

Using the Contents, Index, Page References, and Vocabulary

Note: Some instructors may feel that certain things explained in this chapter are very obvious. They may think that to teach them would be a waste of time, or even an insult to the students. But skills in using an index and looking up page references should not be taken for granted. **If you allow time for explaining and helping students master these basic skills, it can make a big difference in their problem-solving abilities.**

LEARNING HOW TO LOOK THINGS UP

Persons who have not done much reading may find it difficult to use an information book effectively. In addition to reading slowly, they may also have difficulty finding what they are looking for. Sometimes they try to find things by flipping through the book, looking at the pictures. But this can be slow, and they may miss important information.

Early in the training course, **take time to show students how to use their books.** Instructors and more experienced students can guide others in practicing how to look things up.* The following are some points you may want to explain.

Page numbering

The pages are numbered in order: 1,2,3,4,5,6,7,8,9,10 . . . 20 . . . 30 . . . 100 . . . 200, and so on. So if you want to find page 168 to read about 'Cough', do not start at the beginning of the book and go through it page by page. Instead . . .

Open the book somewhere in the middle—
for instance to pages 198 and 199.



That is too far forward, so turn back
some, say to page 184 and then to 166.



Now you are very close. Turn the page to 168.



*It is a good idea, in the first days of the course, to check each person's reading ability, knowledge of alphabetical order, and basic arithmetic skills. Provide special practice for those who need it. But be sure these students are not made to feel ashamed because they have had less schooling. Include them in all regular classes and help them feel free to participate.

Alphabetical lists

Where There Is No Doctor has several reference sections, or lists where you can look things up. Three of these are arranged in alphabetical order:

- The **INDEX** (the yellow pages at the end of the book)—where you can look up the page or pages with information about almost anything in the book.
- The **INDEX OF MEDICINES** in the GREEN PAGES—to help you find the page with the uses, dosage, and precautions for the medicine you want to know about.
- The **VOCABULARY**—where you can look up the meanings of words written in *italics* in the main part of the book.

In each of these lists, the words are arranged so that their first letters are in the order of the alphabet: A,B,C,D,E, and so on until Z.

Suppose you want to look up 'Vomiting'. Depending on whether you are interested in **medicines**, a **definition**, or a **full discussion** on vomiting, you can look it up in the GREEN PAGES, the VOCABULARY, or the INDEX.

First, **look for the large dark letters** in the center of each column. **V** will be near the end of the lists because it is near the end of the alphabet.

348

**INDEX OF MEDICINES
IN THE GREEN PAGES**

T

Tagamet (cimetidine)	382
Terramycin (tetracycline)	356
Tetanus antitoxin	389
Tetanus immune globulin	389
Tetracycline	356
Doxycycline	356
Oxytetracycline	356
Tetracycline HCl	356
Theophylline	385
Thiabendazole	375
Thiacetazone	363
Tinactin (tolnaftate)	372
Tolnaftate	372
<i>Trinordiol</i> (birth control pills)	394
<i>Trinovum</i> (birth control pills)	394
<i>Triphasil</i> (birth control pills)	394
<i>Triquilar</i> (birth control pills)	394
Tuberculosis, medicines for	361
Typhoid, medicines for	357

U

Ulcers, medicines for	381
Undecylenic acid	372

V

Vaginal infections, medicines for	370
Valium (diazepam)	390
Vansil (oxamniquine)	377
Vaseline (petroleum jelly)	371
Vermox (mebendazole)	374
Vibramycin (doxycycline)	356
Vinegar	372
Vitamins	392
Vomiting, medicines for	386

428

VOCABULARY

V

Vaccinations See *Immunization*.

Vagina The tube or canal that goes from the opening of the woman's sex organs to the entrance of her womb.

Vaginal Of or relating to the vagina.

Varicose veins Abnormally swollen veins, often lumpy and winding, usually on the legs of older people, pregnant women, and women who have had a lot of children.

Vaseline See *Petroleum jelly*.

Veneral disease A disease spread by sexual contact. Now called 'sexually transmitted disease' or 'STD'.

Vessels Tubes. Blood vessels are the veins and arteries that carry the blood through the body.

Virus Germs smaller than bacteria, which cause some infectious (easily spread) diseases.

Vitamins Protective foods that our bodies need to work properly.

Vomiting Throwing up the contents out of the stomach through the mouth.

W

Welts Lumps or ridges raised on the body, usually caused by a blow or an allergy (hives).

Womb The sac inside a woman's belly where a baby is made. The uterus.

X

Xerophthalmia Abnormal dryness of the eye due to lack of vitamin A.

If you find **T**
or **U**,

look further ahead for **V**.

If you find **W**

or **X**,

go back to find **V**.

After you find **V**, start looking for '**Vomiting**'—after '**Vaccinations**' and '**Vitamins**'.

Using the INDEX (yellow pages) of *Where There Is No Doctor*

When you find a word in the index followed by several page numbers, the **dark number** indicates the page that has the most information. For example,

page **147** for 'Vaccinations',
pages **241-242** for 'Vaginal discharge',
and
page **175** under 'Varicose veins'.

What others do you find in this list?

If you find several words listed in lighter letters under the main word, these are subheadings related to the main topic or idea. For example, 'with diarrhea' refers to '**Vomiting** with diarrhea'.

If you do not find the subject you want in the INDEX, try looking for it under another name. For example, you might look first for 'Upset stomach'. If that is not listed, look up other words that mean the same thing: 'Puking', 'Throwing up', or 'Vomiting'. Usually the most widely known word is listed.

