Additional Information

When we revised Where There Is No Doctor *in 1992, we added several topics. We continue to update these with each new edition. Some of these topics were specifically requested and others are problems that affect more and more people, such as HIV and AIDS, complications from unsafe abortions, pesticide poisoning, and drug addiction. We added the section on blood pressure because the book is used by many health workers who have equipment for measuring it.*

HIV AND AIDS

HIV (Human Immunodeficiency Virus) is a very small germ, called a virus, that you cannot see without a microscope. AIDS (Acquired Immune Deficiency Syndrome) is an illness that develops later, after a person has been infected with HIV for some time. HIV is now found all around the world.

HIV reduces the body's ability to fight disease. A person with HIV can get sick very easily—from illnesses such as diarrhea, pneumonia, tuberculosis (TB), and certain types of cancer. Most people with AIDS die from diseases their bodies are no longer strong enough to fight.

HIV spreads when an HIV-infected person's blood, semen (sperm), breast milk, or fluid from the vagina enters the body of a person without HIV. It can spread through:

Unprotected sex between someone who has HIV and someone who does not. This is the most common way HIV is spread.

Using an unsterilized needle or syringe (or any instrument that pierces or cuts the skin).

Pregnancy, birth or breastfeeding, which can pass HIV to a baby if the mother is infected. (See p. 398 for information on preventing HIV from spreading this way.)

Blood transfusions, if the blood has not been tested to be sure it is free from HIV.

HIV is not spread through everyday contact such as shaking hands, hugging, kissing, or living, playing, sleeping, or eating together. Also, it is not spread by food, water, insects, toilet seats, or communion cups. Caring for someone with HIV or AIDS is safe if you follow the advice on p. 401.

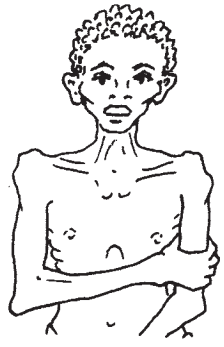
IMPORTANT: **Someone who looks and feels completely healthy can have, and spread, HIV.** It may take years after the virus enters the body for the first signs of illness to appear. The only way to know for sure whether or not you have HIV is to get an HIV test. These tests are available at many health centers at low or no cost.

Signs of AIDS:

A person has AIDS when the part of the body that fights disease, the immune system, gets so weak that it can no longer fight off infections. The signs of AIDS are different in different people. Often they are the typical signs of other common illnesses, but are more severe and last longer.

If a combination of these 3 signs appears and the person gets sick more and more often, he or she may have HIV (but you cannot be sure without an HIV test):

- Gradual weight loss.
- Diarrhea for more than 1 month.
- A fever for more than 1 month, sometimes with chills or soaking night sweats.



AIDS was called 'slim disease' in Africa because people lost so much weight.

The person may also have one or more of these signs:

- A bad cough that lasts for more than 1 month.
- Yeast infection in the mouth ('thrush,' see p. 232).
- Swollen lymph nodes, anywhere in the body (see p. 88).
- Rashes or painless dark patches on the skin.
- Warts or sores that keep growing and do not go away, especially around the genital area and buttocks.
- Feels tired all the time.
- People with HIV are more likely to get TB (p. 179) or shingles (p. 204).

Treatment:

There is still no medicine to cure HIV or AIDS. But medicines called "antiretrovirals" can help people with HIV stay healthy and live longer. Taken in combination, they are called Antiretroviral Therapy, or ART. ART is becoming less costly and more available in many countries. (See pages 396 to 398 for information on ART.)

Because people with HIV have difficulty fighting infections, many use cotrimoxazole daily to prevent infections (see page 357). Be sure to treat any problems that occur:

- For diarrhea, use Rehydration Drink (see p. 152).
- For yeast infection in the mouth (thrush), use gentian violet, nystatin, or miconazole (see pages 232 and 372).
- For warts, use trichloroacetic acid or podophyllin (see p. 373 and 402).
- For fever, give lots of fluids, aspirin or acetaminophen, and lower high fever with a cool bath (see pages 75 and 76).
- Treat cough by drinking lots of water and treat pneumonia with antibiotics (see pages 168 to 171). If cough and fever last more than a week, **seek advice immediately about TB prevention and treatment** for people with HIV (see pages 179 and 180).
- For itching and rashes, use antihistamines (p. 385) and treat infections (p. 202).
- Treat infected wounds and sores (see pages 88 and 89).
- For shingles, see p. 204.

You can also stay as healthy as possible by eating well (see Chapter 11); purifying your drinking water; avoiding alcohol, tobacco, and other drugs; getting enough rest and sleep; and using a condom when having sex.

Preventing HIV:

- If possible, have sex with only one partner who has sex only with you.
- Practice safer sex (see p. 290). **Using a condom reduces the risk of getting or giving HIV.**
- Treat sexually transmitted infections early—especially those that cause sores.
- Do not share the same needle or syringe or have an injection unless you are sure the instruments are sterilized first with bleach or by boiling for 20 minutes. **Health workers should NEVER re-use a needle or syringe without sterilizing it first** (see p. 74). Also make sure equipment for circumcision, ear piercing, acupuncture, and traditional practices such as scarring, is sterilized.
- If possible, do not accept a transfusion of blood that has not first been tested. Avoid transfusions except when absolutely necessary.
- Do not share razors.
- Wear latex gloves or plastic bags on your hands if you touch someone else's wound, blood, or body fluids.
- If you were raped or had unprotected sex with someone who has HIV, take ART to prevent getting HIV. See page 398.
- **Treatment is prevention**. All people with HIV, especially pregnant women, can take ART to improve their health and stop HIV from spreading.

