

Some Very Common Sickesses

13

DEHYDRATION

Most children who die from diarrhea die because they do not have enough water left in their bodies. This lack of water is called dehydration.

Dehydration results when the body loses more liquid than it takes in. This can happen with severe diarrhea, especially when there is vomiting too. It can also happen in very serious illness, when a person is too sick to take much food or liquid.

People of any age can become dehydrated, but **dehydration develops more quickly and is most dangerous in very young children.**

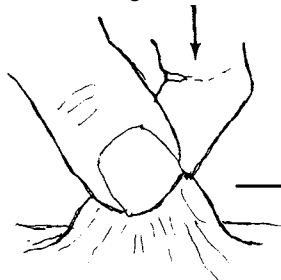
Any child with watery diarrhea is in danger of dehydration.

It is important that everyone—especially parents of young children—know the signs of dehydration and how to prevent and treat it.

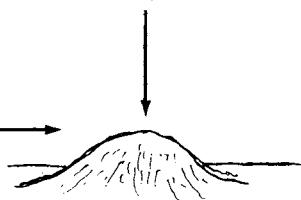
Signs of dehydration:

- thirst is often a first, early sign
- little or no urine; the urine is dark yellow
- sudden weight loss
- dry mouth
- sunken, tearless eyes
- sagging in of the soft spot in infants
- loss of elasticity or stretchiness of the skin

Lift the skin between two fingers, like this . . .



If the skin fold does not fall right back, the child is dehydrated.



Very severe dehydration may cause rapid, weak pulse (see Shock, p. 77), fast, deep breathing, fever, or seizures (see convulsions, p. 178).

When a person has watery diarrhea, or diarrhea and vomiting, do not wait for signs of dehydration. **Act quickly**—see the next page.

To prevent or treat dehydration: When a person has watery diarrhea, **act quickly:**

- ◆ **Give lots of liquids to drink:** Rehydration Drink is best. Or give a thin cereal porridge or gruel, teas, soups, or even plain water.
- ◆ **Keep giving food.** As soon as the sick child (or adult) will accept food, give frequent feedings of foods he likes and accepts.
- ◆ To babies, **keep giving breast milk** often—and before other drinks.

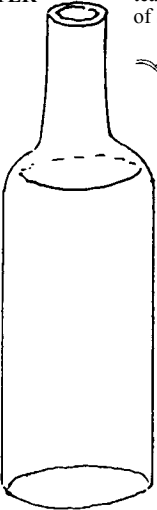
A special **rehydration drink** helps to prevent or treat dehydration, especially in cases of severe watery diarrhea:

2 WAYS TO MAKE HOME MIX REHYDRATION DRINK


1. WITH SUGAR AND SALT

(Raw sugar or molasses can be used instead of sugar)

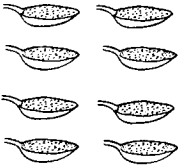
In 1 liter of clean **WATER**



put half of a level teaspoon of **SALT**



and 8 level teaspoons of **SUGAR.**



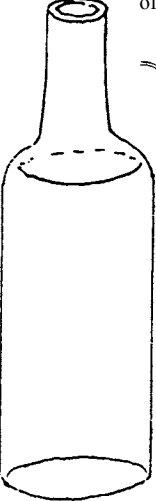
CAUTION: Before adding the sugar, taste the drink and be sure it is less salty than tears.

To either Drink add half a cup of fruit juice, coconut water, or mashed ripe banana, if available. This provides potassium which may help the child accept more food and drink.


2. WITH POWDERED CEREAL AND SALT

(Powdered rice is best. Or use finely ground maize, wheat flour, sorghum, or cooked and mashed potatoes.)

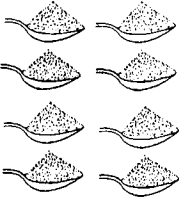
In 1 liter of **WATER**



put half a teaspoon of **SALT**



and 8 heaping teaspoons (or 2 handfuls) of powdered **CEREAL.**



Boil for 5 to 7 minutes to form a liquid gruel or watery porridge. Cool the Drink quickly and start giving it to the child.

CAUTION: Taste the Drink each time before you give it to be sure it is not spoiled. Cereal drinks can spoil in a few hours in hot weather.

IMPORTANT: Adapt the Drink to your area. If liter containers or teaspoons are not in most homes, adjust quantities to local forms of measurement. Where people traditionally give cereal gruels to young children, add enough water to make it liquid, and use that. Look for an easy and simple way.

Give the dehydrated person sips of this Drink every 5 minutes, day and night, until he begins to urinate as usual. A large person needs 3 or more liters a day. A small child usually needs at least 1 liter a day, or 1 glass for each watery stool. Keep giving the Drink **often** in small sips, **even if the person vomits**. Not all of the Drink will be vomited.

WARNING: If dehydration gets worse or other danger signs appear, go for medical help (p. 159). It may be necessary to give liquid in a vein (intravenous solution).

Note: In some countries packets of Oral Rehydration Salts (ORS) are available for mixing with water. These contain a simple mix of sugar, salt, citrate, zinc, and potassium (p. 383). However, homemade drinks—especially cereal drinks—when correctly prepared are often cheaper, safer, and more effective than ORS packets.

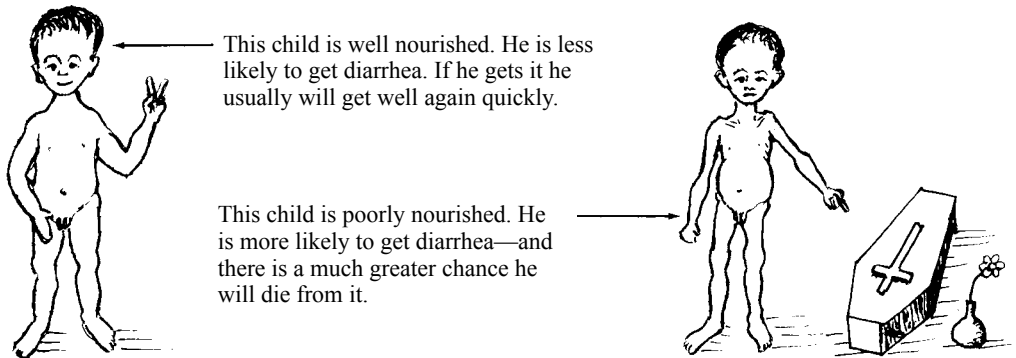
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health guides

DIARRHEA AND DYSENTERY

When a person has loose or watery stools, he has *diarrhea*. If mucus and blood can be seen in the stools, he has *dysentery*.

Diarrhea can be mild or serious. It can be *acute* (sudden and severe) or *chronic* (lasting many days).

Diarrhea is more common and more dangerous in young children, especially those who are poorly nourished.



Diarrhea has many causes. **Usually no medicines are needed**, and the child gets well in a few days if you give him lots of Rehydration Drink and food. (If he does not eat much, give him a little food many times a day.) Occasionally, special treatment is needed. However, **most diarrhea can be treated successfully in the home**, even if you are not sure of the exact cause or causes.

THE MAIN CAUSES OF DIARRHEA:

poor nutrition (p. 154) weakens the child and makes diarrhea from other causes more frequent and worse

shortage of water and unclean conditions (no latrines) spread the germs that cause diarrhea

virus infection or “intestinal flu”

an infection of the gut caused by bacteria (p. 131), amebas (p. 144), or giardia (p. 145)

worm infections (p. 140 to 144) (most worm infections do not cause diarrhea)

infections outside the gut (ear infections, p. 309; tonsillitis, p. 309; measles, p. 311; urinary infections, p. 234)

malaria (falciparum type, in parts of Africa, Asia, the Pacific, Latin America and the Caribbean, p. 186)

food poisoning (spoiled food, p. 135)

HIV (long-lasting diarrhea may be an early sign of AIDS, p. 401)

inability to digest milk (mainly in severely malnourished children and certain adults)

difficulty babies have digesting foods that are new to them (p. 154)

allergies to certain foods (seafood, crayfish, etc., p. 166); occasionally babies are allergic to cow’s milk or other milks

side effects produced by certain medicines, such as ampicillin or tetracycline (p. 58)

laxatives, purges, irritating or poisonous plants, certain poisons

eating too much unripe fruit or heavy, greasy foods

Preventing diarrhea:

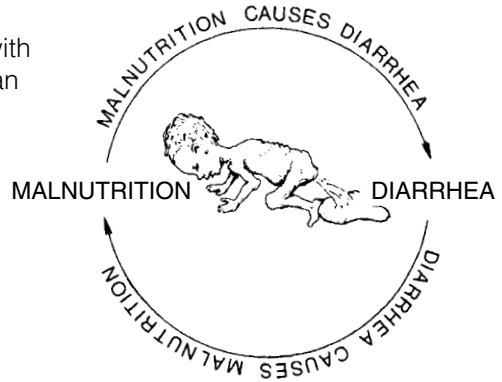
Although diarrhea has many different causes, the most common are **infection** and **poor nutrition**. **With good hygiene and good food, most diarrhea could be prevented.** And if treated correctly by giving **lots of drink and food**, fewer children who get diarrhea would die.

Diarrhea is also very dangerous for people with HIV, especially children. Using cotrimoxazole can prevent diarrhea in persons with HIV (p. 357).

