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# A HANDBOOK FOR THE BARANGAY HEALTH WORKER IN MANGYAN COMMUNITIES



RESEARCH CENTER  
DE LA SALLE UNIVERSITY  
and  
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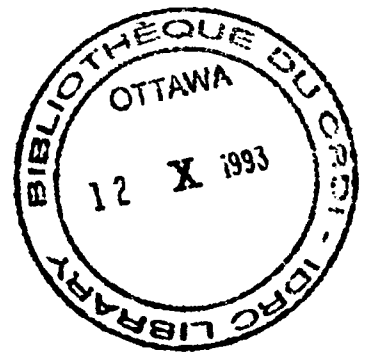
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**A HANDBOOK FOR THE BARANGAY HEALTH WORKER  
IN MANGYAN COMMUNITIES**

**De La Salle University  
Research Center  
Taft Avenue, Manila  
and  
Department of Health  
Philippines  
August 1987**



## PREFACE

The need for a culturally-appropriate health handbook for Philippine tribal communities has been raised in the past decade by various groups that are concerned with the physical well-being of tribals but very few attempts have been made to meet this demand. This handbook is a response to such a need and it is the outcome of a joint effort between the De La Salle University Research Center and the Department of Health (DOH).

This resource material was first utilized as a manual for the training of Hanunuo Mangyan health workers in Barangay Binli, Bulalacao, Mindoro Oriental in December 1985 for an operations research on a community-based health program for the Hanunuo Mangyans by the De La Salle University Research Center. Adopting the concepts of the DOH's Primary Health Care Program, this handbook's major contents are the following: (1) The features of Primary Health Care (PHC) and the roles, functions and activities of Barangay Health Workers in promoting health, prolonging life and preventing disease within the PHC context; (2) Maternal care and Family planning; (3) Child care and Nutrition; (4) The treatment and prevention of different types of illnesses common in tribal communities, i.e. upper respiratory tract infection, tuberculosis, diarrhea, parasitism, malaria and skin diseases; (5) Procedures in preparing malarial smear and tubercular sputum smear; and (6) The uses and preparation of medicinal plants.

This handbook has undergone some revisions as a result of its usage in the field by the 37 Hanunuo Mangyan Health Workers



during the implementation phase of the health program from January 1986 to March 1987.

Credit for the development of this manual goes to the following: two DLSU-RC consultants, Dr. Orlando C. Marinas of the UP College of Public Health and Thelma Corcega of the UP College of Nursing; the Bulalacao Rural Health Unit whose nurse and midwife served as trainers for the Hanunuo Mangyan health workers; J. Luis Luna, the project artist; Myrna T. Briones, the project nurse; Alicia B. Manlangit and Fe E. Custodio, project documentors; Maria S. Castillo, project typist; and last but not least, the 37 Hanunuo Mangyan health workers who utilized this manual in health care delivery and made suggestions for its improvement. We would also like to acknowledge the support extended by the International Development Research Centre in making the entire operations research possible.

Although this manual was originally designed for Hanunuo Mangyan health workers, it can also be utilized as a reference material by the households and other sectors of the Hanunuo and other Mangyan tribes. We hope that this handbook will have a major contribution in improving the health conditions of the Mangyans as well as other tribal groups.

DR. TRINIDAD S. OSTERIA  
DR. PILAR RAMOS-JIMENEZ  
Project Directors

## CONTENTS

	Page
<b>CHAPTER</b>	
<b>PREFACE</b>	i
<b>1 PRIMARY HEALTH CARE</b>	<b>1</b>
Objectives	1
What is primary health care?	1
What are the other features of primary health care?	2
What are these essential health services?	2
What is the goal of primary health care?	3
Why is there a need to have a Barangay Health Worker?	3
Who is a Barangay Health Worker?	3
What are the roles of a Barangay Health Worker?	4
<b>2 MATERNAL CARE AND FAMILY PLANNING</b>	<b>6</b>
Objectives	6
Pregnancy and care during pregnancy	6
What are the signs and symptoms of pregnancy?	6
What are the discomforts of pregnancy?	8
What are the needs of a pregnant woman?	12
Who are the high risk mothers?	16
What are the danger signs of pregnancy?	16
What are the needs of a mother after delivery?	20
Who are the high risk post-delivery mothers?	24
Family planning	24
What is the importance of family planning?	24
Who are the possible acceptors of family planning methods?	25
What are the different family planning methods?	25
What is the role of the Barangay Health Worker in family planning?	28
<b>3 CHILD CARE AND NUTRITION</b>	<b>29</b>
Objectives	29
Caring for the child	30
What are the characteristics of a healthy child?	32
Who are the high risk babies?	34
Proper nutrition	34
Breastfeeding	34
How to introduce new food to the baby	36
What is weaning?	39
What are the basic food groups?	39

	Page
Well planned meals	41
Signs and symptoms of undernutrition	43
What can the baby do?	46
Immunization	51
Common signs and symptoms of childhood illness	53
How to give a sponge bath	56
How to bathe a baby	60
<b>4 COMMON RESPIRATORY TRACT INFECTIONS AND TUBERCULOSIS</b>	<b>64</b>
Objectives	64
Respiratory diseases	64
Facts about cough and common cold	64
Treatment of cough and common cold	65
Facts about influenza	68
Signs and symptoms of influenza	68
Treatment of influenza	71
Prevention and control of influenza	73
Tuberculosis	75
Facts about tuberculosis	75
Signs and symptoms of tuberculosis	78
<b>5 DIARRHEA</b>	<b>81</b>
Objectives	81
What is diarrhea?	81
What causes diarrhea?	82
What are the dangers of diarrhea?	83
How should diarrhea be treated?	88
Prevention of dehydration	88
Steps in the preparation of sugar and salt solution	89
Recommended dosage of sugar and salt solution for children	92
Treatment of dehydration	92
Steps in ORESOL preparation	93
Recommended dosage of ORESOL	94
Prevention of undernutrition	96
Basic sanitation	96
Drinking water	97
Food hygiene	101
Waste disposal	105
Home cleanliness	107
Insect and rat control	109
<b>6 INTESTINAL PARASITISM</b>	<b>111</b>
Objectives	111
What is intestinal parasitism and how it is caused and transmitted?	111

	Page
What are the effects of intestinal parasitism on the health of the infected person?	113
What are the signs and symptoms of intestinal parasitism?	116
How is intestinal parasitism treated?	117
What are the prevention and control measures for intestinal parasitism?	118
<b>7      MALARIA</b>	<b>124</b>
Objectives	124
What is malaria and its cause?	124
What are the dangers of malaria?	126
What are the signs and symptoms of malaria?	127
How should malaria be treated?	128
How to prevent and control malaria?	130
<b>8      FIRST AID</b>	<b>133</b>
Objectives	133
What is first aid?	133
Reminders in case of injury	135
How to stop bleeding	140
In the arms and legs	140
In the nose	144
From the ear canal	146
Fractures and their treatment	147
Burns and their treatment	151
Poisoning and its treatment	157
Snake bites and their treatment	162
<b>9      SKIN DISEASES</b>	<b>166</b>
Objectives	166
What are the characteristics of the different diseases of the skin?	166
What are the causes of these skin diseases and how are they acquired?	170
How are these skin diseases treated?	173
How are these skin diseases prevented and controlled?	174
<b>10     MALARIAL SMEAR</b>	<b>180</b>
Procedure for preparing thick and thin blood smear on the same slide	180
<b>11     COLLECTION OF SPUTUM SPECIMEN</b>	<b>184</b>
Preparation and labelling of sputum smear	185

	<b>Page</b>
<b>12      MEDICINAL PLANTS</b>	<b>188</b>
Fever	188
Dizziness	189
Headache	189
Toothache	190
Swollen gums	191
Cough	192
Intestinal worms	195
Stomach pain	195
Constipation	196
Diarrhea	197
Gaseous distention	198
Increase amount of urine	200
Itching	202
Joints and muscle pains	202
Sprains	203
Superficial burns	203
Scratches and superficial cuts	204
Wound wash	204
Boil	205
Scabies	206
Tinea flava, ringworm and athlete's foot	206
Superficial bleeding	207
Otitis media	207
<b>13      BANANA POWDER FOR DIARRHEA</b>	<b>208</b>
Preparation and directions for use	208
<b>14      SLK COUGH SYRUP</b>	<b>211</b>
Preparation and directions for use	211

## PRIMARY HEALTH CARE

Primary health care has been adopted by the Ministry (now Department) of Health of the Philippines as an approach towards attaining "Health for All Filipinos by the Year 2000." Partnership with the community characterizes this new approach. In order to become an effective partner, one has to understand the meaning of primary health care. This module will help you to understand what primary health care is as well as your roles and functions in this new approach.

