
 **Where There Is No Doctor - A Village Health Care Handbook (Hesperian Foundation, 1993, 516 p.)**

 **Chapter 20 - FAMILY PLANNING - HAVING THE NUMBER OF CHILDREN YOU WANT**

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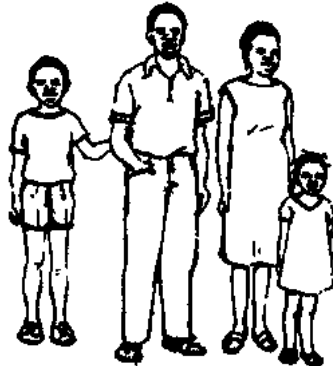
Where There Is No Doctor - A Village Health Care Handbook (Hesperian Foundation, 1993, 516 p.)

Chapter 20 - FAMILY PLANNING - HAVING THE NUMBER OF CHILDREN YOU WANT

BOTH THESE FAMILIES LIVE IN POOR COMMUNITIES:



This family lives where wealth is distributed unfairly.



This family lives where resources are distributed fairly.

Some mothers and fathers want a lot of children - especially in countries where poor people are denied a fair share of land, resources, and social benefits. This is because

children help with work and provide care for their parents in old age. In such areas, having just a few children may be a privilege only wealthier people can afford.

The situation is different in poor countries where resources and benefits are fairly distributed. Where employment, housing, and health care are guaranteed and where women have equal opportunities for education and jobs, people usually choose to have smaller families. This is in part because they do not need to depend on their children for economic security.

But in any society, it helps if a family has control over how many children they have, and when they have them.

When a mother has child after child, without much space between, she often becomes weak. Her babies are more likely to die. Also, after many pregnancies the danger is greater that she will die in childbirth, leaving many motherless children. Therefore many couples now choose to allow two or more years to pass between pregnancies, and avoid having a very large number of children.

If a man and woman have a lot of children, when the children grow up there may not be enough land for all of them to grow the food their families need. Children may begin to die of hunger. This is already happening in many areas.

Although most, if not all, hunger in the world today could be prevented if land and wealth were distributed fairly, the growing number of people is part of the problem. But the solution is not to force the poor to limit the number of children they have. Instead, the challenge is for societies to provide enough security so that the poor can afford to have few children.

FAMILY PLANNING AND BIRTH CONTROL

Different parents have different reasons for wanting to limit the size of their family. Some young parents may decide to delay having any children until they have worked and saved enough so that they can afford to care for them well. Some parents may decide that a small number of children is enough, and they never want more. Others may want to space their children several years apart, so that both the children and their mother will be healthier. Some parents may feel they are too old to have more children.

Family planning is having the number of children you want, when you want them.

When a man and woman decide when they want to have children, and when they do not, they can choose one of several methods to prevent the woman from becoming pregnant, for as long as she wishes. These are methods of *birth control or contraception*.

Couples who want children but are not able to have them should see section: "Men and Women Who are Not Able to Have Children (Infertility)".

Is Birth Control Good - and Is It Safe?

1. Is it good?

In some parts of the world there has been a lot of discussion about whether different forms of birth control are good or are safe. Some religions have been against any form of birth control except trying not to have sex together. But an increasing number of religious leaders are realizing how important it is to the health and well-being of families and communities that people be able to use easier and surer methods of birth control.

Also, in many places women who get pregnant when they do not want a child will go for an *abortion*, to have the pregnancy removed. Where these abortions are legal, they can be done in health centers under sanitary conditions, and they are not usually dangerous to the woman. But where abortions are not permitted, many women get abortions illegally

and secretly, often in dirty conditions and performed by unskilled persons. Thousands of women die from such abortions. If women are given the chance to use birth control methods, and information to use them wisely, many abortions, legal and illegal, would not be necessary. Much needless suffering and death could be prevented. (See Complications from Abortion)

Some people feel that much of the push for family planning comes from rich countries or persons who want to keep their control over the poor by controlling their numbers. The rich and powerful find it hard to accept that the way they manage the earth's land and resources strongly contributes to world hunger. They see only the growing numbers of people. In some countries professionals sterilize poor women by force or experiment on them with new or unsafe methods. For all these reasons social reformers and spokespersons for the poor often protest against birth control.

This is unfortunate. The object of attack should not be birth control, but rather its misuse. The attack should be against social injustice and the unfair distribution of land and wealth. If used well, birth control can in fact help the poor gain strength to work for their basic human rights. But the decisions and responsibility for family planning must be in the hands of the people themselves.

Decide for yourself if and how you want to plan your family. Do not let anyone else decide for you.

2. Is it safe?

Whether or not different forms of birth control are safe has been much discussed. Often those who are against birth control for religious or political reasons try to scare women by talking about the risks. Some methods do have certain risks. However, the important thing all women should realize is that birth control is safer than pregnancy, especially for








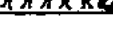







women less than 20 or more than 35 years old, and for women who have had many children.

The risk of serious illness or death resulting from pregnancy is many times greater than the risks involved in using any of the common methods of birth control.

There is much talk about the risks of taking birth control pills. But the risks with pregnancy are many times greater. The pill works so well in preventing pregnancy that for most women it is safer - in terms of protecting their lives - than any of the other 'less risky' but less effective methods.

Choosing a Method of Birth Control

On the following pages several methods of birth control are described. Some work better for some people than others. Study these pages, and talk with your midwife, health worker, or doctor about what methods are available and are likely to work best for you. Differences in effectiveness, safety, convenience, availability, and cost should be considered. Husbands and wives should decide together, and share the responsibility.

Of each 20 women using this method . . .	on the average this many are likely to get pregnant in spite of the method . . .	and this many must (or should) stop the method because of problems.
PILL		
CONDOM		
DIAPHRAGM		
FOAM		
I. U. D.		
PULLING OUT		
STERILIZATION		*
INJECTIONS		
IMPLANTS		
SPONGE (HOME METHOD)		
RHYTHM		COMBINED
MUCUS		

AVERAGE EFFECTIVENESS OF DIFFERENT FORMS OF BIRTH CONTROL

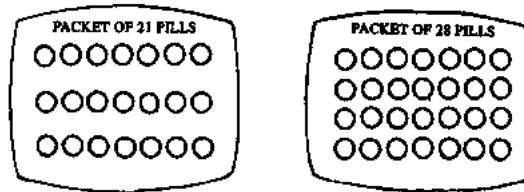
* With sterilization, problems occasionally result from surgery but the method is permanent.

Birth Control Pills (Oral Contraceptives)

Birth control pills are made of chemicals (hormones) that normally occur in a woman's body. When taken correctly, the 'pill' is one of the most effective methods for avoiding pregnancy. However, certain women should not take birth control pills if they can use another method. Birth control pills do not prevent AIDS or any other sexually transmitted

diseases. To prevent these diseases, use a condom. If possible, birth control pills should be given by health workers, midwives, or other persons trained in their use.

The pills usually come in packets of 21 or 28 tablets. The packets of 21 are often less expensive, and of these, some brands are cheaper than others. The amount of medicine differs in different brands. To pick the kind that is right for you, see the GREEN PAGES.



Figure

How to take the pills - packet of 21:

Take the first pill on the fifth day from the beginning of your period, counting the first day of the period as day 1. Then take 1 pill every day until the packet is finished (21 days). Take your pills at the same time each day.

After finishing the packet, wait 7 days before taking any more pills. Then begin another packet, 1 pill each day.

This way, you will take the pills for 3 weeks out of each month, then go 1 week without taking any. Normally, the menstrual period will come during the week when the pill is not taken. Even if the period does not come, start the new packet 7 days after finishing the last one.

If you do not want to get pregnant, it is important to take the pills as directed - 1 every

day. If you forget to take the pill one day, take it as soon as you realize this, or take 2 the next day.

Packet of 28 pills:

Take the first pill on the fifth day of the period, just as with the packets of 21. Take 1 a day. Seven of the pills will probably be a different size and color. Take these pills last (one a day) after the others have all been taken. The day after you finish the packet of 28, start another packet. Take 1 a day without ever missing a day, packet after packet, for as long as you want not to get pregnant.

No special diet must be followed when taking the pill. Even if you happen to get sick with a cold or another common illness while taking birth control pills, go right on taking them. If you stop taking the pills before the packet is used up, you may become pregnant.

Side effects:

Some women get a little morning sickness, swelling of the breasts, or other signs of pregnancy when they first start taking the pill. This is because the pill contains the same chemicals (hormones) that a woman's body puts into her blood when she is pregnant. These signs do not mean she is unhealthy or should stop taking the pill. They usually go away after the first 2 or 3 months. If the signs do not go away, she may need to change to a kind with a different amount of hormone. This is discussed in the GREEN PAGES.

Most women bleed less than usual in their monthly period when they are taking the pill. This change is usually not important.

“Is it dangerous to take oral contraceptives?”

Like all medicines, birth control pills occasionally cause serious problems in certain

persons. The most serious problems related to the pill are blood clots in the heart, lungs, or brain (see stroke). This occurs most often in women who smoke - especially if they are over 35. However, the chance of getting dangerous clots is higher when women get pregnant than when they take the pill.

Although it is rare, a woman may become pregnant while taking the pill. If this happens, immediately stop taking the pill because it can harm the developing baby.

Death related to taking the pill is rare. On the average, pregnancy and childbirth are 50 times as dangerous as taking the pill.

Of 15,000 women who become pregnant, this many are likely to die from problems of pregnancy or childbirth.



Figure

Of 15,000 women who take birth control pills, only 1 is likely to die from problems related to having taken the pills.



Figure

Conclusion:

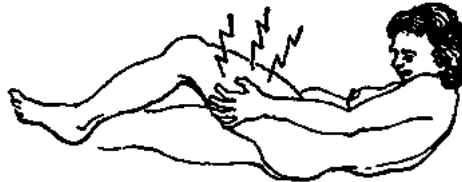
IT IS MUCH SAFER TO TAKE THE PILL THAN TO BECOME PREGNANT.

For most women, birth control pills are relatively safe. Certainly they are far safer than becoming pregnant. However, for some women both pregnancy and taking birth control pills have a higher risk. These women should use other methods of birth control.

Who Should Not Take Birth Control Pills?

A woman who has any of the following signs should not take oral (or injected) contraceptives:

- **A woman, whose period is late, who thinks she might be pregnant.**
- **Deep or steady pain in one leg or hip. This may be caused by an inflamed vein (phlebitis or blood clot). Do not use birth control pills. (Women with varicose veins that are not inflamed can usually take birth control pills without problems. But they should stop taking them if the veins become inflamed.)**



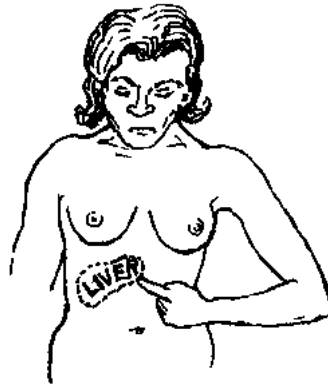
Figure

- **Stroke. A woman who has had any signs of a stroke should not take the pill.**



Figure

- **Hepatitis, cirrhosis, or other liver disease. Women with these problems, or whose eyes had a yellow color during pregnancy, should not take the pill. It is better not to take oral contraceptives for one year after having hepatitis.**



Figure

• **Cancer.** If you have had or suspect cancer of the breast or womb, do not use oral contraceptives. Before beginning oral contraceptives, examine your breasts carefully. In some health centers you may also be able to get a simple test (Pap smear) to check for cancer of the *cervix* or opening of the womb. Birth control pills have not been proven to cause cancer of the breasts or womb. But if cancer already exists, the pill can make it worse.



Figure

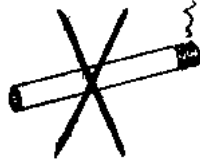
Some health problems maybe made worse by oral contraceptives. If you have any of the following problems, it is better to use another method if you can:

- **Migraine.** Women who suffer from true migraine should not take oral contraceptives. But simple headache that goes away with aspirin is no reason not to take the pill.
- **Urinary infection with swelling of the feet.**
- **Heart disease.**
- **High blood pressure.**

If you suffer from asthma, tuberculosis, diabetes or epilepsy, it is best to get medical advice before taking birth control pills. However, most women with these diseases can

take oral contraceptives without harm.

Precautions Women Should Take when Using Birth Control Pills



1. Do not smoke, especially if you are over 35. It can cause heart problems.



2. Examine the breasts carefully every month for lumps or possible signs of cancer.







3. If possible, have your blood pressure measured every 6 months.

4. Watch for any of the problems mentioned in section "Who Should Not Take Birth Control Pills?", especially:

- **Severe and frequent migraine headaches.**
- **Dizziness, headache, or loss of consciousness that results in difficulty in seeing, speaking, or moving part of the face or body (see Stroke).**
- **Pain with inflammation in a leg or hip (chance of a blood clot).**
- **Severe or repeated pain in the chest (see Heart Problems).**

If one of these problems develops, stop taking the pill and get medical advice. Avoid pregnancy by using another method, as these problems also make pregnancy especially dangerous.

Questions and Answers about Birth Control Pills

	Some people claim birth control pills cause cancer. Is this true?	No! However, if cancer of the breast or womb already exists, taking the pill may make the tumor grow faster.
	Can a woman have children again if she stops taking the pill?	Yes. (Sometimes there is a delay of 1 or 2 months before she can become pregnant.)
	Is the chance of having twins or defective children greater if a woman has used oral contraceptives?	No. The chances are the same as for women who have not taken the pill.
	Is it true that a mother's women	Some women will produce less milk when taking the pill. So it is best to use another method of birth control while



breasts will dry up if she starts taking birth control pills?

nursing, and later change to the pill. Or she can take the 'mini-pill', which contains so little hormone that it usually does not affect the milk.

Other Methods of Birth Control

THE CONDOM (also called 'prophylactic', 'rubber', or 'sheath') is a narrow rubber or latex bag that the man wears on his penis while having sex. Usually it works well to prevent pregnancy. It is also the only effective method for preventing AIDS, and other sexually transmitted diseases, but is not a complete safeguard.



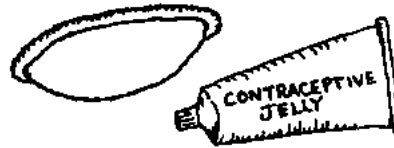
Figure

Put on the condom while the penis is stiff, and leave space at the tip for sperm. The man should hold on to the condom when he pulls out his penis.

You can buy condoms in most pharmacies. Some are cheaper than others. Condoms are sometimes given away free at health clinics or family planning clinics. It is best to use a condom only once. (However, a washed and re-used condom, although not as safe, may be better than none. Fill with water to check for leaks.)

THE DIAPHRAGM is a shallow cup made of soft rubber, A woman wears it in her vagina while having sexual relations. It should be left in for at least 6 hours afterward. It is a fairly sure method if used together with a contraceptive cream or jelly. A health worker or midwife should help fit the diaphragm, as different women need different sizes. Check the diaphragm regularly for holes and cracks by holding it up to the light. If there is even a

tiny hole, get a new one. They usually last a year or longer. After use, wash it in warm soapy water, rinse, and dry. Keep in a clean, dry place.



Figure

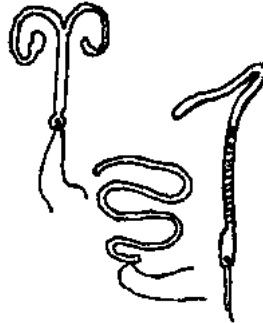
CONTRACEPTIVE FOAM comes in a tube or can. The woman puts it into her vagina with a special applicator. It must be applied no longer than 1 hour before having sex, and left in for at least 6 hours afterward. The application should be repeated before each time the couple has sex, even if this is several times in one night. It is a fairly sure method if used correctly.



Figure

THE INTRAUTERINE DEVICE (IUD) is a plastic (or sometimes metal) object that a specially trained health worker or midwife places inside the womb. While in the womb, it prevents pregnancy. IUDs fall out of some women. In others they cause pain, discomfort, heavy bleeding during periods, and sometimes serious problems, but for some women

they give no trouble, at all. For these women, the IUD may be the simplest and most economical method.



Figure

WITHDRAWAL OR PULLING OUT (COITUS INTERRUPTUS) is a method in which the man pulls his penis out of the woman before the sperm comes. This method is perhaps better than none, but may be disturbing to the couple and does not always work, because some men do not pull out in time, especially if they have been drinking.

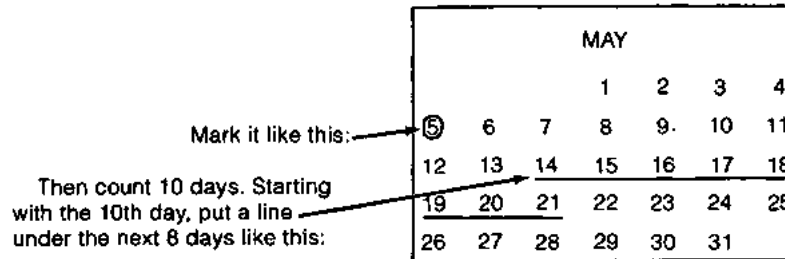
THE RHYTHM METHOD

This method is not very sure to prevent pregnancy, but it has the advantage of not costing anything. It is more likely to work for a woman whose periods come very regularly, more or less once every 28 days. Also, the husband and wife must be willing to pass one week out of each month without having sex the regular way.

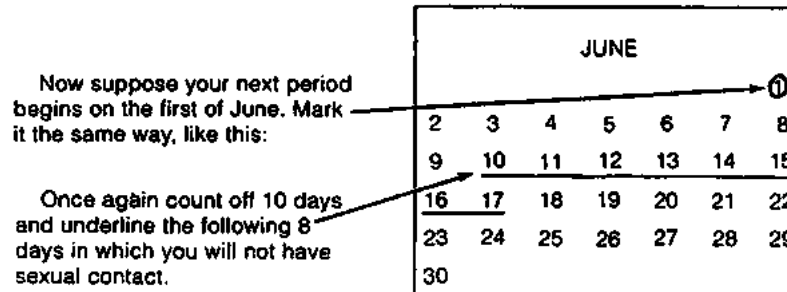
Usually a woman has a chance of becoming pregnant only during 8 days of her monthly cycle - her 'fertile days'. These 8 days come midway between her periods, beginning 10 days after the first day of menstrual bleeding. To avoid getting pregnant, a woman should

not have sex with her man during these 8 days. During the rest of the month, she is not likely to get pregnant.

To avoid confusion the woman should mark on a calendar the 8 days she is not to have sex.



For example: Suppose your period begins on the 5th day of May. Count that as day number 1.



During these 8 'fertile days', do not have sexual relations.

If the woman and her husband carefully avoid having sex together during these 8 days of

each month, it is possible that they will go years without having another child. However, few couples are successful for very long. This is not a very sure method, unless used in combination with another method such as a diaphragm or condoms, especially during the days from the end of the menstrual period until the fertile days are over.

THE MUCUS METHOD

This is a variation of the rhythm method. A woman finds out when she could become pregnant by checking the mucus in her vagina every day. It works fairly well for some couples but not for others. In general it cannot be considered a very sure way of preventing pregnancy, but' it costs nothing and has no risks other than those that come with pregnancy itself. However, it is more difficult to do if the woman has a vaginal infection with a lot of discharge, if her periods are not regular, or if she douches often.

Every day, except during her period, the woman should examine the mucus from her vagina. Take a little mucus out of your vagina with a clean finger and try to make it stretch between your thumb and forefinger, like this:

As long as the mucus is sticky like paste - not slippery or slimy - you probably cannot become pregnant, and can continue to have sexual relations.



Figure

When the mucus begins to get slippery or slimy, like raw egg, or if it stretches between your fingers, you may become pregnant if you have sexual relations. So, do not have sex when the mucus is slippery or stretches, or until 4 days after it has stopped being slippery or stretchy and has become sticky again.



Figure

The mucus will usually become slippery during a few days midway between your periods. These are the same days you would not have sex with your man if you were using the rhythm method.

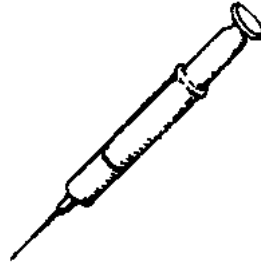
To be more sure, use the mucus and rhythm methods together. To be still more sure, see below.

Combined Methods

If you want to be more certain not to become pregnant, it often helps to use 2 methods at the same time. The rhythm or mucus method combined with the use of a condom, diaphragm, foam, or sponge is surer than any of these methods alone. Likewise, if a man uses condoms and the woman a diaphragm or foam, the chance of pregnancy is very low.

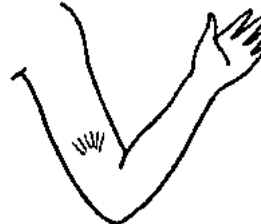
INJECTIONS. There are special injections to prevent pregnancy. *Depo-Provera* is one. An injection is usually given every 3 months. Side effects and precautions are similar to those for birth control pills: After a woman stops getting injections, it can take a year or more

for her to become pregnant. But to avoid pregnancy, it is wise to use another form of birth control.



Figure

IMPLANTS. With this method, 6 small tubes are put under the skin. If left there, they can prevent pregnancy for up to 5 years. Menstrual bleeding may be heavy during the first year. Return to the clinic if this happens.



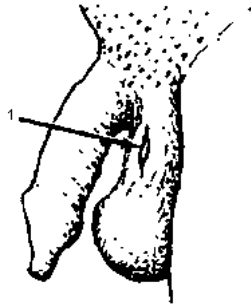
Figure

Injections and implants are useful for women who have trouble remembering to take pills, or who run into problems using other kinds of birth control.

Methods for Those Who Never Want to Have More Children

STERILIZATION. For those who never want to have more children, there are fairly safe, simple operations for both men and women. In many countries these operations are free. Ask at the health center.

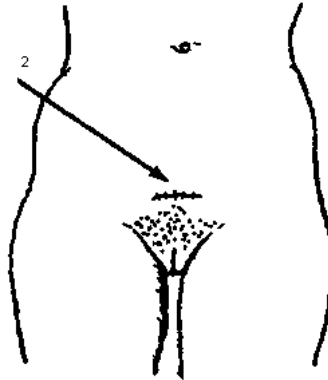
- For men, the operation is called a vasectomy. It can be done simply and quickly in a doctor's office or a health center, usually without putting the man to sleep. Small cuts are made here so (1) that the tubes from the man's testicles can be cut and tied. The testicles are not removed.



Figure

The operation has no effect on the man's sexual ability or pleasure. His fluid comes just the same, but has no sperm in it.

- For women, the operation is called a tubal ligation, which means to tie the tubes. One method is to make a small cut in the lower (2) belly so that the tubes coming from the ovaries, or egg-makers, can be cut and tied. It can usually be done in a doctor's office or health center without putting the woman to sleep. Although usually successful, there is a higher risk of infection in the operation for women than for men.



Figure

This operation has no effect on the woman's menstrual periods or sexual ability, and may make having sex more pleasant because she does not have to worry about pregnancy.

Home Methods for Preventing Pregnancy

Every land has 'home remedies' for preventing or interrupting pregnancy. Unfortunately, most either do not work or are dangerous,. For example, some women think that to wash out the vagina or to urinate after having sex will prevent pregnancy, but this is not true.

BREAST FEEDING. While a woman is breast feeding her baby she is less likely to become pregnant - especially when breast milk is the only food her baby receives. The chance of her becoming pregnant is much greater after 4 to 6 months, when the baby begins to get other foods in addition to breast milk. Even then, breast feeding can help prevent pregnancy if she breast feeds frequently, both day and night, and gives breast milk as the main food. (But if her periods start, she cannot depend on breast feeding to prevent

pregnancy.)



Figure

To be more sure she will not become pregnant, the mother who is breast feeding should begin some method of birth control when the baby is 3 to 4 months old. A method other than birth control pills is better because the pills cause some women to produce less milk. (The 'mini-pill' causes less of a problem.)

THE SPONGE METHOD. Here is a home method that is not harmful and sometimes works. You cannot be sure it will prevent pregnancy every time, but it can be used when no other method is available.

You will need a sponge and either vinegar, lemons, or salt. Either a sea sponge or an artificial sponge will work. If you do not have a sponge, try a ball of cotton, wild kapok, or soft cloth.



Figure

• **Mix:**

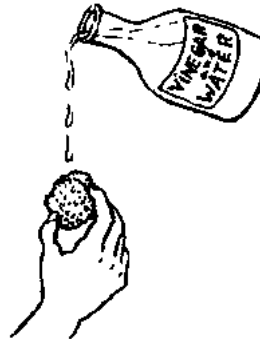
2 tablespoons vinegar in 1 cup clean water

or

1 teaspoon lemon juice in 1 cup clean water

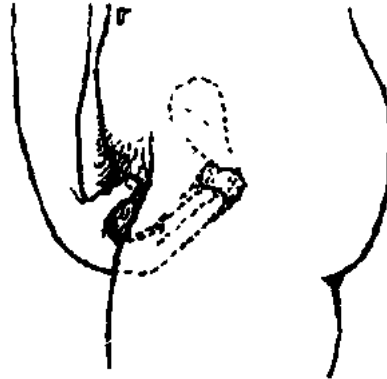
or

1 spoon of salt in 4 spoons clean water



Figure

- **Wet the sponge with one of these liquids.**
- **Push the wet sponge deep into your vagina before having sex. You can put it in up to an hour before.**
- **Leave the sponge in at least 6 hours after having sex. Then take it out. If you have trouble getting it out, next time tie a ribbon or piece of string to it that you can pull.**



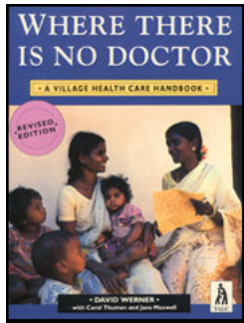
Figure


The sponge can be washed and used again, many times. Keep it in a clean place.

You can make up the liquid in advance and keep it in a bottle.























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 **Where There Is No Doctor - A Village Health Care Handbook (Hesperian Foundation, 1993, 516 p.)**

  **Chapter 21 - HEALTH AND SICKNESSES OF CHILDREN**

-  **What to Do to Protect Children's Health**
-  **Children's Growth - and the 'Road to Health'**
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-  **Health Problems of Children Not Discussed in Other Chapters**
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Chapter 21 - HEALTH AND SICKNESSES OF CHILDREN

What to Do to Protect Children's Health

NUTRITIOUS FOOD,



Figure

CLEANLINESS



Figure

AND VACCINATIONS



Figure

ARE THE THREE IMPORTANT 'BODY GUARDS' THAT KEEP CHILDREN HEALTHY AND PROTECT THEM AGAINST MANY SICKNESSES

Chapters 11 and 12 tell more about the importance of nutritious food, cleanliness, and vaccination. Parents should read these chapters carefully and use them to help care for -

and teach - their children. The main points are briefly repeated here.

Nutritious Food

It is important that children eat the most nutritious foods they can get, so that they grow well and do not get sick.

The best foods for children at different ages are:

- **in the first 4 to 6 months: breast milk and nothing more.**
- **from 6 months to 1 year: breast milk and also other nutritious foods - such as boiled cereals, mashed-up beans, eggs, meat, cooked fruits and vegetables.**
- **from 1 year on: the child should eat the same foods as adults - but more often. To the main food (rice, maize, wheat, potatoes, or cassava) add 'helper foods' as discussed in Chapter 11.**
- **Above all, children should get enough to eat - several times a day.**
- **All parents should watch for signs of malnutrition in their children and should give them the best food they can.**

Cleanliness

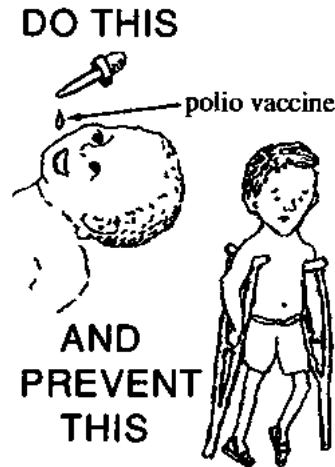
Children are more likely to be healthy if their village, their homes, and they themselves are kept clean. Follow the Guidelines of Cleanliness explained in Chapter 12. Teach children to follow them - and to understand their importance. Here the most important guidelines are repeated:

- **Bathe children and change their clothes often.**

- **Teach children always to wash their hands when they get up in the morning, after they have a bowel movement, and before they eat or handle food.**
- **Make latrines or 'outhouses' - and teach children to use them.**
- **Where hookworm exists, do not let children go barefoot; use sandals or shoes.**
- **Teach children to brush their teeth; and do not give them a lot of candies, sweets, or carbonated drinks**
- **Cut fingernails very short.**
- **Do not let children who are sick or have sores, scabies, lice, or ringworm sleep with other children or use the same clothing or towels.**
- **Treat children quickly for scabies, ringworm, intestinal worms, and other infections that spread easily from child to child.**
- **Do not let children put dirty things in their mouths or let dogs or cats lick their faces.**
- **Keep pigs, dogs, and chickens out of the house.**
- **Use only pure, boiled, or filtered water for drinking. This is especially important for babies.**
- **Do not feed babies from 'baby bottles', because these are hard to keep clean and can cause illness. Feed babies with a cup and spoon.**

Vaccinations

Vaccinations protect children against many of the most dangerous diseases of childhood - whooping cough, diphtheria, tetanus, polio, measles, and tuberculosis.



Figure

Children should be given the different vaccinations during the first months of life. Polio drops should be first given if possible at birth, but no later than 2 months of age, because the risk of developing infantile paralysis (polio) is highest in babies under 1 year old.

Important: For complete protection, the DPT (diphtheria, whooping cough, tetanus) and polio vaccines should be given once a month for 3 months and once again a year later.

Tetanus of the newborn can be prevented by vaccinating mothers against tetanus during pregnancy.

Be sure your children get all the vaccinations they need.

Children's Growth - and the 'Road to Health'



Figure

A healthy child grows steadily. If he eats enough nutritious food, and if he has no serious illness, a child gains weight each month.

A child who grows well is healthy.

A child who gains weight more slowly than other children, stops gaining weight, or is losing weight is not healthy. He may not be eating enough or he may have a serious illness, or both.

A good way to check whether a child is healthy and is getting enough nutritious food is to weigh him each month and see if he gains weight normally. If a monthly record of the child's weight is kept on a Child Health Chart, it is easy to see at a glance whether the child is gaining weight normally.

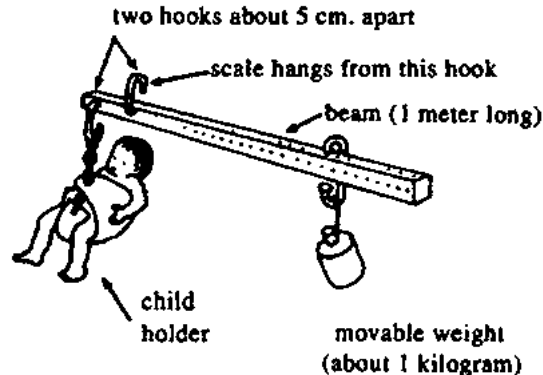
When used well, the charts will tell mothers and health workers when a child is not

growing normally, so that they can take early action. They can make sure the child gets more to eat, and can check for and treat any illness the child may have.

On the next page is a typical Child Health Chart showing the 'road to health'. This chart can be cut out and copied. Or larger, ready-made cards can be obtained (in English, French, Spanish, Portuguese, or Arabic) from Teaching Aids at, Low Cost (TALC). Similar charts are produced in local languages by the Health Departments in many countries.

It is a good idea for every mother to keep a Child Health Chart for each of her children under 5 years of age. If there is a health center or 'under-fives clinic' nearby, she should take her children, with their charts, to be weighed and to have a 'check-up' each month. The health worker can help explain the Chart and its use.

To protect the Child Health Chart, keep it in a plastic envelope.

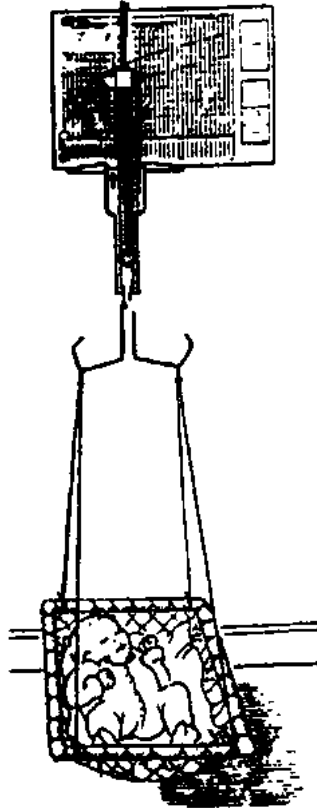


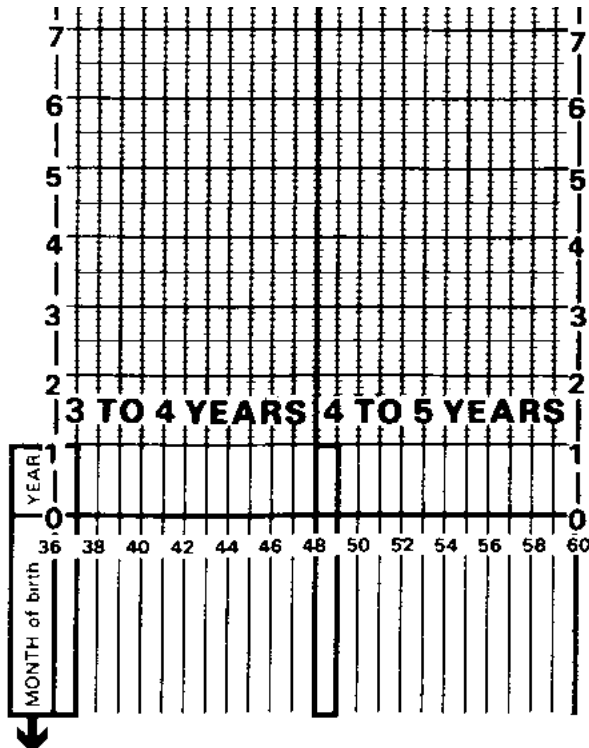
HOMEMADE BEAM SCALE

You can make a beam scale of dry wood or bamboo. For the movable weight use a

bag, bottle, or tin filled with sand.

Weight is correct when beam stays horizontal.





CARD GIVEN AND MOTHER TAUGHT BY

Date

ASK THE MOTHER ABOUT THESE REASONS FOR GIVING THE CHILD EXTRA CARE (make a circle round the right answer!)