Setting up treatment and testing programs will also help prevent HIV from spreading in your community. In the long run, HIV can best be prevented by fighting for fairer social and economic conditions, so that people have stronger bodies from better nutrition, so that families do not need to separate to find work, and so that people need not sell their bodies for sex.

CARING FOR SOMEONE WITH HIV OR AIDS:

People with HIV or AIDS need comfort, kindness, and emotional support. You can help them discuss how to tell their loved ones about their illness, and prepare the legal and social arrangements necessary to care for their children, family, and property. They may also need help getting enough to eat or taking their medicines.

Be kind to persons with AIDS.

If they have a lot of fever, diarrhea, or pain, they will need extra help staying clean. This can usually be done without risk. To prevent spreading the virus, remember:

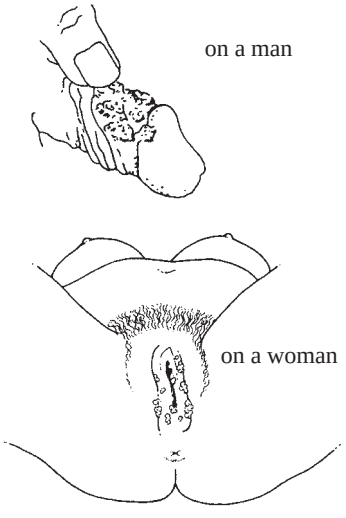
- Blood, open sores, bloody diarrhea, or bloody vomit can spread the virus. To prevent touching these, wear rubber latex or plastic gloves, or plastic bags on your hands. Wash your hands often.
- Soiled or bloody clothes, bedding, or towels should be handled with care. Wash them in hot soapy water, or add chlorine bleach. Keep separate from other household laundry.

At some point, there is nothing more that can be done to treat a person with AIDS. At home, family and friends can give love and support to help the person prepare for his or her death (see p. 330).

SORES ON THE GENITALS

A single, painless sore on the genitals may be a sign of syphilis (see p. 237). But several sores are likely to be a sign of other sexually transmitted infections: genital warts, genital herpes, or chancroid. HIV can easily pass through a sore on the genitals during sex. Always use a condom, and avoid having sex if the condom will not cover the sore.

Genital Warts (Venereal warts, Condylomata acuminata)



These warts are caused by a virus that is spread by sexual contact. They look like warts on other parts of the body (see p. 210) but there are usually more of them.

Signs:

Small, hard, whitish or brownish skin growths that have a rough surface. In men they usually grow on the penis but can also grow on the scrotum or anus. In women they grow on the lips of the vagina, inside the vagina, on the cervix, or around the anus.

Treatment:

Apply a small amount of trichloroacetic acid or podophyllin (see p. 373) to each wart. (If possible, first apply some Vaseline or other greasy ointment to the skin around each wart to protect the healthy skin.) Podophyllin must be washed off 6 hours later. Several treatments are usually necessary. The warts will slowly shrink and go away, but often return.

Prevention:

The man should wear a condom (see p. 287) during sex if either he or his partner has genital warts.

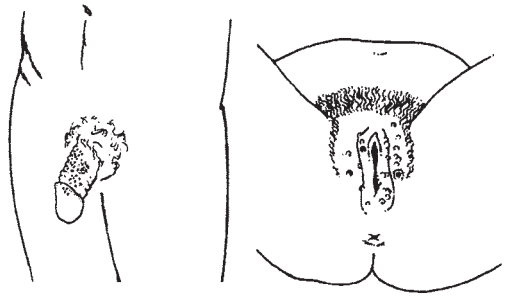
Using a condom each time you have sex helps prevent the spread of warts, herpes, chancroid, HIV, and other sexually transmitted infections.

Genital Herpes

Genital herpes is a painful skin infection caused by a virus. It produces sores on the genitals or in the mouth that come and go for months or years. Genital herpes is spread from person to person during sex, but not all sores on the mouth are spread by sex. Children and adults often get sores on their mouths caused by a different herpes virus when they have a cold or fever (see Cold Sores, p. 232).

Signs:

- One or more very small, painful blisters, like drops of water on the skin, appear on the genitals, anus, buttocks or thighs.
- The blisters burst and form small, open sores that are very painful.
- The sores dry up and become scabs.



on a man on a woman

The herpes sores can last for 3 weeks or more, with fever, aches, chills, and swollen lymph nodes in the groin. There may be pain when the woman pees.

The virus stays in the body after all the signs disappear. New blisters can appear at any time, from weeks to years later. Usually the new sores appear in the same place, but are fewer, not as painful, and heal more quickly.

Treatment:

There is no medicine that cures herpes, but it can be controlled with acyclovir (see p. 373). Keep the area clean. Do not have sex until all the sores are healed—not even with a condom.

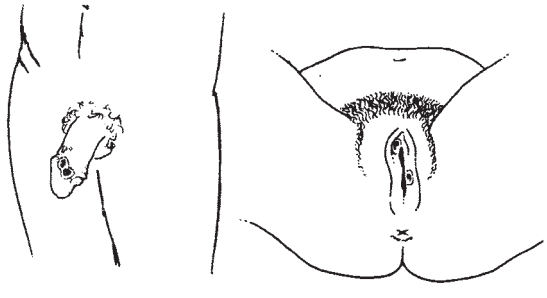
Always wash hands with soap and water after touching the sores. Be very careful not to touch the eyes. A herpes infection in the eyes can cause blindness.

CAUTION: If a woman has herpes sores when she gives birth, her baby can get it. This is very dangerous. Let your health worker or midwife know if you have ever had genital herpes.