INDEX		445
v		
Vaccinations , 19, 147 , 180, 250, 296, 321, 337, 405		
Vagina , 233 , 428		
infections of, 241-242, 370		
placenta blocking, 249		
tearing during birth, 269		
Vaginal discharge , 241-242 , 370-371		
Vapors, breathing hot water vapors , 47, 168		
Varicose veins , 175 , 213, 288, 410, 428		
and chronic sores, 20, 212, 213, 324		
during pregnancy, 248		
Vasectomy , 293 , 428		
Veins, inflamed , 288		
(Also see Varicose veins)		
Venereal diseases (VD) (See Sexually transmitted disease)		
Venereal lymphogranuloma , 238 , 420		
Ventilated improved pit latrine , 139		
Verrucae (warts) , 210		
Village health committee , w24		
Village health worker , w1-w7, w29, 43, 340		
Village medicine kit , 336-337		
Village storekeeper , 338		
VIP latrine , 139		
Virus , 19, 399-401		
Vision (See Eyes)		
Vital signs , 41, inside back cover		
Vitamins , 110, 111, 116-118, 392-394, 405		
injections of, 65, 67, 118		
the best way to get, 52, 118		
vitamin A, 226, 392		
vitamin B, 208		
vitamin C, 248, 335,		
vitamin B ₆ , 361, 394		
vitamin B ₁₂ , 51, 65, 393		
vitamin K, 265, 272, 337, 394		
(Also see Iron)		
Vitiligo , 207		
Vomiting , 161		
during pregnancy, 248, 249		
enemas and laxatives with, 15		
how to cause vomiting, 103, 389		
in the newborn, 273		
medicines for, 161, 335, 386-387		
violent vomiting, 151		
with blood (cirrhosis), 328		
with blood (ulcer), 128		
with diarrhea, 151, 157		
with urine poisoning (uremia), 239		

Practice at finding things in alphabetical lists will make it easier for health workers to use the INDEX and VOCABULARY.

I NEVER LEARNED THE LETTERS IN ALPHABETICAL ORDER BECAUSE I DIDN'T SEE ANY USE FOR IT.

ME NEITHER. BUT NOW THAT I SEE THE USE, I'M GOING TO LEARN IT!



Finding what you are looking for on a page

After you have looked something up in the INDEX and have turned to the page with the topic you want, take a moment to **look over the whole page**. Do not just start reading from the top. First notice what part of the page has the information you are looking for.

For example: Suppose some neighbors have a baby who is cross-eyed, and you want to discuss with them what can be done to correct the problem. You look in the INDEX (or the CONTENTS) and find that the main reference to cross-eyes is page 223. But **where on page 223 should you read?** Here are some clues:

223

Look at the words in BIG, DARK LETTERS.

INFECTION OF THE TEAR SAC (DACRYOCYSTITIS)

Signs:
Redness, pain, and swelling beneath the eye, next to the nose. The eye waters a lot. A drop of pus may appear in the corner of the eye when the swelling is gently pressed.

Treatment:

- Apply hot compresses.
- Put antibiotic eye drops or ointment in the eye.
- Take penicillin (p. 351).

TROUBLE SEEING CLEARLY

Children who have trouble seeing clearly or who get headaches or eye pain when they read may need glasses. Have their eyes examined.

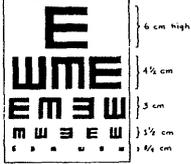
In older persons, it is normal that, with passing years, it becomes more difficult to see close things clearly. Reading glasses often help. Pick glasses that let you see clearly about 40 cm. (15 inches) away from your eyes. If glasses do not help, see an eye doctor.

CROSS-EYES AND A WANDERING OR 'LAZY' EYE (STRABISMUS, 'SQUINT')

If the eye sometimes wanders like this, but at other times looks ahead normally, usually you need not worry. The eye will grow straighter in time. But if the eye is always turned the wrong way, and if the child is not treated at a very early age, she may never see well with that eye. See an eye doctor as soon as possible to find out if patching of the good eye, surgery, or special glasses might help.

Surgery done at a later age can usually straighten the eye and improve the child's appearance, but it will not help the weak eye see better.

IMPORTANT: The eyesight of every child should be checked as early as possible (best around 4 years). You can use an 'E' chart (see *Helping Health Workers Learn*, p. 24-13). Test each eye separately to discover any problem that affects only one eye. If sight is poor in one or both eyes, see an eye doctor.



Look at the words in BIG, DARK LETTERS.

INFECTION OF THE TEAR SAC (DACRYOCYSTITIS)

Signs:
Redness, pain, and swelling beneath the eye, next to the nose. The eye waters a lot. A drop of pus may appear in the corner of the eye when the swelling is gently pressed.

Treatment:

- Apply hot compresses.
- Put antibiotic eye drops or ointment in the eye.
- Take penicillin (p. 351).

TROUBLE SEEING CLEARLY

Children who have trouble seeing clearly or who get headaches or eye pain when they read may need glasses. Have their eyes examined.

In older persons, it is normal that, with passing years, it becomes more difficult to see close things clearly. Reading glasses often help. Pick glasses that let you see clearly about 40 cm. (15 inches) away from your eyes. If glasses do not help, see an eye doctor.

CROSS-EYES AND A WANDERING OR 'LAZY' EYE (STRABISMUS, 'SQUINT')

If the eye sometimes wanders like this, but at other times looks ahead normally, usually you need not worry. The eye will grow straighter in time. But if the eye is always turned the wrong way, and if the child is not treated at a very early age, she may never see well with that eye. See an eye doctor as soon as possible to find out if patching of the good eye, surgery, or special glasses might help.

Surgery done at a later age can usually straighten the eye and improve the child's appearance, but it will not help the weak eye see better.

IMPORTANT: The eyesight of every child should be checked as early as possible (best around 4 years). You can use an 'E' chart (see *Helping Health Workers Learn*, p. 24-13). Test each eye separately to discover any problem that affects only one eye. If sight is poor in one or both eyes, see an eye doctor.