Children who are poorly nourished get diarrhea and die from it far more often than those who are well nourished. Yet diarrhea itself can be part of the cause of malnutrition.

**Malnutrition causes diarrhea.
Diarrhea causes malnutrition.**

And if malnutrition already exists, diarrhea rapidly makes it worse.



THE VICIOUS CIRCLE OF
MALNUTRITION AND DIARRHEA
TAKES MANY CHILDREN'S LIVES.

This results in a vicious circle, in which each makes the other worse. For this reason, **good nutrition is important in both the prevention and treatment of diarrhea.**

**Prevent diarrhea by preventing malnutrition.
Prevent malnutrition by preventing diarrhea.**

To learn about the kinds of foods that help the body resist or fight off different illnesses, including diarrhea, read Chapter 11.

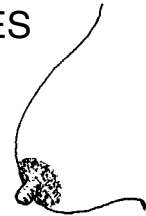
The prevention of diarrhea depends both on **good nutrition** and cleanliness. Many suggestions for personal and public **cleanliness** are given in Chapter 12. These include the use of latrines, the importance of **clean water**, and the **protection of foods** from dirt and flies.

Other suggestions to prevent diarrhea in babies:

- ◆ **Breastfeed rather than bottle feed babies.** Give only breast milk for the first 6 months. Breast milk helps babies resist the infections that cause diarrhea. If it is not possible to breastfeed a baby, feed her with a cup and spoon. **Do not use a baby bottle** because it is harder to keep clean and more likely to cause an infection.
- ◆ When you begin to give the baby new or solid food, start by giving her just a little, mashing it well, and mixing it with a little breast milk. The baby has to learn how to digest new foods. If she starts with too much at one time, she may get diarrhea. **Do not stop giving breast milk suddenly. Start with other foods while the baby is still breastfeeding.**
- ◆ Keep the baby clean—and in a clean place. Try to keep her from putting dirty things in her mouth.
- ◆ Do not give babies unnecessary medicines.
- ◆ Vaccinate your child against rotavirus (p.147).



YES



BREASTFEEDING HELPS
PREVENT DIARRHEA

Treatment of diarrhea:

For most cases of diarrhea no medicine is needed. If the diarrhea is severe, the biggest danger is **dehydration**. If the diarrhea lasts a long time, the biggest danger is **malnutrition**. So the most important part of treatment has to do with giving **enough liquids** and **enough food**. No matter what the cause of diarrhea, always take care with the following:

1. PREVENT OR CONTROL DEHYDRATION. A person with diarrhea must drink a lot of liquids. If diarrhea is severe or there are signs of dehydration, give him Rehydration Drink (p. 152). Even if he does not want to drink, gently insist that he do so. Have him take several swallows every few minutes.

2. MEET NUTRITIONAL NEEDS. **A person with diarrhea needs food as soon as he will eat.** This is especially important in small children or persons who are already poorly nourished. Also, when a person has diarrhea, food passes through the gut very quickly and is not all used. **So give the person food many times a day**—especially if he only takes a little at a time.

- ◆ A baby with diarrhea should **go on breastfeeding**.
- ◆ An underweight child should get plenty of energy foods and some body-building foods (proteins) all the time he has diarrhea—and extra when he gets well. If he stops eating because he feels too sick or is vomiting, he should eat again as soon as he can. **Giving Rehydration Drink will help the child be able to eat.** Although giving food may cause more frequent stools at first, it can save his life.
- ◆ If a child who is underweight has diarrhea that lasts for many days or keeps coming back, give him more food more often—at least 5 or 6 meals each day. Often no other treatment is needed.
- ◆ If possible, give zinc supplements to a baby or child with diarrhea (p. 383).

FOODS FOR A PERSON WITH DIARRHEA		
When the person is vomiting or feels too sick to eat, he should drink:	As soon as the person is able to eat, in addition to giving the drinks listed at the left, he should eat a balanced selection of the following foods or similar ones:	
watery mush or broth of rice, maize powder, or potato	energy foods	body-building foods
rice water (with some mashed rice)	ripe or cooked bananas	chicken (boiled or roasted)
chicken, meat, egg, or bean broth	crackers	eggs (boiled)
Rehydration Drink	rice, oatmeal, or other	meat (well cooked, without much fat or grease)
breast milk	well-cooked grain	beans, lentils, or peas
yogurt or fermented milk drinks	fresh maize (well cooked and mashed)	(well cooked and mashed)
	potatoes	fish (well cooked)
	applesauce (cooked)	milk (sometimes this causes problems, see the next page)
	papaya	
	(It helps to add a little sugar or vegetable oil to the cereal foods.)	
DO NOT EAT OR DRINK		
fatty or greasy foods	any kind of laxative or purge	highly seasoned food
most raw fruits		alcoholic drinks

Diarrhea and milk:

Breast milk is the best food for babies. It helps prevent and combat diarrhea. **Keep giving breast milk when the baby has diarrhea.**

Cow's milk, powdered milk, or canned milk can be good sources of energy and protein. Keep on giving them to a child with diarrhea. In a very few children these milks may cause more diarrhea. If this happens, try giving less milk and mixing it with other foods. But remember: **a poorly nourished child with diarrhea must have enough energy foods and protein.** If less milk is given, well cooked and mashed foods such as chicken, egg yolk, meat, fish, or beans should be added. Beans are easier to digest if their skins have been taken off and they are boiled and mashed.

As the child gets better, he will usually be able to drink more milk without getting diarrhea.

Medicines for diarrhea:

For most cases of diarrhea no medicines are needed. But in certain cases, using the right medicine can be important. However, many of the medicines commonly used for diarrhea do little or no good. Some are actually harmful:

GENERALLY IT IS BETTER **NOT** TO USE THE FOLLOWING MEDICINES IN THE TREATMENT OF DIARRHEA:

“Anti-diarrhea” medicines with bismuth subsalicylate (such as *Pepto-Bismol* or *Kaopectate*, p. 384) make diarrhea thicker and less frequent. But they do not correct dehydration or control infection. Some anti-diarrhea medicines, like loperamide (*Imodium*) or diphenoxylate (*Lomotil*) may even cause harm or make infections last longer.



“ANTI-DIARRHEA MEDICINES” ACT LIKE PLUGS. THEY KEEP
IN THE INFECTED MATERIAL THAT NEEDS TO COME OUT.



“Anti-diarrhea” mixtures containing neomycin or streptomycin should not be used. They irritate the gut and often do more harm than good.

Antibiotics like ampicillin and tetracycline are useful only in **some** cases of diarrhea (p. 158). But they themselves sometimes cause diarrhea, especially in small children. If, after taking these antibiotics for more than 2 or 3 days, diarrhea gets worse rather than better, stop taking them—the antibiotics may be the cause.

Chloramphenicol (p. 356) should never be used for diarrhea

Laxatives and purges should never be given to persons with diarrhea. They will make it worse and increase the danger of dehydration.

Special treatment in different cases of diarrhea:

While most cases of diarrhea are best treated by giving plenty of **liquids** and **food**, and **no medicine**, sometimes special treatment is needed.

In considering treatment, keep in mind that some cases of diarrhea, especially in small children, are caused by **infections outside the gut**. Always check for **infections of the ears**, the **throat**, and the **urinary system**. If found, these infections should be treated. Also look for signs of **measles**.

If the child has mild diarrhea together with signs of a cold, the diarrhea is probably caused by a virus, or “intestinal flu,” and no special treatment is called for. Give lots of liquids and all the food the child will accept.

In certain difficult cases of diarrhea, analysis of the stools or other tests may be needed to know how to treat it correctly. But usually you can learn enough from asking specific questions, seeing the stools, and looking for certain signs. Here are some guidelines for treatment according to signs.

1. Sudden, mild diarrhea. No fever. (Upset stomach? “Intestinal flu?”)

- ◆ Drink lots of liquids. Usually no special treatment is needed. It is usually best not to use “anti-diarrhea” medicines such as bismuth subsalicylate (*Kaopectate*, p. 384) or diphenoxylate (*Lomotil*). They are never necessary and do not help either to correct dehydration or get rid of infection so why waste money buying them? Never give them to persons who are very ill, or to small children.

2. Diarrhea with vomiting. (Many causes)

- ◆ If a person with diarrhea is also vomiting, the danger of dehydration is greater, especially in small children. It is very important to give the Rehydration Drink (p. 152), tea, soup, or whatever liquids he will take. **Keep giving the Drink, even if the person vomits it out again.** Some will stay inside. Give sips every 5 to 10 minutes.
- ◆ If you cannot control the vomiting or if the dehydration gets worse, seek medical help fast.



3. Diarrhea with mucus and blood. Often chronic. No fever. There may be diarrhea some days and constipation other days. (Possibly amebic dysentery. For more details, see pages 144 to 145.)

- ◆ Use metronidazole (p. 370). Take the medicine according to the recommended dose. If the diarrhea continues after treatment, seek medical advice.

4. **Severe diarrhea with blood, with fever.** (Bacterial dysentery caused by Shigella)

- ◆ Give ceftriaxone or ciprofloxacin (p. 358). Pregnant women and children under 18 years old should not use ciprofloxacin. (For children under 8 weeks old, seek medical help.) Shigella is often resistant to ampicillin (p. 352), cotrimoxazole (p. 357), and azithromycin, but they are still being used. If the first medicine you try does not bring improvement within 2 days, try another or seek medical help. Women in the first 3 months of pregnancy should not use cotrimoxazole (p. 357). Azithromycin is safe during pregnancy and for children. For adults, give 1 g (1000 mg) by mouth once a day for 3 days. For children's doses, see a health worker.
- ◆ Also give zinc, 20 mg once a day, for 14 days.