Chancroid

Signs:

- soft, **painful** sores on the genitals or anus
- enlarged lymph nodes (bubos) may develop in the groin



on a man on a woman

Treatment:

- Give 1 g of azithromycin by mouth in 1 dose, or erythromycin 500 mg by mouth, 4 times daily for 7 days, or ciprofloxacin 500 mg by mouth 2 times a day for 3 days. You can also give ceftriaxone, 250 mg by intramuscular injection, as a single dose. **Pregnant women and children should not take ciprofloxacin.**
- Generally, it is best to treat for syphilis at the same time (see p. 237).

CIRCUMCISION AND EXCISION (CUTTING AWAY SKIN FROM THE SEX PARTS)

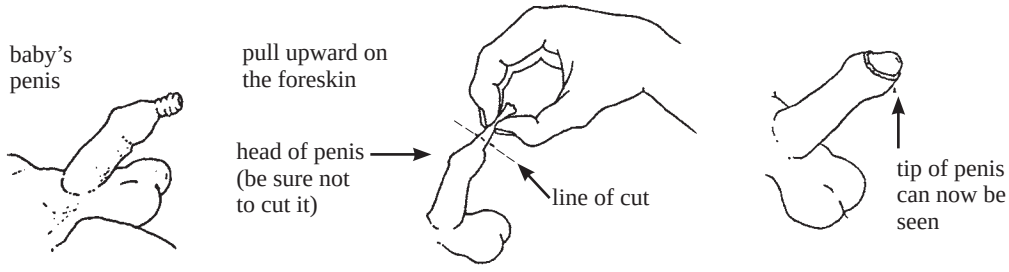
In many communities, boy children are circumcised—as are girls in some parts of the world—as a traditional 'practice' or 'custom'. Circumcision is not necessary for health, although male circumcision may provide some protection against HIV. For boys it is usually not dangerous. **But for girls, this practice—sometimes called 'excision', 'infibulation', or 'female genital cutting'—is very dangerous and should be strongly discouraged.** For both boys and girls, unclean cutting tools risk spreading HIV.

BOYS

A baby boy is born with a tube of skin (foreskin) covering the 'head' of his penis. As long as urine comes out of the hole at the tip, there should be no problem. The foreskin will usually not pull back completely over the head of the penis until the boy is about 4 years old. This is normal and **circumcision is not necessary.** Do not try to pull the foreskin back by force.

However, if the foreskin becomes red, swollen, and so tight that the baby cannot pass urine without pain, this is not normal. Take him to a health worker for a circumcision as soon as possible.

As a family ritual, simple circumcision of a healthy baby boy may be done by a midwife or person with experience. Using a new razor, she cuts off a little of the foreskin beyond the head of the penis. After the cut, there is some bleeding. Hold the penis firmly with a clean cloth, or gauze, for 5 minutes, until the bleeding stops. Some healers use the juice of a plant to help stop the bleeding (see p. 13).



If the bleeding does not stop, wash away the clots of blood with clean water, and pinch the end of the foreskin between the fingers with a piece of clean cloth for as long as it takes the bleeding to stop. No medicine is needed.

GIRLS

In circumcision of girls, or 'excision', the soft knob of flesh (clitoris) at the front end of the vagina is cut out. Sometimes, part of the vaginal lips is also cut away. Removing the clitoris is as bad as cutting off the head of a boy's penis. **Excision should not be done.** Girls who have been excised may have frequent urinary and vaginal infections, and difficulty during childbirth.

There is also danger of severe bleeding during excision. **The child can die** in a few minutes. **Act quickly.** Wash away the clots to find the exact point where the blood is coming from and press on it firmly for 5 minutes. If bleeding continues, keep pressing the bleeding spot while you carry the child to a health worker or doctor for help. Watch for signs of shock (see page 77) and infection.

SPECIAL CARE FOR SMALL, EARLY, AND UNDERWEIGHT BABIES—'KANGAROOING'

A baby who is born very small (weighs less than 2 ½ kg. or 5 pounds) will need special care. If possible, take the baby to a health post or hospital. In the hospital, these babies are often kept warm and protected in a special temperature–controlled box called an incubator. However, for a baby who is basically healthy, a mother can often provide similar warmth and protection by 'kangarooing' the baby:

- Place the baby naked, with or without a diaper or nappy, upright inside your clothing against your skin, between your breasts. (It helps to wear a loose blouse, sweater, or wrap tied at the waist.)
- Let the baby suck at your breast as often as he wants, but at least every 2 hours.
- Sleep propped up so that the baby stays upright.
- Wash the baby's face and bottom each day.
- **Make sure the baby stays warm at all times.** If it is cool, dress the baby with extra clothing, and cover his head.
- While you bathe or rest, ask the father, or another family member, to 'kangaroo' the baby.
- Take the baby to a health worker regularly. Be sure that he gets all his vaccinations (see p. 147).
- Give the baby iron and vitamin supplements—especially vitamin D (see p. 392).

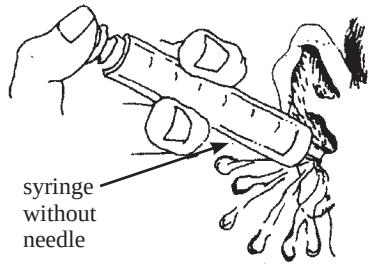
EAR WAX

A little wax in the ears is normal. But some people have too much wax, or it dries into a hard lump close to the ear drum. This can block the ear canal so that the person cannot hear well.

Treatment:

To remove the wax, first soften it by putting several drops of warm vegetable oil into the person's ear. Then have her lie down on her side with the ear up for 15 minutes. Next, wash the ear out well by pouring several cups of warm (not hot) water into it.

If this does not work, remove the needle from a syringe and fill the syringe with warm water and squirt it into the ear canal. Repeat this several times, or until the wax comes out. Stop if the person starts to feel dizzy. If the wax still will not come out, seek medical advice.



LEISHMANIASIS

This disease is found in Africa, India, and the Middle East, and in southern Mexico, Central America and South America. The infection is carried from person to person by a small sand fly which infects a person when it bites.