TAKE EXTRA CARE

- Was the baby **less than 2.5 kg** at birth no... yes
 - Is this baby a **twin** no... yes
 - Is this baby **bottle fed** no... yes
 - Does the mother **need more family support** no... yes
 - Are any brothers or sisters **underweight** no... yes
 - Are there any other reasons for **taking extra care?** no... yes
- For example – tuberculosis or leprosy or **social problems**

Remember to discuss child spacing



chart produced by
TALC TALC P.O. BOX 49, ST. ALBANS, UK.
Training materials are also available

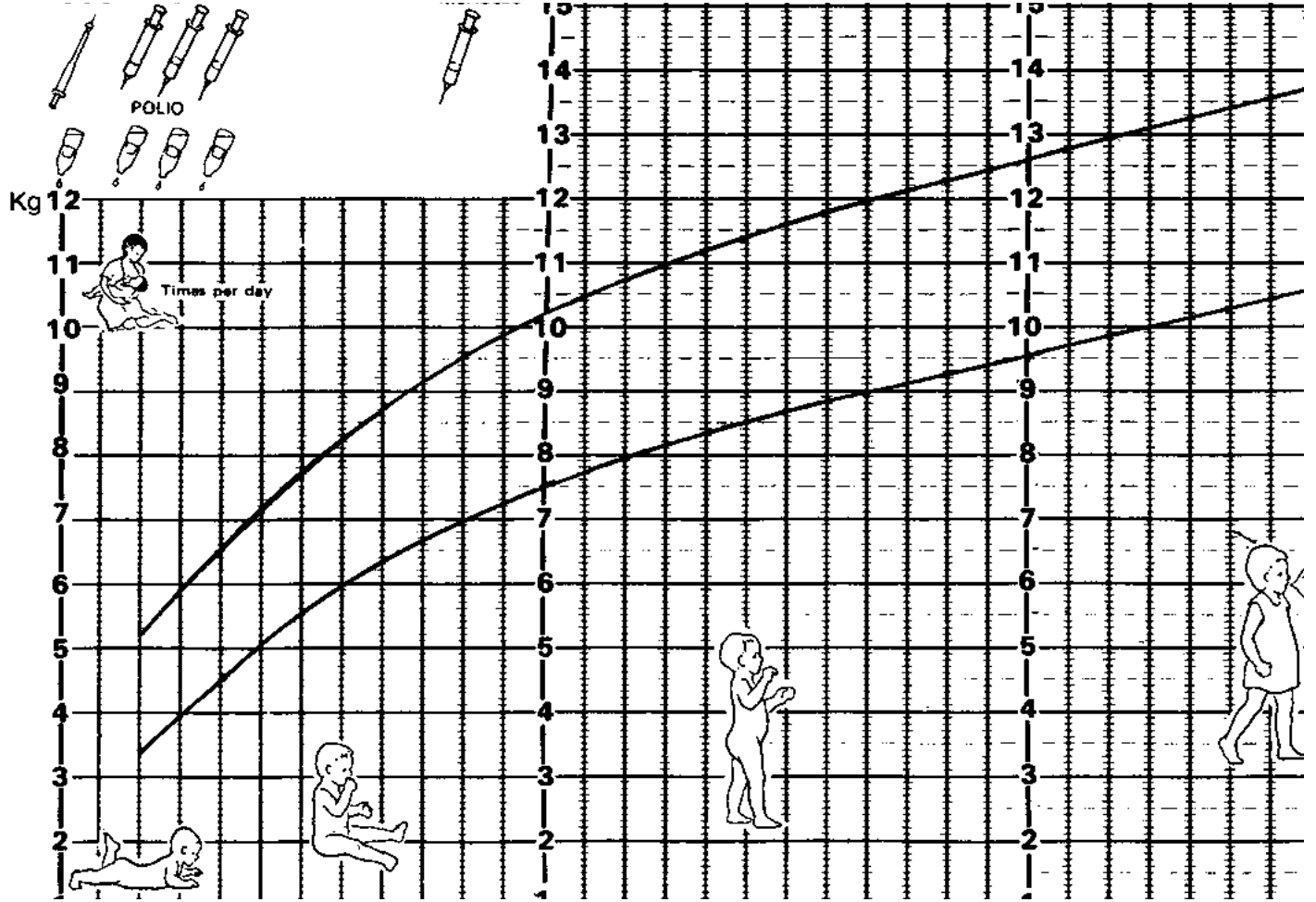
GROWTH CURVE Reference values – WHO recommended 1980
 UPPER LINE: 50th CENTILE BOYS LOWER LINE: 3rd CENTILE GIRLS

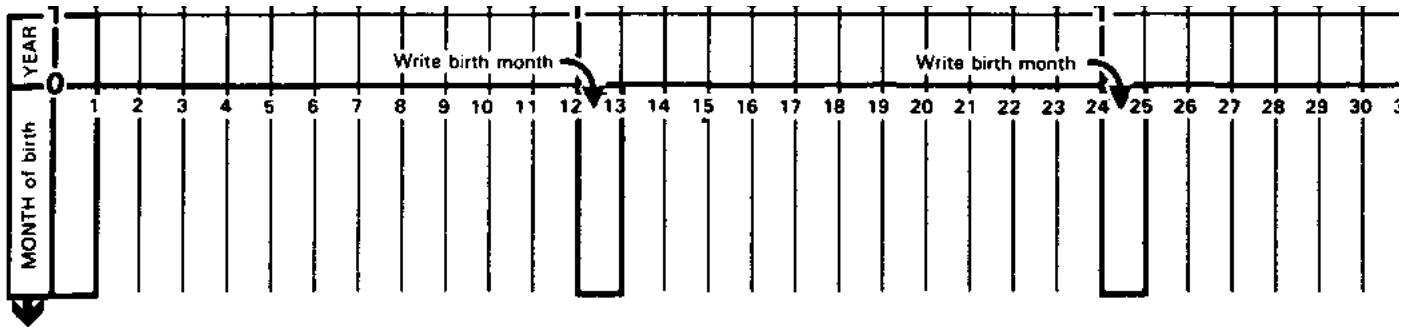
CHILD HEALTH CHART - SIDE ONE

CHILD'S NAME _____ **2 TO 3 YE**

BIRTH TO 1 YEAR _____ **1 TO 2 YEARS** _____

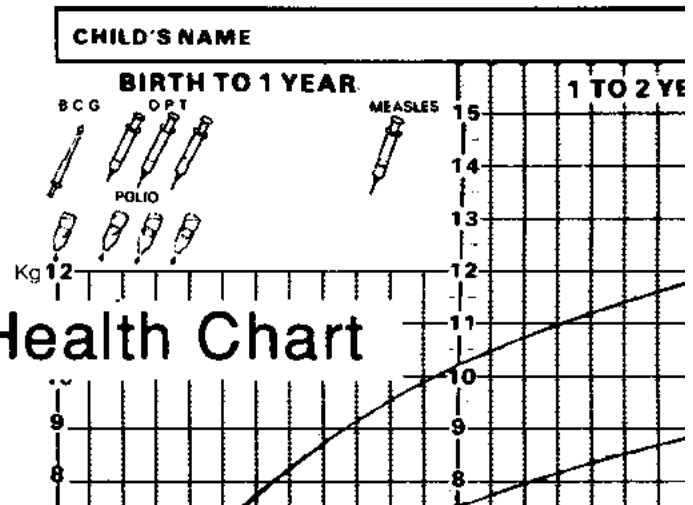
B.C.G. D.P.T. MEASLES





CHILD HEALTH CHART - SIDE TWO

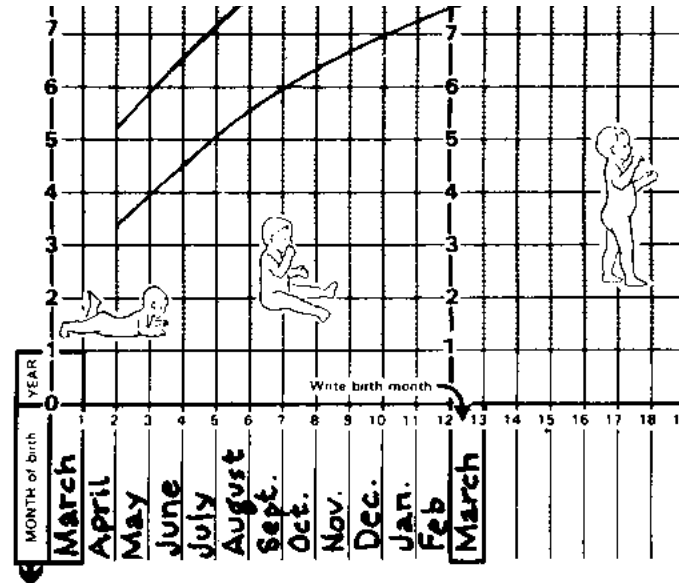
How to Use the Child Health Chart



How to Use the Child Health Chart

FIRST, write the

months of
the year in
the little
squares at
the bottom
of the chart.

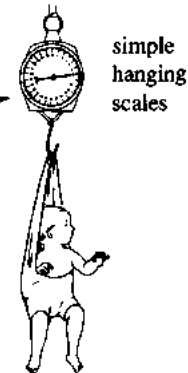


Write the month the baby was born
in the first square for each year.
This chart shows the baby was born in March.

FIRST

SECOND, weigh the child.

Let us suppose that a child was born in April.
It is now August, and the child weighs 6 kilograms.



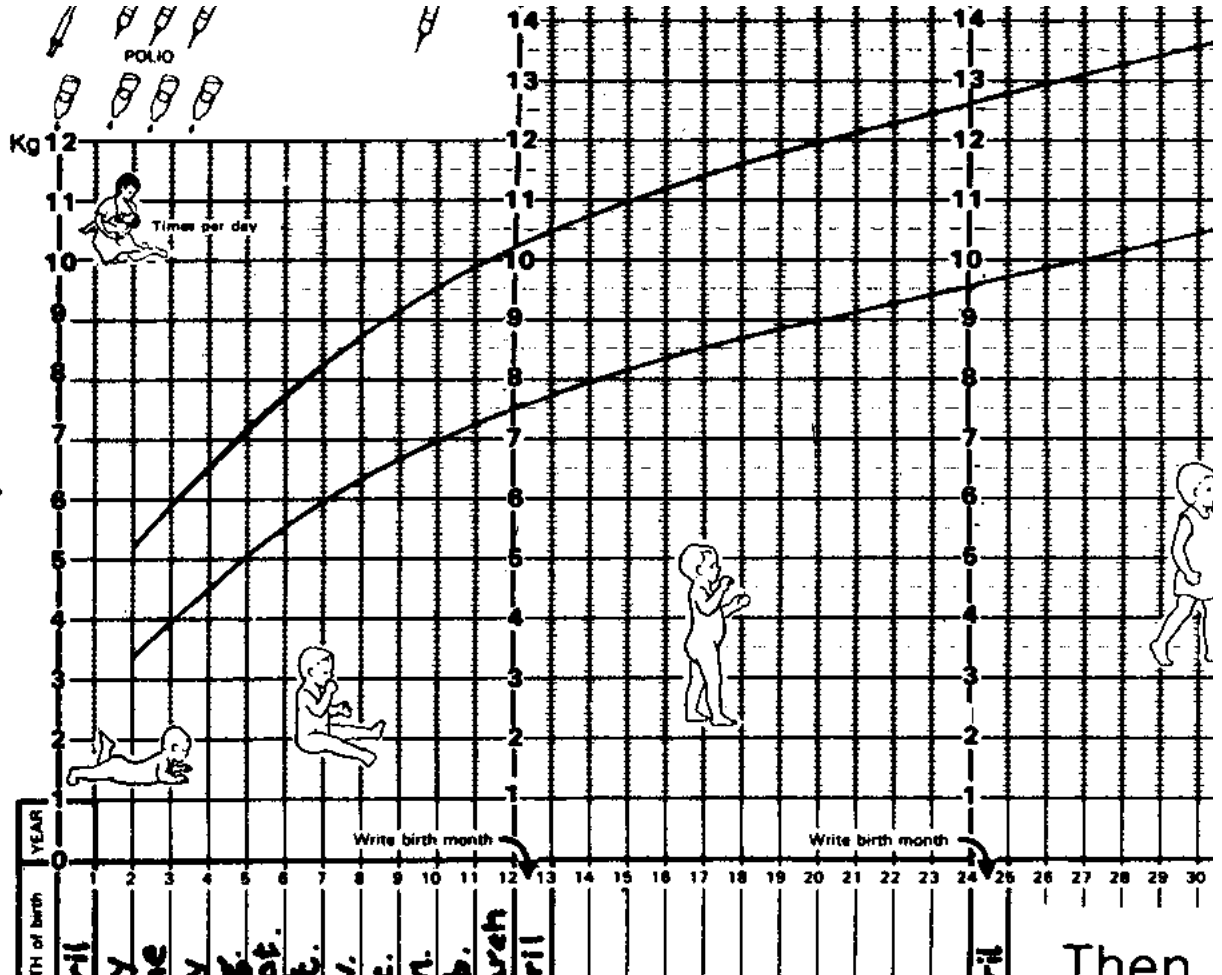
simple
hanging
scales

SECOND

THIRD, look at the card.

Kilograms are written on the side of the card.
Look for the number of kilograms the child weighs
(in this case, 6).

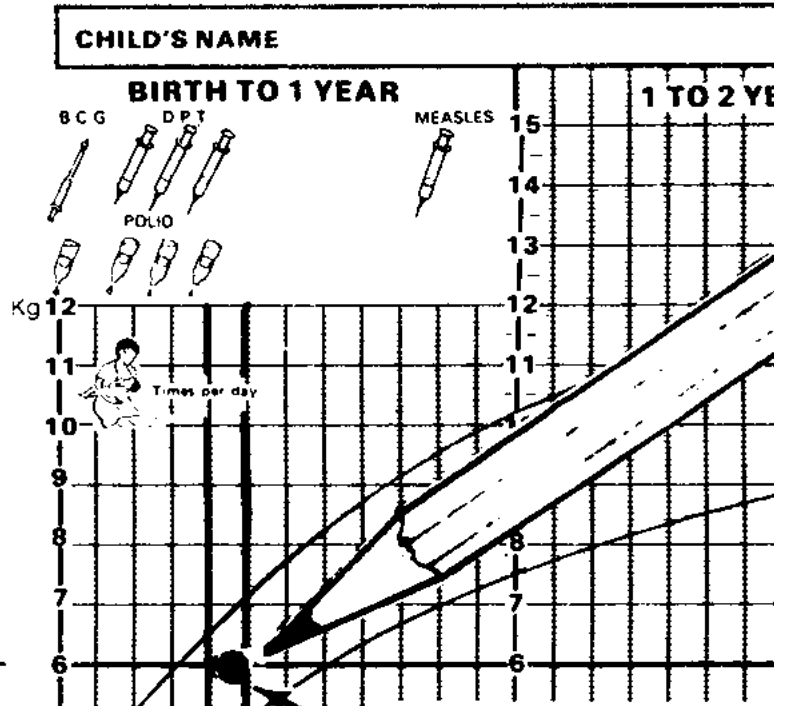
CHILD'S NAME				2 TO 3 Y			
BIRTH TO 1 YEAR				1 TO 2 YEARS			
B.C.G.	D.P.T.		MEASLES	15			15





FROM
bottom
August

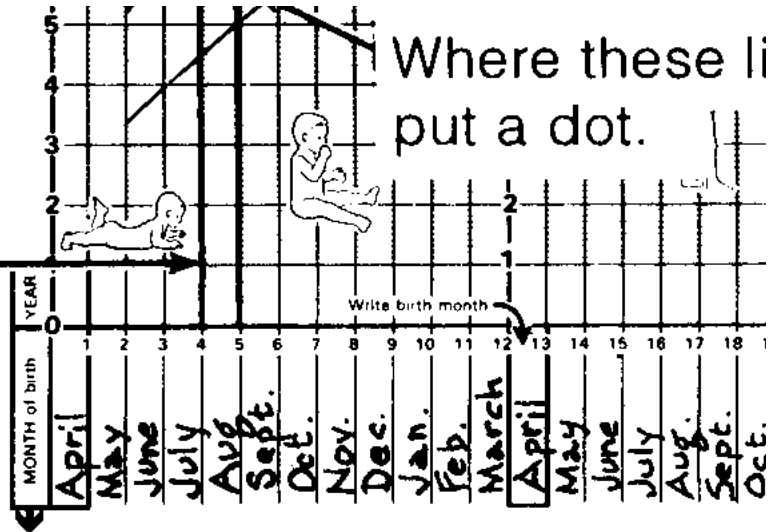
THIRD



FOURTH, follow the
line that goes
out from the 6



and
the lines that go
up from August.

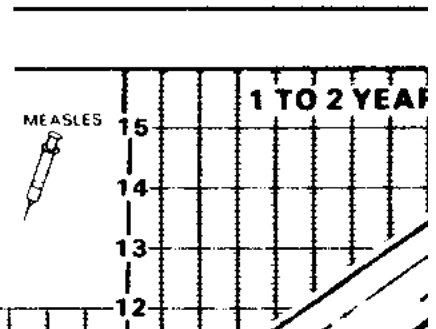
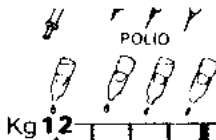


Where these li
put a dot.

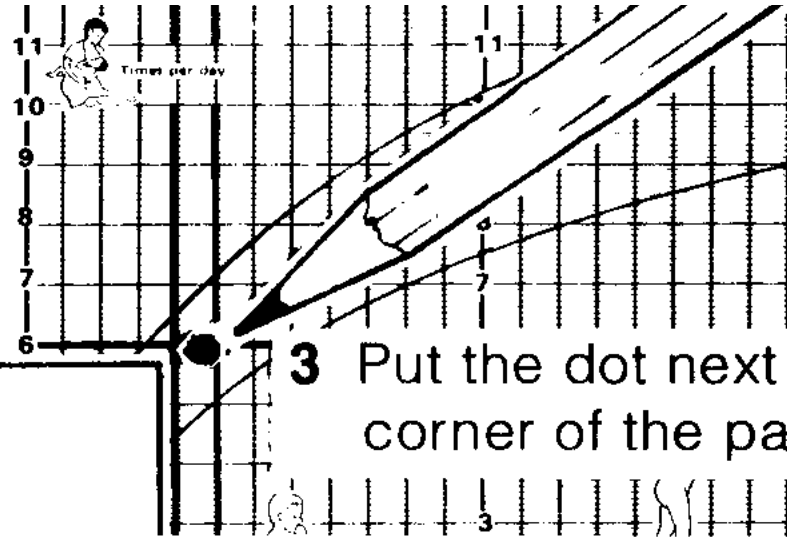
FOURTH

It is easy to know where to put
the dot if you hold a square
piece of paper against the chart.

1 Line up one



edge of the paper with the child's weight.



2 Line up the other edge of paper with the month.



Figure 1

Each month weigh the child and put another dot on the chart.

If the child is healthy, each month the new dot will be higher on the chart than the last.

To see how well the child is growing, join the dots with lines.

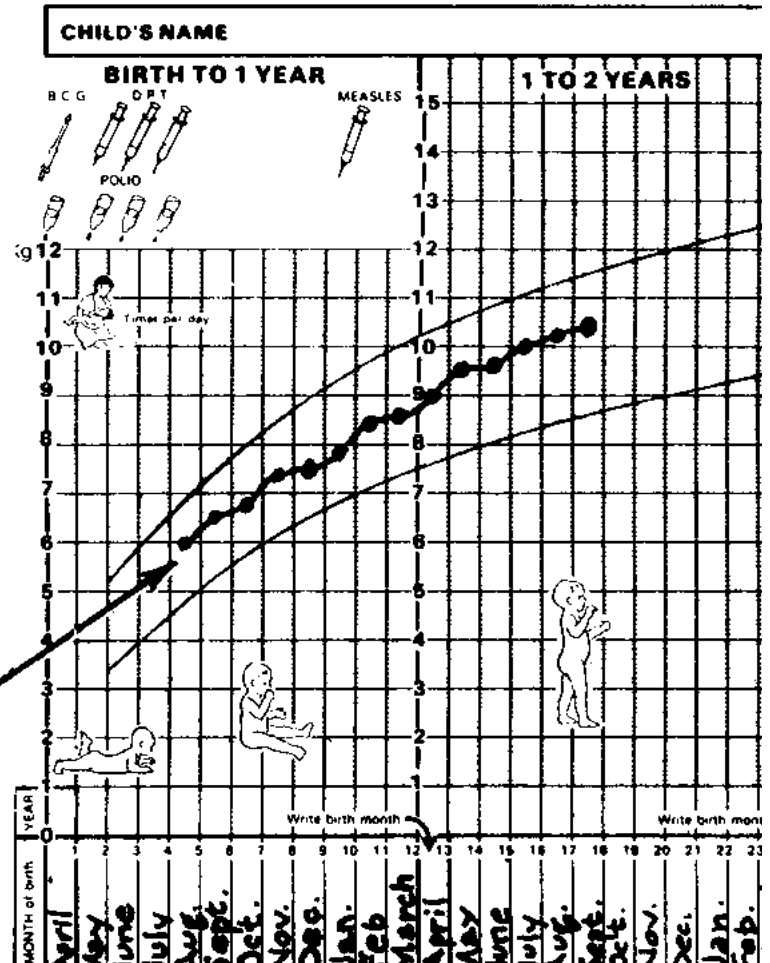
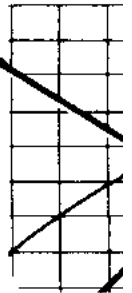




Figure 2

The 2 long curved lines on the chart mark the 'Road to Health' that a child's weight should follow.

The line of dots marks the child's weight from month to month, and from year to year.



How to Read the Child Health Chart

In most normal, healthy children, the line of dots falls between these lines is called the Road to Health.

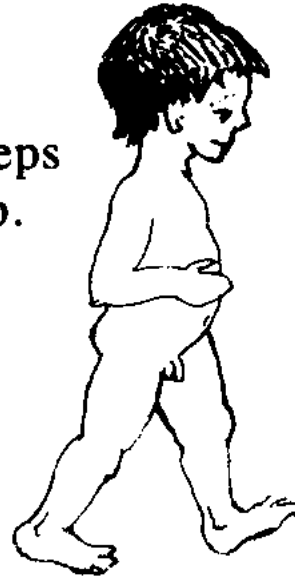
If the line of dots rises steadily, month after month, in the same direction as the long curved lines, this is also a sign that the child is healthy.

A healthy child who gets enough nourishing food usually begins to sit, walk, and speak at about the times shown here.

**Sits
without
help.**



**Walks 10 steps
without help.**



12 to 16

months

**Sit
with**



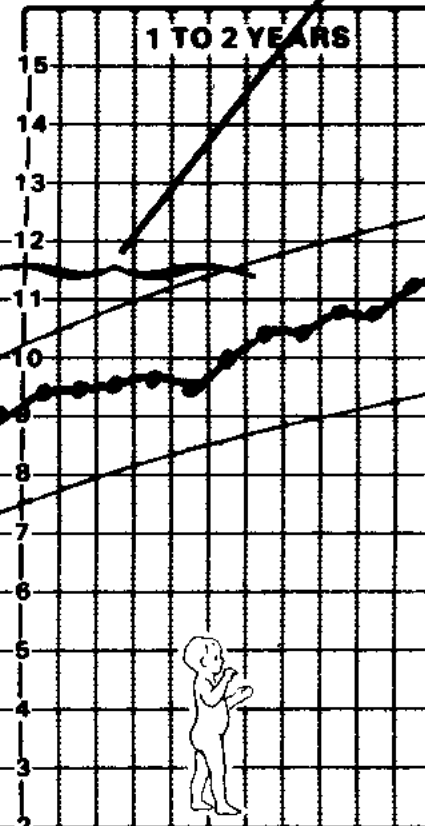
11

mo

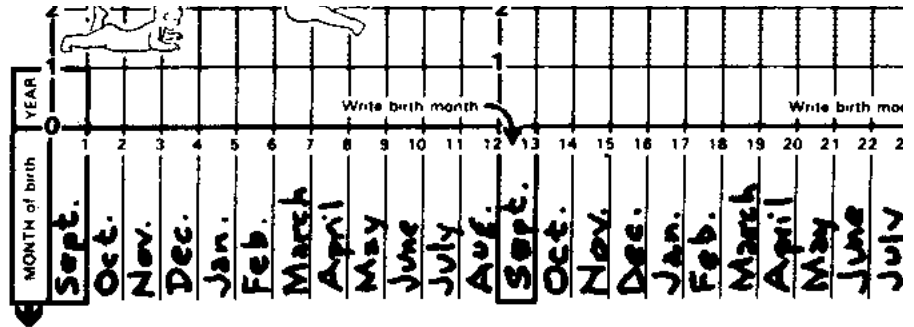


6 to 8 months

MONTHS

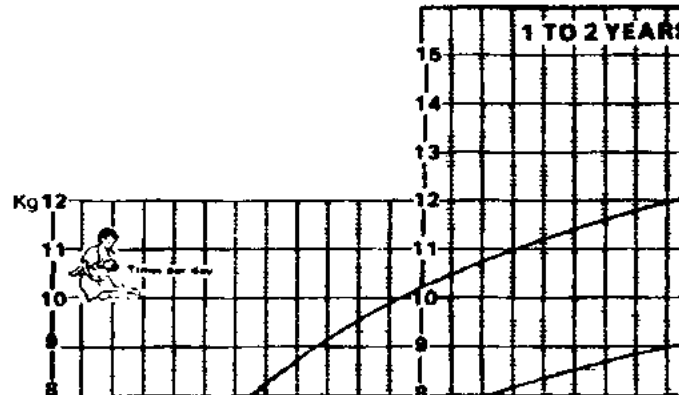


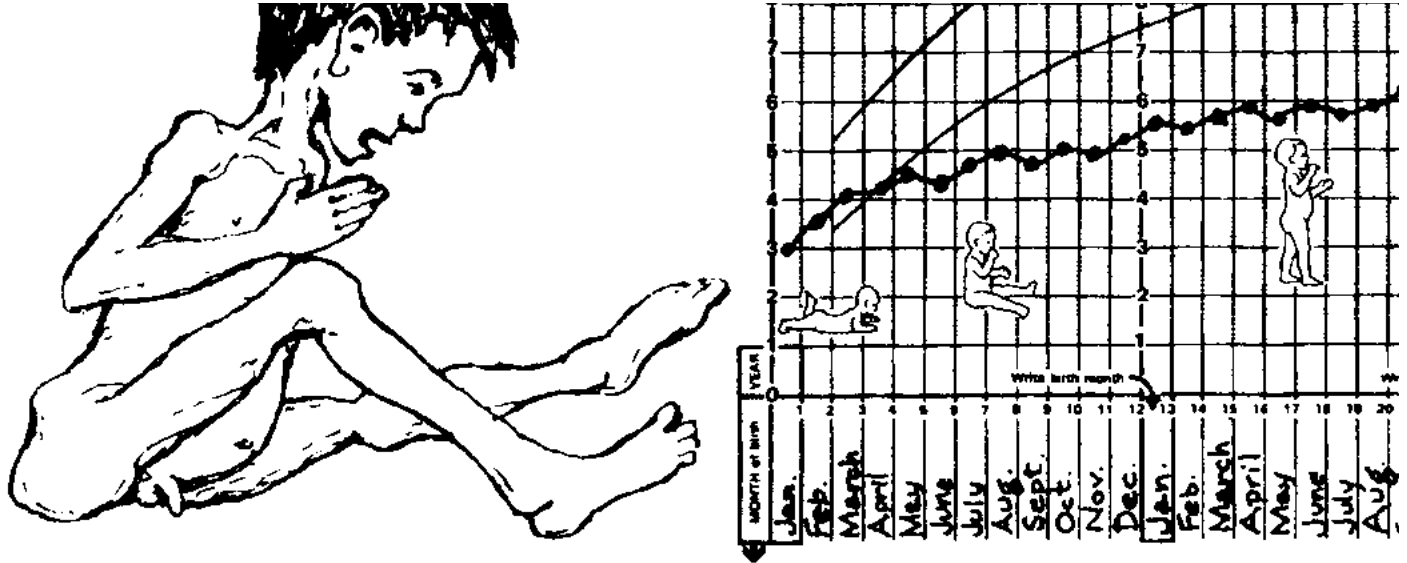
In the healthy, well-nourished child, the weight rises steadily. The dots usually lie inside the lines that mark the Road to Health.



Typical chart of THE HEALTHY, WELL-NOURISHED CHILD

A malnourished, sickly child may have a chart like the one below. Notice that the line of dots (his weight) is below the Road to Health. The line of dots is also irregular and does not rise much. This shows the child is in danger.



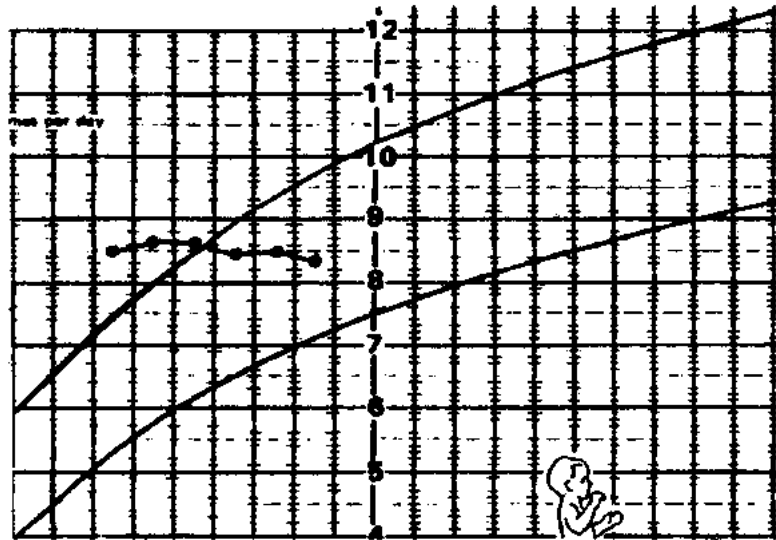


Typical chart of THE UNDERWEIGHT OR MALNOURISHED CHILD

A child with a chart like the one above is seriously underweight. Perhaps he is not getting enough food. Or perhaps he has a disease like tuberculosis or malaria. Or both. He should be given more energy-rich foods more often. He should also be checked or tested for possible illnesses, and visit a health worker frequently until his chart shows he is gaining weight well.

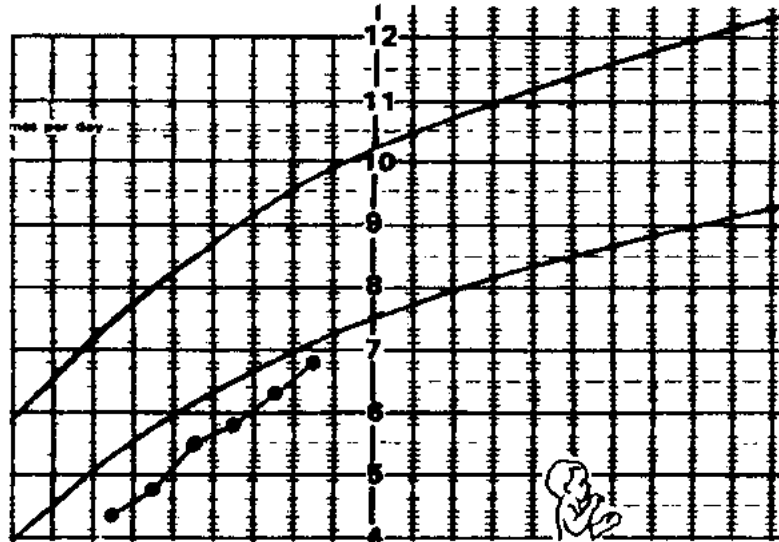
***IMPORTANT:* Watch the direction of the line of dots.**

The direction of the line of dots tells more about the child's health than whether the dots are inside or below the two curved lines. For example:



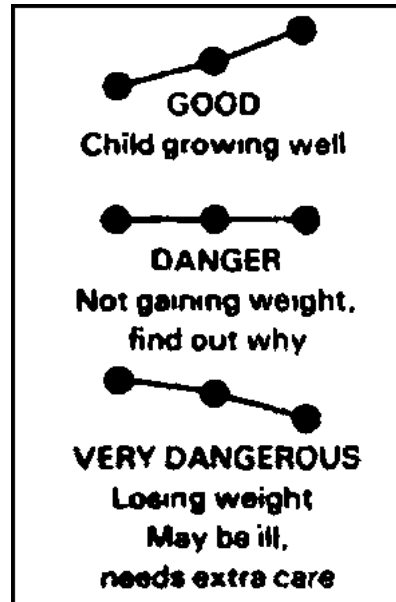
DANGER! This child is not gaining weight.

Although the dots for this child are within the curved lines, the child has not been gaining weight well for several months.



GOOD! This child is gaining weight well.

Although the dots for this child are below the 2 curved lines, their upward direction shows the child is growing well. Some children are naturally smaller than others. Perhaps this child's parents are also smaller than average.



WATCH THE DIRECTION OF THE LINE SHOWING THE CHILD'S GROWTH

This baby was healthy and gained weight well for the first 6 months of life, because his

At 6 months, the mother became pregnant again and stopped breast feeding him. The baby was fed little more than corn and

At 10 months he developed chronic diarrhea and began

When the child was 12 months old, I learned how it is to give a child enough good food to begin gaining fast. By age 1

mother breast fed him.

rice. He stopped gaining weight.

losing weight. He became very thin and sick.

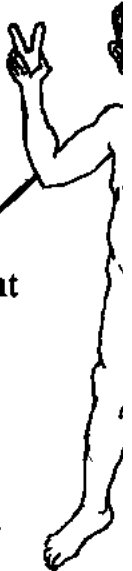
back on the Health.

breast fed

poorly fed

diarrhea

well fed

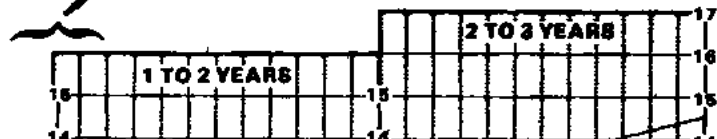


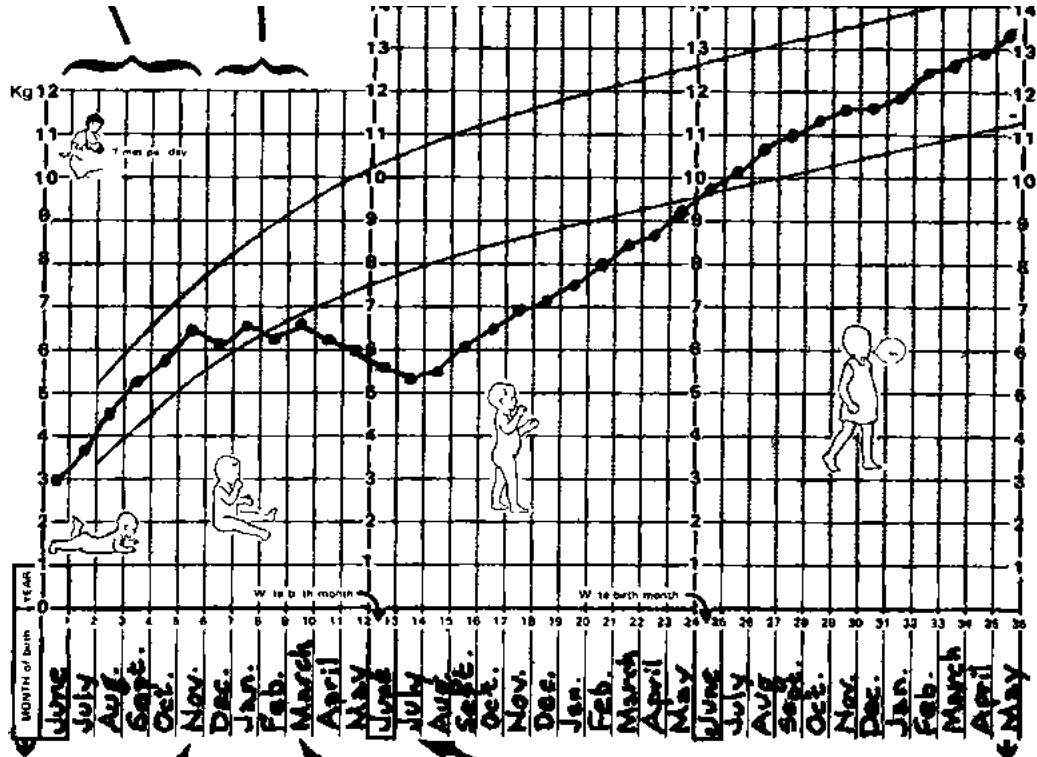
good weight gain

poor weight gain

weight loss

good weight gain





off breast
at 6 months

diarrhea begins
at 10 months

nutritious feeding
begins at 13 months

A typical CHILD HEALTH CHART SHOWING A CHILD'S PROGRESS

Child Health Charts are important. When used correctly, they help mothers know when their children need more nutritious food and special attention. They help health workers better understand the needs of the child and his family. They also let the mother know when she is doing a good job.