5. **Severe diarrhea with fever, usually no blood.**

- ◆ Fever may be partly caused by dehydration. Give lots of Rehydration Drink (p. 152). If the person is very ill and does not improve within 6 hours after beginning Rehydration Drink, seek medical help.
- ◆ Check for signs of typhoid fever. If present, treat for typhoid (p. 188).
- ◆ In areas where falciparum malaria is common, also treat persons with diarrhea and fever for malaria (p. 186), especially if they have an enlarged spleen.

6. **Yellow, bad smelling diarrhea with bubbles or froth, without blood or mucus.**

Often a lot of gas in the belly, and burps that taste bad, like sulfur.

- ◆ This may be caused by parasites called giardia (p. 145) or perhaps by malnutrition. In either case, plenty of liquid, nutritious food, and rest are often the best treatment. Severe giardia infections can be treated with metronidazole (p. 370). Quinacrine (*Atabrine*) is cheaper, but has worse side effects (p. 371).

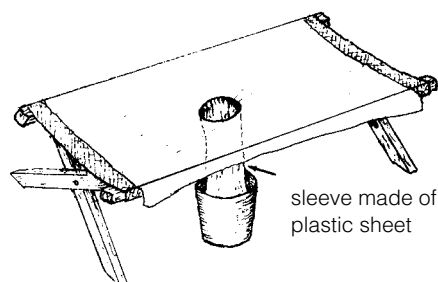
7. **Chronic diarrhea (diarrhea that lasts a long time or keeps coming back).**

- ◆ This can be in part caused by malnutrition, or by a chronic infection such as giardia or HIV. See that the child eats more nutritious food more times a day (p. 110). If the diarrhea still continues, seek medical help.

8. **Diarrhea like rice water.** (Cholera)

- ◆ Rice water stools in very large quantities may be a sign of cholera. In countries where this dangerous disease occurs, cholera often comes in *epidemics* (striking many people at once) and is usually worse in older children and adults. Severe dehydration can develop quickly, especially if there is vomiting also. It is important to treat the dehydration continuously with Rehydration Drink and other liquids (p. 152). Cholera should be reported to the health authorities. Seek medical help.

A “cholera bed” like this can be made for persons with very severe diarrhea. Watch how much liquid the person is losing and be sure he drinks larger amounts of Rehydration Drink. Give him the Drink almost continuously, and have him drink as much as he can.



Care of Babies with Diarrhea

Diarrhea is especially dangerous in babies and small children. Often no medicine is needed, but special care must be taken because a baby can die very quickly of dehydration.

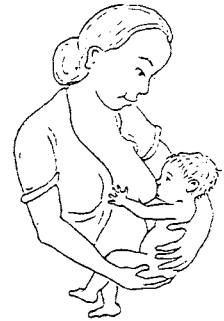
- ◆ **Continue breastfeeding** and also give sips of **Rehydration Drink**.

- ◆ If vomiting is a problem, give breast milk often, but only a little at a time. Also give Rehydration Drink in small sips every 5 to 10 minutes (see Vomiting, p. 161).

- ◆ If there is no breast milk, try giving frequent small feedings of some other milk or milk substitute (like milk made from soybeans) **mixed to half normal strength with boiled water**. If milk seems to make the diarrhea worse, give some other protein (mashed chicken, eggs, lean meat, or skinned mashed beans, mixed with sugar or well-cooked rice or another carbohydrate, and boiled water).

- ◆ If possible, give zinc supplements (p. 383).
- ◆ If the child is younger than 1 month, try to find a health worker before giving any medicine. If there is no health worker and the child is very sick, give him an infant syrup that contains ampicillin: half a teaspoon 4 times daily (p. 352). It is better not to use other antibiotics.

GIVE HIM BREAST MILK



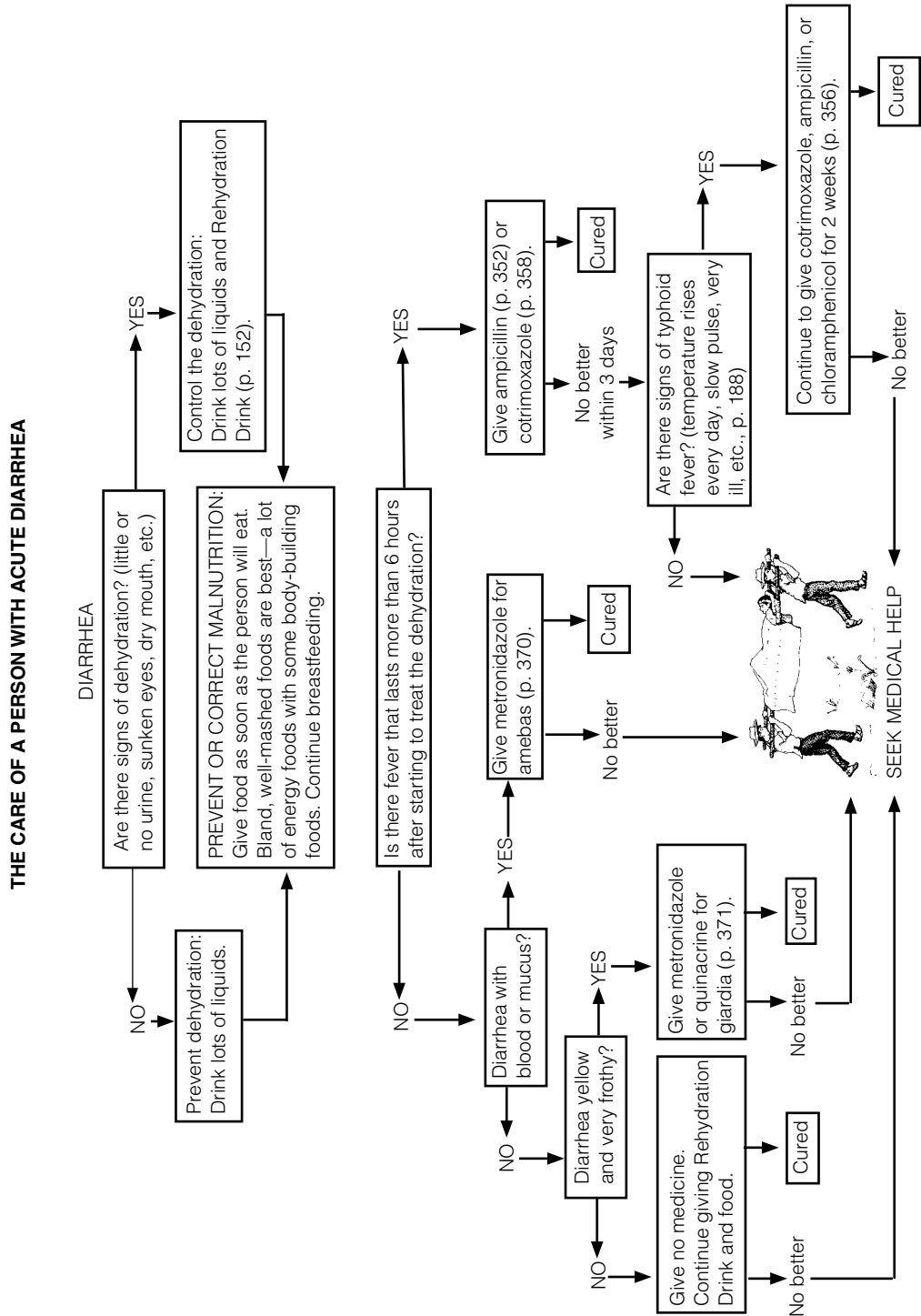
AND ALSO
REHYDRATION DRINK



When to Seek Medical Help in Cases of Diarrhea

Diarrhea and dysentery can be very dangerous—especially in small children.
In the following situations you should get medical help:

- if diarrhea lasts more than 4 days and is not getting better—or more than 1 day in a small child with severe diarrhea
- if the person shows signs of dehydration and is getting worse
- if the child vomits everything he drinks, or drinks nothing, or if frequent vomiting continues for more than 3 hours after beginning Rehydration Drink
- if the child begins to have seizures, or if the feet and face swell
- if the person was very sick, weak, or malnourished before the diarrhea began (especially a little child or a very old person)
- if there is much blood in the stools. This can be dangerous even if there is only very little diarrhea (see gut obstruction, p. 94)



VOMITING

Many people, especially children, have an occasional stomach upset with vomiting. Often no cause can be found. There may be mild stomach or gut ache or fever. This kind of simple vomiting usually is not serious and clears up by itself.

Vomiting is one of the signs of many different problems, some minor and some quite serious, so it is important to examine the person carefully. Vomiting often comes from a problem in the stomach or guts, such as: an infection (see diarrhea, p. 153), poisoning from spoiled food (p. 135), or acute abdomen (for example, appendicitis or something blocking the gut, p. 94). Also, almost any sickness with high fever or severe pain may cause vomiting, especially malaria (p. 186), hepatitis (p. 172), tonsillitis (p. 309), earache (p. 309), meningitis (p. 185), urinary infection (p. 234), gallbladder pain (p. 329) or migraine headache (p. 162).