### OBJECTIVES

Upon completion of this module, you should be able:

1. To define primary health care.
2. To state the goal of primary health care.
3. To enumerate the different elements of primary health care.
4. To explain what a barangay health worker is.
5. To discuss the roles and functions of a barangay health worker (BHW) in primary health care.

### What is Primary Health Care?

Primary health care is a partnership among the community, the government and the private sector or non-government organizations for the purpose of improving health and quality of life. It recognizes the importance of the participation of the community in identifying health and health related problems and in finding solutions to those problems.

### **Why is it Necessary to Involve the Community in Identifying Problems and in Seeking Solutions to Them?**

The community should be involved in identifying problems and in seeking solutions to them because they are the ones who know the conditions in their area. They know the problems and can discuss ways and means to solve them. It is clear then that primary health care is community based.

### **What are the Other Features of Primary Health Care?**

Aside from being community based, primary health care as an approach provides essential health services that are:

1. Accessible and acceptable to individuals and families in the community through their full participation;
2. Sustainable at a cost that the community and the government can afford;
3. Aimed at developing self-reliance for individual and community health;
4. Part of the total socio-economic development effort.

### **What are these Essential Health Services?**

The essential health services include:

1. Education on prevailing health problems and the methods of preventing and controlling them.
2. Promotion of adequate food supply and proper nutrition.
3. Basic environmental sanitation and an adequate supply of safe water.
4. Maternal and child care and family planning.
5. Immunization against the major infectious diseases.



6. Prevention and control of locally endemic diseases.
7. Appropriate treatment of common diseases and injuries.
8. Provision of essential drugs.

#### **What is the Goal of Primary Health Care?**

The goal of primary health care is health for all Filipinos by the year 2000. It aims to attain the following:

1. Promotion and maintenance of health among the greatest number of Filipinos, especially those in remote and economically depressed communities.
2. Development of community leadership and initiative in identifying community health problems and needs and in seeking their solutions in the spirit of self-reliance.
3. Provision of relevant health and health related services to complement government efforts.

#### **Why is there a Need to have a Barangay Health Worker?**

A barangay health worker is needed to help facilitate and hasten the delivery of health and health related services to the community.

#### **Who is a Barangay Health Worker?**

1. One who is a non-professional health worker residing in the coverage area he or she serves.
2. One who is a voluntary worker and selected by the community.

3. One whose work complements that of the government or other community development programs at the primary level.
4. One who works closely with the local health team and whose work is linked with that of other health facilities.

#### **What are the Roles of a Barangay Health Worker?**

The roles of a barangay health worker are:

1. **Health educator**

The barangay health worker is expected to share all that he/she had learned in training with the families in his or her area of coverage.

2. **Motivator**

He/she is expected to motivate families in the practice of hygiene and sanitation, nutrition and responsible parenthood.

3. **Provider of health care**

As a provider of health care, he/she can:

- a. Render life-saving measures in emergencies;
- b. Detect early signs and symptoms of high-risk infants, preschoolers and pregnant women and of cases of tuberculosis, malaria and diarrhea;
- c. Refer these cases immediately to the health center; and
- d. Visit families for follow-up treatment.

4. Recorder

A barangay health worker keeps a record of all his/her activities and reports them to the health personnel.

5. Liaison officer

A barangay health worker serves as the link between the community and the health personnel. He/she is also expected to assist the latter in organizing the families in his/her area of coverage in order to identify their health problems and find solutions to them.

## MATERNAL CARE AND FAMILY PLANNING

### OBJECTIVES

Upon completion of this module, you are expected to be able:

1. To discuss common signs and symptoms of pregnancy.
2. To identify all pregnant women in your area of coverage.
3. To discuss care of the mother during pregnancy and after delivery.
4. To explain the danger signs and symptoms of pregnancy and after delivery.
5. To discuss the importance of family planning and responsible parenthood.
6. To explain the different methods of contraception.
7. To refer mothers for family planning services.

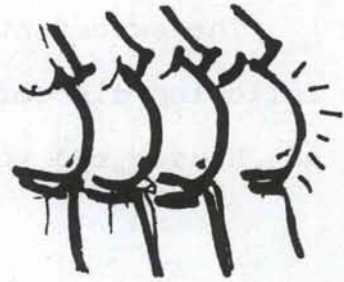
### Pregnancy and Care During Pregnancy

Pregnancy begins when the male sperm unites with the female egg. They merge into one, travel into the womb from their meeting place and remain embedded there. The fertilized egg then grows gradually until it is ready to be born as a baby nine months later.

1. What are the signs and symptoms of pregnancy?

A pregnant woman presents the following characteristics:

- a. She stops menstruating.
- b. "Morning sickness" (dizziness, nausea, vomiting).
- c. She may have to urinate more often.

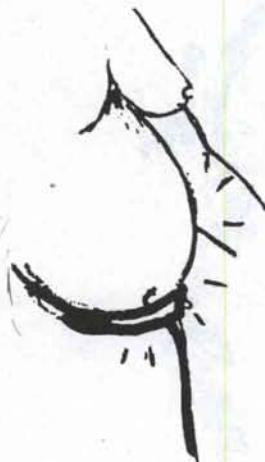


d. Her belly gets larger.



e. Her breasts get bigger.

f. "Marks of pregnancy"  
(dark areas on the face,  
breasts, belly).



g. The baby begins to move  
during the fifth month  
or so.

2. What are the discomforts of pregnancy?

The expectant mother will complain about the following discomforts:

- a. Nausea and vomiting



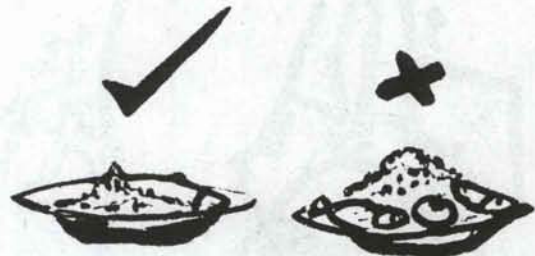


Relief may be obtained by eating sweets or sugar cane and by drinking cold water. Avoid eating fatty foods and large meals.