Review of Children's Health Problems Discussed in Other Chapters

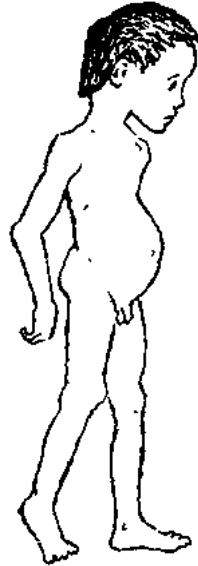
Many of the sicknesses discussed in other chapters of this book are found in children. Here some of the more frequent problems are reviewed in brief. For more information on each problem, see the pages indicated.

Remember: In children, sicknesses often become serious very quickly. An illness that takes days or weeks to severely harm or kill an adult may kill a small child in hours. So, it is important to notice early signs of sickness and attend to them right away.

Malnourished Children

Many children are malnourished because they do not get enough to eat. Or, if they eat mainly foods with a lot of water and fiber in them, like cassava, taro root, or maize gruel, their bellies may get full before they get enough energy food for their bodies' needs. Also, some children may lack certain things in their food, like Vitamin A or iodine. For a fuller discussion of the foods children need, read Chapter 11.

THESE TWO CHILDREN ARE MALNOURISHED



NOT VERY SERIOUS

- **small**
- **underweight**
- **big belly**
- **thin arms and legs**



SERIOUS

- sad
- **underweight (he may gain weight for a while because of swelling)**
- **dark spots, peeling skin, or open sores**
- **swollen feet**

Malnutrition may cause many different problems in children, including:

In mild cases:

- slower growth

In more serious cases:

- little or no weight gain

- swollen belly
 - thin body
 - loss of appetite
 - loss of energy
 - paleness (anemia)
 - desire to eat dirt (anemia)
 - sores in corners of mouth
 - frequent colds and other infections
- swelling of feet(sometimes face also)
 - dark spots, 'bruises', or open peeling sores
 - thinness or loss of hair
 - lack of desire to laugh or play
 - sores inside mouth
 - failure to develop normal intelligence
 - 'dry eyes' (xerophthalmia)
- blindness
- night blindness

Severe forms of general malnutrition are 'dry malnutrition' or marasmus, and 'wet malnutrition' or kwashiorkor.

Signs of malnutrition are often first seen after an acute illness like diarrhea or measles. A child who is sick, or who is getting well after a sickness, has an even greater need for enough good food than a child who is well.

Prevent and treat malnutrition by giving your children ENOUGH TO EAT and by feeding them MORE OFTEN. Add some high energy food, such as oil or fat, to the main food the child eats. Also try to add some body-building and protective foods like beans, lentils, fruits, vegetables, and if possible, milk, eggs, fish, or meat.

Diarrhea and Dysentery

The greatest danger to children with diarrhea is dehydration, or losing too much liquid from the body. The danger is even greater if the child is also vomiting. Give Rehydration Drink. If the child is breast feeding, continue giving breast milk, but give Rehydration

Drink also.



Figure

The second big danger to children with diarrhea is malnutrition. Give the child nutritious food as soon as he will eat.

Fever

In small children, high fever (over 39°) can easily cause fits or damage the brain. To lower fever, take the clothes off the child. If she is crying and seems unhappy, give her acetaminophen (paracetamol) or aspirin in the right dosage, and give her lots of liquids' If she is very hot and shaky, wet her with cool (not cold) water and fan her.



Figure

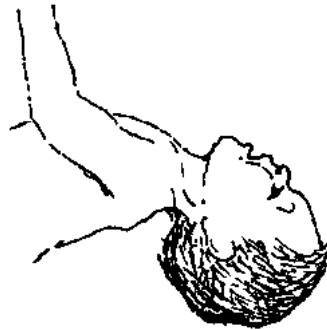
Fits (Convulsions)



Figure

Common causes of fits or convulsions in children are high fever, dehydration, epilepsy, and meningitis. If fever is high, lower it rapidly. Check for signs of dehydration and meningitis. Fits that come suddenly without fever or other signs are probably epilepsy, especially if the child seems well between them. Fits or spasms in which first the jaw and then the whole body become stiff may be tetanus.

Meningitis



Figure

This dangerous disease may come as a complication of measles, mumps, or another serious illness. Children of mothers who have tuberculosis may get tubercular meningitis. A very sick child who lies with his head tilted way back, whose neck is top stiff to bend forward, and whose body makes strange movements (fits) may have meningitis.

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**
- **chronic gut infections**
- **hookworm**

- **malaria**



Figure

Prevention and Treatment:

- **Eat iron-rich foods like meat and eggs. Beans, lentils, groundnuts (peanuts), and dark green vegetables also have some iron.**
- **Treat the cause of anemia - and do not go barefoot if hookworm is common.**
- **If you suspect hookworm, a health worker may be able to look at the child's stools under a microscope. If hookworm eggs are found, treat for hookworm.**
- **If necessary, give iron salts by mouth (ferrous sulfate).**

CAUTION: Do not give iron tablets to a baby or small child. They could poison her instead, give iron as a liquid. Or crush a tablet into powder and mix it with food.

Worms and Other Parasites of the Gut

If one child in the family has worms, all the family should be treated. To prevent worm infections, children should:

- **Observe the Guidelines of Cleanliness.**
- **Use latrines.**
- **Never go barefoot.**
- **Never eat raw or partly raw meat or fish.**
- **Drink only boiled or pure water.**

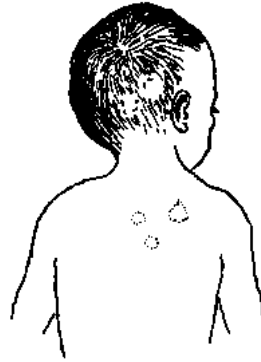


Figure

Skin Problems (see Chapter 15)

Those most common in children include:

- **scabies**
- **infected sores and impetigo**
- **ringworm and other fungus infections**

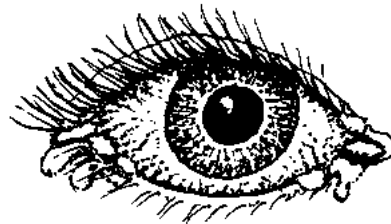


Figure

To prevent skin problems, observe the Guidelines of Cleanliness.

- **Bathe and delouse children often.**
- **Control bedbugs, lice, and scabies.**
- **Do not let children with scabies, lice, ringworm, or infected sores play or sleep together with other children. Treat them early.**

Pink Eye (Conjunctivitis)



Figure

Wipe the eyelids clean with a clean wet cloth several times a day. Put an antibiotic eye ointment inside the eyelids 4 times a day. Do not let a child with pink eye play or sleep with others. If he does not get well in a few days, see a health worker

Colds and the 'Flu'



Figure

The common cold, with runny nose, mild fever, cough, often sore throat, and sometimes, diarrhea is a frequent but not a serious problem in children.

Treat with lots of liquids. Give acetaminophen or perhaps aspirin. Let children who want to stay in bed do so. Good food and lots of fruit help children avoid colds and get well quickly.

Penicillin, tetracycline, and other antibiotics do no good for the common cold or 'flu'. Injections are not needed for colds.

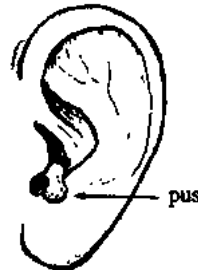
If a child with a cold becomes very ill, with high fever and shallow, rapid breathing, he

may be getting pneumonia, and antibiotics should be given. Also watch for an ear infection or 'strep throat'.

Health Problems of Children Not Discussed in Other Chapters

Earache and Ear Infections

Ear infections are common in small children. The infection often begins after a few days with a cold or a stuffy or plugged nose. The fever may rise, and the child often cries or rubs the side of his head. Sometimes pus can be seen in the ear. In small children an ear infection sometimes causes vomiting or diarrhea. So when a child has diarrhea and fever be sure to check his ears.



Figure

Treatment:

- **It is important to treat ear infections early. Give an antibiotic like penicillin or co-trimoxazole. In children under 3 years of age, ampicillin often works better. Give acetaminophen for pain. Aspirin also works but is less safe.**
- **Carefully clean pus out of the ear with cotton, but do not put a plug of cotton, a**

stick, leaves, or anything else in the ear.

- **Children with pus coming from an ear should bathe regularly but should not swim or dive for at least 2 weeks after they are well.**

Prevention:

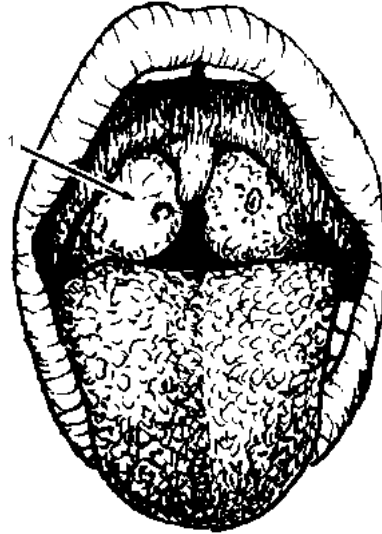
- **Teach children to wipe but not to blow their noses when they have a cold.**
- **Do not bottle feed babies - or if you do, do not let a baby feed lying on his back, as the milk can go up his nose and lead to an ear infection.**
- **When children's noses are plugged up, use salt drops and suck the mucus out of the nose.**

Infection in the ear canal:

To find out whether the canal or tube going into the ear is infected, gently pull the ear. If this causes pain, the canal is infected. Put drops of water with vinegar in the ear 3 or 4 times a day. (Mix 1 spoon of vinegar with 1 spoon of boiled water.) If there is fever or pus, also use an antibiotic.

Sore Throat and Inflamed Tonsils

These problems often begin with the common cold. The throat may be red and hurt when the child swallows. The tonsils (two lymph nodes seen as lumps on each side at the back of the throat) may become large and painful or drain pus. Fever may reach 40°. (1)



Figure

Treatment:

- Gargle with warm salt water (1 teaspoon of salt in a glass of water).
- Take acetaminophen or aspirin for pain.
- If pain and fever come on suddenly or continue for more than 3 days, see the following page.

Sore throat and the danger of rheumatic fever:

For the sore throat that often comes with the common cold or flu, antibiotics should usually not be used and will do no good. Treat with gargles and acetaminophen (or

aspirin).

However, one kind of sore throat - called strep throat - should be treated with penicillin. It is most common in children and young adults. It usually begins suddenly with severe sore throat and high fever, often without signs of a cold or cough. The back of the mouth and tonsils become very red, and the lymph nodes under the jaw or in the neck may become swollen and tender.

Give penicillin for 10 days. If penicillin is given early and continued for 10 days, there is less danger of getting rheumatic fever. A child with strep throat should eat and sleep far apart from others, to prevent their getting it also.

Rheumatic Fever

This is a disease of children and young adults. It usually begins 1 to 3 weeks after the person has had a strep throat (see above).

Principal signs (usually only 3 or 4 of these signs are present):

- **fever**
- **joint pain, especially in the wrists and ankles, later the knees and elbows. Joints become swollen, and often hot and red.**
- **curved red lines or lumps under the skin**
- **in more serious cases, weakness, shortness of breath, and perhaps heart pain**



Figure

Treatment:

- **If you suspect rheumatic fever, see a health worker. There is a risk that the heart may become damaged.**
- **Take aspirin in large doses. A 12-year-old can take up to 2 or 3 tablets of 300 mg. 6 times a day. Take them together with milk or food to avoid stomach pain. If the ears begin to ring, take less.**
- **Give penicillin.**

Prevention:

- **To prevent rheumatic fever, treat 'strep throat' early with penicillin - for 10 days.**
- **To prevent return of rheumatic fever, and added heart damage, a child who has once had rheumatic fever should take penicillin for 10 days at the first sign of a sore throat. If he already shows signs of heart damage, he should take penicillin on a regular basis or have monthly injections of benzathine penicillin perhaps for the rest of his life. Follow the advice of an experienced health worker or doctor.**

Infectious Diseases of Childhood

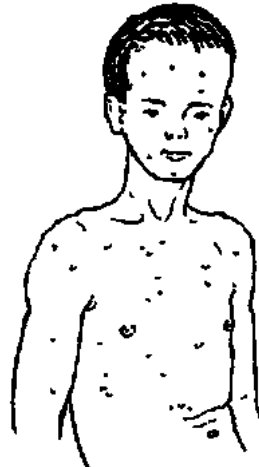
Chickenpox

This mild virus infection begins 2 to 3 weeks after a child is exposed to another child who has the disease.

Signs:



Figure



spots, blisters, and scabs

First many small, red, itchy spots appear. These turn into little pimples or blisters that pop and finally form scabs. Usually they begin on the body, and later on the face, arms, and legs: There may be spots, blisters, and scabs, all at the same time. Fever is usually mild.

Treatment:

The infection usually goes away in a week. Bathe the child daily with soap and warm water. To calm itching, apply cool cloths soaked in water from boiled and strained oatmeal. Cut fingernails very short. If the scabs get infected, keep them clean. Apply hot, wet compresses, and put an antibiotic ointment on them. Try to keep the child from scratching.

Measles (Rubeola)



Figure

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.**
- **If possible, give vitamin A to prevent eye damage.**
- **For fever and discomfort, give acetaminophen (or aspirin).**
- **If earache develops, give an antibiotic.**
- **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.**

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.

German Measles (Rubella)

German measles are not as severe as regular measles. They last 3 or 4 days. The rash is mild. Often the lymph nodes on the back of the head and neck become swollen and tender.

The child should stay in bed and take acetaminophen or aspirin if necessary.

Women who get German measles in the first 3 months of pregnancy may give birth to a child who is damaged or deformed. For this reason, pregnant women who have not yet had German measles - or are not sure - should keep far away from children who have this kind of measles. Girls or women who are not pregnant can try to catch German measles before they get pregnant. Vaccine exists for German measles, but is not often available.

Mumps



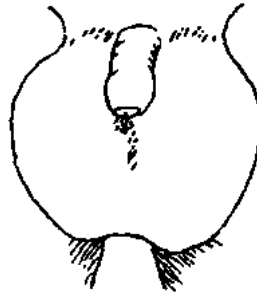
Figure

The first symptoms begin 2 or 3 weeks after being exposed to someone with mumps.

Mumps begin with fever and pain on opening the mouth or eating. In 2 days, a soft swelling appears below the ears at the angle of the jaw. Often it comes first on one side, and later on the other side.

Treatment:

The swelling goes away by itself in about 10 days, without need for medicine. Acetaminophen or aspirin can be taken for pain and fever. Feed the child soft, nourishing foods and keep his mouth clean.



Figure

Complications:

In adults and children over 11 years of age, after the first week there may be pain in the belly or a painful swelling of the testicles in men. Persons with such swelling should stay quiet and put ice packs or cold wet cloths on the swollen parts to help reduce the pain and swelling.

If signs of meningitis appear, get medical help.

Whooping Cough



Figure

Whooping cough begins a week or two after being exposed to a child who has it, it starts like a cold with fever, a runny nose, and cough.

Two weeks later, the whoop begins, The child coughs rapidly many times without taking a breath, until she coughs up a plug of sticky mucus, and the air rushes back into her lungs with a loud whoop. While she is coughing, her lips and nails may turn blue for lack of air. After the whoop, she may vomit. Between coughing spells the child seems fairly healthy.

Whooping cough often lasts 3 months or more.

Whooping cough is especially dangerous in babies under 1 year of age, so vaccinate children early. Small babies do not develop the typical whoop so it is hard to be sure if they have whooping cough or not. If a baby gets fits of coughing and swollen or puffy eyes

when there are cases of whooping cough in your area, treat her for whooping cough at once.

Treatment:

- **Antibiotics are helpful only in the early stage of whooping cough, before the whoop begins. Use erythromycin or ampicillin. Chloramphenicol also helps but is more risky. For the dosage for babies. It is especially important to treat babies under 6 months at the first sign.**
- **In severe cases of whooping cough, phenobarbital may help, especially if the cough does not let the child sleep or causes convulsions.**
- **If the baby stops breathing after a cough, turn her over and pull the sticky mucus from her mouth with your finger. Then slap her on the back with the flat of your hand.**
- **To avoid weight loss and malnutrition, be sure the child gets enough nutritious food. Have her eat and drink shortly after she vomits.**

Complications:

A bright red hemorrhage (bleeding) inside the white of the eyes may be caused by the coughing. No treatment is necessary. If fits or signs of pneumonia develop, get medical help.

Protect all children against whooping cough. See that they are first vaccinated at 2 months of age.

Diphtheria



Figure

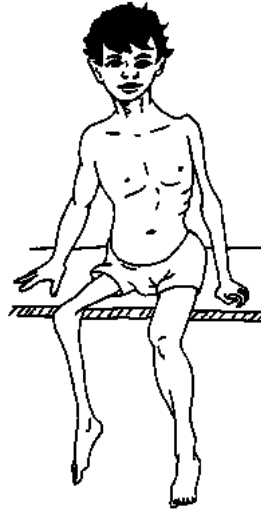
This begins like a cold with fever, headache, and sore throat. A yellow-gray coating or *membrane* may form in the back of the throat, and sometimes in the nose and on the lips. The child's neck may become swollen. His breath smells very bad.

If you suspect that a child has diphtheria:

- **Put him to bed in a room separate from other persons.**
- **Get medical help quickly. There is special antitoxin for diphtheria.**
- **Give penicillin, 1 tablet of 400,000 units, 3 times a day for older children.**
- **Have him gargle warm water with a little salt.**
- **Have him breathe hot water vapors often or continually.**
- **If the child begins to choke and turn blue, try to remove the membrane from his throat using a cloth wrapped around your finger.**

Diphtheria is a dangerous disease that can easily be prevented with the DPT vaccine. Be sure your children are vaccinated.

Infantile Paralysis (Polio, Poliomyelitis)



Figure

Polio is most common in children under 2 years of age. It is caused by a virus infection similar to a cold, often with fever, vomiting, diarrhea, and sore muscles. Usually the child gets completely well in a few days. But sometimes a part of the body becomes weak or paralyzed. Most often this happens to one or both legs. In time, the weak limb becomes thin and does not grow as fast as the other one.

Treatment:

Once the disease has begun, no medicine will correct the paralysis. (However, sometimes part or all of the lost strength slowly returns.) Antibiotics do not help. For early treatment, calm the pain with acetaminophen or aspirin and put hot soaks on painful muscles. Position the child to be comfortable and avoid *contractures*. Gently straighten his arms and legs so that the child lies as straight as possible. Put cushions under his knees, if necessary to reduce pain, but try to keep his knees straight.

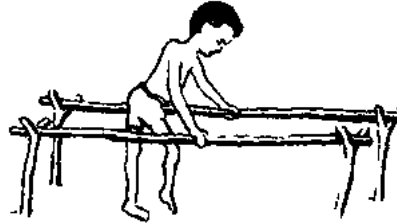
Prevention:

- **Vaccination against polio is the best protection.**
- **Do not give injections of any medicine to a child with signs of a cold, fever, or other signs that might be caused by the polio virus. The irritation caused by an injection could turn a mild case of polio without paralysis into a severe case, with paralysis. Never inject children with any medicine unless it is absolutely necessary.**

See that children are vaccinated against polio, with 'polio drops' at 2, 3, AND 4 months of age.

A child who has been paralyzed by polio should eat nutritious food and do exercises to strengthen remaining muscles.

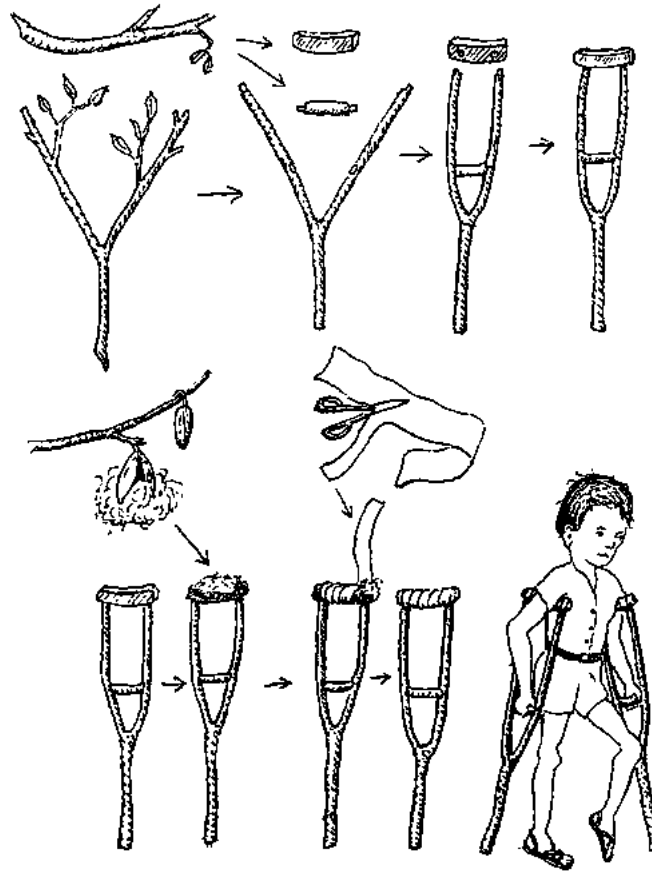
Help the child learn to walk as best he can. Fix 2 poles for support, like these, and later make him some crutches. Leg braces (calipers), crutches, and other aids may help the child to move better and may prevent deformities.



Figure

For more information on polio and other childhood disabilities, see *Disabled Village Children*, also published by The Hesperian Foundation.

How to Make Simple Crutches



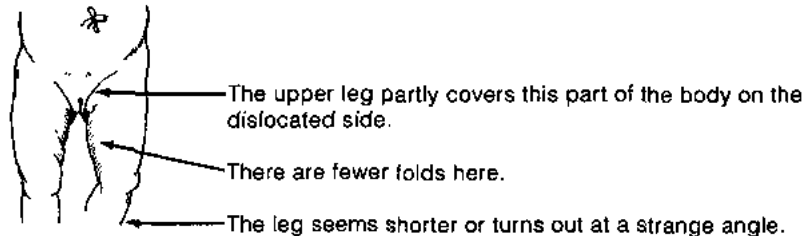
Figure

Problems Children Are Born With

Dislocated Hip

Some children are born with a dislocated hip - the leg has slipped out of its joint in the hip bone. Early care can prevent lasting harm and a limp. So babies should be checked for possible hip dislocation at about 10 days after birth.

1. Compare the 2 legs. If one hip is dislocated, that side may show:



Figure

2. Hold both legs with the knees doubled, like this



Figure

and open them wide like this.



Figure

If one leg stops early or makes a jump or click when you open it wide, the hip is dislocated.

Treatment:

Keep the baby with her knees high and wide apart:



by using many thickness of diapers like this



or by pinning her legs like this (when the baby sleeps)



or by doing this.

In places where babies are traditionally parried with their legs spread on the woman's hips, often no other treatment is necessary.

Umbilical Hernia (Belly Button That Sticks Out)

A belly button that sticks out like this is no problem. No medicine or treatment is needed. Tying a tight cloth or 'belly band' around the belly will not help.



Figure

Even a big umbilical hernia like this one is not dangerous and will often go away by itself. If it is still there after age 5, an operation may be needed. Get medical advice.



Figure

A 'Swollen Testicle' (Hydrocele or Hernia)

If a baby's *scrotum*, or bag that holds his testicles, is swollen on one side, this is usually because it is filled with liquid (a hydrocele) or because a loop of gut has slipped into it (a hernia).

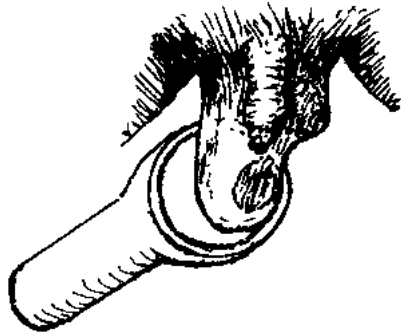


Figure

To find out which is the cause, shine a light through the swelling.

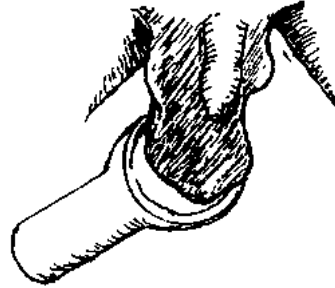
If light shines through easily, it is probably a **hydrocele**. If light does not shine through, and if the swelling gets bigger when the baby coughs or cries, it is a **hernia**.

Sometimes the **hernia** causes a swelling above and to one side of the baby's scrotum, not in it.



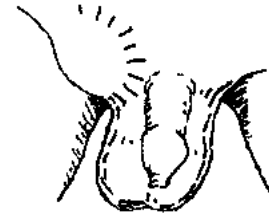
Figure

A hydrocele usually goes away in time, without treatment. If it lasts more than a year, get medical advice.



Figure

A hernia needs surgery.



Figure

You can tell this from a swollen lymph node because the hernia swells when the baby cries or is held upright and disappears when he lies quietly.

Mentally Slow, Deaf, Or Deformed Children

Sometimes parents will have a child who is born deaf, mentally *retarded* (slow), or with *birth defects* (something wrong with part of his body). Often no reason can be found. No one should be blamed. Often it just seems to happen by chance.

However, certain things greatly increase the chance of birth defects. A baby is less likely to have something wrong if parents take certain precautions.

1. Lack of nutritious food during pregnancy can cause mental slowness or birth defects in babies.

To have healthy babies, pregnant women must eat enough nutritious food.

2. Lack of iodine in a pregnant woman's diet can cause *cretinism* in her baby. The baby's face is puffy, and he looks dull. His skin and eyes may remain yellow (jaundiced) for a long time after he is born. His tongue hangs out, and his forehead may be hairy. He is weak, feeds poorly, cries little, and sleeps a lot. He is retarded, may be deaf, and usually has an umbilical hernia. He will begin to walk and talk later than normal babies.



CRETINISM

To help prevent cretinism, pregnant women should use iodized salt instead of ordinary salt.

If you suspect your baby may have cretinism, take him to a health worker or doctor at once. The sooner he gets special medicine (thyroid) the more normal he will be.

3. Smoking or drinking of alcoholic drinks during pregnancy causes babies to be born small or to have other problems. Do not drink or smoke - especially during pregnancy.

4. After age 35, there is more chance that a mother will have a child with defects. *Mongolism* or Down disease, which looks somewhat like cretinism, is more likely to occur in babies of older mothers.

It is wise to plan your family so as to have no more children after age 35 (see Chapter 20).

5. Many medicines can harm the baby developing inside a pregnant mother. Use as little medicine as possible during pregnancy - and only those known to be safe.

6. When parents are blood relatives (cousins, for instance), there is a higher chance that their children will be defective or retarded. Cross-eyes, extra fingers or toes, club feet, hare lip, and cleft palate are common defects.

To lower the chance of these and other problems, do not marry a close relative. And if you have more than one child with a birth defect, consider not having more children (see Family Planning, Chapter 20).

If your child is born with a birth defect, take him to a health center. Often something can be done.

- **For cross-eyes.**

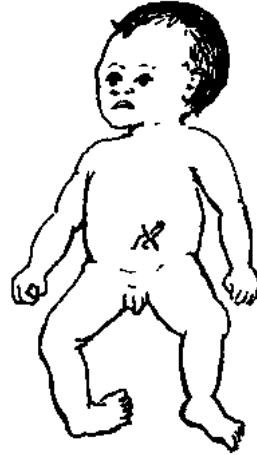
- **If an extra finger or toe is very small with no bone in it, tie a string around it very tightly (1). It will dry up and fall off. If it is larger or has bone in it, either leave it or have it taken off by surgery.**



Figure

• If a newborn baby's feet are turned inward or have the wrong shape (clubbed), try to bend them to normal shape. If you can do this easily, repeat this several times each day. The feet (or foot) should slowly grow to be normal.

If you cannot bend the baby's feet to normal, take him at once to a health center where his feet can be strapped in a correct position or put in casts. For the best results, it is important to do this within 2 days after birth.



CLUB FOOT



WITH CAST

- **If a baby's lip or the top of his mouth (*palate*) is divided (*cleft*), he may have trouble breast feeding and need to be fed with a spoon or dropper. With surgery, his lip and palate can be made to look almost normal. The best age for surgery is usually at 4 to 6 months for the lip, and at 18 months for the palate.**



HARE LIP AND CLEFT PALATE

7. Difficulties before and during birth sometimes result in brain damage that causes a child to be spastic or have fits. The chance of damage is greater if at birth the baby is slow to breathe, or if the midwife injected the mother with an oxytocic (medicine to speed up the birth or to 'give force' to the mother) before the baby was born.

Be careful in your choice of a midwife - and do not let your midwife use an oxytocic before the baby is born.

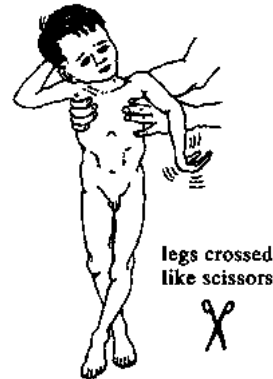
For more information on children with birth defects, see *Disabled Village Children*, Chapter 12.

The Spastic Child (Cerebral Palsy)

A child who is spastic has tight, stiff muscles that he controls poorly. His face, neck, or body may twist, and his movements may be jerky. Often the -tight muscles on the inside of his legs cause them to cross like scissors.

At birth the child may seem normal or perhaps floppy. The stiffness comes as he gets older. He may or may not be mentally slow.

The brain damage that causes cerebral palsy often results from brain damage at birth (when the baby does not breathe soon enough) or from meningitis in early childhood.



Figure

There are no medicines that cure the brain damage that makes a child spastic. But the child needs special care. To help prevent tightening of muscles in the legs or in a foot, straighten and bend them very slowly several times a day.

Help the child learn to roll over, sit, stand - and if possible to walk. Encourage him to use both his mind and body as much as he can. Even if he has trouble with speaking he may have a good mind and be able to learn many skills if given a chance. Help him to help himself.

For more information on cerebral palsy, see *Disabled Village Children*, Chapter 9.

TO HELP PREVENT MENTAL RETARDATION OR BIRTH DEFECTS IN HER CHILD, A WOMAN SHOULD DO THESE THINGS:

1. Do not marry a cousin or other close relative.
2. Eat as well as possible during pregnancy: as much beans, fruit, vegetables, meat, eggs, and milk products as you can.
3. Use iodized salt instead of regular salt, especially during pregnancy.
4. Do not smoke or drink during pregnancy.
5. While pregnant, avoid medicines whenever possible - use only those known to be safe.
6. While pregnant, keep away from persons with German measles.
7. Be careful in the selection of a midwife - and do not let the midwife use an oxytocic before the child is born.
8. Do not have more children if you have more than one child with the same birth defect (see Family Planning).
9. Consider not having more children after age 35.

Retardation in the First Months of Life

Some children who are born healthy do not grow well. Their minds and bodies are slow to develop because they do not eat enough nutritious food. During the first few months of life the brain develops more rapidly than at any other time. For this reason the nutrition of the newborn is of great importance. Breast milk is the best food for a baby (see The Best Diet for Babies).

Sickle Cell Disease (Sickle Cell Anemia)

Some children of African origin (or less often from India) are born with a 'weakness of the blood', called sickle cell disease. This disease is passed on from the parents, who often do not know they carry the 'sickle cell' trait. The baby may appear normal for 6 months, then signs may begin to appear.

Signs:

- fever and crying
- occasional swelling of the feet and fingers which lasts for 1 or 2 weeks (1, 2)



Figure

- big belly that feels hard at the top
- anemia, and sometimes yellow color in the eyes (jaundice)
- child frequently sick (cough, malaria, diarrhea)
- child grows slowly
- by age 2, bony bumps may appear on the head ('bossing') (3)



Figure

Malaria or other infections can bring on a 'sickle cell crisis' with high fever and severe pain in the arms, legs, or belly. Anemia becomes much worse. Swellings on the bones may discharge pus. The child may die.

Treatment:

There is no way to change the weakness in the blood. Protect the child from malaria and other diseases and infections that can bring on a 'crisis'. Take the child for regular monthly visits to a health worker for an examination and medicines.

- **Malaria.** In areas where malaria is common, the child should have regular malaria medicines to help prevent the disease. Add to this a daily dose of folic acid to help build up the blood. Iron medicine (ferrous sulfate) is not usually necessary.
- **Infections.** The child should be vaccinated against measles, whooping cough, and tuberculosis at the earliest recommended time. If the child shows signs of fever, cough, diarrhea, passing urine too often, or pains in the belly, legs or arms, take him to a health worker as soon as possible. Antibiotics may be necessary. Give plenty of water to drink, and acetaminophen for pain in the bones.
- **Avoid exposure to cold.** Keep warm with a blanket at night when necessary. Use a foam mattress if possible.

Helping Children Learn

As a child grows, she learns partly from what she is taught. Knowledge and skills she learns in school may help her to understand and do more later. School can be important.

But a child does much of her learning at home or in the forest or fields. She learns by watching, listening, and trying for herself what she sees others do. She learns not so much from what people tell her, as from how she sees them act. **Some of the most important things a child can learn - such as kindness, responsibility, and sharing - can only be taught by setting a good example.**

A child learns through adventure. She needs to learn how to do things for herself, even though she makes mistakes. When she is very young, protect a child from danger. But as she grows, help her learn to care for herself. Give her some responsibility. Respect her judgment, even if it differs from your own.

When a child is young, she thinks mostly of filling only her own needs. Later, she discovers the deeper pleasure of helping and doing things for others. Welcome the help of children and let them know how much it means.