Danger signs with vomiting—seek medical help quickly!

- dehydration that increases and that you cannot control (p. 152)
- severe vomiting that lasts more than 24 hours
- violent vomiting, especially if vomit is dark green, brown, or smells like shit (signs of obstruction, p. 94)
- constant pain in the gut, especially if the person cannot defecate (shit) or if you cannot hear gurgles when you put your ear to the belly (see acute abdomen: obstruction, appendicitis, p. 94)
- vomiting of blood (ulcer, p. 128; cirrhosis, p. 328)

To help control simple vomiting:



- ◆ Eat nothing while vomiting is severe.
- ◆ Sip a cola drink or ginger ale. Some herbal teas, like camomile, may also help.
- ◆ For dehydration give small frequent sips of cola, tea, or Rehydration Drink (p. 152).
- ◆ If vomiting does not stop soon, use a vomit control medicine like promethazine (p. 387) or diphenhydramine (p. 388). But do not give these medicines to children under 2 years old.

Most of these come in pills, syrups, injections, and suppositories (soft pills you push up the *anus*). Tablets or syrup can also be put up the anus. Grind up the tablet in a little water. Put it in with an enema set or syringe without a needle.

When taken by mouth, the medicine should be swallowed with very little water and nothing else should be swallowed for 5 minutes. Never give more than the recommended dose. Do not give a second dose until dehydration has been corrected and the person has begun to urinate. If severe vomiting and diarrhea make medication by mouth or anus impossible, give an injection of one of the vomit-control medicines. Promethazine may work best. Take care not to give too much.

HEADACHES AND MIGRAINES

SIMPLE HEADACHE can be helped by rest and aspirin. It often helps to put a cloth soaked in hot water on the back of the neck and to massage (rub) the neck and shoulders gently. Some other home remedies also seem to help.

Headache is common with any sickness that causes fever. If headache is severe, check for signs of meningitis (p. 185).

Headaches that keep coming back may be a sign of a chronic illness, poor nutrition, or chemicals at work or in the environment. It is important to eat well and get enough sleep. If you think that chemicals could be causing the headaches or if they do not go away, talk with a health worker.

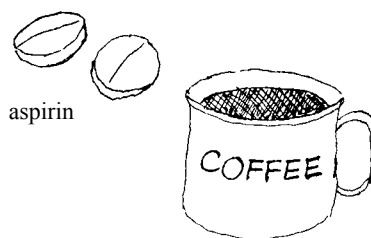
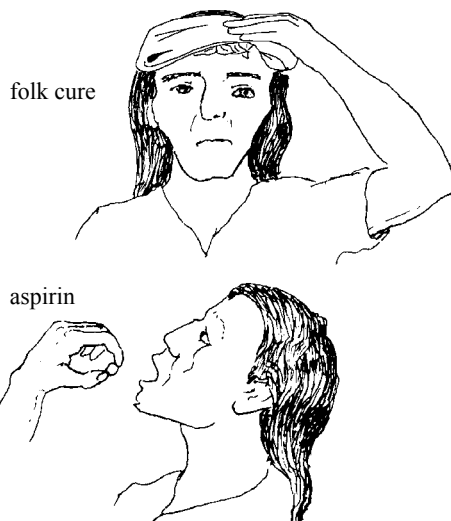
A **MIGRAINE** is a severe throbbing headache often on one side of the head only. Migraine attacks may come often, or months or years apart.

A typical migraine begins with blurring of vision, seeing strange spots of light, or numbness of one hand or foot. This is followed by severe headache, which may last hours or days. Often there is vomiting. Migraines are very painful, but not dangerous.

TO STOP A MIGRAINE, DO THE FOLLOWING AT THE FIRST SIGN:

- ◆ Take 2 aspirins with a cup of strong coffee or strong black tea.
- ◆ Lie down in a dark, quiet place. Do your best to relax. Try not to think about your problems.
- ◆ For especially bad migraine headaches, take aspirin, if possible with codeine, or with another sedative. Or obtain pills of ergotamine with caffeine (*Cafergot*, p. 381). Take 2 pills at first and 1 pill every 30 minutes until the pain goes away. Do not take more than 6 pills in 1 day.

For simple or nervous headache, folk cures sometimes work as well as modern medicine.



WARNING: Do not use *Cafergot* during pregnancy.

COLDS AND THE FLU

Colds and the flu are common virus infections that may cause runny nose, cough, sore throat, and sometimes fever or pain in the joints. There may be mild diarrhea, especially in young children.

Colds and the flu almost always go away without medicine. **Do not use penicillin, tetracycline, or other antibiotics**, as they will not help at all and may cause harm.



- ◆ Drink plenty of water and get enough rest.
- ◆ Aspirin, acetaminophen, or ibuprofen (pages 380 to 381) helps lower temperature and relieve body aches and headaches. More expensive “cold tablets” are no better than these.
- ◆ No special diet is needed. However, fruit juices, especially orange juice or lemonade, are helpful.

For treating coughs and stuffy noses that come with colds, see the next pages.

WARNING: Do not give any kind of antibiotic or injections to a child with a simple cold. They will not help and may cause harm.

If a cold or the flu lasts more than a week, or if the person has fever, coughs up a lot of *phlegm* (mucus with pus), has shallow fast breathing or chest pain, he could be developing bronchitis or pneumonia (pages 170 and 171). An antibiotic may be called for. The danger of a cold turning into pneumonia is greater in old people, in those who have lung problems like chronic bronchitis, in people who cannot move much, and in people with HIV. People with HIV can take cotrimoxazole daily to prevent pneumonia and other infections (p. 357).

Sore throat is often part of a cold. No special medicine is needed, but it may help to gargle with warm water. However, if the sore throat begins suddenly, with high fever, it could be a strep throat. Special treatment is needed (p. 310).

Prevention of colds:

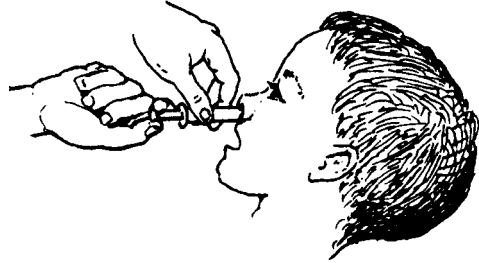
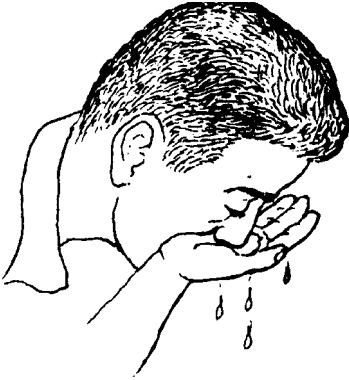
- ◆ Getting enough sleep and eating well helps prevent colds. Eating oranges, tomatoes, and other fruit containing vitamin C may help. Washing hands often—especially before touching your face, nose, mouth, or anything you put into your mouth—is also good prevention.
- ◆ Contrary to popular belief, colds do not come from getting cold or wet (although getting very cold, wet, or tired can make a cold worse). A cold is “caught” from others who have the infection and sneeze the virus into the air.
- ◆ To keep from giving his cold to others, the sick person should eat and sleep separately—and take special care to keep far away from small babies. He should cover his nose and mouth when he coughs or sneezes, and wash his hands often if possible.
- ◆ To prevent a cold from leading to earache (p. 309), **try not to blow your nose—just wipe it**. Teach children to do the same.

STUFFY AND RUNNY NOSES

A stuffy or runny nose can result from a cold or allergy (see next page). A lot of mucus in the nose may cause ear infections in children or sinus problems in adults.

To help clear a stuffy nose, do the following:

1. In little children, carefully suck the mucus out of the nose with a suction bulb or syringe **without a needle**, like this:



2. Older children and adults can put a little salt water into their hand and sniff it into the nose. This helps to loosen the mucus. The water should not be too salty. $\frac{1}{4}$ teaspoon of salt mixed in a cup of water is enough.

3. Breathing hot water vapor as described on page 168 helps clear a stuffy nose.

4. Wipe a runny or stuffy nose, but **try not to blow it**. Blowing the nose may lead to earache and sinus infections.

5. Persons who often get earaches or sinus trouble after a cold can help prevent these problems by using **decongestant** nose drops with phenylephrine or ephedrine (p. 384). After sniffing a little salt water, put the drops in the nose like this:

With the head sideways, put 2 or 3 drops in the lower nostril. Wait a couple of minutes and then do the other side.

CAUTION: Use decongestant drops no more than 3 times a day, for no more than 3 days.



A decongestant syrup (with phenylephrine or something similar) may also help.

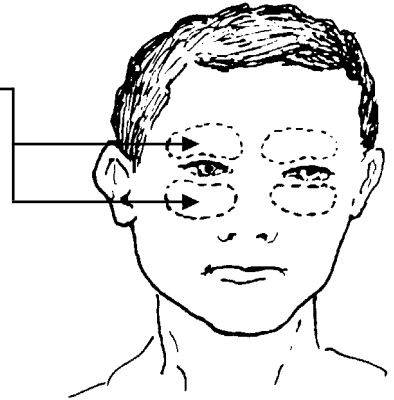
Prevent ear and sinus infections—try not to blow your nose, just wipe it.