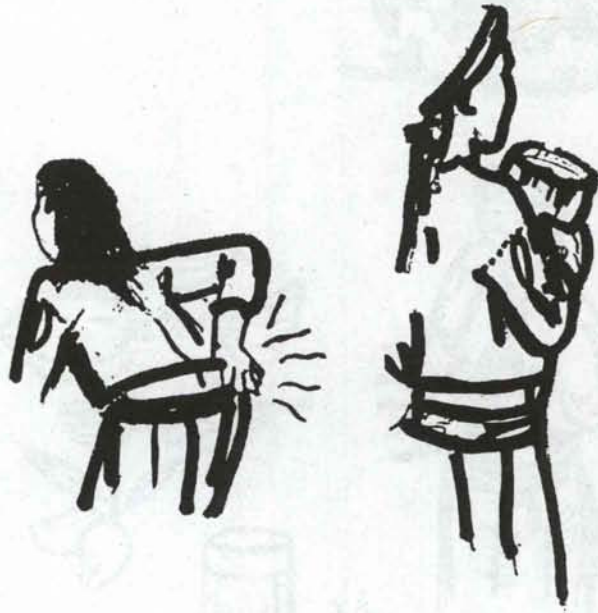
- b. Burning or pain in the pit of the stomach or lower part of the chest

Eat only small amount of food. Very little fat should be included in the diet.



- c. Backache

This can be relieved by exercise, maintenance of good posture and taking short rest periods.







d. Cramps

Force the toes upward and put pressure on the knee to straighten the legs.



e. Varicose veins

Advise the woman to raise her legs for about 5-10 minutes several times a day.

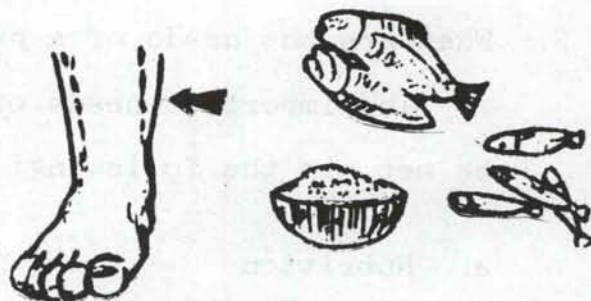


f. Hemorrhoids

Prevent constipation by including fruits and vegetables in the diet. Drink at least 8 glasses of water everyday.

g. Swelling of the feet

Decrease salt and salty foods in the diet. Rest with both feet up several times a day.



h. Frequent urination

Nothing can be done to relieve this, but it will decrease by the end of the 3rd month. Later, during the last weeks of pregnancy, the symptom will reoccur.



i. Shortness of breath

Relief may be obtained by being in a semi-sitting position with the back well supported.

j. Vaginal discharge

To relieve this discomfort, some kind of menstrual pad is advised.



3. What are the needs of a pregnant woman?

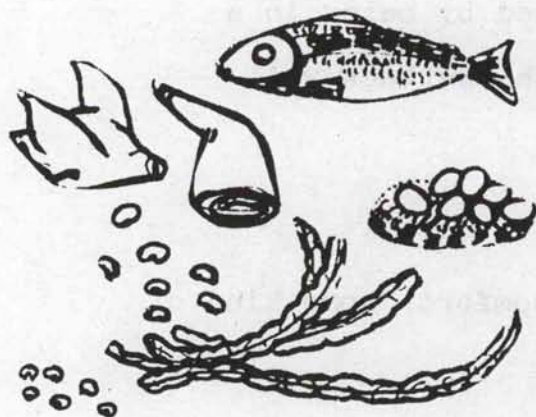
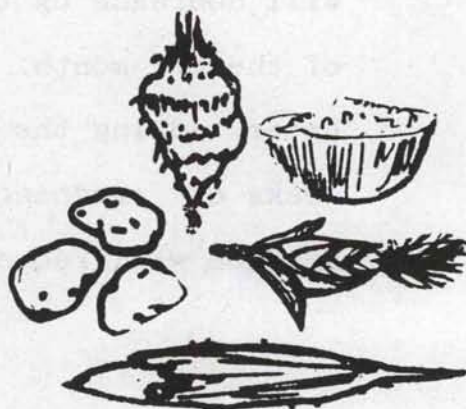
The important needs of an expectant mother which should be met are the following:

a. Nutrition

It is important that the mother eats the right kinds and amounts of food because the health of the baby will depend on her nutritional status. The expectant mother should eat all the nutritious foods she can get. The following foods should be taken by the mother:

1. Energy-giving foods

These are the foods that give us strength and energy. Sources: rice, corn, sweet potatoes.

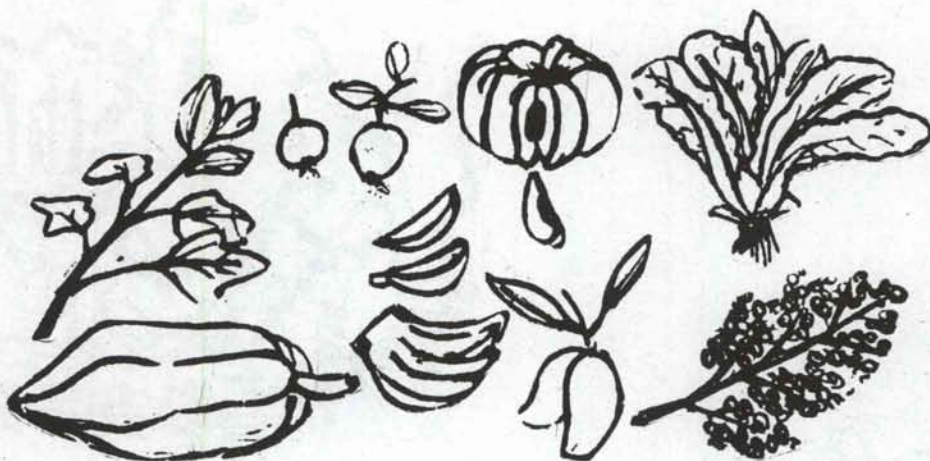


2. Body-building foods

They make the baby grow and develop well. Sources: meat, chicken, fish, eggs, beans - dried or fresh, mongo.

### 3. Protective foods

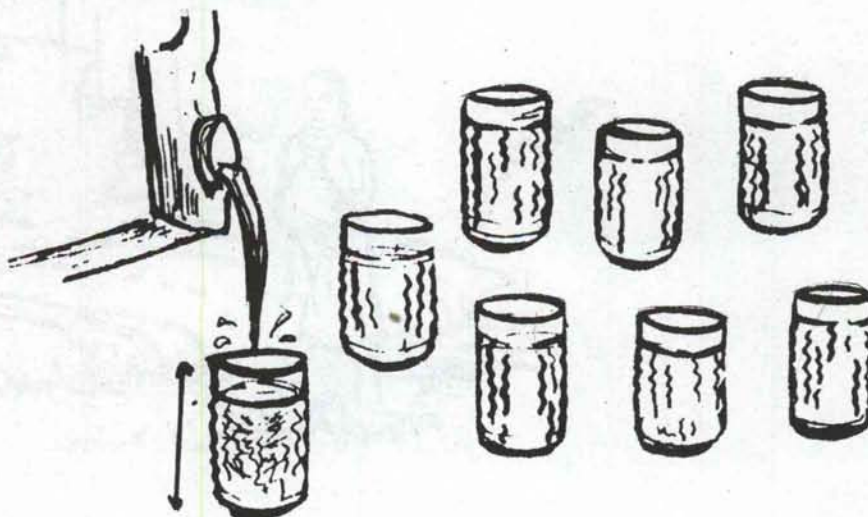
These are important to the mother and fetus to give color to their blood, to develop strong bones and teeth, healthy eyes, skin and hair, and to increase the body's resistance to infection.



Sources: camote tops, malunggay, squash, pechay, guava, mango, banana and papaya.