Some forms of the disease cause damage inside the body (visceral leishmaniasis, kala–azar, dumdum fever). These are very difficult to recognize and the treatment is very complicated and expensive. If possible, seek medical help.

Other forms affect mainly the skin (cutaneous leishmaniasis, tropical sore, Delhi boil, espundia, forest yaws, uta, chiclero ulcer). These are easier to treat.

Signs of leishmaniasis of the skin:

- 2 to 8 weeks after being bitten, swelling appears where the fly bit.
- The swelling becomes an open sore, usually with pus.
- Sores can heal by themselves, but may take several weeks to 2 years.
- Sores become infected (with bacteria) very easily.

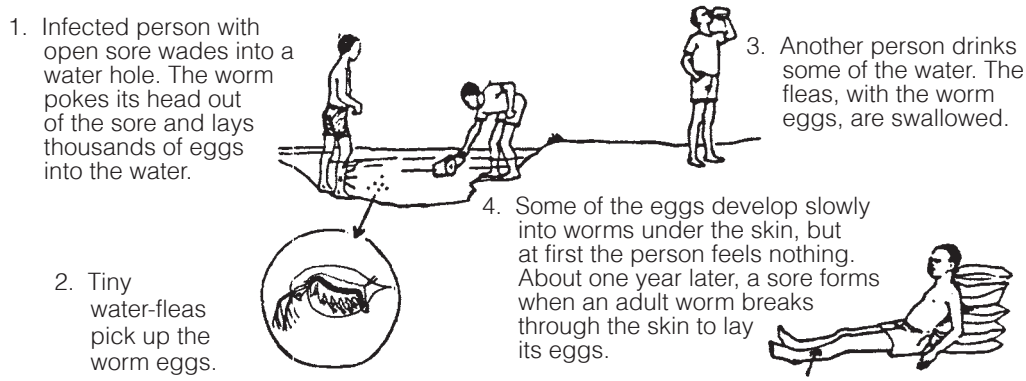
Treatment:

- Clean the sore with cool, boiled water.
- Apply a hot, moist cloth to the sore (not so hot that it burns the skin) for 10 to 15 minutes.
- Do this 2 times a day for 10 days. This 'heat treatment' often brings a complete cure.
- If the sore looks infected (red and painful), also give antibiotics (see p. 351).

GUINEA WORM

Guinea worm is a long, thin worm that lives under the skin and makes a painful sore on the ankle, leg, or elsewhere on the body. The worm, which looks like a white thread, can be over a meter long. Guinea worm is found in parts of Africa.

Guinea worm is spread from person to person, like this:

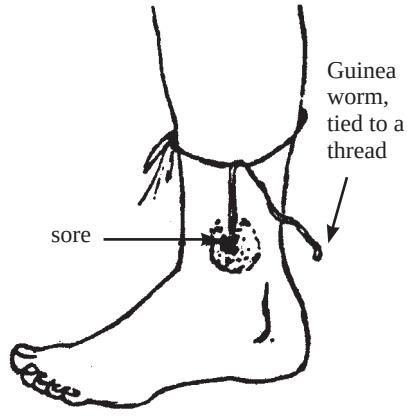


Signs:

- A painful swelling develops on the ankle, leg, testicles or elsewhere on the body.
- After a week a blister forms, which soon bursts open forming a sore. This often happens when standing in water, or bathing. The end of a white thread-like Guinea worm can be seen poking out of the sore.
- If the sore gets dirty and infected, the pain and swelling spread, and walking becomes impossible. Sometimes tetanus occurs (see p. 182).

Treatment:

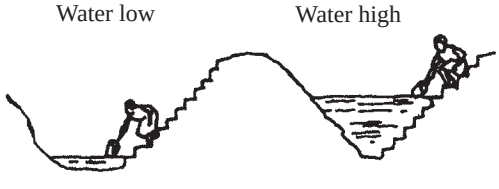
- Keep the sore clean. Soak the sore in cold water until the worm's head pokes out.
- Attach a thread to the worm, or roll it round a thin stick, and pull gently, a little more each day. This may take a week or more. The worm can be more than a meter long! Try not to break it, because this can cause severe infection.
- Give metronidazole or thiabendazole to help reduce discomfort and make it easier to slowly pull out the worm. (The medicines do not kill the worms. For dosages and precautions, see pages 368 and 374.)
- Give anti-tetanus vaccination (p. 147).
- If sores become infected (spreading pain, redness, swelling, and fever), give penicillin or dicloxacillin or a similar antibiotic (see p. 351).



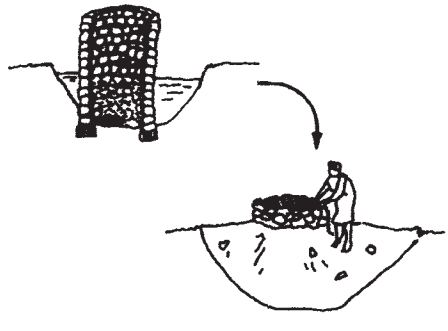
Prevention:

- Use tap water for drinking, if available. If a water hole is the only supply, then do not drink from it directly. Pour the water into a special drinking water pot, through a clean cloth tied over the top. The cloth will filter out the infected water-fleas.

- If the community can build stone steps into the water hole, people can scoop water from the last dry step without getting wet.
- Or turn the water hole into a well, so that people can draw water with a rope and bucket.



ALWAYS USE THE LAST DRY STEP.
NEVER STEP INTO THE WATER.



If nobody wades or bathes in water used for drinking, the infection cannot be passed on, and will eventually disappear from the area.