SINUS TROUBLE (SINUSITIS)

Sinusitis is an acute or chronic (long-term) inflammation of the sinuses or hollows in the bone that open into the nose. It usually occurs after a person has had an infection of the ears or throat, or after a bad cold.

Signs:

- Pain in the face above and below the eyes. (It hurts more when you tap lightly just over the bones, or when the person bends over.)
- Thick mucus or pus in the nose, perhaps with a bad smell. The nose is often stuffy.
- Fever (sometimes).
- Certain teeth may hurt.



Treatment:

- ◆ Drink a lot of water.
- ◆ Sniff a little salt water into the nose (p. 164), or breathe steam from hot water to clear the nose (p. 168).
- ◆ Put hot compresses on the face.
- ◆ Use decongestant nose drops such as phenylephrine (*Neo-synephrine*, p. 384).
- ◆ Use an antibiotic such as tetracycline (p. 355), ampicillin (p. 352), or penicillin (p. 351).
- ◆ If the person does not get better, seek medical help.

Prevention:

When you get a cold and a stuffy nose, try to keep your nose clear. Follow the instructions on page 164.

HAY FEVER (ALLERGIC RHINITIS)

Runny nose and itchy eyes can be caused by an allergic reaction to something in the air that a person has breathed in (see the next page). It is often worse at certain times of year.

Treatment:

Use an antihistamine such as chlorpheniramine (p. 386). Dimenhydrinate (*Dramamine*, p. 388), usually sold for motion sickness, also works.

Prevention:

Find out what things cause this reaction (for example: dust, chicken feathers, *pollen*, mold) and try to avoid them.



ALLERGIC REACTIONS

An allergy is a disturbance or reaction that affects only certain persons when things they are sensitive or allergic to are . . .

- breathed in
- eaten
- injected
- or touch the skin

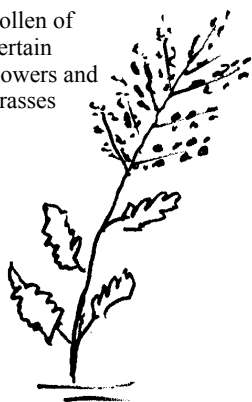
Allergic reactions, which can be mild or very serious, include:

- itching rashes, lumpy patches, or *hives* (p. 203)
- runny nose and itching or burning eyes (hay fever, p. 165)
- irritation in the throat, difficulty breathing, or asthma (see next page)
- allergic shock (p. 70)
- diarrhea (in children allergic to milk—a rare cause of diarrhea, p. 156)

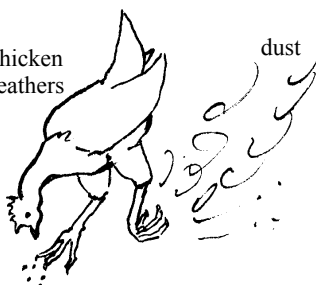
An allergy is not an infection and cannot be passed from one person to another. However, children of allergic parents also tend to have allergies.

Often allergic persons suffer more in certain seasons—or whenever they come in touch with the substances that bother them. Common causes of allergic reactions are:

pollen of
certain
flowers and
grasses



chicken
feathers

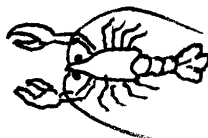


dust

hair from cats and
other animals



specific foods, especially fish,
shellfish, beer, and others



kapok or feather
pillows



certain medicines,
especially injections of
penicillin or antitoxins
made from horse serum
(p. 70)



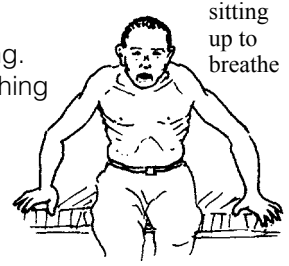
chemicals in your home,
school, or work



moldy blankets or
clothes

ASTHMA

A person with asthma has fits or attacks of difficult breathing. Listen for a hissing or wheezing sound, especially when breathing out. When he breathes in, the skin behind his collar bones and between his ribs may suck in as he tries to get air. If the person cannot get enough air, his nails and lips may turn blue, and his neck veins may swell. Usually there is no fever.



Asthma often begins in childhood and may be a problem for life. It is not **contagious**, but is more common in children with relatives who have asthma. It is generally worse during certain months of the year or at night.

An asthma attack may be caused by eating or breathing things to which the person is allergic (p. 166). In children asthma often starts with a cold. Nervousness or worry may bring on an asthma attack. Asthma can also be caused by unclean air (air pollution), such as smoke from cigarettes, inside cooking fires, burning fields, or cars and trucks.

Treatment:

- ◆ If asthma gets worse inside the house, the person should go outside to a place where the air is cleanest. Remain calm and be gentle with the person. Reassure him.
- ◆ Give a lot of liquids. This loosens mucus and makes breathing easier. Breathing water vapor may also help (p. 168).
- ◆ Strong coffee or black tea can help relieve an asthma attack if you do not have any medicines.
- ◆ For attacks, treat with the rescue inhaler salbutamol (albuterol, p. 385) as often as needed. This is a spray medicine that you want to breathe in as deeply as possible.
- ◆ For frequent attacks, or asthma that makes you gasp for breath while walking or during mild exercise, also use the controller inhaler (beclomethasone, p. 386). Using a controller medicine can prevent attacks, save you money, and make you feel better than always responding to an asthma emergency. Using a “spacer” with your inhaler allows more medicine to get to the lungs.
- ◆ For severe asthma where you cannot get enough air and do not improve with salbutamol, use prednisolone by mouth right away, and then continue for 3 to 7 days (p. 386). In emergencies if you have no other medicines you can inject epinephrine (adrenaline, p. 386) under the skin.
- ◆ In rare cases, worms cause asthma. Try giving mebendazole (p. 375) to a child who starts having asthma if you think she has worms.
- ◆ **If the person does not get better, seek medical help.**



See page 386 to learn how to make a spacer for your inhaler.

Prevention:

A person with asthma should avoid eating or breathing things that bring on attacks. The house or work place should be kept clean. Keep chickens and other animals outside. Air bedding in the sunshine. Sometimes it helps to sleep outside in the open air. Drink at least 8 glasses of water each day to keep the mucus loose. Persons with asthma may improve when they move to where the air is cleaner.

If you have asthma do not smoke—smoking damages your lungs even more.

COUGH

Coughing is not a sickness in itself, but is a sign of many different sicknesses that affect the throat, lungs, or *bronchi* (the network of air tubes going into the lungs). Below are some of the problems that cause different kinds of coughs:

<p>DRY COUGH WITH LITTLE OR NO PHLEGM:</p> <p>cold or flu (p. 163) worms—when passing through the lungs (p. 140) measles (p. 311) smoker’s cough (smoking, p. 149)</p>	<p>COUGH WITH MUCH OR LITTLE PHLEGM:</p> <p>bronchitis (p. 170) pneumonia (p. 171) asthma (p. 167) smoker’s cough, especially when getting up in the morning (p. 149)</p>	<p>COUGH WITH A WHEEZE OR WHOOP AND TROUBLE BREATHING:</p> <p>asthma (p. 167) whooping cough (p. 313) diphtheria (p. 313) heart trouble (p. 325) something stuck in the throat (p. 79)</p>
<p>CHRONIC OR PERSISTENT COUGH:</p> <p>tuberculosis (p. 179) smoker’s or miner’s cough (p. 149) asthma (repeated attacks, p. 167) chronic bronchitis (p. 170) emphysema (p. 170)</p>	<p>COUGHING UP BLOOD:</p> <p>tuberculosis (p. 179) pneumonia (yellow, green, or blood-streaked phlegm, p. 171) severe worm infection (p. 140) cancer of the lungs or throat (p. 149)</p>	

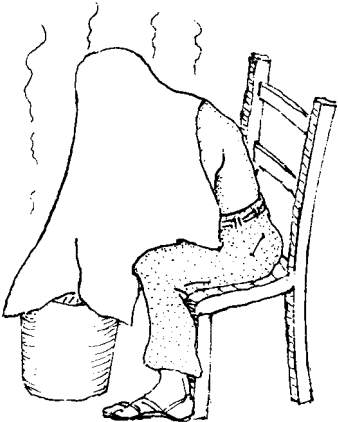
Coughing is the body’s way of cleaning the breathing system and getting rid of phlegm (mucus with pus) and germs in the throat or lungs. So when a cough produces phlegm, **do not take medicine to stop the cough, but rather do something to help loosen and bring up the phlegm.**

Treatment for cough:

1. **To loosen mucus** and ease any kind of cough, **drink lots of water.** This works better than any medicine.

Also **breathe hot water vapors.** Sit on a chair with a bucket of very hot water at your feet. Place a sheet over the bucket to catch the vapors as they rise. Breathe the vapors deeply for 15 minutes. Repeat several times a day. Some people like to add mint or eucalyptus leaves or *Vaporub*, but hot water works just as well alone.