Children who are not afraid ask many questions. If parents, teachers, and others take the time to answer their questions clearly and honestly - and to say they do not know when they do not - a child will keep asking questions, and as she grows may look for ways to make her surroundings or her village a better place to live.

Some of the best ideas for helping children learn and become involved in community health care have been developed through the CHILD-to-child Program. This is described in *Helping Health Workers Learn*, Chapter 24.



Figure

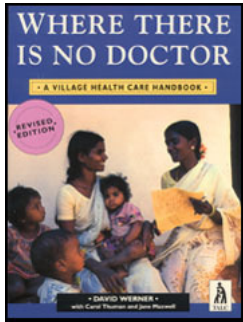
Or write to:

CHILD-to-child
Institute of Education
20 Bedford Way
London WC1N 0AL
GREAT BRITAIN



[Home](#) > [ar.cn.de.en.es.fr.id.it.ph.po.ru.sw](#)

 **Where There Is No Doctor - A Village Health Care Handbook**



(Hesperian Foundation, 1993, 516 p.)

➔ □ **Chapter 22 - HEALTH AND SICKNESSES OF OLDER PEOPLE**

📄 **(introduction...)**

📄 **Summary of Health Problems Discussed in Other Chapters**

📄 **Other Important Illnesses of Old Age**

📄 **Heart Trouble**

📄 **Words to Younger Persons Who Want to Stay Healthy When They Are Older**

📄 **Stroke (Apoplexy, Cerebro-Vascular Accident, CVA)**

📄 **Deafness**

📄 **Loss of Sleep (Insomnia)**

📄 **Diseases Found More Often In People over 40 Years Old**

📄 **Cirrhosis of the Liver**

📄 **Gallbladder Problems**

📄 **Accepting Death**

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Chapter 22 - HEALTH AND SICKNESSES OF OLDER PEOPLE

This chapter is about the prevention and treatment of problems seen mostly in older persons.

Summary of Health Problems Discussed in Other Chapters

Difficulties with Vision

After the age of 40, many people have problems seeing close objects clearly. They are becoming *farsighted*. Often glasses will help.



Figure

Everyone over age 40 should watch for signs of glaucoma, which can cause blindness if left untreated. Any person with signs of glaucoma should seek medical help.

Cataracts and 'flies before the eyes' (tiny moving spots) are also common problems of old age.

Weakness, Tiredness, and Eating Habits

Old people understandably have less energy and strength than when they were younger, but they will become even weaker if they do not eat well. Although older people often do not eat very much, they should eat some body-building and protective foods every day.

Swelling of the Feet

This can be caused by many diseases, but in older people it is often caused by poor circulation or heart trouble. Whatever the cause, keeping the feet up is the best treatment. Walking helps too - but do not spend much time standing or sitting with the feet down. Keep the feet up whenever possible. (1)

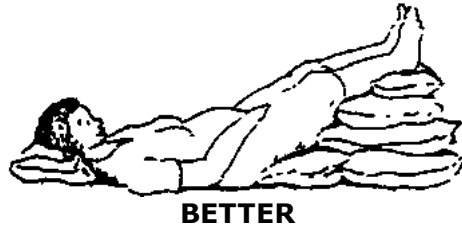


Figure

Chronic Sores of the Legs or Feet



GOOD



These may result from poor circulation, often because of varicose veins. Sometimes diabetes is part of the cause.

Sores that result from poor circulation heal very slowly.

Keep the sore as clean as possible. Wash it with boiled water and mild soap and change the bandage often.

When sitting or sleeping, keep the foot up.

Difficulty Urinating

Older men who have difficulty urinating or whose urine drips, or dribbles are probably suffering from an enlarged prostate gland.

Chronic Cough



Figure

Older people who cough a lot should not smoke and should seek medical advice. If they had symptoms of tuberculosis when they were younger, or have ever coughed up blood, they may have tuberculosis.

If an older person develops a cough with wheezing or trouble breathing (asthma) or if his feet also swell, he may have heart trouble (see the next page).

Rheumatoid Arthritis (painful joints)



Figure

Many older people have arthritis. To help arthritis:

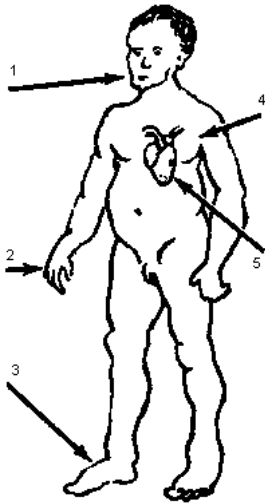
- **Rest the joints that hurt.**
- **Apply hot compresses.**
- **Take a medicine for pain; aspirin is best. For severe arthritis, take 2 to 3 aspirin tablets up to 6 times a day with bicarbonate of soda, an antacid, milk, or a lot of water. (If the ears begin to ring, take less.)**
- **It is important to do exercises that help maintain as much movement as possible in the painful joints.**

Other Important Illnesses of Old Age

Heart Trouble

Heart disease is more frequent in older people, especially in those who are fat, who smoke, or who have high blood pressure.

Signs of heart problems:



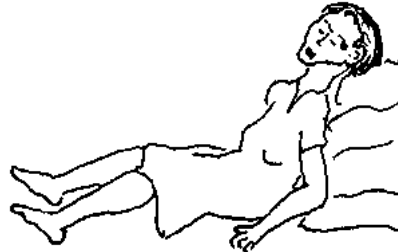
Figure

- **Anxiety and difficulty in breathing after exercise; asthma-like attacks that get worse when the person lies down (cardiac asthma). (1)**
- **A rapid, weak, or irregular pulse. (2)**
- **Swelling of the feet - worse in the afternoons. (3)**
- **Sudden, painful attacks in the chest, left shoulder, or arm that occur when exercising and go away after resting for a few minutes (angina pectoris). (4)**
- **A sharp pain like a great weight crushing the chest: does not go away with rest (heart attack). (5)**

Treatment:

- **Different heart diseases may require different specific medicines, which must be used with great care. If you think a person has heart trouble, seek medical help. It is important that he have the right medicine when he needs it.**
- **People with heart trouble should not work so hard that they get chest pain or have trouble breathing. However, regular exercise helps prevent a heart attack.**
- **Persons with heart problems should not eat greasy food and should lose weight if they are overweight. Also, they should not smoke or drink alcohol.**
- **If an older person begins having attacks of difficult breathing or swelling of the feet, he should not use salt or eat food that contains salt. For the rest of his life he should eat little or no salt.**
- **Also, taking one aspirin tablet a day may help prevent a heart attack or a stroke.**
- **If a person has angina pectoris or heart attack, she should rest very quietly in a cool place until the pain goes away.**

If the chest pain is very strong and does not go away with rest, or if the person shows signs of shock, the heart has probably been severely damaged. The person should stay in bed for at least a week or as long as she is in pain or shock. Then she can begin to sit up or move slowly, but should stay very quiet for a month or more. Consider getting medical help.



Figure

Prevention: See the next page.

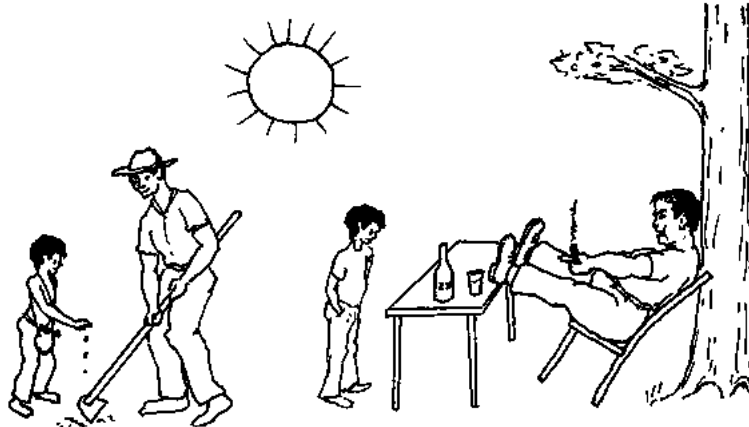
Words to Younger Persons Who Want to Stay Healthy When They Are Older

Many of the health problems of middle and old age, including high blood pressure, hardening of the arteries, heart disease, and stroke, result from the way a person has lived and what he ate, drank, and smoked when younger. Your chances for living and staying healthy longer are greater if you:

- 1. Eat well - enough nutritious foods, but not too much rich, greasy, or salty food. Avoid getting overweight or fat. Use vegetable oil rather than animal fat for cooking.**
- 2. Do not drink a lot of alcoholic drinks.**
- 3. Do not smoke.**
- 4. Keep physically and mentally active.**
- 5. Try to get enough rest and sleep.**

6. Learn how to relax and deal positively with things that worry or upset you.

High blood pressure and hardening of the arteries (arteriosclerosis), which are the main causes of heart disease and stroke, can usually be prevented - or reduced - by doing the things recommended above. The lowering of high blood pressure is important in the prevention of heart disease and stroke. Persons who have high blood pressure should have it checked from time to time and take measures to lower it. For those who are not successful in lowering their blood pressure by eating less (if they are overweight), giving up smoking, getting more exercise, and learning to relax, taking medicines to lower blood pressure (antihypertensives) may help.



WHICH OF THESE TWO MEN IS LIKELY TO LIVE LONGER AND BE HEALTHY IN HIS OLD AGE? WHICH IS MORE LIKELY TO DIE OF A HEART ATTACK OR A STROKE? WHY? HOW MANY REASONS CAN YOU COUNT?

Stroke (Apoplexy, Cerebro-Vascular Accident, CVA)

In older people *stroke* or *cerebro-vascular accident (CVA)* commonly results from a blood clot or from bleeding inside the brain. The word *stroke* is used because this condition often strikes without warning. The person may suddenly fall down, unconscious. Her face is often reddish, her breathing hoarse and noisy, her pulse strong and slow. She may remain in a coma (unconscious) for hours or days.

If she lives, she may have trouble speaking, seeing, or thinking, or one side of her face and body may be paralyzed (1). In minor strokes, some of these same problems may result without loss of consciousness. The difficulties caused by stroke sometimes get better with time.



Figure

Treatment:

Put the person in bed with her head a little higher than her feet. If she is unconscious, roll her head back and to one side so her saliva (or vomit) runs out of her mouth, rather than into her lungs. While she is unconscious, give no food, drink, or medicines by mouth (see the Unconscious Person). If possible, seek medical help.

After the stroke, if the person remains partly paralyzed, help her to walk with a cane and to use her good hand to care for herself. She should avoid heavy exercise and anger.

***Prevention:* See the page before this one.**

***Note:* If a younger or middle-aged person suddenly develops paralysis on one side of his face, with no other signs of stroke, this is probably a *temporary paralysis of the face nerve (Bell's Palsy)*. It will usually go away by itself in a few weeks or months. The cause is usually not known. No treatment is needed but hot soaks may help. If one eye does not close all the way, bandage it shut at night to prevent damage from dryness.**

Deafness

Deafness that comes on gradually without pain or other symptoms occurs most often in men over 40. It is usually incurable, though a hearing aid may help. Sometimes deafness results from ear infections, a head injury, or a plug of dry wax, For information on how to remove ear wax.



Figure

DEAFNESS WITH RINGING OF THE EARS AND DIZZINESS

If an older person loses hearing in one or both ears - occasionally with severe dizziness - and hears a loud 'ringing' or buzzing, he probably has Mnire's disease. He may also feel nauseous, or vomit, and may sweat a lot. He should take an antihistamine, such as dimenhydrinate (*Dramamine*) and go to bed until the signs go away. He should have no salt in his food. If he does not get better soon, or if the problem returns, he should seek medical advice.

Loss of Sleep (Insomnia)

It is normal for older people to need less sleep than younger people. And they wake up more often at night. During long winter nights, older people may spend hours without being able to sleep.

Certain medicines may help bring sleep, but it is better not to use them if they are not absolutely necessary.

Here are some suggestions for sleeping:

- **Get plenty of exercise during the day.**
- **Do not drink coffee or black tea, especially in the afternoon or evening.**
- **Drink a glass of warm milk or milk with honey before going to bed.**
- **Take a warm bath before going to bed.**
- **In bed, try to relax each part of your body - then your whole body and mind. Remember good times.**
- **If you still cannot sleep, try taking an antihistamine like promethazine (*Phenergan*) or dimenhydrinate (*Dramamine*) half an hour before going to bed.**

These are less habit-forming than stronger drugs.

Diseases Found More Often In People over 40 Years Old

Cirrhosis of the Liver



Figure

Cirrhosis usually occurs in men over 40 who for years have been drinking a lot of liquor (alcohol) and eating poorly.

Signs:

- **Cirrhosis starts like hepatitis, with weakness, loss of appetite, upset stomach, and pain on the person's right side below the ribs.**
- **As the illness gets worse, the person gets thinner and thinner. He may vomit blood. In serious cases the feet swell, and the stomach swells with liquid until it looks like a drum. The eyes and skin may turn yellowish (jaundice).**

Treatment:

When cirrhosis is severe, it is hard to cure. There are no medicines that help much. Most people with severe cirrhosis die from it. If you want to stay alive, at the first sign of cirrhosis do the following:

- **Never drink alcohol again! Alcohol poisons the liver.**
- **Eat as well as possible: vegetables, fruit, and some protein. But do not eat a lot of protein (meat, eggs, fish, etc.) because this makes the damaged liver work too hard.**
- **If a person with cirrhosis has swelling, he should not use any salt in his food.**

***Prevention* of this disease is easy: DO NOT DRINK SO MUCH.**

Gallbladder Problems

The gallbladder is a small sac attached to the liver. It collects a bitter, green juice called bile, which helps digest fatty foods. Gallbladder disease occurs most commonly in persons who are 'fat, female and 40'.

Signs:

- **Sharp pain in the stomach at the edge of the right rib cage (1): This pain sometimes reaches up to the right side of the upper back.**



Figure

- **The pain may come an hour or more after eating rich or fatty foods. Severe pain may cause vomiting.**
- **Belching or burping with a bad taste.**
- **Sometimes there is fever.**
- **Occasionally the eyes may become yellow (jaundice).**

Treatment:

- **Do not eat greasy food. Overweight (fat) people should eat small meals and lose weight.**
- **Take an antispasmodic to calm the pain. Strong painkillers are often needed. (Aspirin will probably not help.)**
- **If the person has a fever, she should take tetracycline or ampicillin.**
- **In severe or chronic cases, seek medical help. Sometimes surgery is needed.**

Prevention:

Women who are overweight should lose weight. Avoid rich, sweet, and greasy food - and do not eat too much.

BILIOUSNESS

In many countries and in different languages, bad-tempered persons are said to be 'bilious'. Some people believe that fits of anger come when a person has too much bile.

In truth, most bad-tempered persons have nothing wrong with their gallbladders or bile. However, persons who do suffer from gallbladder disease often live in fear of a return of this severe pain and perhaps for this reason are sometimes short-tempered or continually worried about their health. (In fact, the term 'hypochondria', which means to worry continually about one's own health, comes from 'hypo', meaning under, and 'chondrium', meaning rib - referring to the position of the gallbladder!)

Accepting Death

Old people are often more ready to accept their own approaching death than are those who love them. Persons who have lived fully are not usually afraid to die. Death is, after all, the natural end of life.

We often make the mistake of trying to keep a dying person alive as long as possible, no matter what the cost. Sometimes this adds to the suffering and strain for both the person and his family. There are many occasions when the kindest thing to do is not to hunt for 'better medicine' or a 'better doctor' but to be close to and supporting of the person who is dying. Let him know that you are glad for all the time, the joy and the sorrow you have shared, and that you, too, are able to accept his death. In the last hours, love and acceptance will do far more good than medicines.

Old or chronically ill persons would often prefer to be at home, in familiar surroundings with those they love, than to be in a hospital. At times this may mean that the person will die earlier. But this is not necessarily bad. We must be sensitive to the person's feelings and needs, and to our own. Sometimes a person who is dying suffers more knowing that the cost of keeping him barely alive causes his family to go into debt or children to hunger. He may ask simply to be allowed to die - and there are times when this may be the wise decision.

Yet some people fear death. Even if they are suffering, the known world may be hard to leave behind. Every culture has a system of beliefs about death and ideas about life after death. These ideas, beliefs, and traditions may offer some comfort in facing death.

Death may come upon a person suddenly and unexpectedly or may be long-awaited. How to help someone we love accept and prepare for his approaching death is not an easy matter. Often the most we can do is offer support, kindness, and understanding.

The death of a younger person or child is never easy. Both kindness and honesty are important. A child - or anyone - who is dying often knows it, partly by what her own body

tells her and partly by the fear or despair she sees in those who love her. Whether young or old, if a person who is dying asks for the truth, tell her, but tell her gently, and leave some room for hope. Weep if you must, but let her know that even as you love her, and because you love her, you have the strength to let her leave you. This will give her the strength and courage to accept leaving you. To let her know these things you need not say them. You need to feel and show them.


We must all die. Perhaps the most important job of the healer is to help people accept death when it can or should no longer be avoided, and to help ease the suffering of those who still live.



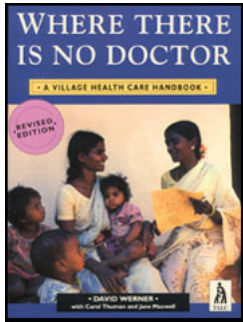
Figure



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** Where There Is No Doctor - A Village Health Care Handbook
(Hesperian Foundation, 1993, 516 p.)**





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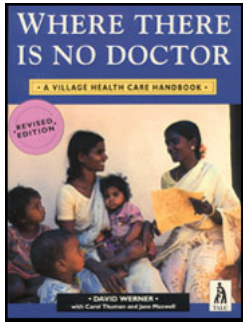
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➔  **Chapter 23 - THE MEDICINE KIT**

 **(introduction...)**

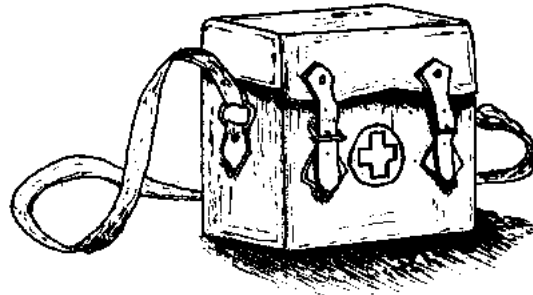
 **How to Care for Your Medicine Kit**



-  **Buying Supplies for the Medicine Kit**
-  **The Home Medicine Kit**
-  **The Village Medicine Kit**
-  **Words to the Village Storekeeper (or Pharmacist)**

Where There Is No Doctor - A Village Health Care Handbook (Hesperian Foundation, 1993, 516 p.)

Chapter 23 - THE MEDICINE KIT



Figure

Every family and every village should have certain medical supplies ready in case of emergency:

- **The family should have a HOME MEDICINE KIT with the necessary medicines for first aid, simple infections, and the most common health problems.**
- **The village should have a more complete medical kit (see VILLAGE MEDICINE KIT) with supplies necessary to care for day-to-day problems as well as to meet a serious illness or an emergency. A responsible person should be in charge of it—a health worker, teacher, parent, storekeeper, or anyone who can be trusted by the community. If possible, all members of the village should take part in setting up and paying for the medical kit. Those who can afford more should contribute more. But everyone should understand that the medicine kit is for the benefit of all—those who can pay and those who cannot.**

On the following pages you will find suggestions for what the medicine kits might contain. You will want to change these lists to best meet the needs and resources in your area. Although the list includes mostly modern medicines, important home remedies known to be safe and to work well can also be included.

How much of each medicine should you have?

The amounts of medicines recommended for the medicine kits are the smallest amounts that should be kept on hand. In some cases there will be just enough to begin treatment. It may be necessary to take the sick person to a hospital or go for more medicine at once.

The amount of medicine you keep in your kit will depend on how many people it is intended to serve and how far you have to go to get more when some are used up. It will also depend on cost and how much the family or village can afford. Some of the medicines for your kit will be expensive, but it is wise to have enough of the important medicines on hand to meet emergencies.

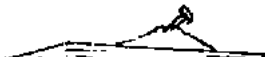
Note: Supplies for birth kits—the things midwives and pregnant mothers need to have

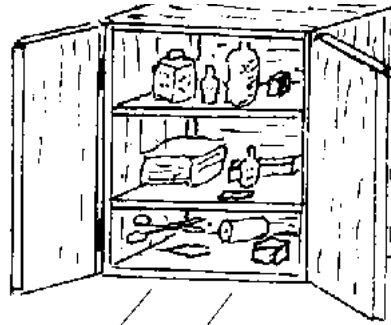
ready for a birth-are listed in section "Things a Mother Should Have Ready Before Giving Birth" and "Additional Supplies for the Well-Prepared Midwife or Birth Attendant".

How to Care for Your Medicine Kit

1. **CAUTION:** Keep all medicines out of the reach of children. Any medicine taken in large doses can be poisonous.
2. Be sure that all medicine is well labeled and that directions for use are kept with each medicine. Keep a copy of this book with the medicine kit.
3. Keep all medicines and medical supplies together in a clean, dry, cool place free from cockroaches and rats. Protect instruments, gauze, and cotton by wrapping them in sealed plastic bags.
4. Keep an emergency supply of important medicines on hand at all times. Each time one is used/replace it as soon as possible.
5. Notice the **DATE OF EXPIRATION** on each medicine. If the date has passed or the medicine looks spoiled, destroy it and get new medicine.

Note: Some medicines, especially tetracyclines, may be very dangerous if they have passed their expiration date. However, penicillins in dry form (tablets or powder for syrup or injection) can be used for as long as a year after the expiration date if they have been stored in a clean, dry, and fairly cool place. Old penicillin may lose some of its strength so you may want to increase the dose. (**CAUTION:** While this is safe with penicillin, with other medicines it is often too dangerous to give more than the recommended dose.)






Figure

Keep medicines out of reach of children.

Buying Supplies for the Medicine Kit

Most of the medicines recommended in this book can be bought in the pharmacies of larger towns. If several families or the village get together to buy what they need at once, often the pharmacist may sell them supplies at lower cost. Or if medicines and supplies can be bought from a wholesaler, prices will be cheaper still.

If the pharmacy does not supply a brand of medicine you want, buy another brand, but be sure that it is the same medicine and check the dosage.

When buying medicines, compare prices. Some brands are much more expensive than others even though the medicine is the same. More expensive medicines are usually no better. When possible, buy generic medicines rather than brand-name products, as the generic ones are often much cheaper. Sometimes you can save money by buying larger quantities. For example, a 600,000-unit vial of penicillin often costs only a little more than a 300,000-unit vial-so buy the large vial and use it for two doses.



Figure

The Home Medicine Kit

Each family should have the following things in their medicine kit. These supplies should be enough to treat many common problems in rural areas.

Also include useful home remedies in your medicine kit.

SUPPLIES

Use	Supply	Price (write in)	Amount recommended
-----	--------	------------------	--------------------

FOR WOUNDS AND SKIN PROBLEMS:

sterile gauze pads in individual sealed envelopes	_____	20
1-, 2-, and 3-inch gauze bandage rolls	_____	2 each
clean cotton	_____	1 small package
adhesive tape (adhesive plaster), 1-inch wide roll	_____	2 rolls
soap-if possible a disinfectant soap like <i>Betadine</i>	_____	1 bar or small bottle
70% alcohol	_____	1/4 liter
hydrogen peroxide, in a dark bottle	_____	1 small bottle
petroleum jelly (<i>Vaseline</i>) in a jar or tube	_____	1
white vinegar	_____	1/2 liter
sulfur	_____	100 gm.
scissors (clean, not rusty)	_____	1 pair
tweezers with pointed ends	_____	1 pair

FOR MEASURING TEMPERATURE:

thermometers		
for mouth		
for rectum	_____	1 each

FOR KEEPING SUPPLIES CLEAN:

plastic bags	_____	several
--------------	-------	---------

MEDICINES

Use	Medicine (generic name)	Local brand (write in)	Price (write)	Amount recommended
-----	-------------------------	------------------------	---------------	--------------------

in)

FOR BACTERIAL INFECTIONS:

- | | | | |
|---|-------|-------|-----|
| 1. Penicillin, 250 mg. tablets | _____ | _____ | 40 |
| 2. Co-trimoxazole (sulfamethoxazole, 400 mg.,
with trimethoprim, 80 mg.) | _____ | _____ | 100 |
| 3. Ampicillin, 250 mg. capsules | _____ | _____ | 24 |

FOR WORMS:

- | | | | |
|------------------------|-------|-------|---------------------------------------|
| 4. Mebendazole tablets | _____ | _____ | 40 tablets of 100
mg. or 2 bottles |
|------------------------|-------|-------|---------------------------------------|

FOR FEVER AND PAIN:

- | | | | |
|---------------------------------------|-------|-------|----|
| 5. Aspirin, 300 mg. (5 grain) tablets | _____ | _____ | 50 |
| 6. Acetaminophen, 500 mg. tablets | _____ | _____ | 50 |

FOR ANEMIA:

- | | | | |
|---|-------|-------|-----|
| 7. Iron (ferrous sulfate), 200 mg. pills (best if pills
also contain vitamin C and folic acid) | _____ | _____ | 100 |
|---|-------|-------|-----|

FOR SCABIES AND LICE:

- | | | | |
|---|-------|-------|-----------------|
| 8. Lindane (gamma benzene hexachloride) and/or
sulfur powder | _____ | _____ | 1 bottle 20 gm. |
|---|-------|-------|-----------------|

FOR ITCHING AND VOMITING:

- | | | | |
|---------------------------------|-------|-------|----|
| 9. Promethazine, 25 mg. tablets | _____ | _____ | 12 |
|---------------------------------|-------|-------|----|

FOR MILD SKIN INFECTIONS:

- | | | | |
|--|-------|-------|--------------------|
| 10. Gentian violet, small bottle; or an antibiotic
ointment | _____ | _____ | 1 bottle
1 tube |
|--|-------|-------|--------------------|

FOR EYE INFECTIONS:

- | | | | |
|-----------------------------|-------|-------|--------|
| 11. Antibiotic eye ointment | _____ | _____ | 1 tube |
|-----------------------------|-------|-------|--------|

The Village Medicine Kit

This should have all the medicines and supplies mentioned in the Home Medicine Kit, but in larger amounts, depending on the size of your village and distance from a supply center. The Village Kit should also include the things listed here; many of them are for treatment of more dangerous illnesses. You will have to change or add to the list depending on the diseases in your area.

ADDITIONAL SUPPLIES

Use	Supply	Price	Amount
FOR INJECTING:	syringes, 5 ml.	_____	2
	needle's #22, 3 cm. long	_____	3-6
	#25, 1 1/2 cm, long	_____	2-4
FOR TROUBLE URINATING:	catheter (rubber or plastic #16 French)	_____	2
FOR SPRAINS AND SWOLLEN VEINS:	elastic bandages, 2 and 3 inches wide	_____	3-6
FOR SUCKING OUT MUCUS:	suction bulb	_____	1-2
FOR LOOKING IN EARS, ETC.:	penlight (small flashlight)	_____	1

ADDITIONAL MEDICINES

Use	Medicine	Local Brand	Price	Amount
FOR SEVERE INFECTIONS:	1. Penicillin, injectable; if only one, procaine penicillin 600,000 U. per ml.	_____	_____	20-40
	2. Ampicillin, injectable 250 mg. ampules			20-40

and/or streptomycin 1 gm. vials for combined use with penicillin (if ampicillin is too expensive)	_____	_____	20-40
3. Tetracycline, capsules or tablets 250 mg.	_____	_____	40-80
FOR AMEBA AND GIARDIA INFECTIONS:			
4. Metronidazole, 250 mg. tablets	_____	_____	40-80
FOR FITS, TETANUS, AND SEVERE WHOOPING COUGH:			
5. Phenobarbital 15 mg. tablets			40-80
and 200 mg. injections	_____	_____	15-30
FOR SEVERE ALLERGIC REACTIONS AND SEVERE ASTHMA:			
6. Epinephrine (<i>Adrenalin</i>) injections, ampules with 1 mg.	_____	_____	5-10
FOR ASTHMA:			
7. Ephedrine, 15 mg. tablets	_____	_____	20-100
FOR SEVERE BLEEDING AFTER CHILDBIRTH:			
8. Ergonovine, injections of 0.2 mg.	_____	_____	6-12

**OTHER MEDICINES NEEDED IN MANY BUT NOT ALL AREAS
WHERE DRY EYES (XEROPHTHALMIA) IS A PROBLEM:**

Vitamin A, 200,000 U. capsules	_____	_____	10-100
--------------------------------	-------	-------	--------

WHERE TETANUS IS A PROBLEM:

Tetanus antitoxin, 50,000 units (Lyophilized if possible)	_____	_____	2-4 bottles
---	-------	-------	----------------

WHERE SNAKEBITE OR SCORPION STING IS A PROBLEM:

Specific antivenom	_____	_____	2-6
--------------------	-------	-------	-----

WHERE MALARIA IS A PROBLEM:

Chloroquine tablets with 150 mg. of base

_____ 50-200

(or whatever medicine works best in your area)

TO PREVENT OR TREAT BLEEDING IN UNDERWEIGHT NEWBORNS:

Vitamin K, injections of 1 mg.

_____ 3-6

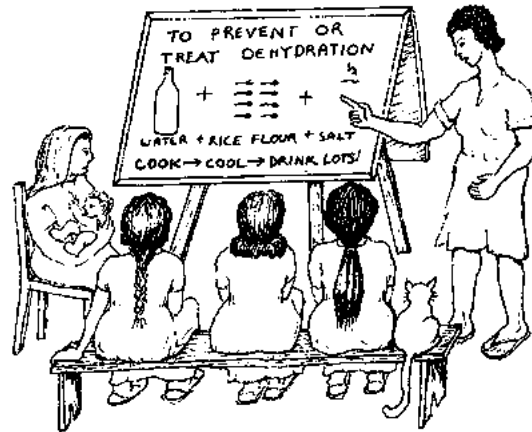
MEDICINES FOR CHRONIC DISEASES

It may or may not be wise to have medicines for chronic diseases such as tuberculosis, leprosy, and schistosomiasis in the Village Medicine Kit. To be sure a person has one of these diseases, often special tests must be made in a health center, where the necessary medicine can usually be obtained. Whether these and other medicines are included in the village medical supplies will depend on the local situation and the medical ability of those responsible.

VACCINES

Vaccines have not been included in the Village Medicine Kit because they are usually provided by the Health Department. However, a great effort should be made to see that all children are vaccinated as soon as they are old enough for the different vaccines. Therefore, if refrigeration is available, vaccines should be part of the village medical supplies-especially the DPT, polio, and measles vaccines.

Words to the Village Storekeeper (or Pharmacist)



Figure

Dear friend,

If you sell medicines in your store, people probably ask you about which medicines to buy and when or how to use them. You are in a position to have an important effect on people's knowledge and health.

This book can help you to give correct advice and to see that your customers buy only those medicines they really need.

As you know, people too often spend the little money they have for medicines that do not help them. But you can help them understand their health needs more clearly and spend their money more wisely. For example:

- If people come asking for cough syrups, for a diarrhea-thickener like *Kaopectate*,

for vitamin B₁₂ or liver extract to treat simple anemia, for penicillin to treat a sprain or ache, or for tetracycline when they have a cold, explain to them that these medicines are not needed and may do more harm than good. Discuss with them what to do instead.

- **If someone wants to buy a vitamin tonic, encourage him to buy eggs, fruit, or vegetables instead. Help him understand that these have more vitamins and nutritional value for the money.**
- **If people ask for an injection when medicine by mouth would work as well and be safer-which is usually the case-tell them so.**
- **If someone wants to buy 'cold tablets' or some other form of 'expensive aspirin' for a cold, encourage him to save money by buying plain aspirin (or acetaminophen) tablets and taking them with lots of liquids.**

You may find it easier to tell people these things if you look up the information in this book, and read it together with them.

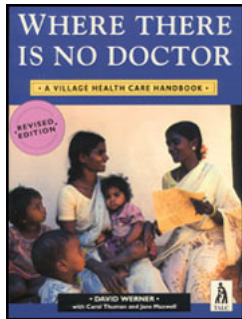
Above all, sell only useful medicines. Stock your store with the medicines and supplies listed for the Home and Village Medicine Kits, as well as other medicines and supplies that are important for common illnesses in your area. Try to stock low-cost generic products or the least expensive brands. And never sell medicines that are expired, damaged, or useless.


Your store can become a place where people learn about caring for their own health. If you can help people use medicines intelligently, making sure that anyone who purchases a medicine is well informed as to its correct use and dosage, as well as the risks and precautions, you will provide an outstanding service to your community.

Good luck! Sincerely,



[Home](#) > [ar.cn.de.en.es.fr.id.it.ph.po.ru.sw](#)



 **Where There Is No Doctor - A Village Health Care Handbook (Hesperian Foundation, 1993, 516 p.)**

- THE GREEN PAGES - The Uses, Dosage, and Precautions for the Medicines Referred to in This Book**
 -   **(introduction...)**
 -  **Information on Medicines**

Where There Is No Doctor - A Village Health Care Handbook (Hesperian Foundation, 1993, 516 p.)

THE GREEN PAGES - The Uses, Dosage, and Precautions for the Medicines Referred to in This Book

The medicines in this section are grouped according to their uses. For example, all the medicines used to treat infections caused by worms are listed under the heading FOR WORMS.

If you want information on a medicine, look for the name of that medicine in the LIST OF

MEDICINES. Or look for the medicine in the INDEX OF MEDICINES. When you find the name you are looking for, turn to the page number shown.

Medicines are listed according to their *generic* (scientific) names rather than their *brand names* (names given by the companies that make them). This is because generic names are similar everywhere, but brand names differ from place to place. Also, medicines are often much cheaper when you buy generic rather than brand-name products.

In a few cases, well-known brand names are given after the generic name. In this book brand names are written in *italics* and begin with a capital letter. For example, *Phenergan* is a brand name for an antihistamine called promethazine (promethazine is the generic name).

With the information on each medicine, blank spaces _____ have been left for you to write in the name and price of the most common or least expensive product in your area. For example, if the cheapest or only available form of tetracycline in your area is *Terramycin*, you would write in the blank spaces as follows:

Tetracycline (tetracycline HCl, oxytetracycline, etc.)

Name: Terramycin price: \$1.25 for 6 capsules

If, however, you find you can buy generic tetracycline more cheaply than *Terramycin*, write instead:






Name: tetracycline price: \$1.00 for 60 capsules

Note: Not all the medicines listed in the Green Pages are needed in your Home or Village Medicine kit. Because different medicines are available in different countries, information has sometimes been given for a number of medicines that do the same job. However, it is wise to

KEEP AND USE ONLY A SMALL NUMBER OF MEDICINES.

Dosage Information:

HOW FRACTIONS ARE SOMETIMES WRITTEN

1 tablet	= one tablet	= 
1/2 tablet	= half a tablet	= 
1 1/2 tablets	= one and a half tablets	= 
1/4 tablet	= one quarter or one fourth of a tablet	= 
1/8 tablet	= one eighth of a tablet (dividing it into 8 equal pieces and taking 1 piece)	= 

DECIDING DOSAGE BY HOW MUCH A PERSON WEIGHS

In these pages most instructions for dosage are given according to the age of a person-so that children get smaller doses than adults. However, it is more exact to determine dosage according to a person's weight. Information for doing this is sometimes included briefly in parentheses (), for use of health workers who have scales. If you read...