223

And look at the drawings.

To save time, start reading here.

When you get to the bottom of the page, be sure to check the next page to see if the information continues.

Looking up page references

Once you have read about the topic you looked up, you may want to turn also to other pages mentioned in the text. These are often referred to in parentheses (inside curved lines like these)—for example, “(see p. 140),” or simply “(p. 125).” On these pages you will find additional information, such as:

- another disease that may be a cause of the problem you are interested in
- danger signs you should watch for
- how the same disease can affect another part of the body or another person
- medicines recommended for treatment, their dosage and precautions
- other recommended treatments
- how to prevent the problem you are reading about

Page 307 of *Where There Is No Doctor* refers you to various causes of anemia in children.

Anemia

Common signs in children:

- pale, especially inside eyelids, gums, and fingernails
- weak, tires easily
- likes to eat dirt

Common causes:

- diet poor in iron (p. 124)
- chronic gut infections (p. 145)
- hookworm (p. 142)
- malaria (p. 186)



124 SPECIAL DIETS FOR SPECIFIC HEALTH PROBLEMS

ANEMIA

A person with anemia has thin blood. This happens when blood is lost or destroyed faster than the body can replace it. Blood loss from large wounds, bleeding ulcers, or gastroenteritis can cause anemia. So can measles, which destroys red blood cells. Not eating enough foods rich in iron can cause anemia or make it worse.

Women can become anemic from blood loss during monthly bleeding (menstrual periods) or childbirth if they do not eat the foods that bodies need. Pregnant women are at risk of becoming severely anemic, because they need to make extra blood for their growing babies.

In children anemia can come from not eating foods rich in iron. It can also come from not drinking to give some fluids or vitamins to breast milk, after the baby is 6 months old. Common causes of severe anemia in children are hookworm infection (see p. 142), chronic diarrhea, and dysentery.

The signs of anemia are:

- pale or unshiny skin
- pale inside of eyelids
- pale gums
- weakness and fatigue
- if the anemia is very severe, face and feet may be swollen
- the heart beats fast and the person may have shortness of breath
- children with anemia who are ill are usually anemic

Treatment and prevention of anemia:

- **Eat foods rich in iron.** Meat, fish, and chicken are high in iron. Liver is especially high. Dark green leafy vegetables, beans, peas, and lentils also have some iron. A child needs to look up iron pills (see p. 117) to help the body adjust more iron. Eat the vegetables and fruit with meals.
- **Use iron pills if needed to correct the iron.** Iron pills are not as good as iron-rich foods (see p. 293). This is especially important for pregnant women who are anemic. To reach an adult's anemia, iron pills should be taken much better than low-dose iron pills. At a general rule, iron should be given by mouth, not injected, because iron injections can be dangerous and are no better than pills.
- **Iron pills are usually given to correct iron deficiency.** Iron pills can be given to a person with iron deficiency anemia, but this should also be treated with a diet rich in iron. Iron pills should be given to a pregnant woman. This is especially important for a pregnant woman.

Many women are anemic. Anemic women run a greater risk of miscarriage and of dangerous bleeding in childbirth. It is very important that women eat as much of the foods high in iron as possible, especially during pregnancy (Chapter 2). 3 years between pregnancies lets the woman regain strength and make new blood (see Chapter 20).

186 MALARIA

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

Signs of malaria:

- The typical attack strikes every 2 or 3 days and lasts several hours. It has 3 stages:
 1. It begins with chills, fever, and a headache. The person shivers or shivers for 15 minutes to an hour.
 2. Chills are followed by fever, often 102° or more. The person is weak, flushed, and pale, and all areas of the body are hot. The fever lasts about 4 to 6 hours.
 3. Finally, the person begins to sweat, and the temperature goes down. After an attack, the person feels weak, but more or less normal.



- Usually malaria causes fever every 2 or 3 days (depending on the kind of malaria), but in the beginning it may cause fever daily. Also, in small children and persons who have had malaria before, the fever pattern may not be regular or typical. For that reason anyone who suffers from unexplained fever should have his blood tested for malaria.
- Chronic malaria often causes a large spleen and anemia.

Analysis and treatment:

- If you suspect malaria or suffer from repeated fevers, go to a health center for a blood test.
- If there is no health center nearby, take chloroquine or whatever medicine is known to work best in your area. Using chloroquine tablets with 150 mg of base, adults should take 4 tablets once a day for 3 days. For the children's dosage, see p. 296.
- If you get better with chloroquine, but after several days the fever starts again, you may need a different medicine, like primaquine. Get advice from the nearest health center.
- If a person who probably has malaria begins to have fits or other signs of meningitis (see 188) he may have cerebral malaria. If possible inject chloroquine at once (see p. 297).

142 Whipworm (Trichuris, Trichocephalus):

3 to 5 cm. long. Color: pink or grey.

This worm, like the roundworm, is passed from the feces of one person to the mouth of another person. Usually this worm does little harm, but it may cause diarrhea. In children it occasionally causes part of the intestines to come out of the anus (protrusion of the rectum).

Prevention: The same as for roundworm.

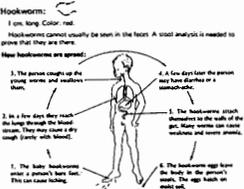
Treatment: If the worms cause a problem, give mebendazole or mebendazole. For dosage, see pages 263 and 264. For prevention of the return, turn the child upside down and pour cool water on the intestine. This should inject it put back in.

Hookworms:

1 cm long. Color: red.

Hookworms cannot usually be seen in the feces. A stool analysis is needed to prove that they are there.