EMERGENCIES CAUSED BY COLD

Loss of Body Heat (Hypothermia)

In cold climates, or cold, wet or windy weather, persons who are not wearing enough warm clothes can lose the heat from their bodies. **This is very dangerous.** Often the person does not realize what is happening and can become so confused that she will not ask for help and may die.

Signs:

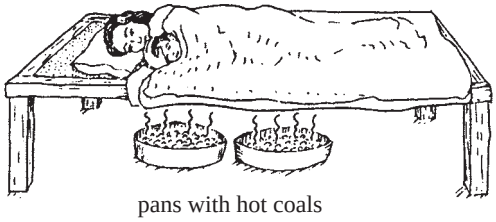
- Uncontrolled shivering
- Slow or unclear speech
- Stumbles when walking
- Cannot think clearly
- Feels very tired

Treatment:

- ♦ Quickly get the person to a dry place protected from the wind.
- ♦ Take off wet clothes and cover person with dry clothing and dry blankets.
- ♦ Make sure her head, feet, and hands are covered.
- ♦ Heat stones in a fire, wrap them in cloth, and put them next to her back and belly.

> *WARNING:* **Do not warm up the person too fast as this could cause heart problems and death.**

- ♦ Do all you can to keep the person warm. If it is a child, wrap him inside your clothing against your skin (see 'Kangarooing', p. 405). Or sleep with him in your arms. If possible, have someone else lie on the other side. Or put pans of hot coals, or a few small oil lamps under the cot. (But be careful he does not get burned, or too warm.)



pans with hot coals

- ♦ Give sweet things to eat and drink like sugar, candy, honey, ripe fruit or juice. If you do not have sweets, give starchy foods like rice, bread, plantain, or potatoes.
- ♦ If the person stops breathing, give mouth-to-mouth breathing (see p. 80). Keep giving mouth-to-mouth breathing for at least 1 hour.

If the person stops shivering but still has any of the above signs, or if he is unconscious, his condition is very serious. Keep trying to warm him, but if he does not wake up, **get medical help FAST.**

Dangerously Low Body Temperature in Babies and Sick Persons

Sometimes, especially in cool weather, a baby, sick child, or person who is very old, ill, malnourished, or weak may lose so much body heat that their temperature drops below normal. The signs mentioned on the previous page may develop, and the person may die. Try to raise the body temperature by keeping the person warm as described on page 408.

Frozen Skin (Frostbite)

In freezing weather, if a person is not dressed warmly enough, her hands, feet, ears, and sometimes face may begin to freeze. **Frostbite is very dangerous.** If completely frozen, the skin will die and later turn black (p. 213). The part may have to be cut off (amputated).

Signs of frostbite:

- At first, numbness and often sharp pain in one part of the body.
- Then all feeling goes away as the part gets more frozen.
- The part gets pale in color and feels hard when touched.

Treatment of mild frostbite: If the skin still feels soft when touched, the person probably has 'mild frostbite'. Wrap the part with dry cloth and warm it against another part of the person's own body or someone else's. Try to keep moving and get out of the cold as fast as possible.

Warm hands and feet against body.

Try to cover ears and face.

Treatment of severe frostbite: CAUTION: Do not start treatment for severe frostbite until you are in a place where the person's whole body can be kept warm during and after treatment. It is better to let a hand or foot stay frozen for several hours than to let it get warm and then freeze again. When you get to a warm, protected place:

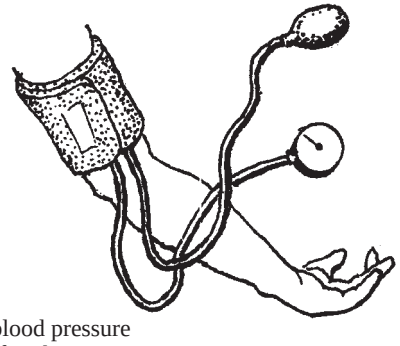
- Fill a large container with warm water **(not hot)** that feels comfortable when you hold your hand in it.
- Soak the person's frozen part in the water until it gets warm.
- If the water cools, add more warm water. But take out the person's hand or foot while you do this. Remember, she cannot feel how hot the water is and you can easily burn her.
- As it gets warm, the frozen part will become very painful. Give aspirin or codeine (p. 379 and 384).
- When it is no longer frozen, the person must stay warm and rest.
- Be very gentle with the part that was frozen. Treat as you would a severe wound or burn (p. 96). Seek medical help. Sometimes dead parts of the body must be removed through surgery.

HOW TO MEASURE BLOOD PRESSURE

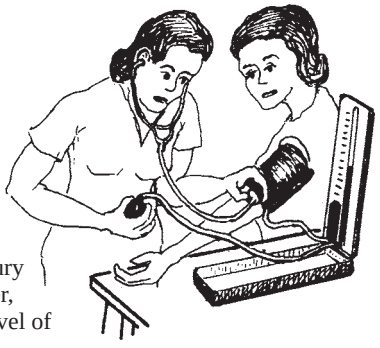
Blood pressure measurement can be an important skill for health workers and midwives. It is an especially useful tool in examining:

- Pregnant women (see pages 249, 251, and 253).
- Mothers before and during childbirth (see p. 265).
- A person who may be losing a lot of blood from any part of the body, inside or out (see p. 77).
- A person who might be in shock (see p. 77), including allergic shock (see p. 70).
- People over 40.
- People who are too heavy (see p. 126).
- Anyone with signs of heart trouble (p. 325), stroke (p. 327), difficulty breathing, frequent headaches, swelling, diabetes (p. 127), chronic urinary problems (p. 234), or swollen or painful veins (p. 175).
- Persons known to have high blood pressure (see p. 125).
- Women taking (or planning to take) birth control pills (see p. 288).

There are 2 kinds of instruments for measuring blood pressure:



A blood pressure cuff with a gauge,



and the older mercury sphygmomanometer, which shows the level of mercury.