### 4. Water

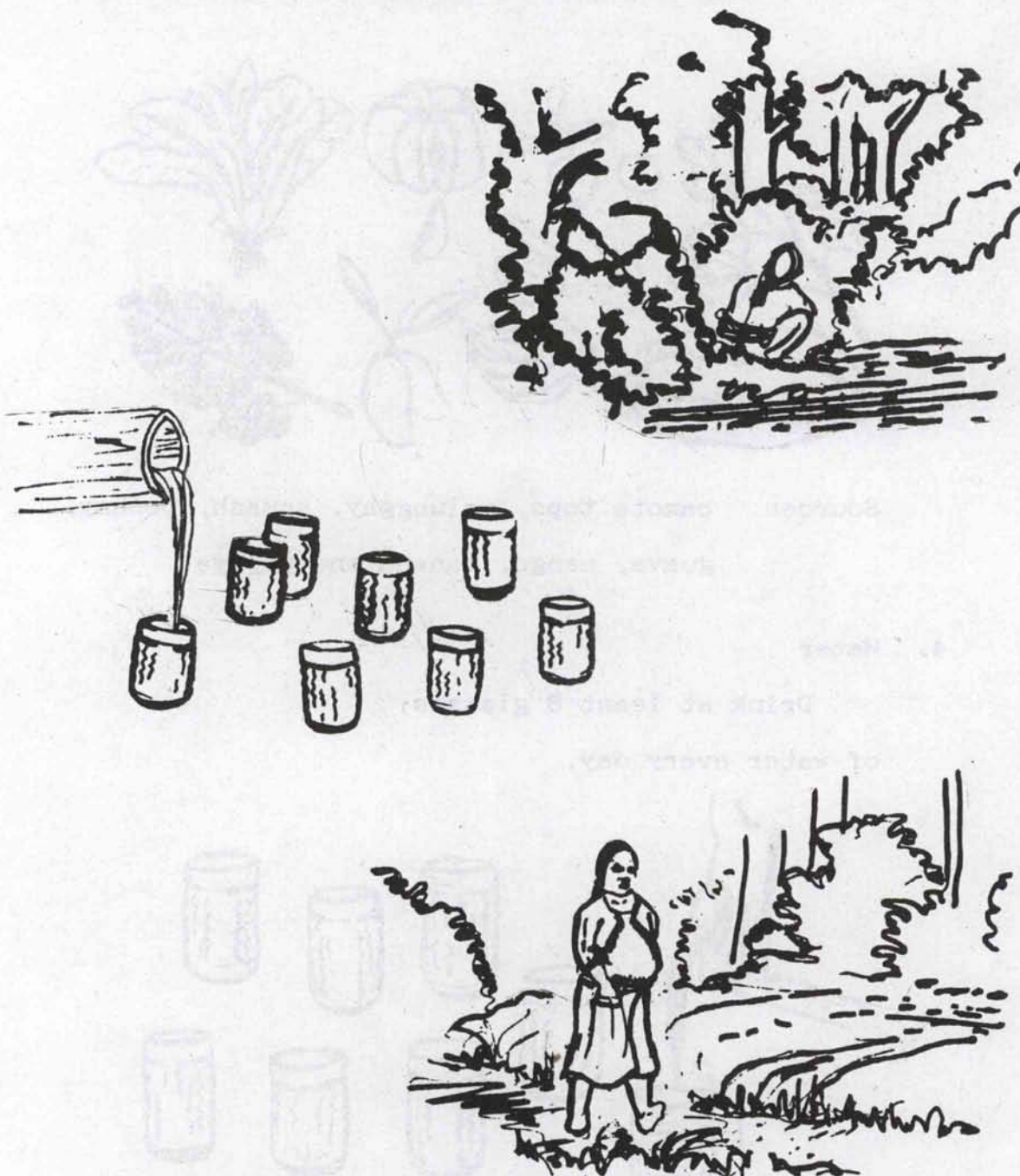
Drink at least 8 glasses of water every day.





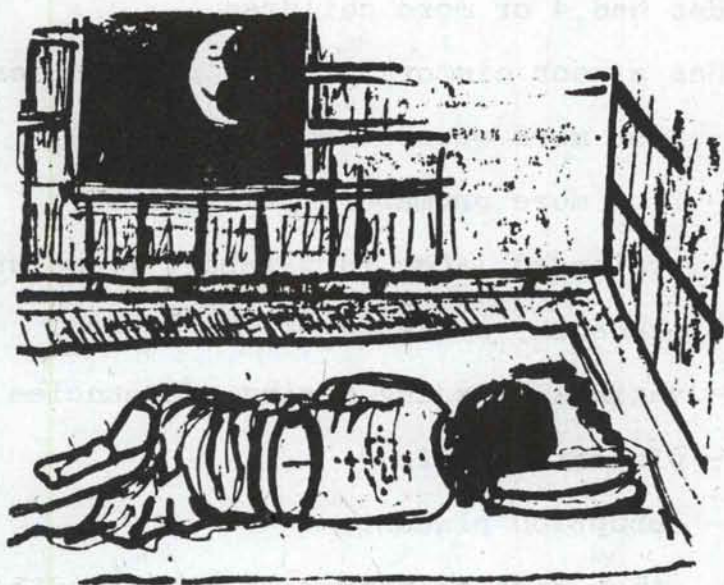
b. Bowel movement

A pregnant woman should maintain regular habits of elimination. Constipation may be prevented by drinking sufficient amounts of fluids, eating plenty of fruits and vegetables, and walking.



c. Rest and sleep

Prolonged sleeping is necessary, and the mother should relax her body and mind to attain rest. Instead of standing, the mother should sit whenever possible with her feet and legs elevated. She can do her normal activities at home but should avoid standing for long and lifting heavy objects.



d. Clothing

Pregnant women should wear comfortable clothes which fit loosely. They should be discouraged from wearing tight belts around the abdomen ("bigkis") because this interferes with the flow of blood and breathing.





- e. Tetanus Toxoid Immunization - during 7 to 8 month of pregnancy. First dose 7th month of pregnancy and second dose 8th month of pregnancy.

4. Who are the high risk mothers?

A high risk mother is a pregnant woman with any of the following characteristics:

- a. Age of 15 years and below or 35 years and above.
- b. Has had 4 or more children.
- c. Has a poor history of past pregnancies.
  - 2 or more spontaneous abortions
  - 2 or more premature deliveries
  - prolonged labor (dry labor, premature rupture of the placenta, prolapse of the cord)
  - vaginal bleeding during pregnancies
  - placenta previa
  - abruption placenta
  - other disease condition like cardiac, etc.

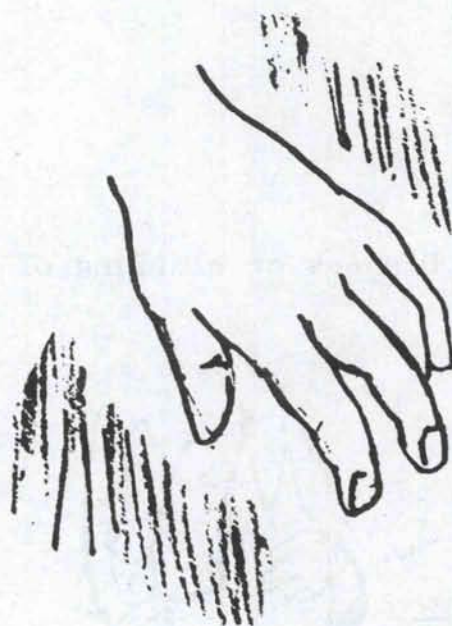
5. What are the danger signs of pregnancy?