How hookworms are passed:



1. The person steps on the young worms and picks them up.
2. In a few days they reach the lungs through the blood stream. They may cause a cough (cough with blood).
3. The baby hookworms enter a person's bare feet. They can cause itching.
4. The hookworms attach themselves to the wall of the gut. Many worms can cause weakness and severe anemia.
5. The hookworms lay eggs in the person's stool. The eggs hatch in the soil.

Hookworm infection can be one of the most damaging diseases of childhood. Any child who is anemic, very pale, or has fits may have hookworms. If possible, his blood should be tested.

Prevention: Use mebendazole, mebendazole, tetrachloroethylene (T.C.E.), or piperazine. For dosage and precautions, see pages 263 and 264. Treat anemia by using blood pills or iron and if necessary the salt iron pills (p. 122).

Prevent hookworms: Build and use latrines. Do not let children go barefoot.

145

Typical anemic dysentery consists of:

- diarrhea that comes and goes—sometimes alternating with constipation
- cramps in the belly and a need to have frequent bowel movements, even when there is nothing to get much comes out
- many loose (but usually not watery) stools with lots of mucus, sometimes tinged with blood
- in severe cases, much blood, the person may be very weak and ill
- usually fits at first

Diarrhea with blood may be caused by either anemia or bacteria. However, bacterial dysentery (Shigellet) begins more suddenly, the stools are more watery, and there is a severe attack (see p. 152). As a general rule:

Diarrhea + blood + fever = bacterial infection (Shigellet)
Diarrhea + blood + no fever = anemia

Occasionally bloody diarrhea has other causes. To be sure of the cause, a stool analysis may be necessary.

Sometimes anemia gets into the liver and forms the disease of cirrhosis. This causes tenderness of the liver and the right upper belly. Pain may extend into the right chest and is worse when the person walks. Combine this with gelatinous stool, p. 325; hepatitis, p. 172; and cirrhosis, p. 228. If the person with these signs begins to cough up a brown liquid, anemic, stopes in drinking into his lung. **Prevention:**

- If possible get medical help and a stool analysis.
- Mild infection with anemia can be treated with tetracycline, alone or with dihydroxyquin (for dosage, length of treatment, and precautions, see p. 262 and 266).
- For severe dysentery or anemic stopes, take tetracycline together with metronidazole (for dosage, see p. 259). If metronidazole is not available, use chloroquine (see p. 267).

Prevention: Walk and use latrines, protect the source of drinking water, and follow the guidelines of latrines. Eating well and avoiding fatigue and overwork are also important in preventing anemic dysentery.

Giardia:

The giardia, like the amoeba, is a microscopic parasite that lives in the gut and is a common cause of diarrhea, especially in children. The diarrhea may be chronic or intermittent (only come and go).

A person who has yellow, bad-smelling diarrhea that is frothy (full of bubbles) but without blood or mucus, probably has giardia. The body is swollen with gas and uncomfortable. There are mild intestinal cramps, and the person feels fat. There is usually no fever.

Giardia infections often clear up by themselves. Good nutrition helps. Severe cases may be treated with metronidazole (see p. 259). Quinine (Chapter 2, p. 296) is cheaper but does not work as well.



Also point out how arrows are used in the book to join writing with pictures (as on page 124 above) or to show which direction to read (page 142 above). Check students' ability to follow the arrows.

Page 159 of *Where There Is No Doctor* refers you to several pages with more information about . . .

special treatment if vomiting is a problem

161

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 gut, 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 cholera (p. 160), hepatitis (p. 172), measles (p. 309), scarlet fever (p. 309), meningitis (p. 189), urinary infection (p. 234), gallbladder pain (p. 329) or migraine headache (p. 162).



Danger signs with vomiting—seek medical help quickly!

- If hydration that increases and that you cannot control (p. 152)
- acute vomiting that lasts more than 24 hours
- violent vomiting, especially if vomit is dark green, brown, or smells like feces
- signs of infection (see p. 301)
- constant pain in the gut, inability of the person to control defecate (shit) or if you cannot find gurgles when you put your ear to the belly (see acute abdomen, obstruction, appendicitis, p. 94)
- vomiting of blood (see p. 128, colitis, p. 328)

To help control simple vomiting:

- Eat nothing while vomiting is severe
- Sip a cold drink or sugar-ale. Some hot tea, like chamomile, may also help
- For rehydration give small frequent sips of salt, tea, or Rehydration Drink (p. 152)
- If vomiting does not stop soon, use a vomit control medicine like promethazine (p. 374), diphenhydramine (p. 371), or phenazepam (p. 372)

Most of these come in pills, syrups, injections, and suppositories (butt pills you push in the anus). Tablets or syrups 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 vomiting and diarrhea make medication by mouth or anus impossible, give an injection of 1 of these vomit control medicines. Promethazine may work best. Take care not to give too much.

the best medicine to use if the child is very sick

353

Ampicillin is a broad spectrum antibiotic that kills many kinds of bacteria that are killed by other antibiotics. It kills many other broad spectrum antibiotics and is especially useful for severe and most children.

Give injection daily.

With each injection give:

- adults 500,000 to 1,000,000 U
- children age 8 to 12 600,000 U
- children age 3 to 7 300,000 U
- children under 3 150,000 U

Injection tablets: DO NOT USE unless you have an injection or ampicillin medicine in emergencies, 75,000 U.

For new severe infections, give twice the above dose. However, it is better to use a shorter acting penicillin.

The dosage for ampicillin combined with a short acting penicillin is the same for ampicillin alone.

For treatment of gonorrhea and syphilis, ampicillin is best. Very high doses are needed. For dosage, see pages 237 and 238.

Amoxicillin penicillin (long acting)

Name: _____ (Amoxil) _____

Dose: 250 mg 4 times a day for 10-14 days for 1,000,000 U

Children age 8 to 12 600,000 U

Children age 3 to 7 300,000 U

Children under 3 years 150,000 U

To prevent return infection in persons who have had rheumatic fever, give twice the above dose every 2 or 4 weeks for 3-10.