To measure blood pressure:

- **Make sure the person is relaxed.** Recent exercise, anger, or nervousness can make pressure rise and give a falsely high reading. Explain what you are going to do, so the person is not surprised or frightened.
- **Fasten the pressure cuff** around the person's bare upper arm.
- **Close the valve** on the rubber bulb by turning the screw clockwise.
- **Pump the pressure up** to more than 200 millimeters of mercury.
- **Place the stethoscope** over the inside of the elbow.
- **Listen carefully for the pulse** as you slowly let air out of the cuff. As the needle of the gauge (or the level of mercury) slowly drops, **take two readings:**

1. **Take the first reading the moment you begin to hear the soft thumping of the pulse.** This happens when the pressure in the cuff drops to the highest pressure in the artery (systolic or 'top' pressure). This top pressure is reached each time the heart contracts and forces the blood through the arteries. In a normal person, this top pressure reading is usually around 110 to 120 mm.

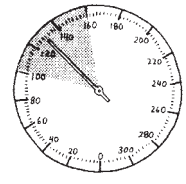
2. Continue to slowly release the pressure while listening carefully. **Take the second reading when the sound of the pulse begins to fade or disappear.** This happens when the pressure in the cuff drops to the lowest pressure in the artery (diastolic or 'bottom' pressure). This bottom pressure occurs when the heart relaxes between pulses. It is normally around 60 to 80 mm.

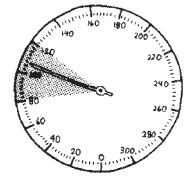
When you record a person's blood pressure, always write both the top and bottom pressure readings. We say that an adult's normal blood pressure (BP) is "120 over 80," and write it like this:

BP $\frac{120}{80}$ or BP 120/80

120 is the top (systolic) reading.
80 is the bottom (diastolic) reading.

For health workers, it may be better to speak of the "top" and "bottom" numbers (TN and BN), rather than use big, strange words like systolic and diastolic.





If a person's blood pressure is 160/110, he has seriously **high blood pressure** and should lose weight (if he is very overweight) or get treatment. A bottom number of over 100 or a top number over 160 usually means the blood pressure is high enough to require attention (diet and perhaps medicine).

Normal blood pressure for an adult is usually around 120/80, but anything from 100/60 to 140/90 can be considered normal.

If a person regularly has **low blood pressure,** there is no need to worry. In fact, blood pressure on the low side of normal, 90/60 to 110/70, means a person is likely to live long and is less likely to suffer from heart trouble or stroke.

A sudden drop in blood pressure is a danger sign, especially if it falls below 60/40. Health workers should watch for any sudden drop in the blood pressure of persons who are losing blood or at risk of shock (see p. 77).

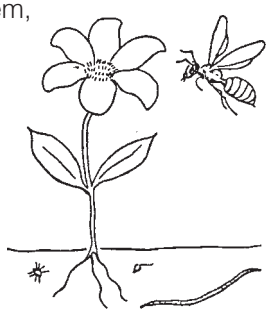
For more information about blood pressure measurement, see ***Helping Health Workers Learn***, Chapter 19.

POISONING FROM PESTICIDES

Pesticides are chemical poisons used to kill certain plants (herbicides), fungus (fungicides), insects (insecticides) or other animals (for example, rat poison). In recent years, the increasing misuse of pesticides has become a big problem in many developing countries. These dangerous chemicals can cause severe health problems. They can also damage the 'balance of nature', which in time can lead to smaller harvests.

Many pesticides are extremely dangerous. Villagers often use them without knowing their risks, or how to protect themselves while using them. As a result, many persons become **very ill, blind, sterile, paralyzed,** or their children may have **birth defects.** Also, working with these chemicals, or eating foods sprayed with them, sometimes causes **cancer.**

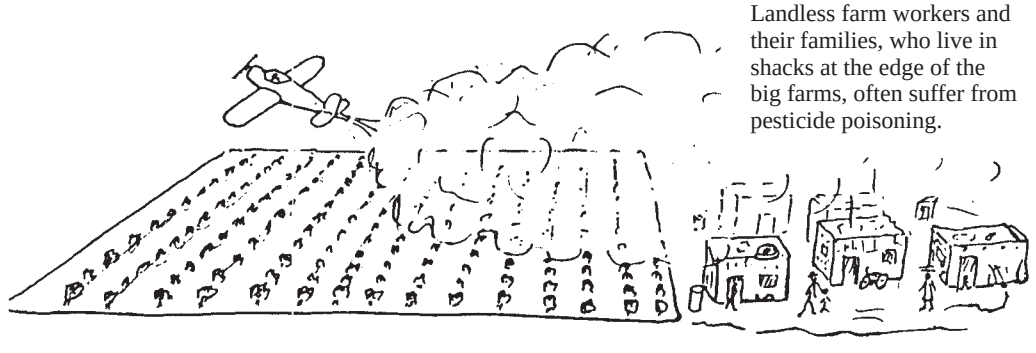
Chemicals used to kill insects and weeds at first allow farmers who can afford them to produce more crops. But today, pesticide-treated crops often produce smaller harvests than crops produced without pesticides. This happens because pesticides also kill the 'good' birds and insects that provide a natural control of pests and are beneficial to the soil. Also, as the insects and weeds become resistant, greater quantities and more poisonous kinds of pesticides are needed. So, once farmers begin to use these chemical poisons, they become dependent on them.



Pesticides also kill the beneficial animals—such as bees and earthworms.

As farmers' dependency on chemical pesticides and fertilizers goes up, so does the cost. When the smaller, poorer farmers can no longer afford them, they are forced off the land. As the land becomes owned by a few 'giant' farmers, and more and more people become landless, the number of malnourished and hungry people increases.