The following signs and symptoms of complications of pregnancy which the pregnant women themselves or the BHWs may encounter should be reported immediately to the health center:





a. Bleeding from the vagina



b. Swelling of the face or fingers



c. Severe, continuous headache



d. Dimness or blurring of vision



e. Pain in the abdomen





f. Persistent vomiting



g. Chills and fever



- h. Sudden escape of water from the vagina
- 6. What are the needs of a mother after delivery?
  - a. Nutrition

On the first day after delivery, liquids may be given to the mother, and a full diet may be given on the second day. Body-building foods, e.g., pork, chicken or fish, may help increase milk secretion.







b. Breast care

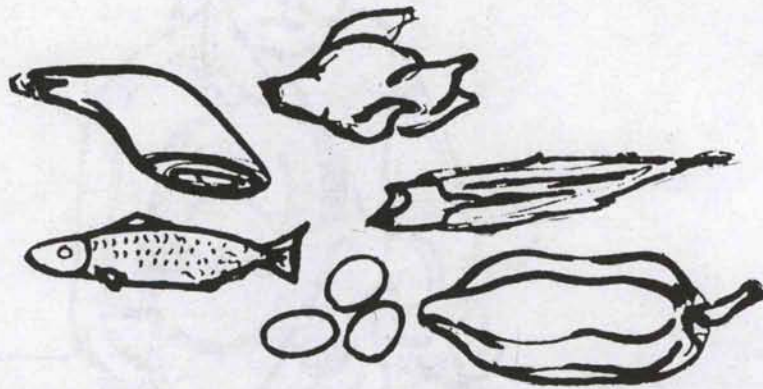
After she has rested, the breasts of the mother may be given to the baby for breastfeeding. The sucking of the baby, even if there is no milk yet, will stimulate milk production. Before feeding the baby, the breasts and nipples should be washed with warm water. To have more milk, advise the mother to:



1. Drink plenty of liquids.



2. Eat body building foods.



3. Get plenty of sleep.



4. Avoid getting very tired and upset.

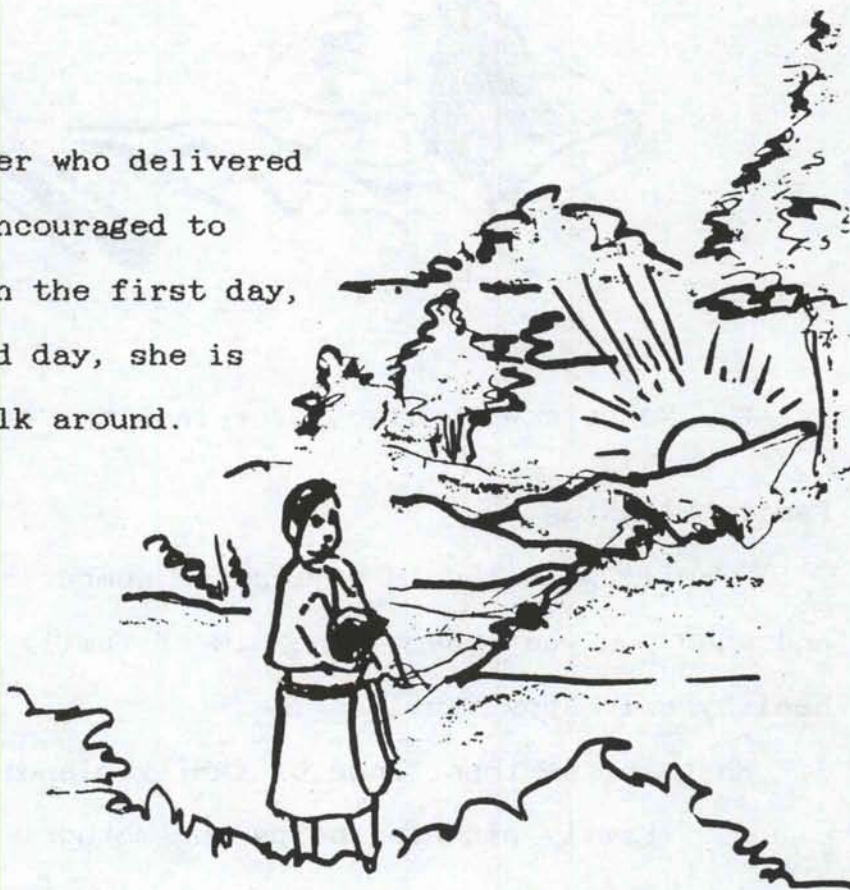


5. Nurse her baby more frequently.



c. Early walking

The mother who delivered normally is encouraged to move in bed on the first day, and on the 2nd day, she is allowed to walk around.



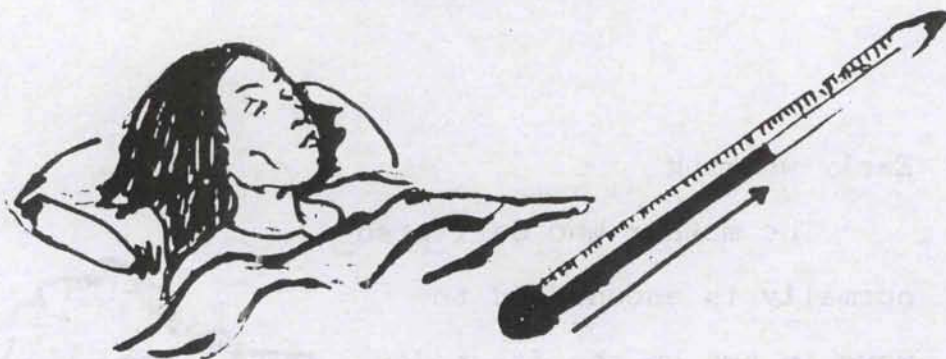


7. Who are the high risk post-delivery mothers?

The following problems after childbirth should be reported immediately to the health center.



- a. Mothers with continuous bleeding from the vagina  
(characteristics of lochias)



- b. Mothers with high fever lasting for more than 2 days

### Family Planning

Family planning is having the number of children you want and when you want them. The aim of family planning is to promote healthy and happy families.

1. What is the importance of family planning?

Family planning helps the mother, the father, the whole family and the country in general. It helps the mother by



giving her a chance to recover her health after delivery, to care for her child more, and still be able to do her work in the house.

It helps the father because he has less children to support and care for, giving him more opportunity to save for the future. It therefore helps the family to be happy and have security.

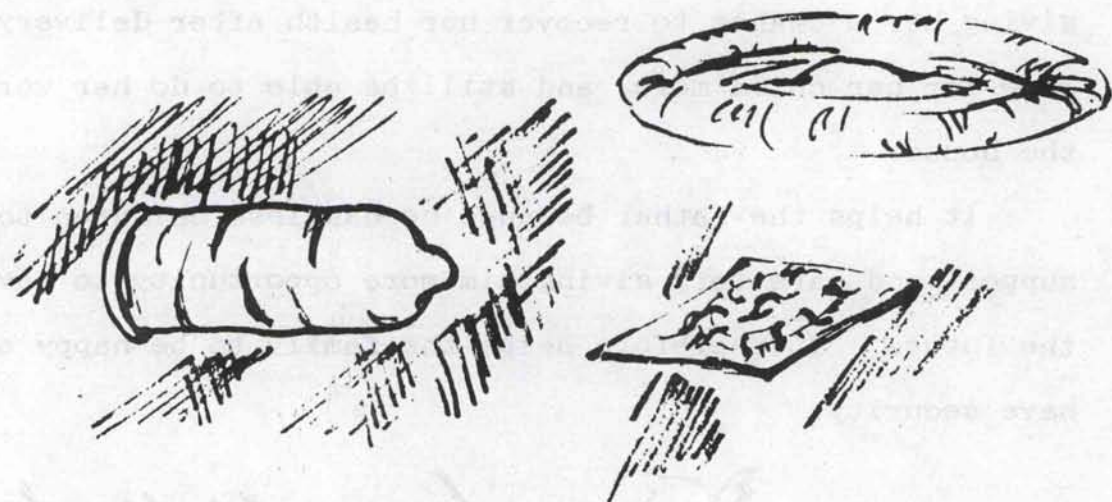


2. Who are the possible acceptors of family planning methods?
  - a. Young parents who want to delay having children.
  - b. Parents who decide that a small number of children is enough.
  - c. Parents who want to space their children several years apart.
  - d. Parents who do not want to have children anymore.
3. What are the different family planning methods?