AMPICILLIN-A WIDE RANGE BROAD SPECTRUM PENICILLIN

Amoxicillin

Often comes in tablets:

- 125 to 250 mg (tab) dose _____ for _____
- capsule, 250 mg dose _____ for _____
- injection, 250 mg dose _____ for _____

Amoxicillin

Often comes in tablets:

- 125 to 250 mg (tab) dose _____ for _____
- capsule, 250 mg dose _____ for _____
- injection, 250 mg dose _____ for _____

the best medicine to use if the child is very sick

159

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 breast feeding 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 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 (see p. 353). It is better not to use other antibiotics.

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 fits, 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).

GIVE HIM BREAST MILK



AND ALSO REHYDRATION DRINK



a sign of danger

94

Obstructed Gut

An acute abdomen may be caused by something that blocks or "obstructs" a part of the gut, so that food and stools cannot pass. More common causes are:

- a full or twist of roundworms (Ascari, p. 140)
- a loop of gut that is pinched in a hernia (p. 177)
- a part of the gut that slips inside the part below it (intussusception)

Almost any kind of acute abdomen may show some signs of obstruction. However it hurts the gut, it stops moving.

Signs of an obstructed gut:

Steady, severe pain in the belly.

The child's belly is swollen, hard, and very tender. It hurts more when you touch it. He tries to protect his belly and keeps his legs doubled up. His belly is often silent (When you put your ear to it, you hear no sound of animal gurgles).



He is usually vomited little or no food (vomiting with great force). The vomit may smell bad or green. He may have green bile in it or smell and look like fever.

He is usually vomited little or no food (vomiting with great force). The vomit may smell bad or green. He may have green bile in it or smell and look like fever.

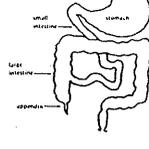
Get this person to a hospital at once. His life is in danger and surgery may be needed.

Appendicitis, Peritonitis

These dangerous conditions often require surgery. Seek medical help fast.

Appendicitis is an infection of the appendix, a finger-shaped sac attached to the large intestine in the lower right hand part of the belly. An infected appendix sometimes bursts open, causing peritonitis.

Peritonitis is an acute, serious infection of the lining of the cavity or bag that holds the gut. It results when the appendix or another part of the gut bursts or is torn.



Looking up related information— even when page references are not given

Usually a book gives only the most important page references, to save you time in looking things up. But sometimes you will want to look up related information, or something you are unsure about—even though no page reference is given.

Read this information about measles from pages 311 and 312 of *Where There Is No Doctor*:

Measles

This severe **virus** infection is **especially dangerous in children** who are **poorly nourished** or have **tuberculosis**. Ten days after being near a person with measles, it begins with signs of a cold—fever, runny nose, red sore eyes, and cough.



The child becomes increasingly ill. The mouth may become very sore and he may develop diarrhea.

After 2 or 3 days a few tiny white spots like salt grains appear in the mouth. A day or 2 later the rash appears—first behind the ears and on the neck, then on the face and body, and last on the arms and legs. After the rash appears, the child usually begins to get better. The rash lasts about 5 days. Sometimes there are scattered black spots caused by bleeding into the skin ('black measles'). This means the attack is very severe. Get medical help.

Treatment:

- The child should stay in bed, drink lots of liquids, and be given **nutritious** food. If she cannot swallow solid food, give her **liquids** like soup. If a baby cannot breast feed, give breast milk in a spoon (**see p. 120**).
- If possible, give vitamin A to prevent eye damage (**p. 392**).
- For fever and discomfort, give **acetaminophen** (or aspirin).
- If earache develops, give an **antibiotic** (**p. 351**).
- If signs of **pneumonia, meningitis, or severe pain in the ear or stomach** develop, get medical help.
- If the child has diarrhea, give Rehydration Drink (**p. 152**).

Prevention of measles:

Children with measles should keep far away from other children, even from brothers and sisters. Especially try to protect children who are poorly nourished or who have tuberculosis or other chronic illnesses. Children from other families should not go into a house where there is measles. If children in a family where there is measles have not yet had measles themselves, they should not go to school or into stores or other public places for 10 days.

To prevent measles from killing children, make sure all children are well nourished. Have your children **vaccinated against measles when they are 8 to 14 months of age.**

Do you know what a *virus* is? If not, look it up in the VOCABULARY.

What foods are *nutritious*? Look in the INDEX, the VOCABULARY, or Chapter 11 on Nutrition.

This is an exact page reference. Turn to page 120.

What are the dosages, risks, and precautions for these medicines? Look them up in the GREEN PAGES.

What is an *antibiotic*? You can turn to p. 351, as suggested. But for more information, look in the INDEX or the GREEN PAGES.

What are the signs of *pneumonia* and *meningitis*? How can you check for *severe pain in the ear or stomach*? If you are uncertain, look these up in the INDEX or the CONTENTS.

What are *vaccinations*? You can look in the VOCABULARY. Where can you find out more about them? Look in the INDEX or the CONTENTS. You might also try looking under 'Prevention'.

Be sure students practice looking up page references and reading the related information. They should keep practicing this until they can do it easily. The group can play a game by following references from page to page. They will find that almost everything in health care is related!