(100 mg./kg./day),

this means 100 mg. per kilogram of body weight per day. In other words, during a 24 hour period you give 100 mg. of the medicine for each kilogram the person weighs.

For example, suppose you want to give aspirin to a boy with rheumatic fever who weighs 36 kilograms. The recommended dose of aspirin for rheumatic fever is 100 mg./kg./day. So multiply:

$$100 \text{ mg.} \times 36 = 3600 \text{ mg.}$$

The boy should get 3600 mg. of aspirin a day. One aspirin tablet contains 300 mg. of aspirin. 3600 mg. comes to 12 tablets. So give the boy 2 tablets 6 times a day (or 2 tablets every 4 hours).

This is one way to figure the dosages for different medicines. For more information on measuring and deciding on dosages, see Chapter 8.

Note to educators and planners of health care programs and to local distributors of this book:

If this book is to be used in training programs for village health workers or is distributed by a local health care program, **information about local names and prices of medicines should accompany the book.**

Local distributors are encouraged to duplicate a sheet with this information, so that it can be copied into the book by the user. Wherever possible, include local sources for **generic or low-cost medicines and supplies.** (See "Buying Supplies for the Medicine Kit," page 333.)

Information on Medicines

ANTIBIOTICS

THE PENICILLINS: VERY IMPORTANT ANTIBIOTICS

Penicillin is one of the most useful antibiotics. It fights certain kinds of infections, including many that produce pus. It does no good for diarrhea, most urinary infections, backache, bruises, the common cold, chickenpox, or other virus infections.

Penicillin is measured in milligrams (mg.) or units (U.). For penicillin G, 250 mg. = 400,000 U.

Risks and precautions for all kinds of penicillin (including ampicillin):

For most people penicillin is one of the safest medicines. Too much does no harm and only wastes money. Too little does not completely stop the infection and may make the bacteria *resistant* (more difficult to kill).

In certain persons penicillin causes allergic reactions. Mild allergic reactions include itchy raised spots or rashes. Often these come several hours or days after taking penicillin and may last for days. Antihistamines help calm the itching.

Rarely, penicillin causes a dangerous reaction called allergic shock. Soon after penicillin is injected (or swallowed), the person suddenly gets pale, has trouble breathing, and goes into the state of shock. Epinephrine (*Adrenalin*) must be injected at once.

Always have epinephrine ready when you inject penicillin.

A person who has once had any allergic reaction to penicillin should never be given any kind of penicillin or ampicillin again, either by mouth or by injection. This is because the next time the reaction would likely be far worse and might kill him. (But stomach upset from taking penicillin is not an allergic reaction, and no cause to stop taking it.)

Persons who cannot take penicillin can sometimes be treated with tetracycline or erythromycin by mouth.

Most infections that can be treated with penicillin can be treated quite well with penicillin taken by mouth. Injected forms of penicillin are more dangerous than those taken by mouth.

Use injectable penicillin only for severe or dangerous infections.

Before injecting penicillin or any medicine that contains it, take the precautions given on in section: "DANGEROUS REACTIONS FROM INJECTING CERTAIN MEDICINES" from chapter 9.

Resistance to penicillin:

Sometimes penicillin does not work against an infection it would normally control. This may be because the bacteria have become resistant, so that penicillin no longer harms them.

Infections that are at times resistant to penicillin include impetigo, sores on the skin with pus, and infections of the bone (osteomyelitis). If one of these infections does not respond to ordinary penicillin, another antibiotic may be tried. Or special forms of penicillin (methicillin, nafcillin, oxacillin, cloxacillin, dicloxacillin) may work.

In many parts of the world, gonorrhoea is now resistant to penicillin; Pneumonia is also sometimes resistant to penicillin-try co-trimoxazole or erythromycin.

PENICILLIN BY MOUTH

Penicillin G or Penicillin V

Name:_____ price:___ for___

Often comes in: 250 mg. (400,000 U.) tablets also: suspensions or powders for suspension, 125 or 250 mg. per teaspoon

(Penicillin V is used by the body more easily than penicillin G, but is more expensive.)

Penicillin by mouth (rather than injections) should be used for mild and moderately severe infections, including:

abscessed or infected teeth

infected wounds or many infected sores

widespread impetigo

erysipelas

ear infections

sinusitis

sore throat with sudden, high fever (strep throat)

some cases of bronchitis

prevention of tetanus in persons who have not been vaccinated and who have deep or dirty wounds

rheumatic fever

pneumonia

If infection is severe, it may be best to start with injections of penicillin, but often penicillin by mouth can be given instead once improvement begins.

If improvement does not begin within 2 or 3 days, consider using another antibiotic and try to get medical advice.

***Dosage* of penicillin by mouth-using tablets of 250 mg. (20 to 60 mg./kg./day):**

For mild infections:

adults: 1 or 2 tablets (250 to 500 mg.) 4 times a day
children 7 to 12: 1 tablet (250 mg.) 4 times a day
children 2 to 6: 1/2 tablet (125 mg.) 3 or 4 times a day
children under 2: 1/4 tablet (63 mg.) 3 or 4 times a day

For more serious infections: double the above dosage.

***Important:* Keep taking the penicillin for at least 5 days, and for 2 or 3 days after fever and other signs of infection are gone.**

To help the body make better use of the medicine, always take penicillin on an empty stomach, an hour before meals. (This is more important for penicillin G than for penicillin V.)

INJECTABLE PENICILLIN

Injectable penicillin should be used for certain severe infections, including:

meningitis

septicemia (bacteria in the blood)

tetanus

severe pneumonia

badly infected wounds

gangrene

infected bones and to prevent infection when a bone pokes through the skin

gonorrhoea

syphilis

pelvic inflammatory disease

Injectable penicillin comes in many different preparations. Before you inject any penicillin, be sure to check the amount and the kind.

Choosing the right kind of penicillin for injection:

Some kinds of penicillin do their job quickly but do not last long. Others work more slowly but last longer. There are times when it is better to use one kind than another.

Short-acting penicillin: These are known by many names, including crystalline penicillin, benzylpenicillin, aqueous penicillin, soluble penicillin, sodium penicillin, potassium penicillin, and penicillin G injections. These penicillins act quickly but only stay in the body a short time, so that they must be injected every 6 hours (4 times a day). A short-acting penicillin is the best choice for very severe infections when high doses of penicillin are needed. For example, for gas gangrene or when a broken bone pokes through the skin, or meningitis.

Intermediate-acting penicillin: Procaine penicillin or procaine penicillin aluminum monostearate (PAM). These work more slowly and last about a day in the body, so injections should be given once daily. Procaine penicillin, or a combination of procaine and a short-acting penicillin, is the best choice for most infections when injectable penicillin is needed.

Long-acting penicillin: Benzathine or benethamine penicillin. This penicillin goes into the blood slowly and lasts up to a month. Its main use is in the treatment of strep throat and syphilis, and for prevention of rheumatic fever. It is useful when a person lives far away from someone who injects or cannot be counted upon to take penicillin by mouth. For mild infections a single injection may be enough. Benzathine penicillin often comes combined with faster-acting penicillins.

Crystalline penicillin (a short-acting penicillin)

Name:_____ price:___ for___

Often comes in: vials of 1 million U. (625 mg.) or 5 million U. (3125 mg.)

Dosage of crystalline penicillin or any short-acting penicillin-for severe infections:

Give an injection every 4 to 6 hours.

In each injection give:

adults and children over age 8: 1 million U.

children age 3 to 8: 500,000 U.

children under 3: 250,000 U.

For meningitis and some other very severe infections, higher doses should be given.

Procaine penicillin (intermediate-acting)

Name:_____ price:___ for___

Often comes in: vials of 300,000 U., 400,000 U., and more

Dosage of procaine penicillin-for moderately severe infections:

Give 1 injection a day.

With each injection give:

adults: 600,000 to 1,200,000 U.

children age 8 to 12: 600,000 U.

children age 3 to 7: 300.000 U.

children under 3: 150.000 U.

newborn babies: DO NOT USE unless no other penicillin or ampicillin is available. In emergencies, 75,000 U.

For very severe infections, give twice the above dose. However, it is better to use a short-acting penicillin.

***The dosage* for procaine penicillin combined with a short-acting penicillin is the same as for procaine penicillin alone.**

For treatment of gonorrhoea that is not resistant to penicillin, procaine penicillin is best. Very high doses are needed. For pelvic inflammatory disease, the dosages are the same as for gonorrhoea.

Benzathine penicillin (long-acting)

Name: _____ price: ___ for ___

Often comes in: vials of 1,200,000 or 2,400,000 U.

Dosage of benzathine penicillin-for mild to moderately severe infections:**Give 1 injection every 4 days. For mild infections, 1 injection may be enough.****adults: 1,200,000 U. to 2,400,000 U.****children age 8 to 12: 900,000 U.****children age 1 to 7: 300,000 U. to 600,000 U.****For strep throat, give one injection of the above dose.****To prevent return infection in persons who have had rheumatic fever, give the above dose every 4 weeks.****For treatment of syphilis, benzathine penicillin is best. For dosage, see page 238.****AMPICILLIN: A WIDE-RANGE (BROAD-SPECTRUM) PENICILLIN****Ampicillin****Name: _____**

Often comes in:

solutions, 125 or 250 mg./tsp. price: _____ for _____

capsules, 250 mg. price: _____ for _____

injections, 500 mg. price: _____ for _____

Ampicillin is a *broad-spectrum* (wide-range) penicillin that kills many more kinds of bacteria than are killed by other penicillins. It is safer than other broad-spectrum antibiotics and is especially useful for babies and small children.

Because it is expensive, and sometimes causes diarrhea or 'thrush', ampicillin should not be used when regular penicillin is likely to do the job as well.

Ampicillin works well when taken by mouth. Injections should only be used for severe illnesses such as meningitis, peritonitis, and appendicitis, or when the sick person vomits or cannot swallow the medicine.

Ampicillin is often useful in treating the following:

septicemia and unexplained illness in the newborn

pneumonia or ear infections of children under 6 years

meningitis

peritonitis and appendicitis

severe urinary tract infections

typhoid fever (if it is resistant to chloramphenicol)

gonorrhea

Persons allergic to penicillin should not take ampicillin. See *Risks and Precautions* for penicillin.

***Dosage* for ampicillin:**

By mouth-(25 to 50 mg./kg./day): capsules of 250 mg.: syrup with 125 mg. per teaspoon (5 ml.)

Give 4 doses a day.

In each dose give:

- adults: 2 capsules or 4 teaspoons (500 mg.)**
- children age 8 to 12: 1 capsule or 2 teaspoons (250 mg.)**
- children 3 to 7: 1/2 capsule or 1 teaspoon (125 mg.)**
- children under 3: 1/4 capsule or 1/2 teaspoon (62 mg.)**
- newborn babies: same as for children under 3 years**

For gonorrhoea, the doses are much higher.

By injection, for severe infections-(50 to 100 mg./kg./day-up to 300 mg./kg./day for meningitis): vials of 500 mg.

Give 4 doses a day, once every 6 hours.

In each dose give:

- adults: 500 to 1000 mg. (one to two 500 mg. vials)**
- children age 8 to 12: 250 mg. (1/2 of a 500 mg. vial)**
- children age 3 to 7: 125 mg. (1/4 of a 500 mg. vial)**
- children under 3: 62 mg. (1/8 of a 500 mg. vial)**
- newborn babies: 125 mg. (1/4 of a 500 mg. vial) twice a day only**

Keep giving the ampicillin for at least 2 days after signs of infection have gone.

PENICILLIN WITH STREPTOMYCIN

Products that combine penicillin with streptomycin are found in most countries and are often used more than they should be. If one of these products is widely used in your area,

write down its name, contents, and price:

Name: _____ mg. of penicillin: ___ mg. of streptomycin: ___ price: for ___

Penicillin and streptomycin should be used together only in special cases, as an alternative to ampicillin, when ampicillin cannot be obtained or is too expensive. They should not be used for minor infections or for the common cold or 'flu'.

Frequent use of streptomycin for illnesses other than tuberculosis makes the tuberculosis bacteria in a community resistant to streptomycin, and therefore harder to treat. Also, streptomycin may cause deafness.

Streptomycin with penicillin can be used for most of the illnesses for which ampicillin is recommended, but ampicillin is safer, especially for babies.

Usually, it is cheaper, as well as easier to figure the correct dosage, if streptomycin and penicillin are injected separately, rather than in a combination.

Dosage of penicillin with streptomycin-for severe infections:

Give short-acting penicillin, at least 25,000 U./kg. 4 times a day, and streptomycin, no more than 30 to 50 mg./kg./day.

In newborns, give short-acting penicillin, 50,000 U./kg. twice a day together with streptomycin, 20 mg./kg. once a day.

Give this much short-acting penicillin with this much streptomycin

adults	1,000,000 U. 4 to 6 times a day	1 gm. (usually 2 ml.) once a day
children 8 to 12 years	500,000 U. 4 to 6 times a day	750 mg. (1 1/2 ml.) once a day
children 3 to 7 years	250,000 U. 4 to 6 times a day	500 mg. (1 ml.) once a day

children under 3	125,000 U. 4 to 6 times a day	250 mg. (1/2 ml.) once a day
newborn babies	150,000 U. twice a day	60 mg. (1/8 ml.) once a day

For very severe infections, such as peritonitis, appendicitis, meningitis, or an acute infection of the bone (osteomyelitis), even higher doses of penicillin may be given, but the dosage of streptomycin must never be higher than what is suggested here.

For less severe infections calling for penicillin with streptomycin, procaine penicillin can be used with streptomycin. For the dosage of procaine penicillin. The dosage for streptomycin is the same as that given above.

Be sure to read the *Risks and Precautions* for both penicillin and streptomycin.

ERYTHROMYCIN: AN ALTERNATIVE TO PENICILLIN

Erythromycin

Name: _____

Often comes in:

tablets or capsules of 250 mg. Price: ___ for ___

syrups with 125 or 200 mg. in 5 ml. Price: ___ for ___

Erythromycin works against many of the same infections as penicillin and tetracycline, but is more expensive. In many parts of the world, erythromycin now works better than penicillin for some cases of pneumonia and certain skin infections.

Erythromycin may be used instead of penicillin by persons allergic to penicillin. Also, it may often be used by persons allergic to tetracycline, and by pregnant women and children, who should not take tetracycline. In some cases, erythromycin is not a good

substitute for tetracycline. See the sections of the book which discuss each illness.

Erythromycin is fairly safe, but care should be taken not to give more than the recommended dose. Do not use for more than 2 weeks, as it may cause jaundice.

Dosage of erythromycin:

Take erythromycin with meals to avoid stomach upset.

Give 1 dose 4 times a day.

In each dose give:

adults: 500 mg. (2 tablets or 4 teaspoons)

children 8 to 12 years: 250 mg. (1 tablet or 2 teaspoons)

children 3 to 7 years: 150 mg. (1/2 tablet or 1 teaspoon)

children under 3 years: 75 to 150 mg. (1/4 to 1/2 tablet or 1/2 to 1 teaspoon)

TETRACYCLINES: WIDE-RANGE ANTIBIOTICS

Tetracycline (tetracycline HCl, oxytetracycline, etc.)

(Familiar but expensive brand: *Terramycin*)

Name: _____

Often comes in:

capsules of 250 mg. Price: ___ for ___

mixture, 125 mg./5 ml. Price: ___ for ___

Tetracyclines are *broad-spectrum* antibiotics; that is, they fight a wide range of different kinds of bacteria.

Tetracycline should be taken by mouth, as this works as well and causes fewer problems than when it is injected.

Tetracycline can be used for:

diarrhea or dysentery caused by bacteria or amebas

sinusitis

respiratory infections (bronchitis, etc.)

infections of the urinary tract

typhus

brucellosis

cholera

trachoma

gallbladder infections

chlamydia

gonorrhea

pelvic inflammatory disease

malaria (chloroquine resistant)

Tetracycline does no good for the common cold. For many common infections it does not work as well as penicillin or sulfas. It is also more expensive. Its use should be limited.

Risks and Precautions:

- 1. Pregnant women should not take tetracycline, as it can damage or stain the baby's teeth and bones. For the same reason, children under 8 years old should take tetracycline only when absolutely necessary, and for short periods only. Use erythromycin instead.**
- 2. Tetracycline may cause diarrhea or upset stomach, especially if taken for a long time.**
- 3. It is dangerous to use tetracycline that is 'old' or has passed the expiration date.**
- 4. For the body to make the best use of tetracycline, milk or antacids should not be taken within 1 hour before or after taking the medicine.**
- 5. Some people may develop a skin rash after spending time in the sun while taking tetracycline.**

***Dosage* for tetracycline-(20 to 40 mg./kg./day): -capsules of 250 mg. and mixture of 125 mg. in 5 ml.-**

Give tetracycline by mouth 4 times a day

In each dose give:

adults: 250 mg. (1 capsule)

children 8 to 12 years: 125 mg. (1/2 capsule or 1 teaspoon)

children under 8 years: As a general rule, do not use tetracycline-instead use co-trimoxazole or erythromycin. If there is no other choice, give:

children 4 to 7 years: 80 mg. (1/3 capsule or 2/3 teaspoon)

children 1 to 3 years: 60 mg. (1/4 capsule or 1/2 teaspoon)

babies under 1 year: 25 mg. (1/10 capsule or 1/5 teaspoon)

newborn babies (when other antibiotics are not available): 8 mg. (1/30 capsule or 6 drops of the mixture)

In severe cases, and for infections like gonorrhoea, chlamydia, pelvic inflammatory disease, cholera, typhus, and brucellosis, twice the above dose should be given (except to small children).

For most infections, tetracycline should be continued for 1 or 2 days after the signs of infection are gone (usually 7 days altogether). For some illnesses, longer treatment is needed: typhus 6 to 10 days; brucellosis 2 to 3 weeks; cholera 3 to 5 days; gonorrhoea and chlamydia 7 to 10 days; pelvic inflammatory disease 10 to 14 days.

Doxycycline (familiar brand name: *Vibramycin*)

Name: _____

Often comes in:

capsules or tablets of 100 mg. Price: ____ for ____

ampules with 100 mg. for injection Price: for

Doxycycline is an expensive form of tetracycline that is taken twice a day instead of 4 times a day. When available, it can be used for the same illnesses as tetracycline. Doxycycline can be taken with food or milk. Otherwise, the risks and precautions are the same as for tetracycline.

Dosage of doxycycline: - tablets of 100 mg -

Give doxycycline by mouth twice a day.

In each dose give:

adults: 100 mg. (1 tablet)

children 8 to 12: 50 mg (1/2 tablet)

children under 8: Do not use doxycycline.

CHLORAMPHENICOL: AN ANTIBIOTIC FOR CERTAIN SEVERE INFECTIONS

Chloramphenicol (Chloromycetin)

Name: _____

Often comes in:

capsules of 250 mg Price: _____ for _____

mixture, 125 mg. in 5 ml. Price: _____ for _____

injections, 1000 mg. per vial Price: _____ for _____

This broad-spectrum antibiotic fights a wide range of different bacteria. It is cheap, but there is some danger in using it. For this reason, its use must be very limited.

Chloramphenicol should be used only for typhoid and for very serious infections that are

not cured by sulfas, penicillin, tetracycline, or ampicillin. For life-threatening illnesses such as meningitis, peritonitis, deep gut wounds, septicemia, or severe childbirth fever, chloramphenicol may be used when less dangerous medicines (like cephalosporins) are not available.

Ampicillin usually works as well as or better than chloramphenicol, and is much safer. Unfortunately, ampicillin is expensive, so there are times when chloramphenicol must be used instead.

***WARNING:* Chloramphenicol harms the blood of some persons. It is even more dangerous for newborn babies, especially premature babies. To newborn babies with serious infections, give ampicillin rather than chloramphenicol if this is at all possible. As a rule, do not give chloramphenicol to babies under 1 month of age.**

Take care not to give more than the recommended dose of chloramphenicol. For babies, the dose is very small (see below)

Avoid long or repeated use.

In treating typhoid, change from chloramphenicol to ampicillin as soon as the illness is under control. (In regions where typhoid is known to be resistant to chloramphenicol, the entire treatment should be with ampicillin or co-trimoxazole.)

In some areas of Central and South America, typhoid has become resistant to both chloramphenicol and ampicillin and is no longer cured by them. Try using co-trimoxazole.

Chloramphenicol taken by mouth often does more good than when it is injected, and is less dangerous. Except in rare cases when the person cannot swallow, do not inject chloramphenicol.

Dosage for chloramphenicol-(50 to 100 mg./kg./day):-capsules of 250 mg., or a mixture of 125 mg in 5 ml.-

Give by mouth 4 times a day.

In each dose give:

adults: 500 to 750 mg. (2 to 3 capsules). For typhoid, peritonitis, and other dangerous infections the higher dose should be given. (3 capsules 4 times a day is 12 capsules a day.)

children 8 to 12 years: 250 mg, (1 capsule or 2 teaspoons of mixture)

children 3 to 7 years: 125 mg. (1/2 capsule or 1 teaspoon)

babies 1 month to 2 years: give 12 mg. (1/2 ml. of the mixture or 1/20 part of a capsule) for *each* kg. of body weight. (This way, a 5 kg. baby would get 60 mg., which is 1/2 teaspoon of mixture, or 1/4 capsule, at each dose. With 4 doses, this means the 5 kg. baby will get 1 capsule, or 2 teaspoons of mixture, a day.)

newborn babies: *As a general rule, do not use chloramphenicol.* If there is no other choice, give 5 mg. (1/4 ml. or 5 drops of the mixture) for each kg. of body weight. Give a 3 kg. baby 15 mg. (15 drops of the mixture) 4 times a day, or about 1/4 capsule a day. Do not give more.

THE SULFAS (OR SULFONAMIDES): INEXPENSIVE MEDICINE FOR COMMON INFECTIONS

Sulfadiazine, sulfisoxazole, sulfadimidine, or 'triple sulfa'

Name: _____

Often comes in:

tablets of 500 mg. Price: _____ for _____

mixture, 500 mg. in 5 ml. Price: _____ for _____

The sulfas or sulfonamides fight many kinds of bacteria, but they are weaker than many antibiotics and more likely to cause allergic reactions (itching) and other problems. Because they are cheap and can be taken by mouth, they are still useful.

The most important use of sulfas is for urinary infections. They may also be used for some ear infections and for impetigo and other skin infections with pus.

Not all the sulfas are used the same way or have the same dosage. If you have a sulfonamide other than one of those listed above, be sure of the correct use and dosage before you use it. Sulfathiazole is similar to the sulfas named above, and is very cheap, but is not recommended because it is more likely to cause side effects.

The sulfas do not work as well for diarrhea as they used to, because many of the microbes that cause diarrhea have become resistant to them. Also, giving sulfas to a person dehydrated from diarrhea can cause dangerous kidney damage.

WARNING:

It is important to drink lots of water, at least 8 glasses a day, when taking sulfa, to prevent harm to the kidneys.

If the sulfa causes a rash, blisters, itching, joint pain, fever, lower back pain or blood in the urine, stop taking it and drink lots of water.

Never give sulfa to a person who is dehydrated, or to babies under 1 year old.

Note: To do any good, these sulfas must be taken in the right dose, which is large. Be sure to take enough-but not too much!

Dosage for sulfadiazine, sulfisoxazole, sulfadimidine, or triple sulfa (200 mg./kg./day): - tablets of 500 mg., or a mixture with 500 mg. in 5 ml.-

Give 4 doses a day - with lots of water!

In each dose give:

adults and children over 10 years: 3 to 4 gm. (6 to 8 tablets) for the first dose; then 1 gm. (2 tablets) for the other doses

children 6 to 10 years: 750 mg. (1 1/2 tablets or teaspoons) in each dose

children 1 to 5 years: 500 mg. (1 tablet or 1 teaspoon) in each dose

babies under 1 year: Do not give sulfa. If you have no choice, give 250 mg. (1/2 tablet or teaspoon) 4 times a day

Co-trimoxazole (sulfamethoxazole with trimethoprim)

(familiar brand names: *Bactrim*, *Septra*)

Name: _____

Often comes in:

tablets of 100 mg. sulfamethoxazole with 20 mg. trimethoprim

Price: _____ for _____

tablets of 400 mg. sulfamethoxazole with 80 mg. trimethoprim

Price: _____ for _____

mixture of 200 mg. sulfamethoxazole with 40 mg. trimethoprim in 5 ml. Price: _____ for _____

Note: This medicine also comes in double strength tablets (*Bactrim DS* and *Septra DS*) with 800 mg. sulfamethoxazole and 160 mg. trimethoprim. Use half the number of tablets given below if the medicine you have is double strength.

This combination medicine fights a wide range of bacteria, and is less expensive than ampicillin.

Co-trimoxazole can be used to treat:

urinary infections

diarrhea with blood and fever (shigella)

typhoid

cholera

brucellosis

respiratory infections (pneumonia)

impetigo

ear infections

chancroid

gonorrhoea

Dosage of co-trimoxazole:

-using tablets of 400 mg. sulfamethoxazole with 80 mg. trimethoprim, or teaspoons of mixture as described above-

Give 2 doses a day - with lots of water!

In each dose give:

adults and children over 12 years: 2 tablets or 4 teaspoons

children 9 to 12 years: 1 1/2 tablets or 3 teaspoons

children 4 to 8 years: 1 tablet or 2 teaspoons

children 1 to 3 years: 1/2 tablet or 1 teaspoon

babies under 1 year: Do not give. If you have no choice, give 1/4 tablet or 1/2 teaspoon 2 times a day.

For urinary infections, give the above dose for 10 to 14 days. For acute bronchitis and typhoid, give for 14 days. For chancroid, give for 7 days. For shigella, give for 5 to 10 days.

For gonorrhoea, very high doses must be used.

KANAMYCIN AND GENTAMICIN

Kanamycin and gentamicin are injectable antibiotics that are greatly overused in some countries. Use of these dangerous medicines should be very limited, because they can cause deafness and damage to the kidneys. Also, bacteria quickly become resistant to them and they lose their effectiveness. (Streptomycin is another medicine from this same group, but it is generally used only for tuberculosis.)

They should be given by experienced health workers only for certain severe infections when other, safer medicines are not available or are too expensive. Kanamycin is sometimes used to treat gonorrhoea (see next page), or eye infections (conjunctivitis) in newborn babies.

Kanamycin (*Kantrex*)

Name:_____ price:___ for___

Often comes in:

vials for injection with 75 mg., 500 mg., or 1000 mg.

Risks and Precautions:

Too much kanamycin for too long may cause deafness. If ringing of the ears or hearing loss begins, stop taking the medicine and see a health worker. Kanamycin should not be taken by pregnant women or persons with kidney problems.

Dosage of kanamycin (15 mg./kg./day):

-vials of liquid; or powder for mixing with water to give 1 gm. of kanamycin in 2 ml.-

Give twice a day.

With each injection give:

**adults: 500 mg. children 8 to 12: 250 mg.
children 3 to 7: 125 mg.
children under 3: 63 mg.**

babies: give 8 for each kg. of body weight; thus a 3 kg. baby gets 24 mg.

For gonorrhoea, larger amounts are given in a single dose: for eye infection in newborn babies, give one injection of 25 mg. for each kg. the baby weighs. (Thus, a 3 kg. baby would get 75 mg.)

Gentamicin (*Garamycin*)

In many countries today, gentamicin is used instead of kanamycin. Its action and the risks and precautions are similar, but the dosage is smaller (2 to 5 mg./kg./day). This dosage is divided, and usually given 3 times a day.

CEPHALOSPORINS

These are powerful new antibiotics that work against many different kinds of bacteria. They are often very expensive and not widely available. For that reason, we have not recommended them as first choice treatments in this book. However, they generally have fewer risks and side effects than many other antibiotics and, when obtainable, can be useful in treating certain serious diseases.

There are many different types, including cefazolin (*Ancef*), cephalixin (*Keflex*), cephadrine (*Velosef*), cefurazime (*Ceftin*), cefoxitin (*Mefoxin*), ceftriaxone (*Rocephin*), cefotaxime (*Claforan*), and ceftazidime (*Fortaz, Taxidime, Tazicel*). Various cephalosporins can be used for pneumonia, urinary infections, typhoid, gut or pelvic infections, bone infections, and meningitis. Some, like ceftriaxone, can be useful for treating sexually transmitted diseases such as chancroid, eye infections in newborns, or gonorrhoea that is resistant to penicillin.

Get advice on dosages and side effects before using these medicines. Also, do not use them for mild illnesses or diseases that can be treated equally well with less expensive

antibiotics.**MEDICINES FOR GONORRHEA AND CHLAMYDIA**

In most parts of the world, penicillin no longer works against gonorrhea, because the bacteria have become resistant to it. So other antibiotics must usually be used. Seek local advice about which medicines are effective in your area. Here we list some possible treatments that might be recommended, depending on what is available and affordable.

If the pain and drip are not gone 3 days after treating for gonorrhea, the disease may be resistant to the medicine, or the person may have chlamydia. These diseases have the same early signs, and often occur together. If both gonorrhea and chlamydia are common in your area, it is probably a good idea to treat both diseases at the same time. (Be sure to use a condom until you are certain you and your partner are fully treated.)

Some of the medicines listed here can have serious side effects when given for long periods of time, or to babies, children, or pregnant women. Before treating, be sure to check the Green Pages warnings and information about these medicines. The dosages listed here are for adults.

For gonorrhea, use one of the following:

- 1. Co-trimoxazole can be used to treat gonorrhea. Using tablets with 400 mg. sulfamethoxazole and 80 mg. trimethoprim: Give 5 tablets twice each day for 2 or 3 days.**
- 2. One injection of 2 grams of kanamycin.**
- 3. Tetracycline or erythromycin tablets can be used to treat both gonorrhea and chlamydia at the same time, but sometimes gonorrhea is resistant to tetracycline.**

Give 500 mg. 4 times a day for 7 to 10 days.

4. Give one injection of 2 grams of streptomycin. But only use streptomycin for gonorrhoea that is resistant to penicillin when no other medicines are available. Too much use of streptomycin for diseases other than tuberculosis reduces its usefulness for that illness.

5. If gonorrhoea in your area is not resistant to penicillin, inject 4.8 million units of procaine penicillin, or 5 million units of crystalline penicillin, all at once. Put half the dose in each buttock, and give 1 gram of probenecid by mouth at the same time. Or give by mouth 3500 mg. ampicillin and 1 gram probenecid at one time.

If clavulanic acid is added to one of these penicillin treatments, it will make the treatment effective against most gonorrhoea resistant to penicillin. If available, give 125 to 250 mg. clavulanic acid along with the penicillin or ampicillin. (*Augmentin* is a combination tablet of clavulanic acid and a kind of penicillin.)

6. There may be other very expensive but effective medicines (ceftriaxone, ciprofloxacin, spectinomycin, thiamphenicol) for gonorrhoea in your area. Seek experienced medical advice before using these medicines.

For chlamydia, use one of the following:

1. Give tetracycline or erythromycin; 500 mg. 4 times a day for 7 to 10 days.

2. Or, give doxycycline: 100 mg. twice a day for 7 to 10 days.

3. Sulfa drugs can also be used. For example, give 500 mg. of sulfisoxazole by mouth 4 times a day for 10 days.

MEDICINES FOR TUBERCULOSIS

In treating tuberculosis (TB), it is very important to always use 2, 3, or even 4 anti-tuberculosis medicines at the same time. If only 1 medicine is used, the TB bacteria become resistant to it and make the disease harder to treat.

Tuberculosis must be treated for a long time, usually 6 to 9 months, or longer. The length of treatment depends on what combination of medicines is used. To keep tuberculosis from coming back again, the full, long-term treatment is extremely important.

Some medicines for tuberculosis are expensive (rifampin, pyrazinamide, ethambutol) if you buy them in a pharmacy. But many governments have programs that test for tuberculosis and give medicine free or at low cost.

Experienced local advice is important, because treatments change, bacteria become resistant, and new medicines may become available. Also, some programs give medicines only twice a week, in higher doses.

Isoniazid (INH) should always be used in the treatment of TB. Rifampin is a very effective medicine that should be used whenever possible, especially until a 'sputum test' comes out negative. Ethambutol and streptomycin are also often used to treat TB. Taking pyrazinamide with INH and rifampin can shorten the time of treatment. Thiacetazone is an inexpensive TB medicine, but it causes side effects so often that many persons cannot use it.

If the medicines cause itching, yellowing of the skin and eyes (jaundice), or stomach pains, see a health worker about possibly changing the dosage or medicines. If blisters occur, stop taking medicines until you can see a health worker. Avoid alcohol when taking TB medicines, especially INH.

Recommended treatments

Use one of the following combinations of medicines, depending on which are available, affordable, and recommended in your area:

- 1. Give isoniazid, rifampin, ethambutol, and pyrazinamide for 2 months. Then stop taking pyrazinamide, but continue using rifampin, isoniazid, and ethambutol for another 4 months.**
- 2. Give isoniazid, rifampin, and ethambutol for 9 months.**
- 3. Combine isoniazid, rifampin, streptomycin, and pyrazinamide for 2 months. Then give isoniazid with ethambutol, streptomycin, or possibly thiacetazone for 6 months. This treatment has the advantage of being cheaper, because less rifampin is needed.**
- 4. If rifampin is not available or is too expensive, give isoniazid, ethambutol, and streptomycin for 2 months, or until a test shows the sputum is negative. Then continue to give streptomycin for 2 more months, and to give INH and ethambutol for 1 year.**
- 5. Pregnant women with TB should seek experienced medical advice. Otherwise, give isoniazid and either ethambutol, rifampin, or thiacetazone for 18 months. Also give 50 mg, of vitamin B₆ (pyridoxine) a day. Do not give pyrazinamide or streptomycin during pregnancy**

Isoniazid (INH)

Name: _____ price: ___ for ___

Often comes in: tablets of 100 or 300 mg.

This is the most basic anti-TB medicine. To treat TB, it must always be given with at least 1 other anti-TB medicine whenever possible. For prevention it can be given alone.

Risks and Precautions:

Rarely, isoniazid causes anemia, nerve pains in the hands and feet, muscle twitching, or even fits, especially in malnourished persons. These side effects can usually be treated by giving 50 mg. of pyridoxine (vitamin B₆) daily, by mouth.

Sometimes isoniazid can damage the liver. Persons who develop the signs of hepatitis (yellow color of skin and eyes, itching, loss of appetite, pain in the belly) while taking isoniazid should stop taking the medicine.

***Dosage* for isoniazid-(5 to 10 mg./kg./day): -using tablets of 100 mg.-**

Give isoniazid once a day.

In each dose give:

adults: 300 mg. (3 tablets)

children: 50 mg. (1/2 tablet) for each 5 kg. the child weighs.

For children with severe TB, or persons with tubercular meningitis, double the above dose until improvement takes place.

For prevention of TB in family members of persons with TB, it is often recommended to give the above dose of INH for 6 to 9 months.