Husband and wife should decide together and share the responsibility in choosing their family planning method.

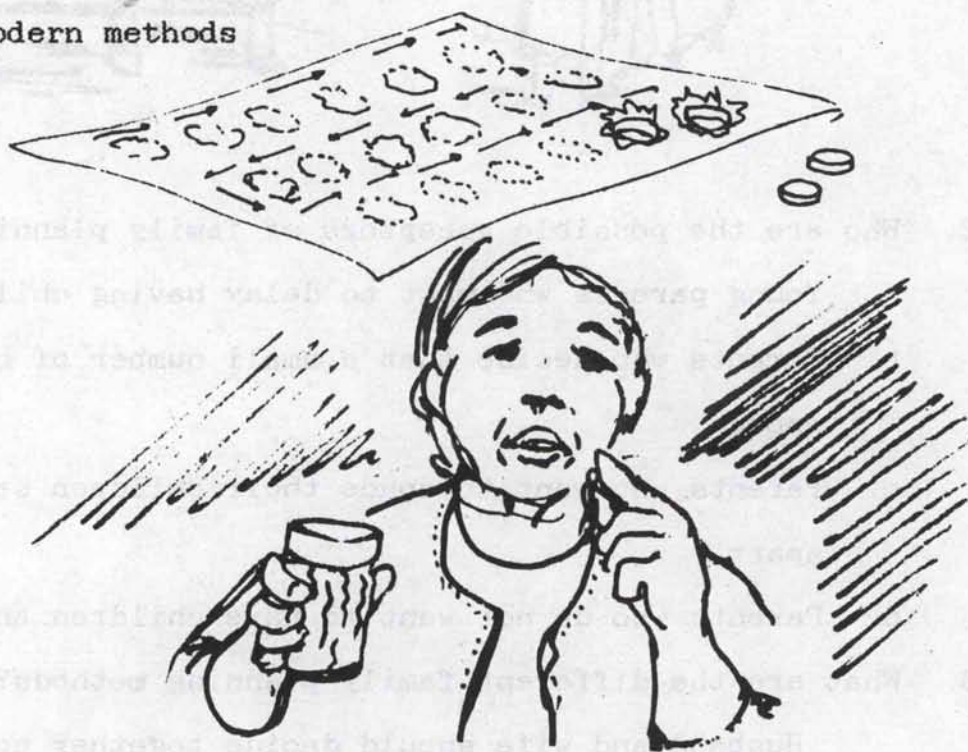
The following are the family planning methods:

- a. Traditional method



Condom - The man wears this over his organ so that his sperm will be deposited in the condom rather than in the vaginal canal.

b. Modern methods



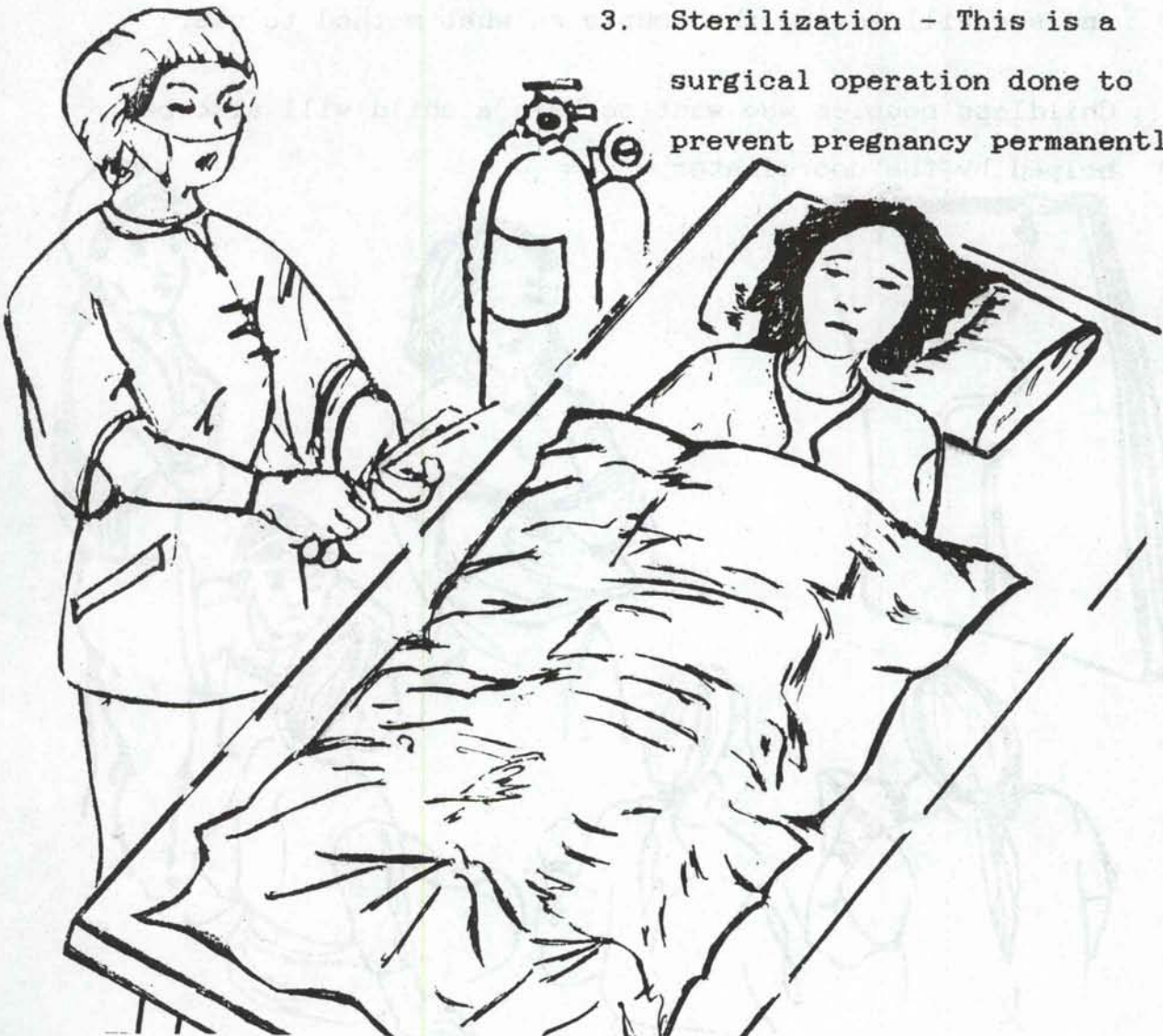
1. Pills - Pills are tablets taken to prevent pregnancy.



2. IUD - This is a plastic material placed inside the uterus to prevent the meeting of the egg and the sperm.



3. Sterilization - This is a surgical operation done to prevent pregnancy permanently.



4. What is the role of the BHW in family planning?

The BHW is usually the first person the mothers call during their pregnancy and delivery, hence, she has the chance to explain to them about family planning. Since the BHW is familiar with the community residents and lives in the community, she can teach those in doubt and refer the couples, friends, neighbors or relatives to the health center for further advice on family planning. The RHU midwife and the nurse will explain to the couple the different methods, and she will advise the couple on what method to use.