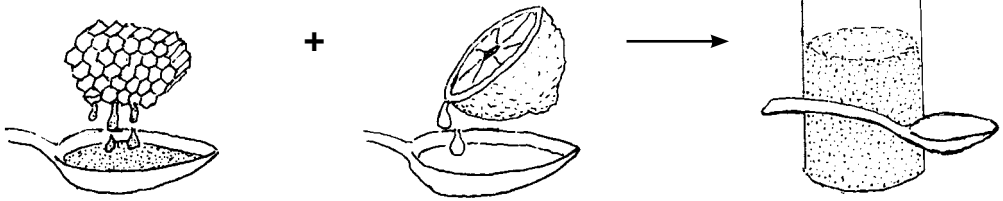
CAUTION: Do not use eucalyptus or *Vaporub* if the person has asthma. They make it worse.



2. **For all kinds of cough**, especially a dry cough, the following cough syrup can be given:

Mix: 1 part
 honey

1 part
lemon juice



Take a teaspoonful every 2 or 3 hours.

WARNING: Do not give honey to babies under 1 year. Make the syrup with sugar instead of honey.

3. **For a severe dry cough that does not let you sleep**, you can take a syrup with codeine (p. 383). Tablets of aspirin with codeine (or even aspirin alone) also help. If there is a lot of phlegm or wheezing, do not use codeine.

4. **For a cough with wheezing** (difficult, noisy breathing), see Asthma (p. 167), Chronic Bronchitis (p. 170), and Heart Trouble (p. 325).

5. **Try to find out what sickness is causing the cough and treat that.** If the cough lasts a long time, if there is blood, pus, or smelly phlegm in it, or if the person is losing weight or has continual difficulty breathing, see a health worker.

6. **If you have any kind of a cough, do not smoke.** Smoking damages the lungs.

To prevent a cough, do not smoke.

To cure a cough, treat the illness that causes it—and do not smoke.

To calm a cough, and loosen phlegm, drink lots of water—and do not smoke.

HOW TO DRAIN MUCUS FROM THE LUNGS (POSTURAL DRAINAGE)

When a person who has a bad cough is very old or weak and cannot get rid of the sticky mucus or phlegm in his chest, it will help if he drinks a lot of water. Also do the following:

- ◆ First, have him breathe hot water vapors to loosen the mucus.
- ◆ Then pound him lightly on the back with a cupped hand. This will help to bring out the mucus.



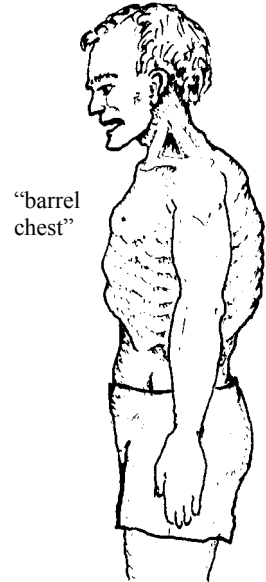
BRONCHITIS

Bronchitis is an infection of the bronchi or tubes that carry air to the lungs. It causes a noisy cough, often with mucus or phlegm. Bronchitis is usually caused by a virus, so antibiotics do not generally help. **Use antibiotics only if the bronchitis lasts more than a week** and is not getting better, if the person shows signs of **pneumonia** (see the following page), or if he already has a **chronic lung problem**.

CHRONIC BRONCHITIS

Signs:

- A cough, with mucus that lasts for months or years. Sometimes the cough gets worse, and there may be fever. A person who has this kind of cough, but does not have another long term illness such as tuberculosis or asthma, probably has chronic bronchitis.
- It occurs most frequently in older persons who have been heavy smokers.
- It can lead to emphysema, a very serious and incurable condition in which the tiny air pockets of the lungs break down. A person with emphysema has a hard time breathing, especially with exercise, and his chest becomes big "like a barrel."



Emphysema can result from chronic asthma, chronic bronchitis, or smoking.

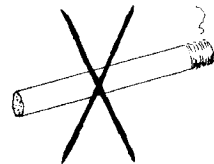
Treatment:

- ◆ Stop smoking.
- ◆ Take an anti-asthma medicine with salbutamol (p. 385).
- ◆ Persons with chronic bronchitis should use cotrimoxazole or amoxicillin every time they have a cold or flu with a fever.
- ◆ If the person has trouble coughing up sticky phlegm, have him breathe hot water vapors (p. 168) and then help him with postural drainage (p. 169).



**If you have a chronic cough
(or want to prevent one),**

DO NOT SMOKE!

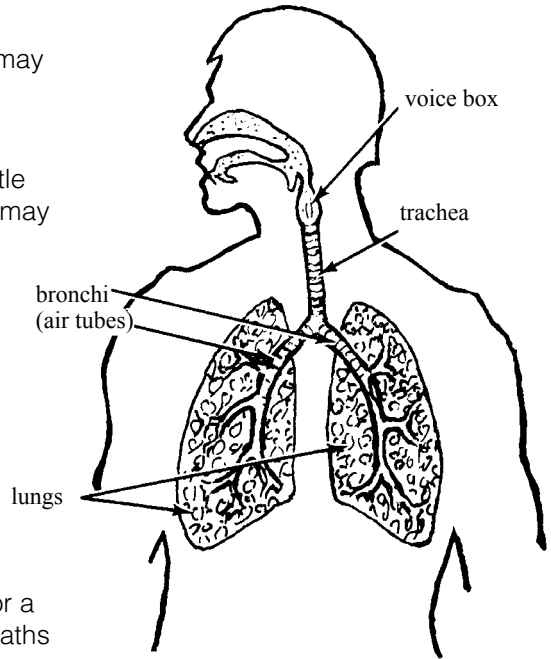


PNEUMONIA

Pneumonia is an *acute* infection of the lungs. It often occurs after another respiratory illness or after any very serious illness, especially in babies and old people. Also, persons with HIV may develop pneumonia.

Signs:

- Fever (infants and older people may have no fever).
- Chills.
- Rapid, shallow breathing, with little grunts or wheezing. The nostrils may spread with each breath.
- Cough (often with yellow, greenish, or slightly bloody mucus).
- Chest pain (sometimes).
- Person looks very ill.
- Cold sores on the face or lips (p. 232).



A very sick child with fast, shallow breathing probably has pneumonia. For a newborn, this means more than 60 breaths a minute. For a baby between 2 months and 1 year, fast breathing is more than 50 breaths a minute, and for a child between 1 and 5 years old, 40 breaths a minute. (If breathing is rapid and deep, check for dehydration, p. 151, or hyperventilation, p. 24.) Do not count the breaths while the child is crying or just after she has stopped.

Treatment:

- ◆ For pneumonia, give amoxicillin by mouth, 1 g, 3 times a day for 5 to 7 days, or give amoxicillin with clavulanic acid, 500 mg, 3 times a day for 5 to 7 days (pages 352 to 353). Give small children $\frac{1}{4}$ to $\frac{1}{2}$ the adult dose. Also give another antibiotic. Azithromycin works best: give 500 mg once a day for 3 days. If it is not available, give doxycycline, 100 mg, 2 times a day for 5 to 7 days.
- ◆ Give aspirin, acetaminophen, or ibuprofen (pages 380 to 381) to lower the temperature and lessen the pain. Acetaminophen is safer for children under 12.
- ◆ Give plenty of liquids. If the person will not eat, give him liquid foods or Rehydration Drink (p. 152).
- ◆ Ease the cough and loosen the mucus by giving the person plenty of water and having him breathe hot water vapors (p. 168). Postural drainage may also help (p. 169).
- ◆ If the person is wheezing, an anti-asthma medicine may help (p. 385).

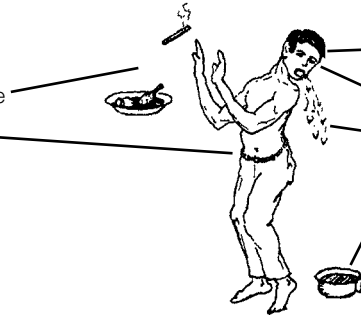
HEPATITIS

Hepatitis is an inflammation of the liver usually caused by a virus. It can also be caused by bacteria, alcohol, or chemical poisoning. There are several major types of hepatitis (for example, A, B, C, D, and E) and it can spread even when someone has no signs of disease. Even though people call it “the fever” in some places (p. 26), hepatitis may not cause fever.

Hepatitis A and E spread *feces-to-mouth* (pages 131 to 133) so are more common where people do not have clean water and good sanitation. These tend to cause mild illness in most people, and children may have no symptoms at all. Hepatitis B and C spread through body fluids including blood, semen, and vaginal fluid. These can cause chronic illness and death from scarring of the liver (cirrhosis) or liver cancer. Hepatitis D infection is possible only if someone has already been infected with hepatitis B.

Signs:

- tiredness
- does not want to eat or smoke
- pain in right side near the liver
- muscle or joint pain
- fever
- yellow skin and eyes
- nausea and vomiting
- dark urine and whitish stools



Treatment:

- ◆ There is no treatment for hepatitis A or E, but most people recover from these illnesses on their own after several weeks. Anti-retroviral medicines can treat hepatitis B and cure hepatitis C.
- ◆ Antibiotics do not work against hepatitis. Some medicines such as acetaminophen will cause added damage to the liver if taken while sick with hepatitis.
- ◆ A person sick with hepatitis should rest and drink lots of liquids: orange, papaya, and other juices plus broth or vegetable soup. Vitamins may help. To control vomiting, see page 161.
- ◆ When the sick person can eat, give a balanced meal. Do not give a lot of protein (meat, eggs, fish, etc.) because this makes the damaged liver work too hard. Avoid lard and fatty foods. The sick person should not drink any alcohol for at least 6 months.