Rifampin (rifampicin, rifamycin)

Name:_____ **price:**___ **for**__

Often comes in: tablets or capsules of 150 or 300 mg.

This antibiotic is expensive, but is powerful in fighting TB. Thus it can shorten the treatment time by several months when combined with isoniazid and at least one other TB medicine. (Rifampin is also used to treat leprosy.)

It is important to keep taking rifampin regularly, without interruption. Be sure to get more before your supply runs out.

Risks and Precautions:

Rifampin can cause serious damage to the liver. A person who has liver problems or is pregnant should take this medicine under medical supervision.

***Side effects:* Urine, tears, feces (shit), saliva, mucus from coughing (sputum), and sweat are colored red-orange by rifampin. Rarely, rifampin can cause fever, loss or increase of appetite, vomiting, nausea, confusion, skin rash, and menstrual problems.**

Rifampin reduces the effectiveness of oral contraceptives. So women taking birth control pills should get medical advice about increasing the dose. Or, use another method such as condoms, IUD, or a diaphragm while taking this medicine.

***Dosage* of rifampin for TB-(10 mg./kg./day): -tablets or capsules of 150 mg. or 300 mg.-**

Give rifampin once a day, either 1 hour before or 2 hours after eating.

In each dose give:

adults: 600 mg. (two 300 mg. tablets or four 150 mg. tablets)

**children 8 to 12 years: 450 mg.
children 3 to 7 years: 300 mg.
children under 3 years: 150 mg.**

Pyrazinamide

Name: _____ price: ___ for: ___

Often comes in: tablets of 500 mg.

Risks and Precautions:

Pregnant women should not take pyrazinamide.

***Side effects:* May cause painful joints, loss of appetite, nausea and vomiting, painful urination, fatigue, and fever.**

***Dosage* for pyrazinamide-(20 to 30 mg./kg./day): - using tablets of 500 mg.-**

Give daily for 2 months, together with other TB medicines.

In each dose give:

**adults: 1500 or 2000 mg. (3 or 4 tablets)
children 8 to 12 years: 1000 mg. (2 tablets)
children 3 to 7 years: 500 mg. (1 tablet)
children under 3 years: 250 mg. (1/2 tablet)**

Ethambutol (familiar brand name: *Myambutol*)

Name: _____ price: ___ for: ___

Often comes in: tablets of 100 or 400 mg.

Risks and Precautions:

Ethambutol may cause eye pain or damage if taken in large doses for a long time. The medicine should be stopped if eye problems develop. Eye damage caused by ethambutol usually slowly gets better after the medicine is stopped.

Dosage of ethambutol-(25 mg./kg./day for the first 2 months, then 15 mg./kg./day): -100 mg. tablets or 400 mg. tablets -

Give once a day.

For the first two months, in each dose give:

adults: 1200 mg. (three 400 mg. tablets or twelve 100 mg. tablets)

children: Give 15 mg. for each kg. the child weighs. But for tubercular meningitis give 25 mg. for each kg. the child weighs.

After the first two months give:

adults: 800 mg. (two 400 mg. tablets or eight 100 mg. tablets)

children: Give 15 mg. for each kg. the child weighs.

Streptomycin

Name: _____ price: ___ for ___

Often comes in: vials for injection with 500 mg. in each ml.

Streptomycin is still a very useful medicine for treating tuberculosis. It is somewhat less effective but much cheaper than rifampin.

Risks and Precautions:

Great care must be taken not to give more than the correct dose. Too much streptomycin for too long may cause deafness. If ringing of the ears or deafness begins, stop taking the medicine and see a health worker.

Streptomycin should not be taken by pregnant women or persons with kidney problems.

Dosage for streptomycin (15 mg./kg./day):

-vials of liquid; or powder for mixing with water to give 1 gm. of streptomycin in 2 ml.-

For treatment of tuberculosis:

**very severe cases, give 1 injection daily for 3 to 8 weeks
for mild cases, give 1 injection 2 or 3 times a week for 2 months**

With each injection give:

adults: 1 gm. (or 2 ml.)

adults over age 50: 500 mg. (1 ml.)

children 8 to 12 years: 750 mg. (1 1/2 ml.)

children 3 to 7 years: 500 mg. (1 ml.)

children under 3 years: 250 mg. (1/2 ml.)

newborn babies: give 20 mg. for each kg. of body weight; thus a 3 kg. baby gets 60 mg. (1/8 ml.)

Use of streptomycin for other than TB:

In emergencies, streptomycin and penicillin together can be used to treat certain severe infections (see PENICILLIN WITH STREPTOMYCIN). However, the use of streptomycin for infections other than tuberculosis should be very limited, because frequent use of streptomycin for other illnesses makes tuberculosis resistant to it, and therefore harder to treat. Streptomycin is sometimes used to treat gonorrhea that is resistant to penicillin-a single high dose is needed.

Thiacetazone

Name:_____ price:___ for___

Often comes in: tablets with 50 mg. of thiacetazone (often in combination with 100 or 133 mg. of isoniazid)

***Side effects:* May cause rashes, vomiting, dizziness, or loss of appetite. Side effects occur often, and may be more severe in persons infected with the AIDS virus.**

***Dosage* for thiacetazone - (2.5 mg./kg./day): - tablets with 50 mg. thiacetazone, with or without isoniazid-**

Give once a day.

In each dose give:

adults: 3 tablets (150 mg.)
children 8 to 12 years: 2 tablets (100 mg.)
children 3 to 7 years: 1 tablet (50 mg.)
children under 3 years: 1/2 tablet (25 mg.)

MEDICINES FOR LEPROSY

When treating leprosy, it is important to know which of the two main types of leprosy the person has. If there are light-colored skin patches with loss of sensation but no lumps or thickened skin, then the person probably has tuberculoid leprosy and only 2 medicines are required. If there are lumps, then the person probably has lepromatous leprosy and it is best to use 3 medicines. If possible, medicines for leprosy should be taken with the guidance of an experienced health worker or doctor, according to the national plan.

Treatment of leprosy must usually continue for at least 6 months and sometimes for life. To prevent the bacteria (bacilli) that cause leprosy from becoming resistant, it is important to keep taking the medicines regularly, without interruption. Be sure to get more medicine before your supply runs out.

Recommended treatment:

***For tuberculoid leprosy* take both of these for at least 6 months:**

Dapsone daily
Rifampin each month

***For lepromatous leprosy* take all of these for 2 to 5 years:**

Dapsone daily
Clofazimine daily and a larger dose each month

Rifampin each month

Note: Although the cure of leprosy is quicker using dapson together with other medicines, sometimes only dapson is available. When taken alone, it often gives good results, but more slowly, so treatment must continue for at least 2 years and sometimes for life for lepromatous leprosy.

Occasionally, a person may develop a serious problem called 'lepra reaction' while taking leprosy medicines. There may be lumpy and inflamed spots, fever, and swollen, tender nerves. It may also cause joint pains, tender lymph nodes and testicles, swelling of the hands and feet, or red and painful eyes which may lead to loss of vision.

In case of a severe 'lepra reaction' (pain along the nerves, numbness or weakness, eye irritation, or painful testicles), it is usually best to keep taking the leprosy treatment, but to also take an anti-inflammatory medicine (cortico-steroid). Seek experienced medical advice about this because the cortico-steroid can also cause serious problems.

Dapsone (diaminodiphenylsulfone, DDS)

Name:_____ price:___ for___

Often comes in: tablets of 50 and 100 mg.

Dapsone sometimes causes anemia or skin rashes, which can be severe. If severe skin peeling occurs, stop taking the medicine.

***WARNING:* DDS is a dangerous drug. Keep it where children cannot reach it.**

Dosage for DDS-(2 mg./kg./day): - using tablets of 100 mg. -

Take once a day

adults: 100 mg. (one 100 mg. tablet)

children 13 to 18 years: 50 mg. (half of a 100 mg. tablet)

children 6 to 12 years: 25 mg. (a quarter of a 100 mg. tablet)

children 2 to 5 years: 25 mg. (a quarter of a 100 mg. tablet) 3 times a week only.

Rifampin (rifampicin, rifamycin)

Name: _____ price: ___ for ___

Often comes in: tablets or capsules of 150 and 300 mg.

Rifampin is a very expensive medicine, but only a small amount is needed to treat leprosy, so the total cost is not great. Take rifampin only with the advice of an experienced health worker or doctor:

Dosage of rifampin for leprosy-(10 to 20 mg./kg.): - using tablets of 300 mg. -

For leprosy, give rifampin once a month. It should be taken either 1 hour before or 2 hours after eating.

In each monthly dose give:

adults: 600 mg. (two 300 mg. tablets)

children 8 to 12 years: 450 mg. (one and a half 300 mg. tablets)

children 3 to 7 years: 300 mg. (one 300 mg. tablet)

children under 3 years: 150 mg. (half a 300 mg. tablet)

Clofazimine (Lamprene)

Name:_____ **price:**___ **for**___

Often comes in: capsules of 50 and 100 mg.

Clofazimine is also an expensive medicine. Although it is less effective in killing leprosy bacteria than rifampin, it has the advantage that it also helps to control lepra reaction to some extent, particularly in persons with lepromatous leprosy

***Side effects:* Causes the skin to become a red-purple color. This is only temporary and will disappear 1 to 2 years after stopping the medicine. May cause stomach or digestive problems. Not recommended for pregnant women.**

***Dosage for clofazimine-(1 mg./kg./day):* - using capsules of 50 mg. -**

Give one dose of clofazimine each day and a second, larger dose once a month.

In each daily dose give:

adults: 50 mg. (one 50 mg. capsule)

children 8 to 12 years: 37 mg. (3/4 of a 50 mg. capsule)

children 3 to 7 years: 25 mg. (1/2 of a 50 mg. capsule)

children under 3 years: 12 mg. (1/4 of a 50 mg. capsule)

In each monthly dose give:

adults: 300 mg. (six 50 mg. capsules)

children 8 to 12 years: 225 mg. (four and a half 50 mg. capsules)

children 3 to 7 years: 150 mg. (three 50 mg. capsules)

children under 3 years: 75 mg. (one and a half 50 mg. capsules)

Note: The larger dose of clofazimine, which can also be used daily to control lepra

reaction, is best given with the advice of an experienced health worker or doctor.

OTHER MEDICINES

MEDICINES FOR MALARIA

There are several medicines that fight malaria unfortunately, in many parts of the world, malaria parasites have become resistant to the best malaria medicines. This is especially true for the most serious type of malaria (*falciparum* malaria).

It is important to learn from the Health Department or at a health center what medicines work best in your area. New medicines are being developed, but these are likely to be effective for a limited time before resistance to them develops.

***IMPORTANT:* Malaria can quickly kill persons who have not developed immunity. Children, and also people who visit areas with malaria, must be treated immediately.**

Medicines for malaria can be used in two ways:

- 1. TREATMENT of the person who is ill with malaria. Medicine is given daily for just a few days.**
- 2. PREVENTION: To keep any malaria parasites that may be in the blood from doing harm. Prevention is used in areas where malaria is common, especially to protect children who are weak or sick for other reasons. It is also used by persons visiting a malaria area who have no defenses against the disease. Medicines are usually given weekly. To prevent malaria, also be sure to follow the advice from section "HOW TO AVOID MALARIA (AND DENGUE)" (chapter 14) to avoid mosquito bites.**

Certain malaria medicines are used only to treat attacks of malaria, while some only work

for prevention. Others can be used for both.

As of 1992, chloroquine is still the most useful medicine to prevent and treat malaria in Mexico, Central America, and Haiti, but resistance is likely to develop as it has in other parts of the world. Chloroquine resistance is widespread in South America, East Africa, and especially Southeast Asia. Quinine is usually the best medicine to treat severe malaria in an area where resistance is likely, or to treat malaria affecting the brain.

Mefloquine is a new medicine used to prevent and treat malaria that is resistant to chloroquine. *Fansidar* another medicine for treatment of malaria resistant to chloroquine. Proguanil is used with chloroquine for prevention. Primaquine is sometimes taken after treatment with another malaria medicine to keep the disease from coming back. Tetracycline is now also used occasionally in malaria treatment and prevention.

Chloroquine

Chloroquine comes in two forms, chloroquine phosphate and chloroquine sulfate. The doses are different, so be sure you know which type of chloroquine you have and the amount of medicine (chloroquine base) in the tablet.

In some areas and for some forms of malaria, other medicines are needed in addition to chloroquine for a complete cure. Seek local advice.

CHLOROQUINE PHOSPHATE (familiar brand names: *Aralen*, *Resochin*, *Avlochlor*)

Name: _____ price: ____ for ____

Often comes in: 250 mg. tablets (which have 150 mg. of chloroquine) or 500 mg. (which have 300 mg. of chloroquine)

Dosage for chloroquine phosphate by mouth: - using 250 mg. tablets -

For treatment of acute attacks of malaria:

For the first dose give:

adults: 4 tablets (1000 mg.)

children 10 to 15 years: 3 tablets (750 mg.)

children 6 to 9 years: 2 tablets (500 mg.)

children 3 to 5 years: 1 tablet (250 mg.)

children 1 to 2 years: 1/2 tablet (125 mg.)

babies under 1 year: 1/4 tablet (63 mg.)

Then give the following dose 6 hours after the first dose, 1 day after the first dose, and 2 days after the first dose:

adults: 2 tablets (500 mg.)

children 10 to 15 years: 1 1/2 tablets (375 mg.)

children 6 to 9 years: 1 tablet (250 mg.)

children 3 to 5 years: 1/2 tablet (125 mg.)

children 1 to 2 years: 1/4 tablet (63 mg.)

babies under 1 year: 1/8 tablet (32 mg.)

For prevention of malaria (where it is not resistant to chloroquine):

Give once a week beginning 1 week before and continuing for 4 weeks after leaving malaria area.

adults: 2 tablets (500 mg.)

children 10 to 15 years: 1 1/2 tablets (375 mg.)

children 6 to 9 years: 1 tablet (250 mg.)
children 3 to 5 years: 1/2 tablet (125 mg.)
children 1 to 2 years: 1/4 tablet (63 mg.)
babies under 1 year: 1/8 tablet (32 mg.)

CHLOROQUINE SULFATE (familiar brand name: *Nivaquine*)

Name:_____ price:___ for___

Often comes in: 200 mg. tablets (which have 150 mg. of chloroquine)

Dosage of chloroquine sulfate by mouth: - 200 mg. tablets -

For treatment of acute attacks of malaria:

For the first dose give:

adults: 4 tablets (800 mg.)
children 10 to 15 years: 3 tablets (600 mg.)
children 6 to 9 years: 2 tablets (400 mg.)
children 3 to 5 years: 1 tablet (200 mg.)
children 1 to 2 years: 1/2 tablet (100 mg.)
babies under 1 year: 1/4 tablet (50 mg.)

Then give the following dose 6 hours after the first dose, 1 day after the first dose, and 2 days after the first dose:

adults: 2 tablets (400 mg.)
children 10 to 15 years: 1 1/2 tablets (300 mg.)
children 6 to 9 years: 1 tablet (200 mg.)

children 3 to 5 years: 1/2 tablet (100 mg.)
children 1 to 2 years: 1/4 tablet (50 mg.)
babies under 1 year: 1/8 tablet (25 mg.)

For prevention of malaria:

Give once a week beginning 1 week before and continuing for 4 weeks after leaving a malaria area.

adults: 2 tablets (400 mg.)
children 10 to 15 years: 1 1/2 tablet (300 mg.)
children 6 to 9 years: 1 tablet (200 mg.)
children 3 to 5 years: 1/2 tablet (100 mg.)
children 1 to 2 years: 1/4 tablet (50 mg.)
babies under 1 year: 1/8 tablet (25 mg.)

For treatment of liver abscess caused by amebas: - using tablets of 250 mg. chloroquine phosphate or 200 mg. chloroquine sulfate -

adults: 3 or 4 tablets twice daily for 2 days and then 1 1/2 or 2 tablets daily for 3 weeks.

Give children less, according to age or weight.

Quinine (quinine sulfate or quinine bisulfate)

Name:_____ price:___ for___

Often comes in: tablets of 300 mg. or 650 mg.

Quinine is used to treat resistant malaria (malaria that does not get better with other

medicines) and severe malaria, including malaria that affects the brain. It is best given by mouth. If vomiting is a problem when giving quinine by mouth, a medicine such as promethazine may help.

***Side effects:* Quinine sometimes causes sweaty skin, ringing of the ears or impaired hearing, blurred vision, dizziness, nausea and vomiting, and diarrhea.**

***Dosage of quinine for treating acute attacks of malaria:* - using tablets of 300 mg. -**

Give 3 times a day for 3 days:

adults: 2 tablets (600 mg.)

children 10 to 15 years: 1 1/2 tablets (450 mg.)

children 6 to 9 years: 1 tablet (300 mg.)

children 3 to 5 years: 1/2 tablet (150 mg.)

children 1 to 2 years: 1/4 tablet (75 mg.)

babies under 1 year: 1/8 tablet (38 mg.)

Note: In some parts of the world, such as Southeast Asia, it is necessary to take quinine for 7 days.

Injections of quinine or chloroquine: when to give them:

Injections of quinine or chloroquine should be given only rarely, in cases of great emergency. If a person who shows signs of malaria, or lives in an area where there is a lot of malaria, is vomiting, having fits (convulsions), or showing other signs of meningitis, he may have cerebral malaria (malaria in the brain). Inject quinine at once. (Or, if you have no other medicine available, try injecting chloroquine.) Great care must be taken to be sure the dose is right. Seek medical help.

QUININE DIHYDROCHLORIDE INJECTIONS, 300 mg. in 2 ml.:

Quinine injections should be given very slowly, and never directly into the vein-this can be dangerous to the heart. Take great care with children.

Inject half this dose slowly into each buttock. Before injecting, draw back on the plunger; if blood appears, inject in another site. Repeat same dose 12 hours later:

adults: 600 mg. (2 ampules of 2 ml.)

children: .07 ml. (1/15 ml., or 10 mg.) for each kg. the child weighs. (A one-year-old baby who weighs 10 kg. would get 0.70 ml.)

CHLOROQUINE INJECTIONS, 200 mg. in 5 ml.:

Give the dose once only (inject 1/2 into each buttock):

adults: 200 mg. (the entire ampule of 5 ml.)

children: inject 0.1 ml. (1/10 ml.) for each kg. the child weighs. (A one-year-old baby who weighs 10 kg. would get 1 ml.)

The dose may be repeated 1 day later if improvement has not taken place.

Mefloquine (familiar brand name: *Lariam*)

Name: _____ price: ___ for ___

Often comes in: tablets of 250 mg.

Mefloquine can prevent and stop acute attacks of malaria that is resistant to chloroquine.

Precautions and side effects: Mefloquine should not be taken by pregnant women, or persons with epilepsy. Persons with heart or mental problems should get experienced medical advice before taking this medicine. Mefloquine sometimes causes strange behavior, confusion, dizziness, stomach upset, headache, vision problems, and occasionally fits or unconsciousness. Take with a large meal. Side effects are more frequent and severe with the higher doses used for treatment.

Dosage of mefloquine:

For treatment of acute attacks of malaria:

Give one time:

adults: 5 tablets (1250 mg.)
children 12 to 15 years: 4 tablets (1000 mg.)
children 8 to 11 years: 3 tablets (750 mg.)
children 5 to 7 years: 2 tablets (500 mg.)
children 1 to 4 years: 1 tablet (250 mg.)
babies under 1 year: 1/2 tablet (125 mg.)

For prevention of malaria:

Give once a week continuing until 4 weeks after leaving malaria area.

adults: 1 tablet (250 mg.)
children over 45 kg.: 1 tablet (250 mg.)
children 31 to 45 kg.: 3/4 tablet (188 mg.)
children 20 to 30 kg.: 1/2 tablet (125 mg.)
children 15 to 19 kg.: 1/4 tablet (63 mg.)
children under 15 kg.: not recommended

Pyrimethamine with sulfadoxine (*Fansidar*)**Name:_____ price:___ for___****Comes in: combination tablet with 25 mg. pyrimethamine and 500 mg. sulfadoxine*****Fansidar* is used to treat resistant malaria.*****WARNING:* Fansidar should not be taken by anyone who has ever had a reaction to a sulfa medicine. If the medicine causes a rash or itching, drink lots of water and do not take it again.*****Dosage* to treat acute attacks of malaria:****Give one time:****adults: 3 tablets****children 9 to 14 years: 2 tablets****children 4 to 8 years: 1 tablet****children 1 to 3 years: 1/2 tablet****babies under 1 year: 1/4 tablet****Proguanil (*Paludrine*)****Name:_____ price:___ for___****Often comes in: tablets of 100 mg.****Proguanil is taken with chloroquine for prevention of chloroquine resistant malaria.
Proguanil is not used to treat acute attacks of malaria.**

Dosage of proguanil for prevention:

Give medicine each day, starting the day entering a malaria area until 28 days after leaving the area.

adults: 2 tablets (200 mg.)

children 9 to 14 years: 1 1/2 tablets (150 mg.)

children 3 to 6 years: 1 tablet (100 mg.)

children 1 to 2 years: 1/2 tablet (50 mg.)

babies under 1 year: 1/4 tablet (25 mg.)

Primaquine

Name: _____ price: ____ for ____

Often comes in: tablets of 26.3 mg. of primaquine phosphate, which contains 15 mg. of primaquine base.

Primaquine is usually used after treatment with chloroquine or another malaria medicine to keep some kinds of malaria from coming back. Primaquine does not work by itself for acute attacks.

***Side effects:* Pregnant women should not take primaquine. In certain persons, especially some black people, this medicine causes anemia. Seek local advice.**

Dosage of primaquine:

Give once a day for 14 days.

In each dose give:

adults: 1 tablet (15 mg. base)
children 8 to 12 years: 1/2 tablet (7 mg. base)
children 3 to 7 years: 1/4 tablet (4 mg. base)

Tetracycline

Tetracycline can be used to treat acute attacks of malaria in Southeast Asia and some other areas where there is much chloroquine-resistant malaria. But because it works slowly, it should be given with another medicine (usually quinine). Visitors to these areas sometimes take doxycycline daily for prevention. See "The Green Pages" for tetracycline and doxycycline doses, risks, and precautions.

FOR AMEBAS AND GIARDIA

In diarrhea or dysentery caused by amebas there are usually frequent stools with much mucus and sometimes blood. Often there are gut cramps, but little or no fever. Amebic dysentery is best treated with metronidazole together with diloxanide furoate or tetracycline. Chloroquine is sometimes used when metronidazole is not available, or in cases of amebic abscess. Iodoquinol is another medicine used to treat amebic dysentery, but it may have dangerous side effects.

In order to kill all the amebas in the gut, very long (2 to 3 weeks) and expensive treatment is necessary. It often makes more sense to stop giving medicines when the person has no more symptoms and then let the body defend itself against the few amebas that are left. This is especially true in areas where the chance of getting a new infection is high.

In diarrhea caused by giardia the stools are often yellow and frothy, but without blood or mucus. Metronidazole is often used, but quinacrine is cheaper.

Metronidazole (familiar brand name. *Flagyl*)**Name:** _____

Often comes in:

tablets of 200, 250, or 500 mg Price: _____ for _____

vaginal inserts, 500 mg Price: _____ for _____

Metronidazole is useful for gut infections caused by amebas and giardia, and sometimes for diarrhea that comes from taking 'wide-range' antibiotics (such as ampicillin). It is also useful for vaginal infections caused by Trichomonas, or by certain bacteria. It can also help to treat the symptoms of guinea worm.

CAUTION: Do not drink alcoholic drinks when taking metronidazole, as this causes severe nausea.

WARNING: Metronidazole may cause birth defects pregnant women should avoid using this medicine if possible, especially during the first 3 months of pregnancy. Breast feeding women using large doses should not give their babies breast milk for 24 hours after taking metronidazole. Persons with liver problems should not use metronidazole.

Dosage for amebic dysentery - (25 to 50 mg./kg./day):-using 250 mg. tablets -

Give metronidazole 3 times a day for 5 to 10 days.

In each dose give:

adults: 750 mg. (3 tablets)

children 8 to 12 years: 500 mg. (2 tablets)

children 4 to 7 years: 375 mg. (1 1/2 tablets)

children 2 to 3 years: 250 mg. (1 tablet)

children under 2 years: 80 to 125 mg. (1/3 to 1/2 tablet)

Dosage for giardia infection

Give metronidazole 3 times a day for 5 days.

In each dose give:

adults: 250 mg. (1 tablet)

children 8 to 12 years: 250 mg, (1 tablet)

children 3 to 7 years: 125 mg. (1/2 tablet)

children under 3 years: 62 mg. (1/4 tablet)

Dosage for guinea worm:

Give the same dose as for giardia, 3 times a day for 10 days

Dosage for Trichomonas infections of the vagina

The woman should take 8 tablets (2 gm.) by mouth in one single dose or, if the infection is not very severe, she can use a vaginal insert twice a day for 10 days. Both the woman and man should be treated for Trichomonas at the same time. (He should do this even if he has no symptoms, or he will pass it back to the woman.)

Dosage for bacterial infections of the vagina:

The woman should take 2 tablets (500 mg.) of metronidazole twice a day for 5 days. If the infection returns, both the woman and man should take the same treatment, at the same time.

Diloxanide furoate (*Furamide*)

Often comes in: 500 mg. tablets also, syrup with 125 mg. in 5 ml.

Name:_____ price:___ for___

Diloxanide furoate is used to treat amebic dysentery, along with metronidazole or tetracycline.

***Side effects:* Occasionally causes gas, stomach pain, or nausea.**

***Dosage* for diloxanide furoate-(20 mg./kg./day) - tablets of 500 mg -**

Give 3 times a day with meals. For complete treatment take for 10 days.

In each dose give:

adults: 1 tablet (500 mg.)

children 8 to 12 years: 1/2 tablet (250 mg)

children 3 to 7 years: 1/4 tablet (125 mg.)

children under 3 years: 1/8 tablet (62 mg) or less, depending on weight

Tetracycline**Chloroquine****Quinacrine (mepacrine)**

(familiar brand name; *Atabrine*)

Name:_____ price:___ for___

Often comes in: 100 mg. tablets

Quinacrine can be used in treating giardia, malaria, and tapeworm, but is not the best medicine for any of these. It is used because it is cheap. Quinacrine often causes headache, dizziness, and vomiting.

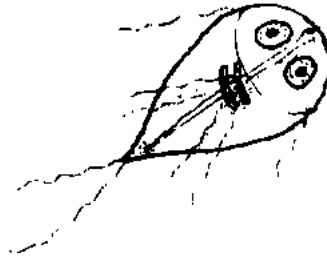
Dosage of quinacrine for treating giardia:

Give quinacrine 3 times a day for a week.

In each dose give:

adults: one 100 mg. tablet

children under 10 years: 50 mg. (1/2 tablet)



Figure

Dosage of quinacrine for treating tapeworm:

(Half an hour before giving quinacrine, give an antihistamine like promethazine to help prevent vomiting.)

Give 1 large dose only:

adults: 1 gm. (10 tablets)

children 8 to 12 years: 600 mg, (6 tablets)

children 3 to 7 years: 400 mg. (4 tablets)

DANGER! DO NOT USE!



Hydroxyquinolines (clioquinol, iodoquinol, di-iodohydroxyquinoline, halquinol, broxyquinoline) (familiar brand names: *Diodoquin, Amicline, Floraquin, Enteroquinol, Chlorambin, Nivembin, Quogyl, Entero-Vioform*, and many other brands)

These medicines were commonly used in the past to treat diarrhea. They are now known to sometimes cause permanent paralysis, blindness, and even death. Do not use these dangerous medicines.

FOR VAGINAL INFECTIONS

Vaginal discharge, itching, and discomfort can be caused by different infections, the most common of which are Trichomonas, yeast (Candida, moniliasis), and bacteria. Cleanliness and vinegar-and-water douches (vaginal washes) help many vaginal infections. Specific medicines are also listed below.

White vinegar for vaginal douches (washes):

Price: _____ for _____

Mix 2 or 3 tablespoons of white vinegar in a liter of boiled water. Give 1 to 3 douches a day for a week, then 1 every other day. This works especially well for bacterial infections of the vagina.

Metronidazole, tablets to be taken by mouth and vaginal inserts:

For Trichomonas and bacterial infections of the vagina. (Only use metronidazole for bacterial infections if vinegar and water douches do not work.)

Nystatin or Miconazole, tablets, cream, and vaginal inserts:

For yeast infection (Candida, moniliasis) of the vagina.

Gentian violet (crystal violet) 1 percent solution:

Price:_____ for_____

For treatment of yeast infection (Candida, moniliasis) and other infections of the vulva and vagina.

Paint on gentian violet once daily for 3 weeks.

Povidone iodine (Betadine)

Price:_____ for_____

For treatment of bacterial infections of the vagina.

Mix 2 tablespoons of povidone iodine in a liter of warm water that has been boiled. Give 1 douche a day for 10 to 14 days.

FOR SKIN PROBLEMS

Washing the hands and bathing frequently with soap and water help prevent many infections, both of the skin and of the gut. Wounds should be carefully washed with soap

and boiled water before they are closed or bandaged.

Frequent scrubbing with soap and water is often the only treatment necessary for dandruff, cradle cap (seborrhea), pimples, mild impetigo, as well as for minor ringworm, tinea, and other fungus infections of the skin or scalp. For these purposes it is better if the soap has in it an antiseptic like iodine, such as povidone iodine (*Betadine*). But *Betadine* can be irritating to tissue and should not be used on open skin.

Sulfur

Often comes as a yellow powder.

Price:_____ for_____

Also comes in many skin lotions and ointments.

Sulfur is useful for many skin problems:

- 1. To avoid or discourage ticks, mites, chiggers, jiggers, and fleas. Before going into fields or forests where these are common, dust the skin-especially legs or ankles, wrists, waist, and neck-with sulfur.**
- 2. To help treat scabies, burrowing fleas, mites, and tiny ticks in or on the skin. Make an ointment: Mix 1 part of sulfur with 10 parts of petrolatum (*Vaseline*) or lard, and smear this on the skin.**
- 3. For ringworm, tinea, and other fungus infections, use the same ointment, 3 or 4 times a day, or a lotion of sulfur and vinegar.**
- 4. For cradle cap (seborrhea) and severe dandruff, the same ointment can be used, or the scalp can be dusted with sulfur.**

Gentian violet (crystal violet)

Often comes as dark blue crystals.

Price: _____ for _____

Gentian violet helps fight certain skin infections, including impetigo and sores with pus. It can also be used to treat yeast infections (Candida, moniliasis) in the mouth (thrush) or in the vulva or skin folds.

Dissolve a teaspoon of gentian violet in half a liter of water. This makes a 2 percent solution. Paint it on the skin or in the mouth or the vulva.

Antibiotic ointments

Name: _____ price: _____ for _____

These are expensive and often do no more good than gentian violet. However, they do not color the skin or clothes and are of use in treating minor skin infections like impetigo. A good ointment is one that contains a neomycin/polymyxin combination (for example *Neosporin* or *Polysporin*). An ointment of tetracycline can also be used.

Cortico-steroid ointments or lotions

Name: _____ price: _____ for _____

These can be used for 'weeping' or severely itchy skin irritations caused by insect bites, by touching certain 'poisonous' plants, and other things. They are also useful in treating severe eczema and psoriasis. Use 3 or 4 times a day. Avoid using for long periods of time, or on large areas of skin.

Petroleum jelly (petrolatum, Vaseline)**Price:_____ for_____**

Useful for preparing ointments or dressings in the treatment of: scabies

ringworm

itching from pinworm

burns

chest wounds

FOR RINGWORM AND OTHER FUNGUS INFECTIONS

Many fungus infections are very difficult to get rid of. For complete control, treatment must be continued for days or weeks after the signs disappear. Bathing and cleanliness are also important.

Ointments with undecylenic, benzoic, or salicylic acid**Name:_____ price:_____ for_____**

Ointments with these acids can be used to treat ringworm, tinea of the scalp, and other fungus infections of the skin. Often they are (or can be) combined with sulfur. Ointments with salicylic acid and sulfur can also be used for cradle cap (seborrhea).

***Whitfield's Ointment* is a combination of salicylic and benzoic acid. It is useful for many fungal infections, including tinea versicolor. Apply twice daily for 2 to 4 weeks.**

Ointments and lotions are cheaper if you make them yourself. Mix 3 parts of salicylic acid and/or 6 parts of benzoic acid with 100 parts of *Vaseline*, petrolatum, mineral oil, lard, or

40 percent alcohol (or rum). Rub onto skin 3 or 4 times a day.

Sulfur and vinegar

A lotion of 5 parts of sulfur to 100 parts vinegar helps fight fungus infections of the skin. Let dry on skin. Also, an ointment can be made using 1 part sulfur to 10 parts of lard.

Sodium thiosulfate ('hypo')

Comes as white crystals, sold in photographic supply stores as 'hypo'.

Price:___ for___

Used for tinea versicolor infections of the skin.

Dissolve a tablespoon of 'hypo' in 1/2 cup of water and spread it on the skin with a piece of cotton or cloth. Then rub the skin with a piece of cotton soaked in vinegar. Do this twice daily until the 'spots' go away and then once again every 2 weeks to keep them from coming back.

Selenium sulfide (*Selsun, Exsel*)

Name:_____ price:___ for___

Often comes as lotion containing 1 or 2.5 percent selenium sulfide.

Lotions with selenium sulfide are useful for treating tinea versicolor. Apply to the affected area, and wash off 30 minutes later. Use daily for one week.

Tolnaftate (*Tinactin*)

Name:_____ **price:**___ **for**___

Often comes in: cream, powder, and solution of 1 percent tolnaftate.

This may be used for fungus infections caused by tinea on the feet, groin, scalp, hands, and body. Apply twice daily until 2 weeks after symptoms are gone.

Griseofulvin

Name:_____ **price:**___ **for**___

Often comes in: tablets or capsules of 250 or 500 mg.

Preparations in 'microsized' particles are best.

This is very expensive and should be used only for severe fungus infections of the skin and deep tinea infections of the scalp. It is also used for fungal infections of the nails, but this may take months and does not always work. Pregnant women should avoid taking griseofulvin.

Dosage of griseofulvin-(15 mg./kg./day): - for microsized particle form, 250 mg. capsules

-

Give once a day for at least a month.

adults: 500 to 1000 mg. (2 to 4 capsules)

children 8 to 12 years: 250 to 500 mg. (1 to 2 capsules)

children 3 to 7 years: 125 to 250 mg. (1/2 to 1 capsule)

children under 3 years: 125 mg. (1/2 capsule)

Gentian violet - for yeast infections

Nystatin or Miconazole**Name: _____ price: ___ for ___****Comes in: solutions, dusting powders, vaginal tablets, ointments, and creams****Used for treating yeast infections (*Candida*, moniliasis) in the mouth (thrush), the vagina, or in the folds of the skin. Nystatin only works for infections caused by yeast, but miconazole works against other fungus infections as well.*****Dosage* for nystatin and miconazole-the same for children and adults:****Thrush in the mouth: put 1 ml. of solution in the mouth and hold it there for at least 1 minute before swallowing. Do this 3 or 4 times a day.****Yeast infection on the skin: keep as dry as possible and use nystatin or miconazole dusting powder or ointment 3 or 4 times a day.****Yeast infection in the vulva or vagina: put cream inside the vagina twice daily or a vaginal tablet inside the vagina nightly for 10 to 14 days.****FOR SCABIES AND LICE: INSECTICIDES****Gamma benzene hexachloride (lindane)****(familiar brand names: *Kwell*, *Gammexane*)****Name: _____ price: ___ for ___****This comes in expensive preparations for people and cheap preparations for animals which work just as well for people. Lindane for a sheep or cattle dip is quite cheap, but it often**

comes concentrated in a 15 percent solution and must be diluted to 1 percent. Mix 1 part of 15 percent lindane concentrate with 15 parts of water or *Vaseline*, and use on the skin for scabies.