Childless couples who want to have a child will also be helped by the coordinator.



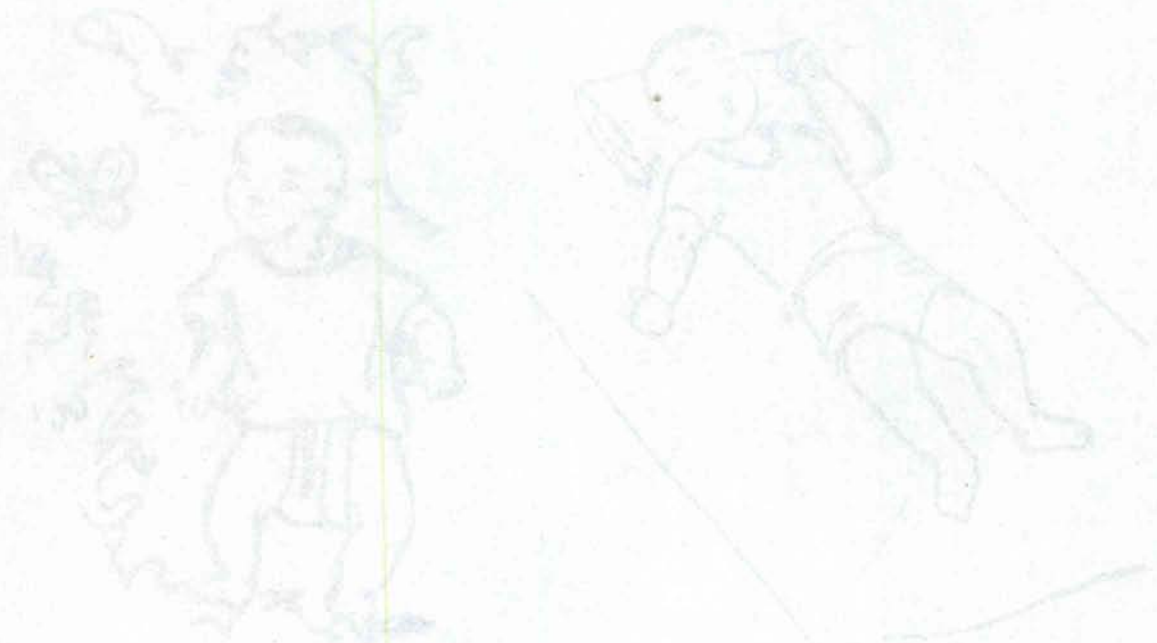


## CHILD CARE AND NUTRITION

### OBJECTIVES

After mastery of this module, you should be able:

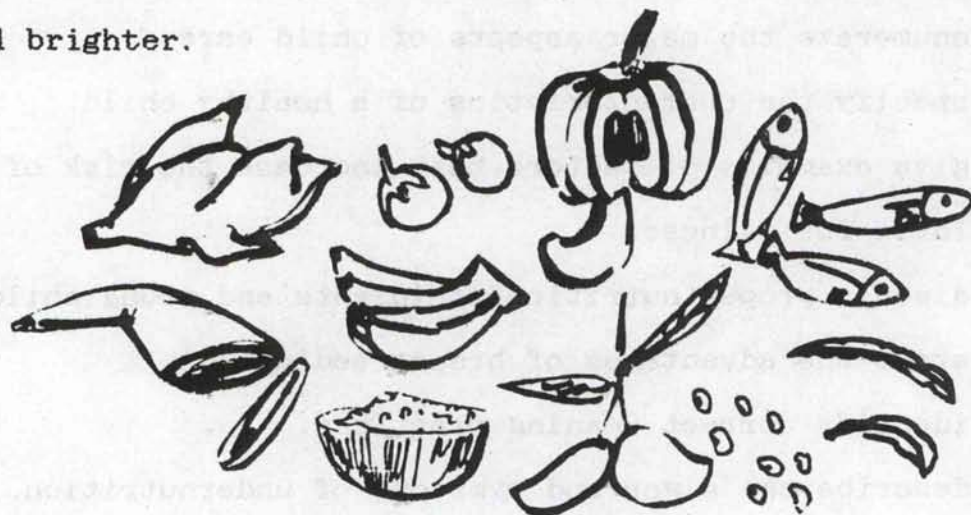
1. To enumerate the major aspects of child care.
2. To specify the characteristics of a healthy child.
3. To give examples of factors that increase the risk of children for illness.
4. To discuss proper nutrition of infants and young children.
5. To state the advantages of breastfeeding.
6. To identify correct weaning practices.
7. To describe the signs and symptoms of undernutrition.
8. To discuss what a baby can do in the first 2 years of life.
9. To state basic immunization for children.
10. To identify common signs and symptoms of illness in children.
11. To explain how to give simple nursing care to a child.



## Caring for the Child

The essential care needed to maintain a healthy baby includes the following:

1. Food - proper food for the baby makes him or her grow faster and brighter.



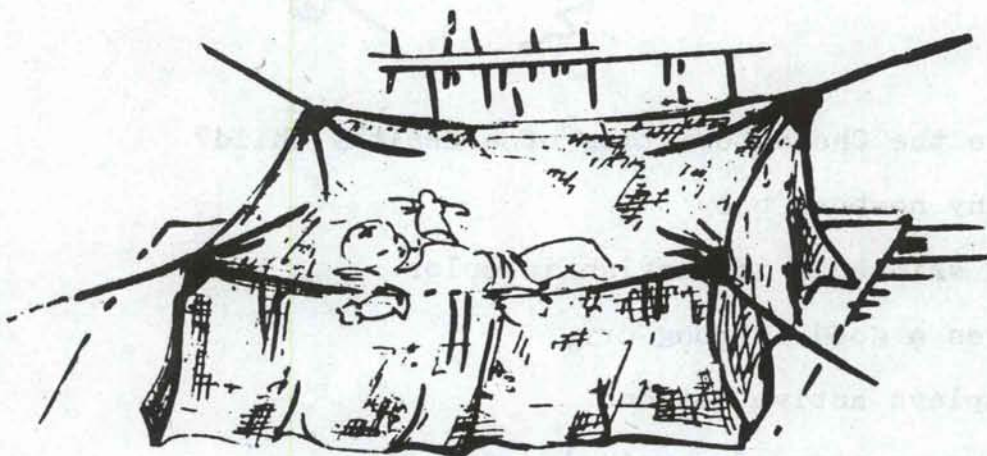
2. Clothing and warmth - the baby's clothes should be warm enough and loose enough for comfort.