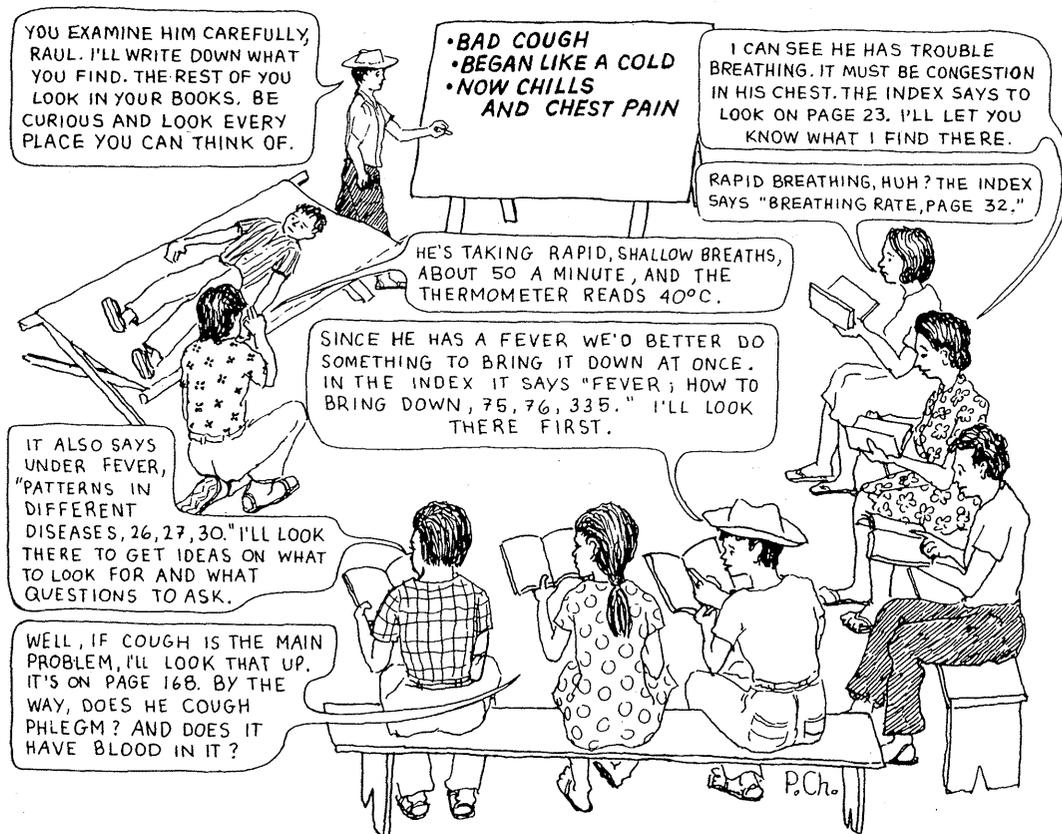


PRACTICE IN READING AND USING THE BOOK

Role-playing exercises can give students a good chance to develop skill in using *Where There Is No Doctor*—especially the CONTENTS, the INDEX, and the page references.

For example, one person can pretend he is sick with a very bad cough, in this case pneumonia. (But do not tell the students what the illness is. Let them find out through their own investigation and use of their books.) The person says his sickness began a few days ago like a cold or the flu—with a headache and sore throat. But now he feels much worse.

The students must ask questions to get more information. The 'sick person' can complain of chills or chest pain. To make it more realistic, he breathes with rapid, shallow breaths (as described in this book on page 14-11). A pretend thermometer can be used to show that he has a fever (see page 14-4).



Encourage the students to look in any part of the book where they think they might find useful information—and to share what they find with each other. Especially help those who have trouble reading or looking things up.

If the group decides that the person in the role play probably has pneumonia, be sure that everyone looks up the references mentioned in the treatment section on page 171.

the correct medicines to fight the infection

171

PNEUMONIA

Pneumonia is an *acute* infection of the lungs. It often occurs after another respiratory illness such as measles, whooping cough, flu, bronchitis, asthma—or any very serious illness, especially in babies and old people. Also, persons with AIDS may develop pneumonia.

Signs:

- Sudden chills and then high fever.
- Rapid, shallow breathing, with little grunts or sometimes wheezing. The nostrils may spread with each breath.
- Fever (sometimes newborns and old or very weak persons have severe pneumonia with little or no fever).
- Cough (often with yellow, greenish, rust-colored, or slightly bloody mucus).
- Chest pain (sometimes).
- The person looks very ill.
- Cold sores often appear on the face or lips (p. 232).

A very sick child who takes more than 50 shallow breaths a minute probably has pneumonia.

(If breathing is rapid and **deep**, check for dehydration, p. 151, or hyperventilation, p. 24.)

Treatment:

- For pneumonia, treatment with antibiotics can make the difference between life and death. Give penicillin (p. 351), co-trimoxazole (p. 358), or erythromycin (p. 355). In serious cases, inject procaine penicillin (p. 353), adults: 400,000 units (250 mg.) 2 or 3 times a day, or give ampicillin by mouth (p. 353), 500 mg., 4 times a day. Give small children 1/4 to 1/2 the adult dose. For children under 6, ampicillin is usually best.
- Give aspirin (p. 379) or acetaminophen (p. 380) to lower the temperature and lessen the pain.
- Give plenty of liquids. If the person will not eat, give him liquid foods or Rehydration Drink (see p. 152).
- Ease the cough and loosen the mucus by giving the person plenty of water and having him breathe hot water vapors (see p. 168). Postural drainage may also help (see p. 169).
- If the person is wheezing, an anti-asthma medicine with theophylline or ephedrine may help.

351

INFORMATION ON MEDICINES

ANTIBIOTICS

THE PENICILLINS
VERY IMPORTANT ANTIBIOTICS

Penicillin is one of the most common antibiotics used to fight bacterial infections. It is usually given in the form of tablets or capsules. It is also available as an injection. Penicillin is used to treat a wide variety of bacterial infections, such as pneumonia, meningitis, and syphilis. It is also used to prevent bacterial infections in people who have heart disease or who are about to have surgery.