CAUTION: Lindane is a poison and can cause dangerous side effects, including fits, especially in babies. Do not overuse. Make only one application; if necessary repeat once more a week later.

Benzyl benzoate, cream or lotion

Name: _____ price: ___ for ___

Use the same as gamma benzene hexachloride (lindane) cream or lotion.

Sulfur in petroleum jelly (*Vaseline*) or lard

Use this for scabies if you cannot get the above.

Mix 1 part of sulfur in 20 parts of *Vaseline*, mineral oil, or lard to form a 5 percent sulfur ointment.

Pyrethrins with piperonyl (*RID*)

Name: _____ price: ___ for ___

Often comes as a liquid solution containing pyrethrins and piperonyl butoxide.

Works well for all kinds of lice and is safer than gamma benzene hexachloride (lindane). Without adding any water, apply the liquid to dry hair until it is completely wet. (Do not use on eyebrows or eyelashes.) Wait 10 minutes, no longer. Wash the hair with warm water and soap or shampoo. Repeat in 1 week. Change clothing and bedding after

treatment.

Crotamiton (*Eurax*)

Name:_____ price:___ for___

This often comes as a cream or lotion containing 10 percent crotamiton.

Crotamiton is used for treatment of scabies only, not lice. After bathing, apply over the whole body, from the chin to the toes-don't miss the folds and creases in the skin! A second application may be used the next day. Take a bath or shower 2 days after the last application to clean off all the cream or lotion. Clothing and bedding should be changed at this time.

FOR GENITAL WARTS

Podophyllin

Name:_____ price:___ for___

Often comes as a solution containing 10 to 25 percent podophyllin mixed with benzoin.

This is used to shrink genital warts. Podophyllin is very irritating to healthy skin, so it should be used with care. Before applying, it helps to protect the area around the warts with petroleum jelly (*Vaseline*) or some other greasy ointment. Apply solution to warts and let dry completely. (This is especially important in areas where normal skin may touch the wart, such as the foreskin of the penis.) Wash off thoroughly in 4 to 6 hours. Treatment can be repeated in one week. Usually several weekly treatments are needed.

***CAUTION:* If severe skin irritation develops, do not use again. Podophyllin should not be used on bleeding warts. Women who are pregnant or breast feeding should not use**

podophyllin.**Bichloroacetic acid****Name:_____ price:___ for___****Comes as a clear liquid.**

If podophyllin is not available, bichloroacetic acid can be used to shrink warts. But it also dissolves healthy skin, so it must be used with great care. Protect the skin surrounding the wart with *Vaseline* or some other greasy ointment. Carefully trim off dead tissue from large or thick warts. With a toothpick, apply a small drop of acid to the wart. Gently work the acid into the wart with the point of the toothpick. Several treatments are usually needed, and can be repeated weekly

***CAUTION:* This acid can cause severe burns. Protect hands and other healthy skin from the acid, and wash immediately in case of contact.**

FOR WORMS

Medicines by themselves are not enough to get rid of worm infections for very long. Guidelines of personal and public cleanliness must also be followed. When 1 person in the family has worms, it is wise to treat the whole family.

Mebendazole (*Vermox*) - for many different worm infections

Name:_____ price:___ for___**Often comes in: tablets of 100 mg.**

This medicine works against hookworm, whipworm, roundworm, pinworm (threadworm),

and another worm called Strongyloides. Works well for mixed infections. It may do some good in cases of trichinosis. When treating heavy worm infections there may be some gut pain or diarrhea, but side effects are not common.

***WARNING:* Do not give mebendazole to pregnant women or children under 2 years old.**

Dosage of mebendazole-using 100 mg. tablets -

Give the same amount to children and adults.

For pinworm: one tablet once a week for 3 weeks.

For roundworm (Ascaris), whipworm (Trichuris), hookworm, and Strongyloides: one tablet twice a day (morning and evening) for 3 days (6 tablets in all).

Albendazole (Zentel) - for many different worm infections

Name: _____ price: ___ for ___

Often comes in: tablets of 200 and 400 mg.

This medicine is similar to mebendazole, but often more expensive. It works against hookworm, whipworm, Strongyloides, roundworm, and pinworm. Side effects are rare.

***WARNING:* Do not give albendazole to pregnant women or children under 2 years.**

Dosage of albendazole-using 200 mg. tablets-

Give the same amount to children and adults.

For pinworm, roundworm (Ascaris), whipworm (Trichuris), and hookworm: 400

mg. (2 tablets) one time.

For Strongyloides: 400 mg. (2 tablets) twice a day for 3 days, and then repeat one week later.

Piperazine - for roundworm (Ascaris) and pinworm (threadworm, Enterobius)

Name: _____

Comes as piperazine citrate, tartrate, hydrate, adipate, or phosphate

Often comes in:

500 mg. tablets Price: _____ for _____

Mixture, 500 mg. in 5 ml. Price: _____ for _____

A large dose is given for 2 days to treat roundworm. Smaller doses every day for a week are given for pinworm. There are few side effects.

***Dosage* of piperazine for roundworm (Ascaris) - (75 mg./kg.)**

- 500 mg. tablets or mixture with 500 mg. in 5 ml. -

Give once daily for 2 days.

adults: 3500 mg. (7 tablets or 7 teaspoons)

children 8 to 12 years: 2500 mg. (5 tablets or 5 teaspoons)

children 3 to 7 years: 1500 mg. (3 tablets or 3 teaspoons)

children 1 to 3 years: 1000 mg. (2 tablets or 2 teaspoons)

babies under 1 year: 500 mg. (1 tablet or 1 teaspoon)

Dosage of piperazine for pinworm (Enterobius)- (40 mg./kg./day):

Give 2 doses daily for a week.

adults: 1000 mg. (2 tablets or 2 teaspoons)

children 8 to 12 years: 750 mg. (1 1/2 tablets or 1 1/2 teaspoons)

children 3 to 7 years: 500 mg. (1 tablet or 1 teaspoon)

children under 3 years: 250 mg. (1/2 tablet or 1/2 teaspoon)

Thiabendazole - for many different worm infections

Name:_____ price:___ for___

Often comes as: 500 mg. tablets or mixture with 1 gm. in 5 ml.

Because thiabendazole causes more side effects than mebendazole or albendazole, it should only be used for worms when these medicines are not available, or for worm infections that are not inside the gut.

It can be used to treat hookworm, whipworm (Trichuris), and another worm called Strongyloides. It also works for roundworm and pinworm, but piperazine has fewer side effects. It can be helpful in treating guinea worm, and may do some good in cases of trichinosis.

CAUTION: Thiabendazole may cause roundworm (Ascaris) to crawl up the throat. This can block breathing. Therefore, if you suspect a person has roundworm in addition to other worms, it is wise to treat first with piperazine before giving thiabendazole.

Side effects: Thiabendazole often causes tiredness, a sick feeling, and sometimes vomiting.

Dosage for thiabendazole-(25 mg./kg./day): - 500 mg. tablets or mixture with 1 gm. in 5 mg -

Give twice a day for 3 days. Tablets should be chewed.

In each dose give:

adults: 1500 mg. (3 tablets or 1 1/2 teaspoons)

children 8 to 12 years: 1000 mg. (2 tablets or 1 teaspoon)

children 3 to 7 years: 500 mg. (1 tablet or 1/2 teaspoon)

children under 3 years: 250 mg. (1/2 tablet or 1/4 teaspoon)

Pyrantel (Antiminth, Cobrantril, Helmex)

Name: _____

Comes as pamoate or embonate

Often comes in:

250 mg. tablets Price: _____ for _____

Mixture, 250 mg. in 5 ml. Price: _____ for _____

This medicine works for pinworm, hookworm, and roundworm (Ascaris), but it may be expensive. Pyrantel occasionally causes vomiting, dizziness, or headache.

Dosage for pyrantel-(10 mg./kg.): - using 250 mg. tablets -

For hookworm and roundworm, give one time. For pinworm, repeat dose after 2 weeks.

In each dose give:

adults: 750 mg. (3 tablets)
children 10 to 14 years: 500 mg. (2 tablets)
children 6 to 9 years: 250 mg. (1 tablet)
children 2 to 5 years: 125 mg. (1/2 tablet)
children under 2 years: 62 mg. (1/4 tablet)

FOR TAPEWORM

There are several types of tapeworms. Niclosamide works best for most types and praziquantel is the next best treatment.

Niclosamide (*Yomesan*) - for tapeworm infection

Name: _____ price: ___ for ___

Often comes in: chewable tablets of 500 mg.

Niclosamide is probably the best medicine for tapeworm. It works against most kinds of tapeworm in the gut, but not against cysts outside the gut.

***Dosage* of niclosamide for tapeworm-500 mg. tablets:**

Chew well and swallow 1 dose only. Do not eat before or until 2 hours after taking the medicine. Giving a purge may help get rid of the tapeworm.

adults and children over 8 years: 2 gm. (4 tablets)
children 2 to 8 years: 1 gm. (2 tablets)
children under 2 years: 500 mg. (1 tablet)

Praziquantel (*Biltricide, Droncit*)

Name:_____ **price:**___ **for**___

Often comes in: tablets of 150 mg. and 600 mg.

Praziquantel is effective in treating most types of tapeworms, but is more expensive than niclosamide.

***WARNING:* Pregnant women and children under 4 years old should not take praziquantel. Women who are breast feeding should stop giving their babies breast milk while taking praziquantel and for 72 hours after taking it (squeeze out the milk and throw it away).**

***Side effects:* Praziquantel may cause tiredness, dizziness, headache, and loss of appetite, but these side effects are rare at the low dosages used to treat tapeworm.**

***Dosage* of praziquantel for most kinds of tapeworm, including beef and pork tapeworm - (10 to 20 mg./kg.): - using 600 mg. tablets -**

Take once only.

adults: 600 mg. (1 tablet)

children 8 to 12 years: 300 mg. (1/2 tablet)

children 4 to 7 years: 150 mg. (1/4 tablet)

Treatment of dwarf tapeworm (*H. nana*) requires a larger dosage:

Take once only.

adults: 1500 mg. (2 1/2 tablets)

children 8 to 12 years: 600 to 1200 mg. (1 to 2 tablets)

children 4 to 7 years: 300 to 600 mg. (1/2 to 1 tablet)

Quinacrine (mepacrine, Atabrine) for tapeworm.**FOR SCHISTOSOMIASIS (BLOOD FLUKES, BILHARZIA)**

In different parts of the world there are several types of schistosomiasis, which require different treatments. Praziquantel is a medicine that works against all forms of the disease. Metrifonate and oxamniquine are effective against some kinds of schistosomiasis. Medicines should be given under direction of an experienced health worker.

Praziquantel (Biltricide, Droncit)

Name:_____ price:___ for___

Often comes in: tablets of 150 mg. or 600 mg.

***WARNING:* Pregnant women should not take praziquantel. Women who are breast feeding should stop giving their babies breast milk while taking praziquantel and for 72 hours after taking it (squeeze out the milk and throw it away). Do not give praziquantel to children under 4 years old.**

***Side effects:* Praziquantel frequently causes tiredness, headache, dizziness, and loss of appetite, but treatment need not be stopped if these side effects occur. To lessen side effects, praziquantel is best taken with a large meal.**

***Dosage* of praziquantel for schistosomiasis - (40 mg./kg.): - using 600 mg. tablets -**

To treat schistosomiasis that causes blood in the urine (*S. hematobium*), give in a single dose:

adults: 2400 to 3000 mg. (4 or 5 tablets)

children 8 to 12 years: 1200 to 1800 mg. (2 or 3 tablets)

children 4 to 7 years: 600 mg. (1 tablet)

The above doses will also treat one kind of schistosomiasis found in East and Central Africa and South America that causes blood in the stool (*S. mansoni*). But in Eastern Asia, schistosomiasis causing blood in the stool (*S. japonicum*) requires a larger dose (60 mg./kg.):

Give in one day:

adults: 3600 to 4200 mg. (6 or 7 tablets)

children 8 to 12 years: 1800 to 2400 mg. (3 or 4 tablets)

children 4 to 7 years: 900 mg. (1 1/2 tablets)

(To reduce side effects, this larger amount can be divided into 3 smaller doses, given in one day)

Metrifonate (Metriphonate, *Bilarcil*)

Metrifonate is a much cheaper medicine that can be used to treat schistosomiasis that causes blood in the urine (*S. hematobium*). Pregnant women should not take this medicine.

Name: _____ price: _____ for _____

Comes in: 100 mg. tablets

***Dosage* of metrifonate for schistosomiasis - (7.5 to 10 mg./kg. per dose): -100 mg. tablets-**

**Give 3 doses at 2 week intervals. In each dose give: adults: 400 to 600 mg. (4 to 6 tablets)
children 6 to 12 years: 300 mg. (3 tablets) children 3 to 5 years: 100 mg. (1 tablet)**

Oxamniquine (*Vansil, Mansil*)**Name:** _____

Often comes in:

capsules with 250 mg. Price: _____ for _____

syrup with 250 mg. in 5 ml. Price: _____ for _____

Oxamniquine is used to treat schistosomiasis causing blood in the stools in South and Central America (*S. mansoni*). (To treat *S. mansoni* found in Africa, larger doses than those given here are needed. Seek local advice.) This medicine is best taken after a meal.

***WARNING:* Pregnant women should not take oxamniquine. This medicine may cause dizziness, drowsiness, and, rarely, fits. Persons with epilepsy should use oxamniquine only when also taking epilepsy medicine.**

***Dosage* of oxamniquine-(adults: 15 mg./kg./day. children: 10 mg./kg./twice a day): -250 mg. capsules-**

Give for one day only:

For adults, give 750 to 1000 mg. (3 or 4 capsules) in one dose.

For children, give the following dose twice in one day:

children 8 to 12 years: 250 mg. (1 capsule)

children 4 to 7 years: 125 mg. (1/2 capsule)

children 1 to 3 years: 68 mg. (1/4 capsule)

FOR RIVER BLINDNESS (ONCHOCERCIASIS)

The best medicine for treating river blindness is ivermectin. This new medicine kills the baby worms slowly and does not cause the dangerous reaction of other treatments. If ivermectin is not available, an experienced health worker can give diethylcarbamazine first and then also suramin.

Ivermectin (*Mectizan*)

Name:_____ price:___ for___

Often comes in: 6 mg. tablets

To determine the correct dose, if possible weigh the person first. Give one dose. Another dose is sometimes needed 6 months to 1 year later.

***CAUTION:* Do not give to children who weigh less than 15 kg. (or children who are under 5 years old), to pregnant or breast feeding women, or to persons with meningitis or other serious illness.**

***Dosage* of ivermectin:**

Give one time:

heavy adults (over 64 kg.): 2 tablets (12 mg.)

average adults (45 to 63 kg.): 1 1/2 tablets (9 mg.)

light adults and youths (26 to 44 kg.): 1 tablet (6 mg.)

children (15 to 25 kg.): 1/2 tablet (3 mg.)

Diethylcarbamazine (*Hetrazan, Banocide*)

Name:_____ price:___ for___

Often comes in: tablets of 50 mg.

Diethylcarbamazine kills the young worms, but not the adults. The medicine should be used only under the direction of an experienced health care worker.

To avoid severe damage to the eyes, it is important to start with a low dose of 1 1/2 mg. for adults and gradually increase the amount to 150 mg. a day. Give the full dose for 2 to 3 weeks. Take after meals.

Diethylcarbamazine may cause severe allergic reactions, which can partly be controlled with antihistamines-or cortico-steroids, given by a health worker.

***Side effects:* Diethylcarbamazine sometimes causes headache, tiredness, weakness, loss of appetite, stomach upset, cough, chest pains, muscle or joint pain, fever and rash.**

Suramin (*Naphuride, Bayer 205, Antrypol, Germanin*)

Name: _____ price: ___ for ___

This is more effective than diethylcarbamazine in killing adult worms and should be used after treatment with diethylcarbamazine, when reactions have nearly stopped. Suramin sometimes poisons the kidneys. If swelling of the feet or other signs of urinary poisoning occur, stop using this medicine. Persons with kidney problems should not use it.

Suramin must be given intravenously and should only be used with the assistance of an experienced health worker. For adults inject 1 gm. of suramin in 10 ml. of distilled water once a week for 5 to 7 weeks. Start with a small test dose of 200 mg. Treat allergic reactions with antihistamines.

FOR THE EYES

Antibiotic eye ointment - for 'pink eye' (conjunctivitis)

Useful examples: oxytetracycline or chlortetracycline eye ointments

Name: _____ price: ___ for ___

These eye ointments can be used for 'pink eye' caused by bacteria and for trachoma. For complete cure of trachoma, tetracycline should be taken by mouth also.

For an eye ointment to do any good, it must be put inside the eyelid, not outside. Use it 3 or 4 times a day.

When silver nitrate drops are not available, 1 percent tetracycline eye ointment or 0.5 percent erythromycin eye ointment may be used to protect newborn babies' eyes from gonorrhea and chlamydia. At birth, put a little ointment in the inner corner of each eye and do not wipe or rinse out.

To treat these diseases in the newborn.

Silver nitrate eye drops, 1 percent - to protect eyes of newborn babies

Name: _____ price: ___ for ___

At birth, put a drop of 1 percent silver nitrate in each eye. This will protect the baby's eyes against gonorrhea (but not chlamydia).

***WARNING:* Do not use silver nitrate drops that may have become too concentrated because of evaporation-they can burn babies' eyes.**

FOR PAIN: ANALGESICS

Note: There are many different kinds of pain medicine, many of which are dangerous (especially those containing dipyrene). Use only those you are sure are relatively safe like aspirin, acetaminophen (paracetamol), or ibuprofen. For a stronger painkiller see codeine.

Often comes in:

300 mg. (5 grain) tablets

Price: _____ for _____

75 mg. (1 1/4 grain) tablets for children (or 'child's aspirin') Price: _____ for _____

Aspirin is a very useful, low-cost 'painkiller' or analgesic. It helps to calm pain, lower fever, and reduce inflammation. It also helps a little to calm cough and reduce itching.

Many different medicines sold for pain, arthritis, or colds contain aspirin, but they are more expensive and often do not do any more good than aspirin alone.

Risks and Precautions:

- 1. Do not use aspirin for stomach pain or indigestion. Aspirin is acid and may make the problem worse. For the same reason, persons with stomach ulcers should never use aspirin.**
- 2. Aspirin causes stomach pain or 'heartburn' in some persons. To avoid this, take aspirin with milk, a little bicarbonate of soda, or a lot of water-or together with meals.**
- 3. Do not give more than 1 dose of aspirin to a dehydrated person until he begins to urinate well.**
- 4. It is better not to give aspirin to children under 12 years and especially not to babies (acetaminophen is safer) or to persons with asthma (this may bring on an attack).**

5. Keep aspirin where children cannot reach it. Large amounts can poison them.

6. Do not give to pregnant women.

Dosage of aspirin - for pain or fever: - tablets of 300 mg. (5 grains) -

Take once every 4 to 6 hours (or 4 to 6 times a day), but do not give to children more than 4 times a day

adults: 1 or 2 tablets (300 to 600 mg.)

children 8 to 12 years: 1 tablet (300 mg.)

children 3 to 7 years: 1/2 tablet (150 mg.)

children 1 to 2 years old: 1/4 tablet (75 mg.)

(Dose may be doubled for severe menstrual pain, severe arthritis or rheumatic fever. Or give 100 mg./kg./day. If ringing of the ears develops, lower the dose.)

- 75 mg. 'child's aspirin' tablets -

Give children aspirin 4 times a day:

children 8 to 12 years: 4 tablets (300 mg.)

children 3 to 7 years: 2 to 3 tablets (150 to 225 mg.)

children 1 to 2 years: 1 tablet (75 mg.)

do not give aspirin to children under 1 year old

Acetaminophen (paracetamol) - for pain and fever

Name:_____ price:___ for___

Often comes in: 500 mg. tablets

Also comes in syrups

Acetaminophen (paracetamol) is safer for children than aspirin. It does not cause stomach irritation and so can be used instead of aspirin by persons with stomach ulcers. It can also be used by pregnant women.

Dosage of acetaminophen-for pain and fever: - 500 mg. tablets -

Give acetaminophen by mouth 4 times a day.

In each dose give:

**adults: 500 mg. to 1 gm. (1 or 2 tablets)
children 8 to 12 years: 500 mg. (1 tablet)
children 3 to 7 years: 250 mg. (1/2 tablet)
children 1 year to 2 years: 125 mg. (1/4 tablet)
babies under 1 year: 62 mg. (1/8 tablet)**

Ibuprofen

Name: _____ price: ___ for ___

Often comes in: 200 mg. tablets

Ibuprofen works for muscle swelling and pain, joint pain from arthritis, menstrual pain, headache, and to lower fever. It is more expensive than aspirin.

***WARNING:* Ibuprofen should not be taken by persons who are allergic to aspirin. Pregnant women should not use ibuprofen.**

Dosage of ibuprofen-for pain and fever: - 200 mg. tablets -

Give ibuprofen by mouth every 4 to 6 hours.

In each dose give:

adults and children 12 years and older: 200 mg. (1 tablet)

children under 12 years: Do not give.

If one tablet does not relieve pain or fever, two tablets may be used. Do not take more than six tablets in 24 hours.

Ergotamine with caffeine (Cafergot) - for migraine headache

Name: _____ price: ___ for ___

Often comes in: tablets with 1 mg. of ergotamine

***Dosage* of ergotamine with caffeine for migraine:**

adults: Take 2 tablets at the first sign of a migraine, then 1 tablet every half hour until the pain goes. But do not take more than 6 tablets in all.

***WARNING:* Do not take this medicine often. Do not take when pregnant.**

Codeine - for severe pain.

FOR STOPPING PAIN WHEN CLOSING WOUNDS: ANESTHETICS

Lidocaine (Xylocaine)

2 percent (with or without epinephrine)

Name:_____ **price:**___ **for**___

Often comes in: ampules or bottles for injection

Lidocaine can be injected around the edges of a wound before sewing it, to make the area *anesthetic* or numb so it will not hurt.

Inject both into and under the skin at points about 1 cm. apart. Be sure to pull back on the plunger before injecting. Inject slowly. Use about 1 ml. of anesthetic for each 2 cm. of skin. (Do not use more than 20 mls. altogether.) If the wound is clean, you can inject into the sides of the wound itself. If the wound is dirty, inject through the skin (after cleaning it) around the wound and then clean the wound with great care before closing it.

Use lidocaine with epinephrine for sewing most wounds. The epinephrine makes the numbness last longer and helps control bleeding.

Use lidocaine without epinephrine for wounds on fingers, toes, penis, ears, and nose. This is important because the epinephrine can stop the flow of blood to these areas and cause great damage.

Another use of lidocaine with epinephrine: For severe nosebleed, soak a little into some cotton and pack it into the nose. The epinephrine will cause the veins to squeeze shut and help control bleeding.

FOR GUT CRAMPS: ANTISPASMODICS

Belladonna (with or without phenobarbital)

Name:_____ **price:**___ **for**___

Often comes in: tablets with 8 mg. belladonna

There are many different antispasmodic preparations. Most contain belladonna or something like it (atropine, hyoscyamine) and often phenobarbital (phenobarbitone). These medicines should not be used on a regular basis, but can be used occasionally for treatment of pain or cramps (colic) in the stomach or gut. They may help calm the pain of a bladder infection or inflamed gallbladder. They are sometimes useful in the treatment of ulcers.

Dosage for belladonna - for gut cramps: - tablets with 8 mg. belladonna -

adults: 1 tablet, 3 to 6 times a day

children 8 to 12 years: 1 tablet, 2 or 3 times a day

children 5 to 7 years: 1/2 tablet, 2 or 3 times a day

do not give to children under 5 years

WARNING: These medicines are poisonous if too much is taken. Keep out of reach of children.

Persons with glaucoma should not take medicines that contain belladonna or atropine.

FOR ACID INDIGESTION, HEARTBURN, AND STOMACH ULCERS

Aluminum hydroxide or magnesium hydroxide (*Milk of Magnesia*)

Name:_____ price:___ for___

Often comes in tablets of 500 to 750 mg., or in mixtures with 300 to 500 mg. in 5 ml.

Sometimes these are mixed together or with magnesium trisilicate. If simethicone is added, it helps control gas.

These antacids can be used occasionally for acid indigestion or heartburn or as a regular

part of treatment of a stomach (peptic) ulcer. The most important time to take antacids is 1 hour after meals and at bedtime. Chew 2 or 3 tablets. For severe stomach ulcers, it may be necessary to take 3 to 6 tablets (or teaspoons) every hour.

***CAUTION:* Do not use these medicines if you are also taking tetracycline. Antacids with magnesium sometimes cause diarrhea, and those with aluminum may cause constipation.**

Sodium bicarbonate (bicarbonate of soda, baking soda)

Comes as a white powder

Price:_____ for_____

As an antacid, this should be used in a very limited way, when someone has an occasional stomach upset, with 'heartburn' or acid indigestion. It should not be used in treating chronic indigestion or stomach (peptic) ulcers. Although it seems to help at first, it causes the stomach to produce more acid, which soon makes things worse. 'Soda' is also useful for the 'hangover' of a person who has drunk too much alcohol the night before. For this purpose (but not for acid indigestion) it can be taken with acetaminophen or aspirin. *Alka-Seltzer* is a combination of sodium bicarbonate and aspirin. As an occasional antacid, mix 1/2 teaspoon of sodium bicarbonate with water and drink it. Do not use often.

For cleaning teeth, baking soda or a mixture of 'soda' and salt can be used instead of toothpaste.

***WARNING:* Persons with certain heart problems (failure) or with swelling of the feet or face should not take sodium bicarbonate or other products high in sodium (like salt).**

Calcium carbonate

Name:_____ **price:**___ **for**___

Often comes in tablets of 350 to 850 mg.

This works more slowly than sodium bicarbonate. It is very effective for occasional acid indigestion or heartburn, but should not be used long term or for treatment of ulcers. Chew one 850 mg. tablet or two 350 mg. tablets when symptoms occur. Take another dose in 2 hours if necessary.

Cimetidine (*Tagamet*)

Name:_____ **price:**___ **for**___

Often comes in: tablets of 200 mg., and injections of 200 mg. in 2 ml.

Cimetidine is an expensive but effective treatment for ulcers of the stomach and the gut. It calms the pain and helps healing. Long-term use can help prevent the most common type of ulcer (ulcer of the gut) from returning. But to keep any ulcer from coming back, it is important to also follow the special diet and other advice for care of an ulcer.

***Precautions:* Cimetidine should not be taken by women who are pregnant or breast feeding, or children.**

***Side effects:* Occasionally causes mild diarrhea, dizziness, rash, and sleepiness.**

***Dosage* for an active ulcer of the gut:**

**400 mg. (two 200 mg. tablets) twice a day, or
800 mg. (four 200 mg. tablets) at bedtime, for 6 to 8 months.**

***Dosage* for an active stomach ulcer:**

300 mg. (one and a half 200 mg. tablets), 4 times a day, for 6 to 8 weeks.

***Dosage* to help prevent an ulcer of the gut from coming back:**

400 mg. (two 200 mg. tablets) at bedtime, for up to 1 year.

Ranitidine (*Zantac*)

Name:_____ price:___ for___

Often comes in: tablets of 150 mg. or 300 mg.

Ranitidine is similar to cimetidine, but more expensive. It can calm pain and help an ulcer to heal. But be sure to also follow the advice to treat and prevent ulcers.

***Dosage* of ranitidine for treatment of ulcers:**

150 mg. twice a day, or 300 mg. at dinnertime, for 6 to 8 weeks.

***Dosage* to help prevent an ulcer of the gut from coming back:**

150 mg. (one 150 mg. tablet) for 6 to 8 weeks.

FOR DEHYDRATION: REHYDRATION DRINKS AND 'ORS'

In some countries packets of a simple sugar (glucose) and salts for making a rehydration drink are sold in stores or are available at health posts. While these packets are sometimes convenient, a homemade mix using cereal, combats diarrhea as well or better. A home mix using sugar and a little salt also works well. It is better to make a home mix and spend the money you save on more and better food. Be sure to continue giving breast milk to a baby with diarrhea. And start giving food as soon as the sick child will accept it.

Giving food together with rehydration drink combats dehydration more effectively and protects the child from becoming weaker.

***WARNING:* In some countries, packets of 'ORS' (oral rehydration salts) are sold in a variety of preparations, which require different amounts of water for correct preparation. If you use ORS packets, be sure you know how much water to mix with it. Too little water can be dangerous.**

***CAUTION:* If you plan to take a child with diarrhea to the health post or hospital, always give her lots of liquids, and if possible a homemade rehydration drink, before you leave home. And if you can, take some of the drink (or if nothing else, plain water) with you, to give to the child on the way to the health post and while you wait your turn. Give the child the drink often as much as she will take. If the child is vomiting, give small quantities every minute. Some of the drink will stay inside, and it will also help reduce vomiting.**

FOR HARD STOOLS (CONSTIPATION): LAXATIVES

Laxatives are used far too much. They should be used only occasionally to help soften hard, painful stools (constipation). Never give laxatives to anyone who has diarrhea or gut pain or who is dehydrated. Do not give laxatives to small children under 2 years old.

Generally the best stool softeners are foods high in roughage or fiber, like bran or cassava. Drinking a lot of liquid (at least 8 glasses of water a day) and eating lots of fruit also help.

Milk of magnesia (magnesium hydroxide) - laxative and antacid

Name:_____ price:___ for___

Often comes as a milky solution

Shake well before using. Drink some water each time you take it.

***Dosage* for milk of magnesia:**

As an antacid:

**adults and children over 12 years: 1 to 3 teaspoons 3 or 4 times a day
children 1 to 12 years: 1/2 to 1 teaspoon 3 or 4 times a day**

As a mild laxative give 1 dose at bedtime:

**adults and children over 12 years: 2 to 4 tablespoons
children 6 to 11 years: 1 to 2 tablespoons
children 2 to 5 years: 1/3 to 1 tablespoon
do not give to children under 2 years old**

Epsom salts (magnesium sulfate) - as a laxative and for itching

Name: _____ price: ___ for ___

Often comes in white powder or crystals

***Dosage* for Epsom salts:**

As a mild laxative-mix the following amount of Epsom salts in a glass of water and drink (best taken on an empty stomach):

**adults: 2 teaspoons
children 6 to 12 years: 1/2 to 1 teaspoon**

**children 2 to 6 years: 1/4 to 1/2 teaspoon
do not give to children under 2 years old**

To help stop itching-mix 8 teaspoons of Epsom salts in a liter of water and put on itching skin as cool soaks or compresses.

Mineral oil - as a laxative

Name: _____ price: ___ for ___

This is sometimes taken by persons with piles (hemorrhoids) who have hard, painful stools. However, it does not really soften the stools, but merely greases them. Foods high in fiber, like bran or cassava, are far better.

Dosage of mineral oil as a laxative:

adults and children 12 years and over: 1 to 3 tablespoons by mouth at least 1 hour after the evening meal. Do not take with meals because the oil will rob some of the vitamins from the food.

***CAUTION:* Do not give to children under 12 years old, women who are pregnant or breast feeding, to persons who cannot get out of bed, or to persons who have trouble swallowing.**

Glycerine suppositories (*Dulcolax*)

Name: _____ price: ___ for ___

These are bullet-shaped pills that are pushed into the anus. They stimulate the bowel and cause it to push out the stool (shit).

Dosage for glycerin suppositories:

adults and children over 12 years: push 1 suppository well up the anus and let it stay there for 15 to 30 minutes (it helps to lie down). The longer you let the suppository stay inside the anus, the better it will work.

FOR MILD DIARRHEA: ANTI-DIARRHEA MEDICINE**Kaolin with pectin (*Kaopectate*)**

Name:_____ price:___ for___

Often comes as a milky mixture

This can be used to make mild diarrhea thicker (less watery) and less troublesome. It does not cure the cause of the diarrhea and does not help prevent or cure dehydration. It is never necessary in the treatment of diarrhea, and its common use is a great waste of money. It should not be given to persons who are very ill or to small children. WE INCLUDE IT HERE MAINLY TO WARN AGAINST ITS USE.

Dosage of kaolin with pectin, for mild diarrhea only:

- using a standard mixture such as *Kaopectate* -

Give 1 dose after each stool, or 4 or 5 times a day.

In each dose give:

adults: 2 to 8 tablespoons

children 6 to 12 years: 1 to 2 tablespoons

children under 6 years: DO NOT GIVE

FOR STUFFY NOSE

To help open a stuffy nose, often all that is needed is to sniff water with a little salt in it. Occasionally, decongestant drops may be used, as follows:

Nose drops with ephedrine or phenylephrine (*Neo-Synephrine*)

Name:_____ price:___ for___

These may be used for stuffy or 'runny' nose, especially if a person has (or often gets) infection of the inner ear.

Dosage for decongestant nose drops:

Put 1 or 2 drops in each nostril. Do this 4 times a day. Do not use for more than 3 days or make a habit of using these drops.

For nose drops made from ephedrine tablets.

FOR COUGH

Cough is the body's method for cleaning the air tubes that go to the lungs and preventing germs and mucus in these tubes from getting into the lungs. Because cough is part of the body's defense, medicines that stop or calm cough sometimes do more harm than good. These cough-calmers (or cough *suppressants*) should be used only for irritating, dry coughs that do not let a person sleep. There are other medicines, called cough-helpers (or *expectorants*), that are supposed to make it easier to cough up the mucus.

In truth, both kinds of cough syrups (cough-calmers and cough-helpers) are used far more than they need to be. Most popular cough syrups do little or no good and are a waste of money.

The best and most important cough medicine is water. Drinking a lot of water and breathing hot water vapors loosen mucus and help calm cough far better than most cough syrups.

Cough-calmers (cough suppressants): codeine

Name: _____ price: ___ for ___

Often comes in: cough syrups or liquid. Also in tablets of 30 mg. or 60 mg, with or without aspirin or acetaminophen.

Codeine is a strong painkiller and also one of the most powerful cough-calmers, but because it is habit-forming (narcotic), it may be hard to get. It often comes in cough syrup combinations or in tablet form. For dosage, follow the instructions that come with the preparation. Less is needed to calm cough than to control pain. To calm cough in adults, 7 to 15 mg. of codeine is usually enough. Children should be given less, according to age or weight. For severe pain, adults can take 30 to 60 mg. of codeine every 4 hours.