Prevention:

- ◆ Vaccines prevent both hepatitis A and B. The hepatitis B vaccine is part of the standard vaccinations given to all babies (p. 147). Older children and adults can get vaccinated if they did not as babies.
- ◆ Small children can have hepatitis without signs of illness, but can still spread the infection to others. It is very important that everyone in the house follow all the guidelines of cleanliness with great care (pages 133 to 139).
- ◆ To prevent the spread of hepatitis A and E, bury the stools of anyone sick with these illnesses. The sick person, his family, and caregivers must stay clean and wash their hands often.
- ◆ To prevent the spread of hepatitis B and C, use condoms (p. 287), follow the HIV prevention suggestions on p. 403, and always use clean and sterilized medical tools including needles and syringes (p. 74).

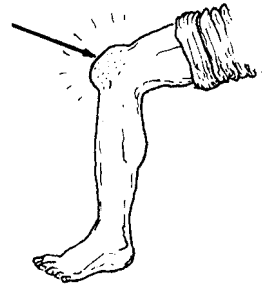
ARTHRITIS (PAINFUL, INFLAMED JOINTS)

Most chronic joint pain, or arthritis, in older people cannot be cured completely. However, the following offer some relief:

- ◆ **Rest.** If possible, avoid hard work and heavy exercise that bother the painful joints. If the arthritis causes some fever, it helps to take naps during the day.
- ◆ **Place cloths soaked in hot water** on the painful joints (p. 195).
- ◆ **Aspirin** helps relieve pain; the dose for arthritis is higher than that for calming other pain. Adults should take 3 tablets, 4 times a day. If your ears begin to ring, take less. **To avoid stomach problems caused by aspirin, always take it with food, or a large glass of water.** If stomach pain continues, take the aspirin not only with food and lots of water, but also with a spoonful of an antacid such as *Maalox* or *Gelusil*.
- ◆ It is important to do simple **exercises** to help maintain or increase the range of motion in the painful joints.

If only one joint is swollen and feels hot, it may be infected—especially if there is fever. Use an antibiotic such as penicillin (p. 350) and if possible see a health worker.

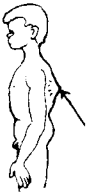
Painful joints in young people and children may be a sign of other serious illness, such as rheumatic fever (p. 310) or tuberculosis (p. 179). For more information on joint pain, see *Disabled Village Children*, Chapters 15 and 16.



BACK PAIN

Back pain has many causes. Here are some:

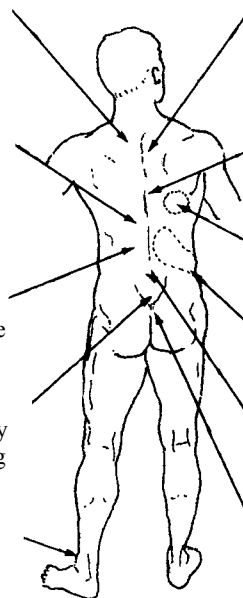
Chronic upper back pain with cough and weight loss may be TB of the lungs (p. 179).



Mid back pain in a child may be TB of the spine, especially if the backbone has a hump or lump.

Low back pain that is worse the day after heavy lifting or straining may be a sprain.

Severe low back pain that first comes suddenly when lifting or twisting may be a *slipped disc*, especially if one leg or foot becomes painful or numb and weak. This can result from a pinched nerve.



Standing or sitting with the shoulder drooped is a common cause of backache.



In older people, chronic back pain is often arthritis.

Pain in the upper right back may be from a gallbladder problem (p. 329).

Acute (or chronic) pain here may be a urinary problem (p. 234).

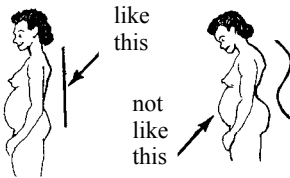
Low backache is common for some women during menstrual periods or pregnancy (p. 248).

Very low back pain sometimes comes from problems in the uterus, ovaries, or rectum.

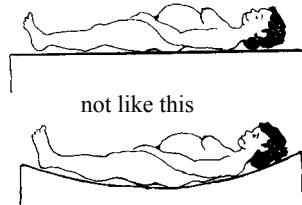
Treatment and prevention of back pain:

- ◆ If back pain has a cause like TB, a urinary infection, or gallbladder disease, treat the cause. Seek medical help if you suspect a serious disease.
- ◆ Simple backache, including that of pregnancy, can often be prevented or made better by:

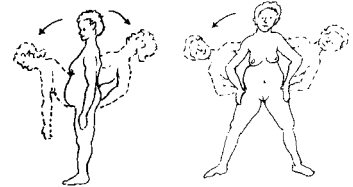
always standing straight



sleeping on a firm flat surface like this

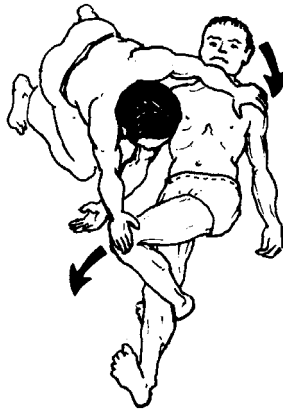
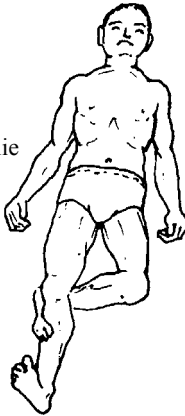


back-bending exercises (done very slowly)



- ◆ Aspirin and hot soaks (p. 195) help calm most kinds of back pain.
- ◆ For sudden, severe, low back pain that comes from twisting, lifting, bending, or straining, quick relief can sometimes be brought like this:

Have the person lie with one foot tucked under his knee.

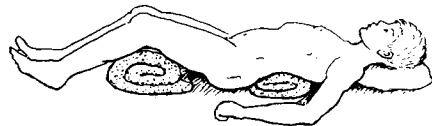


Then, holding this shoulder down, gently but steadily push this knee over so as to twist the back.

Do this first on one side and then the other.

CAUTION: Do not try this if the back pain is from a fall or injury.

- ◆ If back pain from lifting or twisting is sudden and severe with knife-like pain when you bend over, if the pain goes into the leg(s), or if a foot becomes numb or weak, this is serious. A nerve coming from the back may be pinched by a slipped disc (pad between the bones of the back). It is best to rest flat on your back for a few days. It may help to put something firm under the knees and mid back.



- ◆ Take aspirin and use hot soaks. If pain does not begin to get better in a few days, seek medical advice.

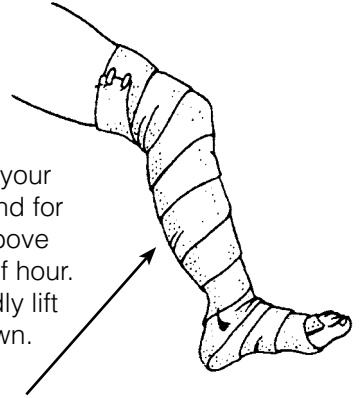
VARICOSE VEINS

Varicose veins are veins that are swollen, twisted, and often painful. They are often seen on the legs of older people and of women who are pregnant or who have had many children.

Treatment:

There is no medicine for varicose veins. But the following will help:

- ◆ Do not spend much time standing or sitting with your feet down. If you have no choice but to sit or stand for long periods, try to lie down with your feet up (above the level of the heart) for a few minutes every half hour. When standing, try to walk in place. Or, repeatedly lift your heels off the ground and put them back down. Also, sleep with your feet up (on pillows).
- ◆ Use elastic stockings (support hose) or elastic bandages to help hold in the veins. Be sure to take them off at night.
- ◆ Taking care of your veins in this way will help prevent chronic sores or varicose ulcers on the ankles (p. 213).



PILES (HEMORRHOIDS)

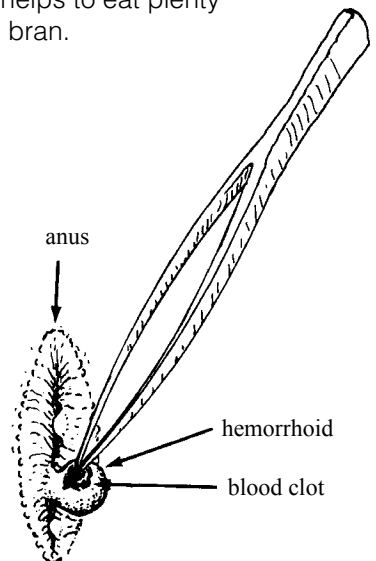
Piles or hemorrhoids are varicose veins of the anus or rectum, which feel like little lumps or balls. They may be painful, but are not dangerous. They frequently appear during pregnancy and may go away afterwards.

- ◆ Certain bitter plant juices (witch hazel, cactus, etc.) dabbed on hemorrhoids help shrink them. So do hemorrhoid *suppositories* (p. 393).
- ◆ Sitting in a bath of warm water can help the hemorrhoid heal.
- ◆ Piles may be caused in part by constipation. It helps to eat plenty of fruit or food with a lot of fiber, like cassava or bran.
- ◆ Very large hemorrhoids may require an operation. Get medical advice.

