughing up blood  
(c) Marked blueness of lips and nails (if it is  
new)  
*or great difficulty in breathing; does not  
improve with rest  
or the person cannot be wakened (coma)  
or the person feels so weak he faints  
or a day or more without being able to  
urinate  
or heavy vomiting or severe diarrhea that  
lasts for more than one day or more  
than a few hours in babies  
or black stools like tar, or vomit with blood or  
feces  
see page 2 of Training Pac for more*  
12) Splinted  
13) False

Page J

- 14) Blood  
15) Contagious  
16) Vaccination  
17) Fever...headache...neck  
18) Mosquito  
19) Sudden fever with chills  
20) Cattle, goats, and pigs  
21) Feces...mouth...food...water  
22) Carrier  
23) Typhus  
24) A slowly growing patch on the skin that does  
not itch or hurt  
25) prevented

# FINAL TEST

## TREATMENT OF DANGEROUS ILLNESSES

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

SCORE: \_\_\_\_\_

FINAL TEST  
(6.5 points for each question)

lice  
meningitis  
mosquitoes  
Dengue  
gut  
Fleas

Hansen's Disease  
tuberculosis  
splinted  
leprosy  
Brucellosis  
typhoid

water  
food  
ticks  
Rabies  
tuberculosis  
tetanus

Fill in the blanks

1. \_\_\_\_\_ is a chronic, contagious disease of the lungs.
2. Typhoid is transmitted by the bites of \_\_\_\_\_, \_\_\_\_\_, rats, and \_\_\_\_\_.
3. Typhoid fever is an infection of the \_\_\_\_\_.
4. \_\_\_\_\_ is sometimes confused with malaria.
5. Coughing up blood is a symptom in serious or advanced cases of \_\_\_\_\_.
6. The surest protection against \_\_\_\_\_ is vaccination.
7. \_\_\_\_\_ is a disease contracted from the bite of an animal.
8. Fever, severe headache, and stiff neck are three symptoms of \_\_\_\_\_.
9. Malaria is spread by \_\_\_\_\_.
10. \_\_\_\_\_ is spread from drinking fresh milk from infected cows and goats.
11. Typhoid is spread from feces-to-mouth in contaminated \_\_\_\_\_ and \_\_\_\_\_.
12. After recovering from \_\_\_\_\_, a person may still be a carrier of it.
13. A slowly growing patch on the skin that does not itch or hurt is the first sign of \_\_\_\_\_.
14. When moving a person with broken bones, the bones must be \_\_\_\_\_ first.
15. Leprosy is also called \_\_\_\_\_.

TREATMENT OF DANGEROUS ILLNESSES  
FINAL TEST KEY

1. Tuberculosis
2. Lice...ticks...fleas
3. Gut
4. Dengue
5. Tuberculosis
6. Tetanus
7. Rabies
8. Meningitis
9. Mosquitoes
10. Brucellosis
11. Food...water
12. Typhoid
13. Leprosy
14. Splinted
15. Hansen's Disease