Penicillin is available in many forms. It is usually given in the form of tablets or capsules. It is also available as an injection. Penicillin is used to treat a wide variety of bacterial infections, such as pneumonia, meningitis, and syphilis. It is also used to prevent bacterial infections in people who have heart disease or who are about to have surgery.

Penicillin is used to treat a wide variety of bacterial infections, such as pneumonia, meningitis, and syphilis. It is also used to prevent bacterial infections in people who have heart disease or who are about to have surgery.

correct medicines to lower the fever

380

FOR THE EYES

FOR RIVER BLINDNESS

FOR PAIN: ANALGESICS

FOR RIVER BLINDNESS

FOR PAIN: ANALGESICS

169

to ease the cough

1. For a cough that does not let you sleep, try to take a small amount of water every 15 minutes. This will help to keep your throat moist.

2. For a cough with wheezing, take a small amount of water every 15 minutes. This will help to keep your throat moist.

3. Try to find out what makes the cough worse and avoid it. If the cough is brought on by dust, avoid it. If it is brought on by cold air, wear a scarf.

4. If you have any kind of a cough, do not smoke. This will help to ease the cough.

HOW TO DRAIN MUCUS FROM THE LUNGS (POSTURAL DRAINAGE):

When you have a cough, you may have a lot of mucus in your lungs. This mucus can make it hard to breathe. You can help to get rid of this mucus by doing postural drainage. This means lying in different positions so that gravity can help to drain the mucus from your lungs.

168

and loosen the mucus

COUGH

Coughing is not a sickness in itself, but it is a sign of many different sicknesses that affect the throat, lungs, or elsewhere in the respiratory system. It is a reflex action that helps to clear the airways of mucus and other irritants. Before you try to cure a cough, find out what is causing it.

SEE YOUR DOCTOR IF: • You have a cough that lasts more than 3 weeks. • You have a cough that is worse at night. • You have a cough that is accompanied by a fever, chest pain, or shortness of breath. • You have a cough that is accompanied by a change in your voice.	COUGH WITH A LITTLE OR NO MUCUS: • Aspirin (p. 379) • Acetaminophen (p. 380) • Codeine (p. 381)	COUGH WITH A LOT OF MUCUS AND PHLEGGING: • Aspirin (p. 379) • Acetaminophen (p. 380) • Codeine (p. 381) • Theophylline (p. 382)
---	---	--

COUGHING IN THE BODY'S WAY OF CLEARING THE BREATHING SYSTEM AND GETTING RID OF MUCUS: The body's way of clearing the breathing system and getting rid of mucus is by coughing. This works better than any medicine. However, sometimes a cough can be so bad that it is hard to breathe. In this case, you may need to see a doctor.

Treatment for cough:

1. To loosen mucus and ease any kind of cough, drink lots of water. This works better than any medicine. However, sometimes a cough can be so bad that it is hard to breathe. In this case, you may need to see a doctor.

152

special drink if he will not eat

to prevent or treat dehydration when a person has a very bad cough and will not eat

Give lots of liquids to drink. Rehydration Drink is best. Or give oral rehydration salts (ORS) or even plain water. A small child usually needs at least 1 liter a day, or 1 pint for each 2.2 kg (5 lb) of body weight. An adult needs at least 2 liters a day, or 2 pints for each 4.5 kg (10 lb) of body weight.

HOW TO MAKE REHYDRATION DRINK:

WITH SUGAR AND SALT: 1 liter of clean water, 6 level teaspoons of sugar, and 1/2 level teaspoon of salt.

WITH POWDERED ORAL AND SALT: 1 liter of clean water, 1 packet of oral rehydration salts, and 1/2 level teaspoon of salt.

Using the GREEN PAGES to find information about medicines

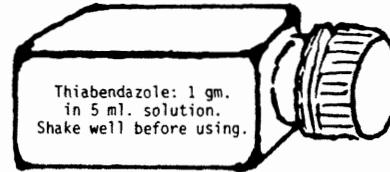
Here, too, role playing can be a realistic and fun way to practice using *WTND*.

For example, one person pretends to be the mother of a 6-year-old boy who has tapeworm. She says she has seen little flat, white worms in his shit.



Another student plays the role of the local store owner. He sells the mother a medicine called *Mintezol*, saying that it is "good for all kinds of worms."

But before giving it to her son, the mother visits the local health worker to ask if the medicine will work and how much she should give. The student playing the role of the health worker first reads the fine print on the side of the bottle:



Then he and the rest of the class help each other to look up 'Thiabendazole' in either of the lists at the beginning of the GREEN PAGES.

LIST OF MEDICINES

342	For Worms	
	Mebendazole (<i>Vermox</i>)—for many kinds of worms	374
	Albendazole (<i>Zentel</i>)—for many kinds of worms	374
	Piperazine—for roundworm and pinworm (threadworm)	375
	Thiabendazole—for many kinds of worms	375
	Pyrantel—for pinworm, hookworm, and roundworm	376
	Nicosamide (<i>Yomesan</i>)—for tapeworm	376
	Praziquantel (<i>Biltricide, Droncit</i>)—for tapeworm	376

INDEX OF MEDICINES

	T	347
<i>Tagamet</i> (cimetidine)		382
<i>Terramycin</i> (tetracycline)		356
Tetanus antitoxin		389
Tetanus immune globulin		389
Tetracycline		356
Doxycycline		356
Oxytetracycline		356
Tetracycline HCl		356
Theophylline		385
Thiabendazole		375
Thiacetazone		363

Both lists say to turn to page 375. Together, the 'health worker' and the 'mother' (and the rest of the class) read what the medicine can be used for. They notice that the description says nothing about tapeworm.

So the health worker tells the mother that *Mintezol* would probably not be useful for her son's tapeworm.