If a hemorrhoid begins to bleed, the bleeding can sometimes be controlled by pressing with a clean cloth directly on the hemorrhoid. If the bleeding still does not stop, seek medical advice. Or try to control the bleeding by removing the clot that is inside the swollen vein.

First, clean the anus with soap and water. Use a blade that has been sterilized by boiling to cut a small opening in the hemorrhoid. Use sterilized tweezers to pull out the clot. Put pressure on the cut with a clean cloth until bleeding stops.

CAUTION: Do not try to cut the hemorrhoid out. The person can bleed to death.



SWELLING OF THE FEET AND OTHER PARTS OF THE BODY

Swelling of the feet may be caused by a number of different problems, some minor and others serious. But if the face or other parts of the body are also swollen, this is usually a sign of serious illness.

Women's feet sometimes swell during the last three months of pregnancy. This is usually not serious. It is caused by the weight of the child that presses on the veins coming from the legs in a way that limits the flow of blood. However, if the woman also has high blood pressure, swollen face, a lot of protein in her urine, or sudden weight gain, she may be suffering from *pre-eclampsia* (p. 249). Seek medical help fast.

Old people who spend a lot of time sitting or standing in one place often get swollen feet because of poor circulation. However, swollen feet in older persons may also be due to heart trouble (p. 325) or, less commonly, kidney disease (p. 234).

Swelling of the feet in small children may result from anemia (p. 124) or malnutrition (p. 107). In severe cases of malnutrition the face and hands may also become swollen (see "Kwashiorkor," p. 113).

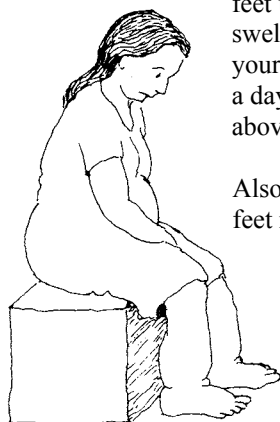
Treatment:

To reduce swelling, treat the sickness that causes it. Use little or no salt in food. Herbal teas that make people urinate a lot usually help (see corn silk, p. 12). Also do the following:

WHEN YOUR FEET ARE SWOLLEN:

Do not spend time sitting with your feet down. This makes them swell more.

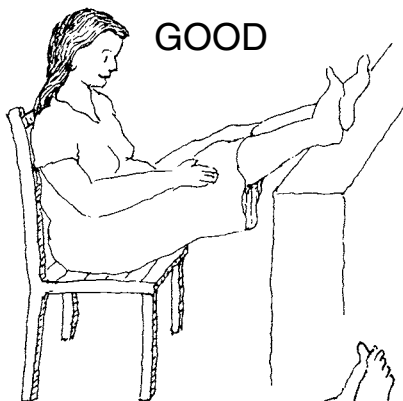
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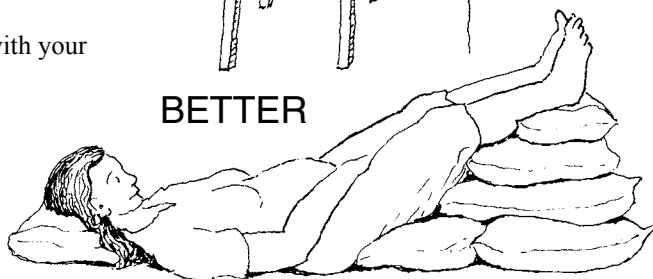
When you sit, put your feet up high. This way the swelling becomes less. Put your feet up several times a day. Your feet should be above the level of your heart.

Also sleep with your feet raised.

GOOD

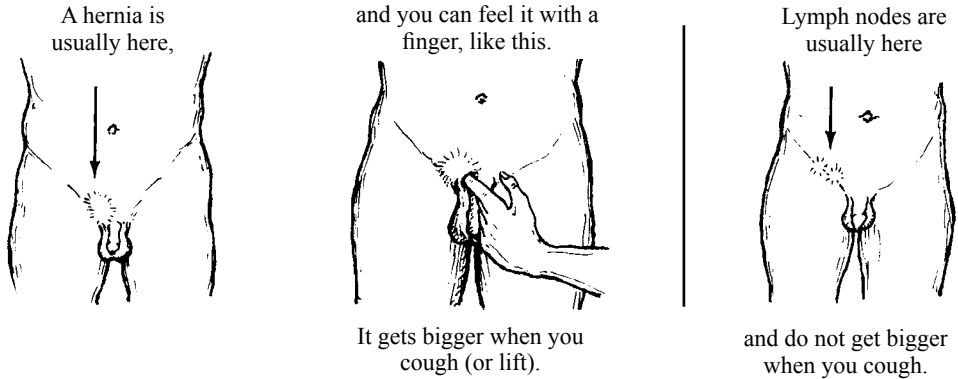


BETTER



HERNIA (RUPTURE)

A hernia is an opening or tear in the muscles covering the belly. This permits a loop of gut to push through and form a lump under the skin. Hernias usually come from lifting something heavy, or straining (as can happen while giving birth). Some babies are born with a hernia (p. 317). In men, hernias are common in the groin. Swollen lymph nodes (p. 88) may also cause lumps in the groin. However . . .



How to prevent a hernia:

Lift heavy things like this



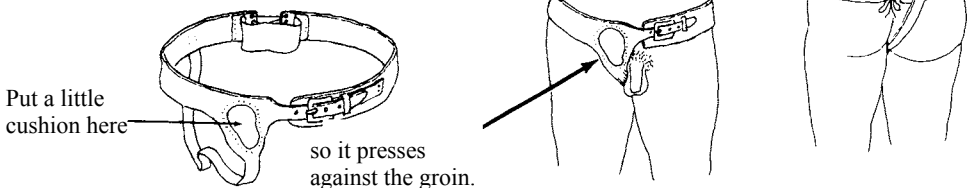
not like this.



How to live with a hernia:

- ◆ Avoid lifting heavy objects.
- ◆ Make a truss to hold the hernia in.

PLAN FOR A SIMPLE TRUSS:



CAUTION: If a hernia suddenly becomes large or painful, try to make it go back in by lying with the feet higher than the head and pressing gently on the bulge. If it will not go back, seek medical help.

If the hernia becomes very painful and causes vomiting, and the person cannot have a bowel movement, this can be very dangerous. Surgery may be necessary. Seek medical help fast. In the meantime, treat as for Appendicitis (p. 95).

SEIZURES (CONVULSIONS)

We say a person has a seizure when he suddenly loses consciousness and makes strange, jerking movements (convulsions). Seizures come from a condition in the brain. In small children, common causes of seizures are high fever and severe dehydration. In very ill persons, the cause may be meningitis, malaria of the brain (severe malaria), or poisoning. In pregnancy, it may be eclampsia (p. 249). A person who often has seizures may have epilepsy.

- ◆ Try to figure out the cause of a seizure and treat it, if possible.
- ◆ If the child has a high fever, lower it with cool water (p. 76) or paracetamol (p 380).
- ◆ If the child is dehydrated, give an enema of Rehydration Drink slowly.
Send for medical help. Give nothing by mouth during a seizure.
- ◆ If there are signs of meningitis (p. 185), begin treatment at once. Seek medical help.
- ◆ If you suspect severe malaria, inject quinine or artesunate (pages 369 and 367).
- ◆ If you suspect eclampsia, give medicine (p. 390).

EPILEPSY

Epilepsy causes seizures in people who otherwise seem fairly healthy. Seizures may come hours, days, weeks, or months apart. In some persons they cause loss of consciousness, violent movements, or the eyes to roll back. In mild types of epilepsy the person may suddenly “blank out” a moment, make strange movements, or behave oddly. Epilepsy may come from brain injury at birth, high fever in infancy, injuries to the head and brain, pesticide or chemical poisoning, or alcohol and drug use. Epilepsy is not an infection and cannot be “caught.” It is often a life-long problem. However, babies sometimes get over it.

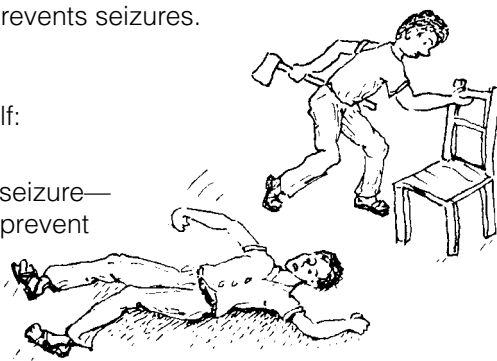
Medicines to prevent epileptic seizures:

Note: These do not cure epilepsy; they help prevent seizures. Often the medicine must be taken for life.

- ◆ Carbamazepine and phenobarbital often control epilepsy. Valproate or phenytoin may work when other medicines do not (pages 390 to 391).
- ◆ Always use the lowest possible dose that prevents seizures.

When a person is having a seizure:

- ◆ Try to keep the person from hurting himself: move away all hard or sharp objects.
- ◆ Put nothing in the person's mouth during a seizure—no food, drink, medicine, nor any object to prevent biting the tongue.
- ◆ After the seizure the person may be confused and sleepy. Let them rest.
- ◆ If a seizure lasts more than 5 minutes, put liquid diazepam in the rectum using a plastic syringe without a needle. For dosage see page 391. Do not inject phenobarbital or diazepam into the muscles.



For more information on seizures, see *Disabled Village Children*, Chapter 29.