***WARNING:* Codeine is habit-forming (narcotic). Use only for a few days.**

FOR ASTHMA

To help prevent and manage asthma correctly. Persons who suffer from asthma should keep asthma medicines at home. Start using them at the first sign of wheeze or chest tightness.

Ephedrine

Name: _____ price: ___ for ___

Often comes in: tablets of 15 mg. (also 25 mg.)

Ephedrine is useful to control mild attacks of asthma and between severe attacks to prevent them. It works by helping open the tubes that lead into the lungs, so that air can pass more easily. It can also be used when there is difficulty breathing due to pneumonia or bronchitis.

Ephedrine often comes in combination with theophylline or aminophylline, and sometimes phenobarbital. Avoid these combinations except when a single asthma medicine is not available.

***Dosage* of ephedrine for asthma - (1 mg./kg./3 times a day when symptoms occur): - using 15 mg. tablets -**

Give by mouth 3 times a day.

In each dose give:

**adults: 15 to 60 mg. (1 to 4 tablets)
children 5 to 10 years: 15 to 30 mg. (1 or 2 tablets)
children 1 to 4 years: 15 mg. (1 tablet)
children under 1 year: DO NOT GIVE**

For stuffy nose, nose drops with ephedrine can be used. They can be made by dissolving 1 tablet in a teaspoon of water.

Theophylline or Aminophylline

Name:_____ price:___ for___

Often comes in: tablets and syrups of different strengths

For controlling asthma and preventing attacks

Dosage - (3 to 5 mg./kg. every 6 hours): - using 100 mg. tablets -

Give every 6 hours:

adults: 2 tablets

children 7 to 12 years: 1 tablet

children under 7 years: 1/2 tablet

babies: DO NOT GIVE

In severe cases or if asthma is not controlled with the above dosage, double this dosage may be given, but no more. If the patient cannot talk, seek medical help fast.

Salbutamol (Albuterol)

Name:_____ price:___ for___

Often comes in: tablets of 4 mg., and syrup with 2 mg. in 5 ml.

For controlling asthma and preventing attacks. Salbutamol can be used alone, or with theophylline.

Dosage for salbutamol - (0.1 mg./kg. every 6 to 8 hours):

-using 4 mg. tablets or syrup with 2 mg. in 1 teaspoon-

Give every 6 to 8 hours:

adults: 1 tablet or 2 teaspoons

children 6 to 12 years: 1/2 tablet or 1 teaspoon

children 2 to 5:1/4 to 1/2 tablet or 1/2 to 1 teaspoon

babies: DO NOT GIVE

For severe asthma or if asthma is not controlled, these doses can be gradually increased until doubled.

Epinephrine (adrenaline, Adrenalin)

Name: _____ price: ___ for ___

Often comes in: ampules of 1 mg. in 1 ml.

Epinephrine should be used for:

- 1. severe attacks of asthma when there is trouble breathing**
- 2. severe allergic reactions or allergic shock due to penicillin injections, tetanus antitoxin, or other antitoxins made from horse serum.**

***Dosage* of epinephrine for asthma: -using ampules of 1 mg. in 1 ml. of liquid-**

First count the pulse. Then inject just under the skin:

**adults: 1/3 ml.
children 7 to 12 years: 1/5 ml.
children 1 to 6 years: 1/10 ml.
children under 1 year: DO NOT GIVE**

***Dosage* of epinephrine for allergic shock: - using ampules of 1 mg. in 1 ml. of liquid -**

Inject into the muscle:

**adults: 1/2 ml.
children 7 to 12 years: 1/3 ml.**

**children 1 to 6 years: 1/4 ml.
children under 1 year: DO NOT GIVE**

If needed, a second dose can be given after half an hour, and a third dose in another half hour. Do not give more than 3 doses. If the pulse goes up by more than 30 beats per minute after the first injection, do not give another dose.

In using epinephrine, be careful never to give more than the recommended amount.

FOR ALLERGIC REACTIONS AND VOMITING: THE ANTIHISTAMINES

Antihistamines are medicines that affect the body in several ways:

- 1. They help calm or prevent allergic reactions, such as itchy rashes or lumps on the skin, hives, 'hay fever', and allergic shock.**
- 2. They help prevent or control motion sickness or vomiting.**
- 3. They often cause sleepiness (sedation). Avoid doing dangerous work, operating machines, or drinking alcohol when taking antihistamines.**

Promethazine (*Phenergan*) and diphenhydramine (*Benadryl*) are strong antihistamines that cause a lot of sleepiness. Dimenhydrinate (*Dramamine*) is similar to diphenhydramine and is most used for motion sickness. However, for vomiting due to other causes, promethazine often works better.

Chlorpheniramine is a less expensive antihistamine and causes less sleepiness. For this reason, it is sometimes best to use chlorpheniramine to calm itching in the daytime. Promethazine is useful at night because it encourages sleep at the same time that it calms the itching.

There is no proof that the antihistamines do any good for the common cold. They are often used more than they need to be. They should not be used much.

Antihistamines should not be used for asthma, because they make the mucus thicker and can make breathing more difficult.

One antihistamine is all that is usually needed in a medical kit. Promethazine is a good choice. Because it is not always available, doses for other antihistamines are also given.

As a general rule, antihistamines are best given by mouth. Injections should be used only to help control severe vomiting or before giving antitoxins (for tetanus, snakebite, etc.) when there is special danger of allergic shock. For children, it is often best to give a rectal suppository.

Promethazine (*Phenergan*)

Name: _____

Often comes in:

tablets of 12.5 mg.

Price: _____ for _____

injections-ampules of 25 mg. in 1 ml.

Price: _____ for _____

suppositories of 12.5 mg., 25 mg., and 50 mg. Price: _____ for _____

CAUTION: Pregnant women should only use promethazine if it is absolutely necessary

Dosage of promethazine-(1 mg./kg./day):

- using tablets of 12.5 mg. -

Give by mouth 2 times a day

In each dose give:

adults: 25 to 50 mg. (2 to 4 tablets)

children 7 to 12 years: 12.5 to 25 mg. (1 or 2 tablets)

children 2 to 6 years: 6 to 12 mg. (1/2 to 1 tablet)

babies 1 year old: 4 mg. (1/3 tablet)

babies under 1 year: 3 mg. (1/4 tablet)

- using intramuscular (IM) injections, 25 mg. in a ml. -

Inject once, and again in 2 to 4 hours, if necessary.

In 1 dose inject:

adults: 25 to 50 mg. (1 to 2 ml.)

children 7 to 12 years: 12.5 to 25 mg. (1/2 to 1 ml.)

children under 7 years: 6 to 12 mg. (1/4 to 1/2 ml.)

babies under 1 year: 2.5 mg. (0.1 ml.)

- using rectal suppositories of 25 mg. -

Put high up the rectum (anus) and repeat in 4 to 6 hours if necessary

In each dose insert:

adults and children over 12 years: 25 mg. (1 suppository)

children 7 to 12 years: 12.5 mg. (1/2 suppository)

children 2 to 6 years: 6 mg. (1/4 suppository)

Diphenhydramine (Benadryl)

Name: _____

Often comes in:

capsules of 25 mg. and 50 mg.

Price: _____ for _____

injections-ampules with 10 mg. or 50 mg. in each ml. Price: _____ for _____

CAUTION: Do not give diphenhydramine to newborn babies or to women who are breast feeding. It is best not to use diphenhydramine in pregnancy unless absolutely necessary

Dosage of diphenhydramine-(5 mg./kg./day):

- using capsules of 25 mg -

Give 3 or 4 times a day:

adults: 25 to 50 mg. (1 or 2 capsules)

children 8 to 12 years: 25 mg. (1 capsule)

children 2 to 7 years: 12.5 mg. (1/2 capsule)

babies: 6 mg. (1/4 capsule)

- using intramuscular (IM) injections, 50 mg. in each ml. -

Diphenhydramine should be injected only in the case of allergic shock. Inject once, and again in 2 to 4 hours if necessary:

adults: 25 to 50 mg. (1/2 to 1 ml.)

children: 10 to 25 mg., depending on size (1/5 to 1/2 ml.)

babies: 5 mg. (1/10 ml.)

Chlorpheniramine

Name:_____ **price:**___ **for**___

Often comes in: 4 mg. tablets (also tablets of other sizes, syrups, etc.)

***Dosage* for chlorpheniramine:**

Take 1 dose 3 or 4 times a day.

In each dose give:

adults: 4 mg. (1 tablet)

children under 12: 2 mg. (1/2 tablet)

babies: 1 mg. (1/4 tablet)

Dimenhydrinate (*Dramamine*)

Name:_____ **price:**___ **for**___

Often comes in: 50 mg. tablets; also syrups with 12.5 mg. in a teaspoon; also suppositories to put up the anus

This is sold mostly for motion sickness, but can be used like other antihistamines to calm allergic reactions and to encourage sleep.

***Dosage* of dimenhydrinate:**

Take up to 4 times a day.

In each dose give:

adults: 50 to 100 mg. (1 or 2 tablets)

children 7 to 12 years of age: 25 to 50 mg. (1/2 to 1 tablet)

children 2 to 6 years: 12 to 25 mg. (1/4 to 1/2 tablet)

children under 2 years: 6 to 12 mg. (1/8 to 1/4 tablet)

ANTITOXINS

WARNING:

Many antitoxins are made from horse serum, such as some tetanus antitoxins and the antivenoms for snakebite and scorpion sting. With these there is a risk of causing a dangerous allergic reaction (allergic shock). Before you inject a horse serum antitoxin, always have epinephrine ready in case of an emergency. In persons who are allergic, or who have been given any kind of antitoxin made of horse serum before, it is a good idea to inject an antihistamine like promethazine (*Phenergan*) or diphenhydramine (*Benadryl*) 15 minutes before giving the antitoxin.

Scorpion antitoxin or antivenom

Name:_____ price:___ for___

Often comes *lyophilized* (in powdered form) for injection

Different antivenoms are produced for scorpion sting in different parts of the world. In Mexico, *Antialacrn Myn* is produced by Laboratories Myn in Mexico, D.F.

Antivenoms for scorpion sting should be used only in those areas where there are dangerous or deadly kinds of scorpions. Antivenoms are usually needed only when a small child is stung, especially if stung on the main upper part of the body or head. To do most good, the antivenom should be injected as soon as possible after the child has been stung.

Antivenoms usually come with full instructions. Follow them carefully small children often need more antivenom than larger children. Two or 3 vials may be necessary.

Most scorpions are not dangerous to adults. Because the antivenom itself has some danger in its use, it is usually better not to give it to adults.

Snakebite antivenom or antitoxin

Name:_____ price:___ for___

Often comes in: bottles or kits for injection

Antivenoms, or medicines that protect the body against poisons, have been developed for the bites of poisonous snakes in many parts of the world. If you live where people are sometimes bitten or killed by poisonous snakes, find out what antivenoms are available, get them ahead of time, and keep them on hand. Some antivenoms-the dried or 'lyophilized' form-can be kept without refrigeration. Others need to be kept cold.

The following are a few of the products sold in different parts of the world:

North America: *Polyvalent Crotalid Antivenom*. Through Wyeth Laboratories. For rattlesnakes and other pit vipers.

Mexico and Central America: *Suero Anticrotlico* (rattlesnakes) and *Suero Antiviperino* (rattlesnakes, pit vipers, fer de lance, and many other poisonous snakes). Through Laboratories Myn, Mxico, D.F.

Thailand: Specific antivenoms for different snakes. Through the Red Cross Pasteur Institute, Bangkok.

India: A polyvalent antivenom (for different snakes). Through Hoffkins Institute,

Bombay.

Ethiopia: Polyvalent antivenom. From Behringwerke Laboratories.

Egypt: Polyvalent antivenom. Available only through government.

West Africa: Polyvalent antivenom against Echis-Bitis-Naja (carpet viper, gaboon viper, and cobra) is usually provided by the government. Antivenom against carpet viper (Echis) alone may be advisable in some areas.

Instructions for the use of snakebite antivenoms usually come with the kit. Study them before you need to use them. The bigger the snake, or the smaller the person, the larger the amount of antivenom needed. Often 2 or more vials are necessary. To be most helpful, antivenom should be injected as soon as possible after the bite.

Be sure to take the necessary precautions to avoid allergic shock.

Antitoxins for tetanus

Tetanus Immune Globulin (human) often comes in: vials of 250 units

Tetanus antitoxin (horse) often comes in: vials of 1,500, 20,000, 40,000, and 50,000 units

In areas where there are people who have not been vaccinated against tetanus, the medical kit should have an antitoxin for tetanus. There are 2 forms, one made from human serum (tetanus immune globulin, *Hyper-tet*), and one made from horse serum (tetanus antitoxin). If available, use tetanus immune globulin, as it is less likely to cause a severe allergic reaction.

But if you use horse serum tetanus antitoxin, take precautions against allergic reaction: If the person suffers from asthma or other allergies, or has ever received any kind of

antitoxin made from horse serum, give an injection of antihistamine such as promethazine 15 minutes before injecting the antitoxin.

If a person who is not fully vaccinated against tetanus has a severe wound likely to cause tetanus, before he develops the signs of tetanus, inject 250 units (1 vial) of tetanus immune globulin. If using tetanus antitoxin, inject 1,500 to 3,000 units. Inject babies with 750 units of tetanus antitoxin.

If a person develops the signs of tetanus, inject 5,000 units of tetanus immune globulin, or 50,000 units of tetanus antitoxin. Give it in many intramuscular injections in the large muscles of the body (buttocks and thighs). Or, half the amount can be given intravenously if someone knows how.

The signs of tetanus usually continue to get worse in spite of treatment with antitoxin. Begin treatment at once and get medical help fast.

FOR SWALLOWED POISONS

Syrup of Ipecac - to cause vomiting

Name:_____ price:___ for___

Often comes in: syrup (Do not use the elixir.)

To cause vomiting when a person has swallowed a poison. Do not use if the person has swallowed strong acid, lye, gasoline, or kerosene.

***Dosage* of Ipecac:**

1 tablespoon for any age. Repeat in half an hour if the person has not vomited.

Powdered charcoal (or activated charcoal) - for swallowed poison**Price:_____ for_____****Charcoal soaks up swallowed poisons and makes them less harmful.*****Dosage of powdered charcoal:*****1 tablespoon mixed in water or fruit juice.*****Dosage of activated charcoal:*****1 cupful mixed with an equal amount of water or fruit juice.****FOR FITS (CONVULSIONS)**

Phenobarbital and phenytoin are common medicines used to prevent fits or convulsions of epilepsy. Other, more expensive medicines are sometimes available, and doctors often prescribe two or more medicines. However, usually a single medicine works as well or better, with fewer side effects. Medicines to prevent fits are best taken at bedtime, because they often cause sleepiness. Diazepam can be given to stop a long-lasting epileptic fit, but it is not usually taken daily to prevent fits.

Phenobarbital (phenobarbitone, *Luminal*)**Name: _____**

Often comes in:

tablets of 15 mg., 30 mg., 50 mg. and 100 mg. Price:_____ for_____

ampules of 65 mg., 130 mg., or 200 mg. in 1 ml. Price:_____ for_____

syrup of 15 mg. in 1 ml.

Price:_____ for_____

Phenobarbital can be taken by mouth to help prevent fits or convulsions (epilepsy), and the spasms of tetanus. For epilepsy, it is often necessary to continue the medicine for life. The lowest dose that prevents fits should be used. Low doses of phenobarbital can also be used to help lessen the cough of whooping cough or to help control severe vomiting.

***WARNING:* Too much phenobarbital can slow down or stop breathing. Its action begins slowly and lasts a long time (up to 24 hours, or longer if the person is not urinating). Be careful not to give too much!**

***Dosage* of phenobarbital-(3 to 6 mg./kg./day): - using tablets of 100 mg. -**

Give 1 dose by mouth (at bedtime for epilepsy).

In each dose give:

adults and children over 12 years: 100 to 200 mg. (1 to 3 tablets)

children 7 to 12 years: 50 to 100 mg. (1/2 to 1 tablet)

children under 7 years: 20 to 50 mg. (1/4 to 1/2 tablet)

Phenobarbital injections can be given to stop an epileptic fit or the spasms of advanced tetanus.

***Dosage* for phenobarbital injections: - using ampules with 200 mg. in 1 ml. -**

Give 1 injection, intramuscular

adults: 200 mg. (1 ml.)

children 7 to 12 years: 150 mg. (3/4 ml.)

children 2 to 6 years: 100 mg. (1/2 ml.)
children under 2 years: 50 mg. (1/4 ml.)

If the fit does not stop, 1 more dose can be given after 15 minutes, but then give no more. For tetanus repeat the dose 3 times a day, and if the spasms are controlled, begin to lower the dose a little at a time.

Phenytoin (diphenylhydantoin, *Dilantin*)

Name: _____

Often comes in:

capsules of 25 mg., 30 mg., and 100 mg. Price: _____ for _____

syrup with 125 mg. in 5 ml. (1 teaspoon) Price: _____ for _____

This helps prevent the fits of epilepsy. The medicine must often be taken for life. The lowest dosage that prevents fits should be used.

***Side effects:* Swelling and abnormal growth of the gums often occur with long-time use of phenytoin. If this is severe, another medicine should be used instead. Gum problems can be partly prevented by keeping the mouth clean and brushing or cleaning the teeth and gums well after eating.**

Dosage of phenytoin for fits - (5 mg./kg./day): - using capsules of 100 mg. -

Start with the following dose once a day at bedtime:

In each dose take:

adults and children over 12 years: 100 to 300 mg. (1 to 3 capsules)

**children 7 to 12 years: 100 mg. (1 capsule)
children under 7 years: 50 mg. (1/2 capsule)**

If fits are not completely prevented with this dose, up to twice this dose can be given but not more.

If fits are prevented, try lowering the dose a little at a time, until you find the lowest dose that prevents the fits.

Diazepam (Valium)

Name:_____ price:___ for___

Often comes in: injections of 5 mg. in 1 ml. of liquid and of 10 mg. in 2 ml. of liquid; also tablets of 5 mg. and 10 mg.

The uses of diazepam are similar to those of phenobarbital, but it is more expensive.

For stopping long-lasting epileptic fits the adult dose is 5 to 10 mg. Repeat in 2 hours if necessary.

Or, 'suppositories' of diazepam or phenobarbital can be put up the anus (asshole). If you only have liquid medicine for taking by mouth, put it up the anus with a plastic syringe without a needle. Or grind up a pill of diazepam or phenobarbital, mix with water, and put up the anus.

For tetanus give enough to control most of the spasms. Start with 5 mg. (less in children) and give more as needed, but not more than 10 mg. at a time or 50 mg. a day. If necessary diazepam can be given together with phenobarbital, but care must be taken not to give too much.

For relaxing muscles and calming pain, 15 minutes before setting broken bones, inject up to 10 mg. (in an adult) or give 10 mg. by mouth 30 minutes before.

Diazepam may also be useful in cases of extreme fright (hysteria) or anxiety, but its use for these should be very limited.

***Dosage* for injectable diazepam - using ampules with 10 mg. in 2 ml. -**

adults and children over 12 years: 5 to 10 mg. (1 to 2 ml.)

children 7 to 12 years: 3 to 5 mg. (2/3 to 1 ml.)

children 1 to 6 years: 1 to 5 mg. (1/5 to 1 ml.)

children under 1 year: DO NOT USE

Repeat dosage in 3 to 4 hours if necessary

***WARNINGS:* (1) Although it is safer to inject diazepam in the muscle (IM) than the vein (IV), it does not work as well or as fast. If you inject in the vein, pick a large vein and inject very slowly. (2) Too much diazepam can slow down or stop breathing. Be careful not to give too much! (3) Diazepam is a habit-forming (addictive) drug. Avoid long or common use. Keep under lock and key**

FOR SEVERE BLEEDING AFTER BIRTH (POSTPARTUM HEMORRHAGE)

For information on the right and wrong use of medicines to control bleeding after a woman gives birth. As a general rule, oxytocics (ergonovine, oxytocin, etc.) should only be used to control bleeding after the baby is born. Their use to speed up labor or to give strength to the mother in labor can be dangerous both to the mother and child. These medicines should never be given until the baby is born, and better, not until the placenta or afterbirth has come out, too. If there is much bleeding before the afterbirth comes out (but after the child has been born), 1/2 ml. (5 units) of oxytocin can be given by

intramuscular injection. Do not use ergonovine before the afterbirth comes out, as this may prevent it from coming out.

Pituitrin is similar to oxytocin, but more dangerous, and should never be used except in a case of emergency bleeding when oxytocin and ergonovine are not available.

For bleeding in the newborn child, use vitamin K. Vitamin K is of no use for bleeding of the woman from childbirth, miscarriage, or abortion.

Ergonovine or ergometrine maleate (*Ergotrate, Methergine*)

Name: _____

Often comes in:

injections of 0.2 mg. in a 1 ml. ampule Price: _____ for _____

tablets of 0.2 mg. Price: _____ for _____

To prevent or control severe bleeding after the placenta has come out.

Dosage of injectable ergonovine:

For severe bleeding (more than 2 cups) after the afterbirth (placenta) has come out, give 1 or 2 ampules (0.2 to 0.4 mg.) of ergonovine by intramuscular injection (or 1 ampule by intravenous injection in extreme emergencies). Dose may be repeated if necessary in half an hour to an hour. Change to ergonovine tablets as soon as bleeding is under control.

Dosage for ergonovine by mouth—using tablets of 0.2 mg.:

To prevent severe bleeding after giving birth or to lessen the amount of blood loss (especially in mothers who are anemic) give 1 tablet 3 or 4 times daily, beginning when

the afterbirth comes out. If bleeding is heavy, 2 tablets can be given in each dose.

Oxytocin (Pitocin)

Name:_____ price:___ for___

Often comes in: ampules of 10 units in 1 ml.

To help stop severe bleeding of the mother after the baby is born and before the afterbirth comes out. (Also helps bring the afterbirth out, but should not be used for this unless there is severe bleeding or great delay)

***Dosage* of oxytocin for the mother after the baby is born:**

Inject 1/2 ml. (5 units). If severe bleeding continues, inject another 1/2 ml. in 15 minutes.

FOR PILES (HEMORRHOIDS)

Suppositories for hemorrhoids

Name:_____ price:___ for___

These are special bullet-shaped tablets to be put up the anus. They help make hemorrhoids smaller and less painful. There are many different preparations. Those that are often most helpful, but are more expensive, contain cortisone or a cortico-steroid. Special ointments are also available. Diets to soften stools are important.

Dosage:

Put a suppository up the anus after the daily bowel movement, and another on going to

bed.

FOR MALNUTRITION AND ANEMIA

Powdered milk (dried milk)

Name:_____ price:___ for___

For babies, mother's milk is best. It is rich in body-building vitamins and minerals. When breast milk is not available, other milk products—including powdered milk—can be used, To allow a baby to make full use of its food value, mix the powdered milk with some sugar and cooking oil.

In 1 cup of boiled water, put:

**12 level teaspoons of powdered milk,
2 level teaspoons of sugar, and
3 teaspoons of oil**

Mixed (or multi) vitamins

Name:_____ price:___ for___

These come in many forms, but tablets are usually cheapest and work well. Injections of vitamins are rarely necessary, are a waste of money, cause unnecessary pain and sometimes abscesses. Tonics and elixirs often do not have the most important vitamins and are usually too expensive for the good they do.

Nutritious food is the best source of vitamins. If additional vitamins are needed, use vitamin tablets.

In some cases of poor nutrition added vitamins may help. Be sure the tablets used contain the important vitamins the person needs.

Using standard tablets of mixed vitamins, 1 tablet daily is usually enough.

Vitamin A (retinol) - for night blindness and xerophthalmia

Name:_____ price:___ for___

Often comes as: capsules of 200,000 units,

**60 mg. of retinol
(also in smaller doses)**

injections of 100,000 units

***WARNING:* Too much vitamin A can cause fits. Do not give too much, and keep out of the reach of children.**

***For prevention:* In areas where night blindness and xerophthalmia are common problems in children, they should eat more yellow fruits and vegetables and dark green leafy foods as well as animal foods, such as eggs and liver. Fish liver oil is high in vitamin A. Or vitamin A capsules can be given. Give 1 capsule once every 4 to 6 months - no more for prevention.**

Mothers can help prevent these eye problems in their babies by taking 1 vitamin A capsule (200,000 units) by mouth when their baby is born or within 1 month after giving birth.

Children with measles are at especially high risk of xerophthalmia, and should be given vitamin A when the illness begins.

In areas where children do not get enough vitamin A, added foods or capsules with vitamin A often help children survive measles and other serious illnesses.

***For treatment:* Give 1 vitamin A capsule (200,000 units) by mouth, or an injection of 100,000 units. The next day give 1 vitamin A capsule (200,000 units) by mouth, and another capsule 1 to 2 weeks later.**

For children less than 1 year old, reduce all doses by one-half.

Iron sulfate (ferrous sulfate) - for anemia

Name:_____ price:___ for___

Often comes in: tablets of 200, 300, or 500 mg. (also in drops, mixtures, and elixirs for children)

Ferrous sulfate is useful in the treatment or prevention of most anemias. Treatment with ferrous sulfate by mouth usually takes at least 3 months. If improvement does not take place, the anemia is probably caused by something other than lack of iron. Get medical help. If this is difficult, try treating with folic acid.

Ferrous sulfate is especially important for pregnant women who may be anemic or malnourished.

Iron may work best if it is taken with some vitamin C (either fruits and vegetables, or a vitamin C tablet).

Ferrous sulfate sometimes upsets the stomach and is best taken with meals. Also, it can cause constipation, and it may make the stools (shit) look black. For children under 3 years, a piece of a tablet can be ground up very fine and mixed with the food.

WARNING: Be sure the dose is right. Too much ferrous sulfate is poisonous. Keep tablets out of the reach of children. Do not give ferrous sulfate to severely malnourished persons.

Dosage of ferrous sulfate for anemia: - using tablets of 200 mg. -

Give 3 times a day, with meals.

In each dose give:

adults: 200 to 400 mg. (1 or 2 tablets)

children over 6 years old: 200 mg. (1 tablet)

children 3 to 6 years: 100 mg. (1/2 tablet)

children under 3 years: 25 to 50 mg. (1/8 to 1/4 tablet) ground up and mixed with food.

Folic acid - for some kinds of anemia

Name:_____ price:___ for___

Often comes in: tablets of 5 mg.

Folic acid can be important in the treatment of kinds of anemia in which blood cells have been destroyed in the veins, as is the case with malaria. An anemic person who has a large spleen or looks yellow may need folic acid, especially if his anemia does not get much better with ferrous sulfate. Babies who are fed goat's milk and pregnant women who are anemic or malnourished often need folic acid as well as iron.

Folic acid can be obtained by eating dark green leafy foods, meat, and liver, or by taking

folic acid tablets. Usually 2 weeks treatment is enough for children, although in some areas children with *sickle cell disease*, or a kind of anemia called *thalassemia* may need it for years. Pregnant women who are anemic and malnourished would be helped by taking folic acid and iron tablets daily throughout pregnancy.

***Dosage* of folic acid for anemia: -using 5 mg. tablets-**

Give by mouth once a day.

adults and children over 3 years: 1 tablet (5 mg.)

children under 3 years: 1/2 tablet (2 1/2 mg.)

Vitamin B₁₂ (cyanocobalamin) - for pernicious anemia only

This is mentioned only to discourage its use. Vitamin B₁₂ is useful only for a rare type of anemia that is almost never found except in some persons over 35 years whose ancestors are from northern Europe. Many doctors prescribe it when it is not needed, just to be giving their patients something. Do not waste your money on vitamin B₁₂ or let a doctor or health worker give it to you unless a blood analysis has been done, and it has been shown that you have *pernicious anemia*.

Vitamin K (phytomenadione, phytonadione)

Name:_____ price:___ for___

Often comes in: ampules of 1 mg. in 2.5 ml. of milky solution.

If a newborn child begins to bleed from any part of his body (mouth, cord, anus), this may be caused by a lack of vitamin K. Inject 1 mg. (1 ampule) of vitamin K into the outer part of the thigh. Do not inject more, even if the bleeding continues. In babies who are born

very small (under 2 kg.) an injection of vitamin K may be given to reduce the risk of bleeding.

Vitamin K is of no use to control bleeding of the mother after childbirth.

Vitamin B₆ (pyridoxine)

Often comes in: 25 mg. tablets

Price: _____ for _____

Persons with tuberculosis being treated with isoniazid sometimes develop a lack of vitamin B₆. To prevent this 50 mg. of vitamin B₆ (pyridoxine) may be taken daily while taking isoniazid. Or the vitamin can be given only to persons who develop problems because of its lack. Signs include pain or tingling in the hands or feet, muscle twitching, nervousness, and being unable to sleep.

***Dosage* of vitamin B₆ - while taking isoniazid:**

Take two 25 mg. tablets daily

FAMILY PLANNING METHODS: BIRTH CONTROL

Oral Contraceptives (Birth Control Pills)

The following information is about choosing the right pill for individual women.

Most birth control pills contain 2 chemicals, or *hormones*, similar to those produced in a woman's body to control her period. These hormones are called *estrogen* and *progesterone*. The pills come under many different brand names, with different strengths

and combinations of the 2 hormones.

Generally, brands that contain a relatively small amount of both hormones are safest and work best for most women. Most women should start with pills from Group 1 or 2.

Group 1. fairly low amounts of estrogen and progesterone

Brevicon 1 + 35

Neocon

Norinyl 1+35, 1+50

Norimin

Ortho-Novum 1/35, 1/50

Perle

Noriday 1+50

Ovysmen 1/35

Logynon

Synophase The amount of hormone in

Trinordiol these brands changes during

Trinovum the month, so it is important

Triquilar to take the pills in order.

Triphasil

Name:_____ price:_____

To assure effectiveness and minimize 'spotting' of blood, it is important to take the pill at the same time each day, especially with pills that have low amounts of hormones.

Women who are bothered by spotting during the second week after their period can often

lessen the problem by taking 2 pills daily instead of 1 during the days when spotting takes place. (To avoid confusion, take the extra pills from a separate package, making sure they are the same color.)

If spotting continues after 3 or 4 months, you can change to one of the brands in Group 2. If there is still bleeding between periods after 3 more months, try a brand from Group 3.

As a rule, women who take birth control pills have less bleeding with their periods. This may be a benefit, especially for women who are anemic. But if a woman misses her period for months or is disturbed by the small amount of blood with her period, she can change to a brand with more estrogen, in Group 3.

For women who have very heavy menstrual bleeding, or whose breasts become painful before their period begins, a brand low in estrogen but high in progesterone may be better. For example:

Group 2. high in progesterone, low in estrogen

Lo-Femenal

Lo-Ovral

Microgynon 30

Microvlar

Nordette

Name: _____ price: _____

Brands from Group 2 are not recommended for women who have pimples, or a lot of hair on their arms or lip, for high progesterone may make these conditions worse-or even cause them.

Women who continue to have missed periods or spotting after using a brand from Group 2, or who become pregnant previously while using another type of pill, can change to a pill that has a little more estrogen. For example:

Group 3. a somewhat higher amount of estrogen. Most of these also have higher progesterone.

Minovlar
Norlestrin
Ovcon 50
Femenal
Eugynon
Nordiol
Ovral
Primovlar
Neogynon

Name:_____ price:_____

The brands *Ovulen* and *Demulen* will often control spotting that continues even when taking pills from Group 3. But these are very strong in estrogen, and for this reason are rarely recommended. They are sometimes useful for women with severe acne.

Women who are disturbed by morning sickness or other side effects after 2 or 3 months of taking the pill, and women who have a higher risk for blood clots can use a brand of birth control pill that is very low in both estrogen and progesterone. For example:

Group 4. very low in both estrogen and progesterone

Brevicon

Brevinor
Modicon
Ovcon
Ovysmen
Perle LD
Loestrin 1/20

Name:_____ price:_____

The disadvantages of brands in Group 4 are that they often cause mid-period spotting, and that there is an increased chance of pregnancy if only 1 pill is forgotten.

Women who are breast feeding, or who should not use regular pills because of headaches, mild high blood pressure, or because they are over 40, may want to use a pill with only progesterone. This is also called the 'mini-pill'. For example:

Group 5. progesterone only-the mini-pill

Femulen
Micronor
Microlut
Micronovum
Nor-Q D
Ovrette

Name:_____ price:_____

These pills should be taken at the same time every day, even during the period. Menstrual bleeding is often irregular. There is also an increased chance of pregnancy if a pill is forgotten.

Condoms (Rubbers, Prophylactics, Sheaths)

Name:_____ **price:**___ **for**___

Often come in packages of 3.

There are many different brands of condoms. Some are lubricated, some come in different colors, and some have spermicide.

In addition to helping prevent pregnancy, condoms (especially those with spermicide) can also help to prevent the spread of sexually transmitted (venereal) diseases, including AIDS. Many people use condoms along with another form of birth control.

Diaphragm

Name:_____ **price:**___

To be effective, the diaphragm should be used with a spermicide cream or jelly. Put some inside the diaphragm, and also perhaps spread some on the rim before putting it in the vagina.

Name of jelly or cream:_____ **price:**___

Contraceptive Foam (Well-known brands: *Emko, Lempko, Delfen*)

Name:_____ **price:**___

Contraceptive suppositories (Common brand: *Neo Sampoo*)

Name:_____ **price:**_____

This is a tablet containing spermicide that a woman puts deep in her vagina near her cervix. The suppository should be put in 15 minutes before having sex. (Follow instructions on the package.) It is a fairly effective method of birth control, especially if the couple also uses a condom.

Intrauterine Device (IUD)

Name:_____ price:_____

fee for putting it in:_____

There are several different kinds: Copper T, Copper 7, Lippes Loop, and the Safety Coil. Another kind, called Progestasert, must be replaced more often than others. One kind of IUD, the Dalkon Shield, causes more problems than others and should not be used

Because infection and other problems can occur with IUDs, only women who live close to a health center should use them. IUDs can be used by women who have never had a child, but if infection occurs it may be harder for a woman to get pregnant later on.

The best time to have an IUD put in is while the woman is having her period or just after.

Injectable Contraceptives (Common brands: *Depo-Provera, Net-En*)

Name:_____ price:_____

Injectable contraceptives are being used in many countries, but there are still arguments over their safety. Many people now believe they are safe, except for women who for medical reasons cannot use birth control pills.

Periods may be irregular, and often become very light or stop after the first year. This is not serious, but worries some women. Older women may mistake this for the menopause,

stop getting more injections, and become pregnant. Seek medical advice if very heavy bleeding occurs.

Contraceptive Implants (Common brand: *Norplant*)

Name: _____ price: _____

fee for putting them in: _____

Implants are a very convenient and highly effective form of birth control. Because they contain only progesterone, they can be used by women who should not use regular pills because of headaches, mild high blood pressure, or because they are over 40 years old.

Six small rubber tubes are put under the skin in a woman's upper arm by a specially trained health worker. They prevent pregnancy for 5 years, but can be removed sooner if the woman wants to become pregnant. The tubes should be inserted 7 days after the woman starts her period.

WRITE HERE INFORMATION ABOUT OTHER MEDICINES OR HOME REMEDIES USEFUL IN YOUR AREA.