The risk of pesticide poisoning is high for these landless, poorly paid farm workers and their families. Many live in open shacks at the edge of fields that are sprayed with pesticides. The poison can easily get into their homes or water supply. This is especially dangerous for small children, who can be seriously harmed by even small amounts of these poisons. Farmers who use backpack sprayers, which often leak, are also at high risk. See ***A Community Guide to Environmental Health***, Chapter 14, for more information.



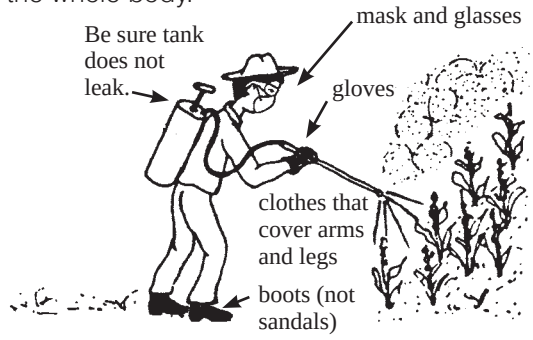
Landless farm workers and their families, who live in shacks at the edge of the big farms, often suffer from pesticide poisoning.

Laws are needed to prohibit the most dangerous pesticides and to provide clear warnings. Unfortunately, after governments in industrialized countries limited the use of many pesticides, chemical manufacturers began to sell their dangerous products to developing countries, where laws are less strict.

Some of the most dangerous pesticides are aldrin, dieldrin, endrin, chlordane, heptachlor, DDT, DBCP, HCH, BHC, ethylene dibromide (EDB), paraquat, parathion, agent orange (2-4D with 2-4-5T), camphechlor (toxaphene), poentachlorophenyl (PCP), and chlordimeform. It is very important to read carefully the labels of pesticide containers. Be sure to read the small print, because the pesticide may not be part of the brand name.

WARNING: If you use any pesticide, take the following precautions:

- Mix chemicals and load spray equipment carefully.
- Stand so that wind blows spray away from you.
- Wear protective clothing, covering the whole body.
- Wash hands before eating.
- Wash the whole body and change clothes immediately after spraying.
- Wash clothes after spraying.
- Do not let wash water get into drinking supply.
- Be sure containers with pesticides are clearly marked, and kept out of children's reach. Do not use pesticide containers for food or water.



CAUTION: **Make sure that children, and women who are pregnant or breastfeeding, stay away from all pesticides.**

Treatment for pesticide poisoning:

- If the person is not breathing, quickly do mouth-to-mouth breathing (see p. 80).
- Follow instructions on p. 103 to make the person vomit, and to give powdered charcoal (or egg whites) to soak up the poison inside the gut. But do not make the person vomit if you do not know what kind of pesticide he was using, or if he swallowed a pesticide with gasoline, kerosene, xylene, or other 'petroleum-based' liquids.
- Remove any pesticide-soaked clothing, and wash skin exposed to pesticide.

The above steps can help to treat the immediate problem of pesticide poisoning. But solving the underlying problem will require:

1. Education for avoiding the most dangerous pesticides, and laws to restrict their use.
2. Farm workers organizing to insist their rights are protected, and safety hazards are corrected.
3. Fairer land distribution.

COMPLICATIONS FROM ABORTION

When a woman takes action to end a pregnancy before a baby is fully enough formed to survive, this is called an abortion. (In this book we use the word 'abortion' only when the action is planned. The unplanned, natural loss of an unborn child we call a 'miscarriage'.)

Deciding whether or not to have an abortion can be difficult. In making a decision, most women will benefit from warm, respectful advice and friendly support. When abortions are done under sterile conditions in a hospital or clinic by a trained medical worker, they are usually safe for the woman. Abortions are safest when done in early pregnancy.

But when abortions are done at home, by untrained persons, or in unclean conditions, they can be extremely dangerous. In places where abortions are illegal or difficult to get, these 'home' abortions are often a major cause of death for women between the ages of 12 and 50.

Methods for ending a pregnancy such as putting sticks or other hard objects into the vagina or womb, squeezing the womb, or using modern drugs or plant medicines can cause **severe bleeding, infection,** and **death.**

Danger signs following an abortion:

- fever
- pain in the belly
- heavy bleeding from the vagina

If you see these signs in a woman who may have been pregnant, they could be the result of an abortion. But they could also be signs of miscarriage (p. 281), ectopic pregnancy (p. 280), or pelvic inflammatory disease (p. 243).

Some women with problems following an abortion go for medical help, but are afraid or ashamed to tell what really happened. Others may be too afraid or embarrassed even to seek medical help, especially if the abortion was secret or illegal. They may wait until they are very sick. This delay could be fatal. **Heavy bleeding (more than with a normal period) or infection following an abortion is dangerous. Get medical help right away!** Meanwhile, do the following:

- Try to control bleeding. Follow instructions on p. 266 for bleeding after miscarriage. Give misoprostol, oxytocin, or ergometrine (see pages 390 and 391).
- Treat for shock (see p. 77).
- If there are signs of infection, give antibiotics as for Childbirth Fever (see p. 276).