If the class looks at the next page (376) of *WTND*, they will find 3 medicines that do work for tapeworm:

nicosamide (**Yomesan**), praziquantel (**Biltricide, Droncit**), and quinacrine (mepacrine, **Atabrine**). They can read about the risks and precautions, and compare the prices and availability of the different medications. The students will need to have already written in the prices of products in their area. Or the instructor can provide this information during the role play. Be sure all students write it into their books.

Nicosamide (Yomesan) —for tapeworm infection	
Name: <u>Yomesan</u>	price: <u>\$.92</u> for <u>4</u> 500 mg. tablets
Praziquantel (Biltricide, Droncit) —for tapeworm	
Name: <u>Droncit</u>	price: <u>\$1.57</u> for <u>16</u> 500 mg. tablets
Quinacrine (mepacrine) (familiar brand name: <i>Atabrine</i>)	
Name: <u>Fedal-Lamb</u> <u>Compuesto</u>	price: <u>\$.67</u> for <u>12</u> 100 mg. tablets

The students can now decide with the 'mother' which medicine may work best at a price she can afford. The health worker then reads or figures out the exact dosage for the child, writes it down, and explains it to the mother. If she cannot read, the health worker can use a dosage blank with pictures (see page 64 of *Where There Is No Doctor*). **Practice in finding and explaining the right dosage is extremely important.** (See page 18-10.)

It is also important that health workers read all they can about a problem before recommending medicines. So, during the role play, be sure students look up 'Tapeworm' in the INDEX or CONTENTS of *Where There Is No Doctor*, and turn to page 143.

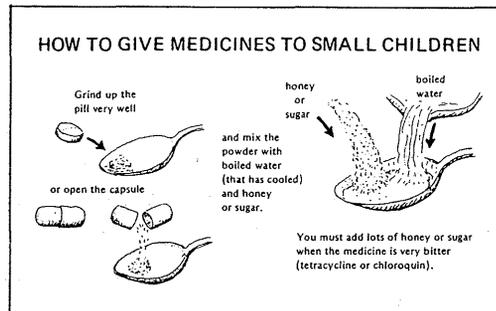
The students can use the pictures in the book to help explain to the 'mother' and her 'son' about tapeworms and how to avoid them. They may also want to look up the 'Guidelines of Cleanliness' referred to in the discussion of tapeworm prevention. (See especially p. 133 of *WTND*.)

Prevention: Be careful that all meat is well cooked, especially pork. Make sure no parts in the center of roasted meat are still raw.

Effect on health: Tapeworms in the intestines sometimes cause mild stomach-aches, but few other problems.

The greatest danger exists when the *cysts* (small sacs containing baby worms) get into a person's brain. This happens when the eggs pass from his stools to his mouth. For this reason, **anyone with tapeworms must follow the guidelines of cleanliness carefully—and get treatment as soon as possible.**

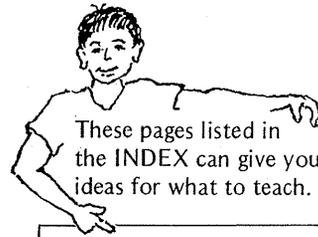
Depending on your local situation, the role play can be developed in various ways. For example, the mother might complain that her son will not swallow pills. What should she do? The health worker and mother can look in the INDEX or CONTENTS, and will be guided to page 62.



Or the health worker might go with the mother to return the unused medicine and buy one that is effective against tapeworm. To interest the store owner in learning more about the medicines he buys and sells, the health worker might show him the 'Words to the Village Storekeeper (or Pharmacist)' on page 338 of *Where There Is No Doctor*.

Using the INDEX or CONTENTS to plan classes or for independent study

The INDEX (yellow pages) is a good source of ideas for independent or group study because it lists all the pages that have information about a specific subject. For example:



If health workers want to refresh their knowledge about how to *examine* someone: →

Examining
 a pregnant woman, 250-253
 a sick person, 29-38
 breasts, 279
 eyes, 33, 217
 eyesight, 223
 for appendicitis, 36, 95
 for hernia, 94, 317
 for knee reflexes, 183

If mothers have already learned the importance of giving *Rehydration Drink* to children with diarrhea, and want to learn about other uses for it: →

Rehydration Drink, 152, 311, 382-383, 400, 426
 and vomiting, 161
 as an enema, 15
 for acute abdomen, 95
 for dehydration, 9, 46, 158, 306
 for newborns, 273
 for very sick persons, 40, 53

If health workers need to review the possible changes in appearance of the *urine*, and what problems these represent: →

Urine
 blood in, 146, 234, 377
 brown, 172
 dark yellow, 151
 less than normal, 151, 236
 too much or often, 127, 234
 pus in, 236

The list of CONTENTS at the beginning of the book can also be useful for planning classes or study. For example, if a group of concerned persons in the community wants to learn about the special problems of old people, the list of CONTENTS may help them plan what to study.

Chapter 22	
HEALTH AND SICKNESSES OF OLDER PEOPLE 323	
Summary of Health Problems Discussed in Other Chapters 323	Deafness with Ringing of the Ears and Dizziness 327
Other Important Illnesses of Old Age 325	Loss of Sleep (Insomnia) 328
Heart Trouble 325	Diseases Found More Often in People over Forty 328
Words to Younger Persons Who Want to Stay Healthy When Older 326	Cirrhosis of the Liver 328
Stroke (Apoplexy, Cerebro-Vascular Accident, CVA) 327	Gallbladder Problems 329
	Accepting Death 330

In several health programs we know, village health workers meet every month or so to review a chapter of *WTND*, or part of a chapter, in order to continue learning. In other programs, health workers and teachers meet regularly with parents, school children, or mothers' clubs to read and discuss the book, chapter by chapter.

There are many ways people can use a book like *Where There Is No Doctor*. But to use it fully and well takes a lot of practice. Practice guided by friendly persons who have experience in using reference books is especially helpful.