To prevent illness and death from abortion:

- Give antibiotics (ampicillin, p. 353, or tetracycline, p. 355) after any abortion, whether done at home or in a health center. This reduces the risk of infections and dangerous complications.
- **Prevent unwanted pregnancy.** Birth control methods should be available to both women and men (see Chapter 20).
- Work to make your community a kinder, better place, especially for women and children. When society guarantees that everyone's needs are met, fewer women will need to seek abortions.
- Abortions done under clean and safe conditions by trained health workers should be available to women free or at low cost. That way women will not need to have dangerous, illegal abortions.
- A woman who has **any** signs of problems after an abortion—whether done at home or in the hospital—should get medical care **immediately.** To encourage this, doctors and health workers should **never make a woman who has had an abortion feel ashamed.**

For more information about how to care for a woman after an abortion, see *A Book for Midwives.*

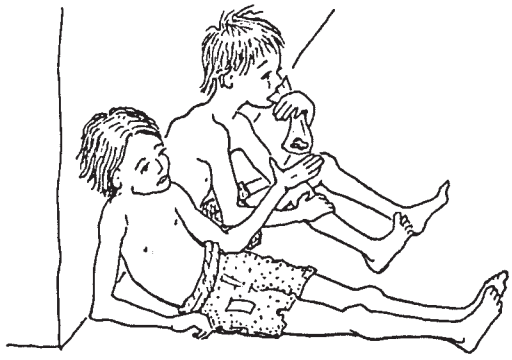
DRUG ABUSE AND ADDICTION

The use of **harmful, habit-forming drugs** is a growing problem in the world today.

Although **alcohol** and **tobacco** are legal in most countries, both are habit-forming or 'addictive' drugs. They contribute to the poor health and death of many millions of people each year. ***Alcohol abuse*** causes enormous health, family, and social problems throughout the world. Cigarette smoking has for many years been a major cause of death in rich countries. and is now becoming an even bigger cause of death in poor countries. As more people in the rich countries stop smoking, the tobacco companies have turned to the 'Third World' as their new and easiest market.

Health problems related to use of alcohol and tobacco are discussed on pages 148 to 149.

In addition to alcohol and tobacco, many people in different parts of the world are using drugs that may be illegal. These vary from place to place, and include **marijuana** (weed, pot, grass, sin semilla, mota, hashish, ganja), **opium** (heroin, morphine, smack), **methamphetamine** (speed) and **cocaine** (crack, snow, rock).

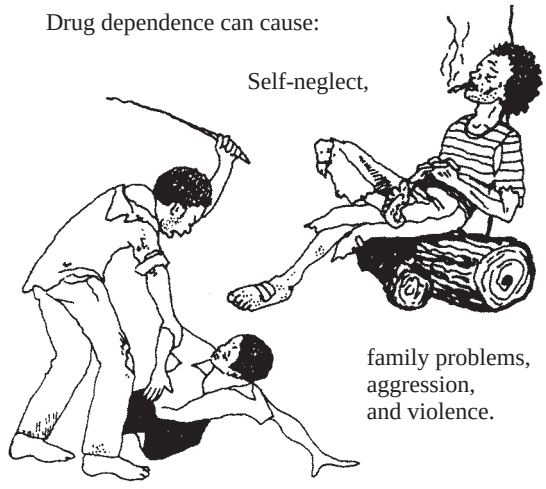


An increasing problem among poor children in cities is the **sniffing of chemicals,** especially **glue,** but sometimes paint thinner, shoe polish, gasoline, and cleaning fluid. Also, some people misuse medicines—especially certain strong painkillers, stimulants, and 'appetite control' drugs.

Drugs can be swallowed, injected, smoked, chewed, or sniffed. Different drugs create different effects on the body and mind. Cocaine or kolanuts may make a person feel energetic and happy, but some time later he will feel tired, irritable, and depressed. Some drugs, like alcohol, opium, morphine, and heroin, may at first make a person feel calm and relaxed, but later they may cause him to lose his inhibitions, self-control, or even consciousness. Other drugs, such as marijuana, PCP, LSD, and peyote make a person imagine things that do not exist, or create dream-like fantasies.

WARNING: **Use of cigarettes, alcohol, or other drugs by pregnant women can harm their unborn child. Also, injecting drugs using the same needle for more than one person spreads dangerous diseases. See hepatitis (p. 172) and HIV and AIDS (p. 399).**

People usually start taking drugs to escape the hardships, forget the hunger, or calm the pain in their daily lives. But once they start, they often become 'hooked' or addicted. If they try to stop, they become miserable, sick, or violent. In order to get more drugs, they will often commit crimes, go hungry, or neglect their families. Thus drug use becomes a problem for whole families and communities.



Some drugs such as cocaine and heroin are very addictive; a person may try the drug only once and feel that he needs to keep taking it. Other drugs become addictive after longer periods of time. Addiction is a dangerous trap that can lead to health problems or even death. But **with determination, effort, and support, addictions can be overcome.**

When a person first gives up a drug he is addicted to, he will usually feel miserable and act strangely. This is called 'withdrawal'. The person may be extremely nervous, depressed, or angry. He may feel that he cannot live without the drug.

With some drugs, such as heroin or cocaine, withdrawal may be so severe that the person can become violent and injure himself or others. He or she may need the help of a special clinic. For other kinds of drugs, such as alcohol, marijuana, tobacco, and chemical sniffing, medical care is usually not necessary, but the care and support of family and friends is very important.

Here are a few suggestions to help solve the problem of drug use and addiction:

- Be as helpful and supportive as possible to someone trying to overcome drug use. Remember that their difficult moods are because of their addiction, not because of you.
- Members of the community who have been addicted to drugs but have overcome the habit can form a 'support group' to help others trying to give up alcohol or drugs. Alcoholics Anonymous is one such organization (see p. 429). This group of recovering alcoholics has successfully helped people all over the world to deal with problems of addiction.
- Families, schools, and health workers can tell children about the dangers of cigarettes, alcohol, and drugs. Help children learn that there are other, healthier ways to 'feel good', to act 'grown up', or to rebel.
- Work to correct some of the problems in your community that may lead people to use drugs: hunger, exploitative working conditions, and lack of opportunities to lead a better life. Help disadvantaged persons organize and stand up for their rights.

Actions that are *supportive* and *kind* work better than those that are punishing and cruel.