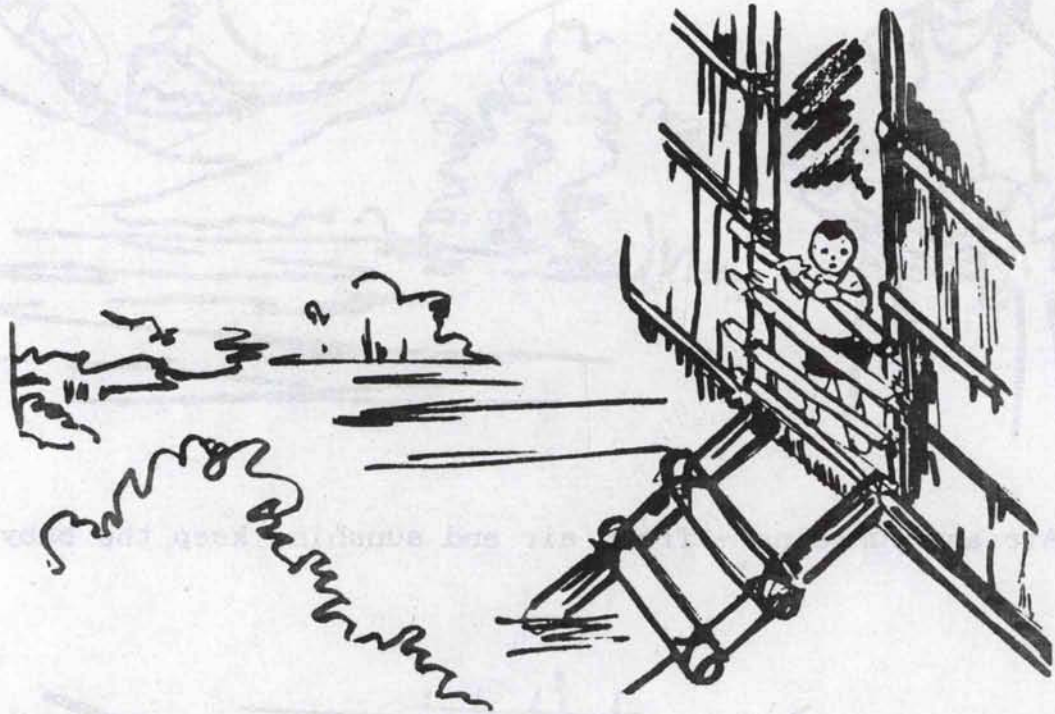
3. Air and sunshine - fresh air and sunshine keep the baby well.



4. Rest and sleep - enough rest and sleep should be provided.  
Keep children warm and dry and protected from strong light  
and drafts.



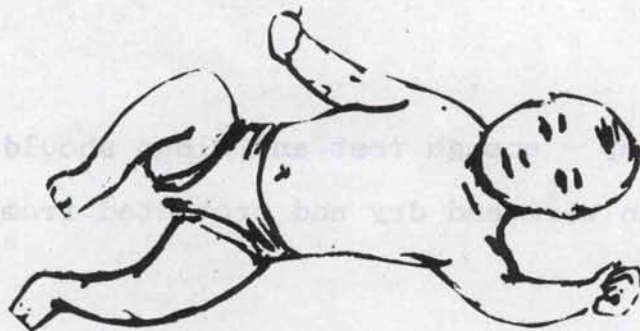
5. Accident prevention - children, especially toddlers, are generally active. Keep the home and their play area safe.



#### What are the Characteristics of a Healthy Child?

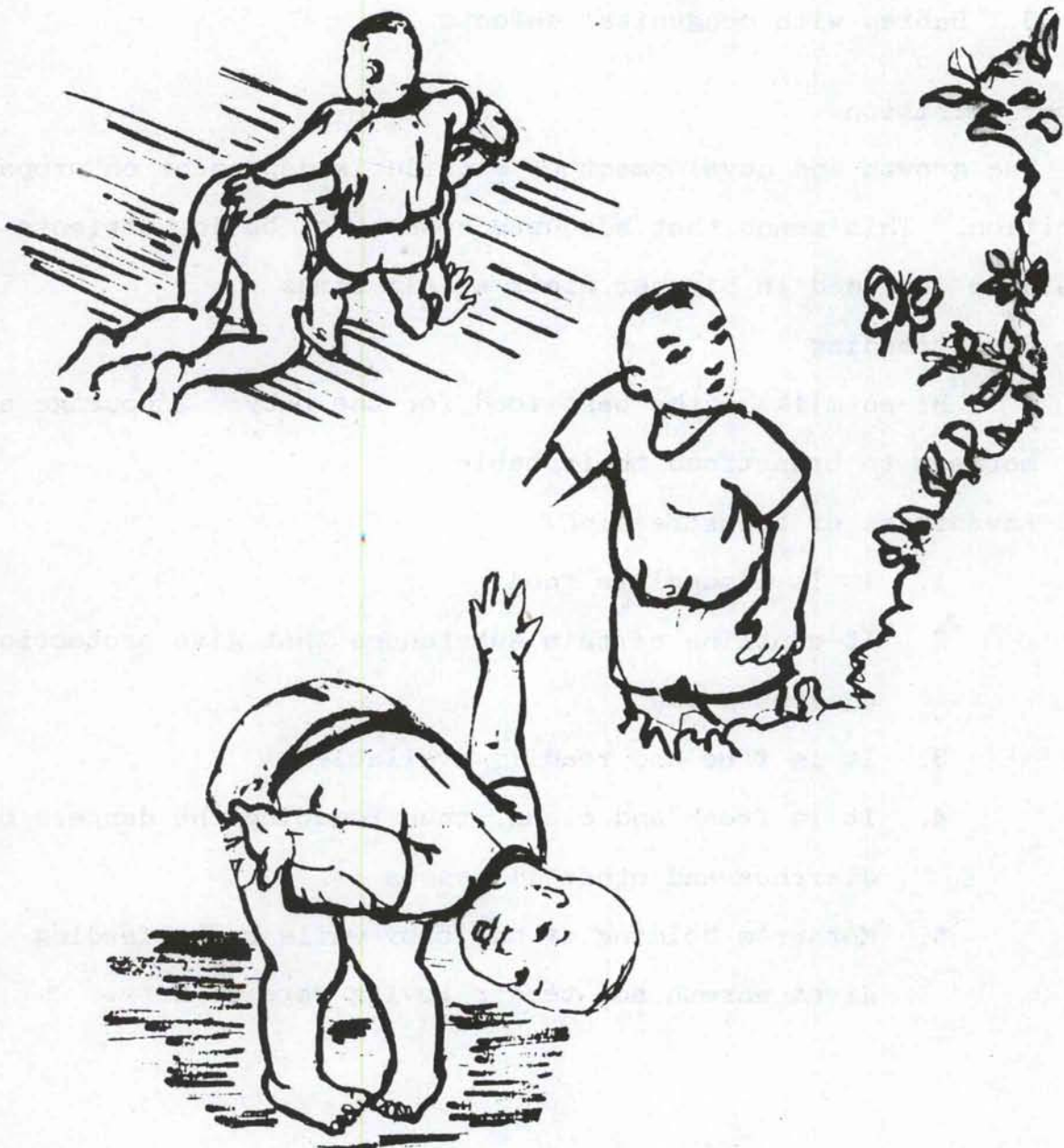
A healthy newborn baby:

1. Has skin that is pinkish in color.
2. Gives a good, strong cry.
3. Displays active motions.
4. Shows no sign of physical deformities.



A healthy child:

1. Has energy for daily activities and does not tire easily.
2. Is generally aware and interested in what is going on around him or her.
3. Interacts well with playmates.





### **Who are the High Risk Babies?**

Priority attention is given to infants who are at high risk.

Examples of this group are:

1. Premature babies - born less than 9 months.
2. Babies born of mothers who had difficult delivery and pregnancy complications.
3. Babies with congenital defects.

### **Proper Nutrition**

The growth and development of a child is dependent on proper nutrition. This means that adequate amount of basic nutrients should be included in his/her diets at all times.

#### **Breastfeeding**

Breastmilk is the best food for the baby. Encourage all mothers to breastfeed their babies.

Advantages of breastfeeding:

1. It is a complete food.
2. It contains certain substances that give protection against germs.
3. It is free and readily available.
4. It is fresh and clean, thus reducing the dangers of diarrhea and other illnesses.
5. Mother's holding of her baby while breastfeeding gives warmth and tender loving care to baby.

Breastfeeding should be started right after birth. After four months the baby needs supplemental food in addition to breastmilk. You can help the mother remember important points by preparing with her a feeding calendar as shown below.

#### FEEDING CALENDAR

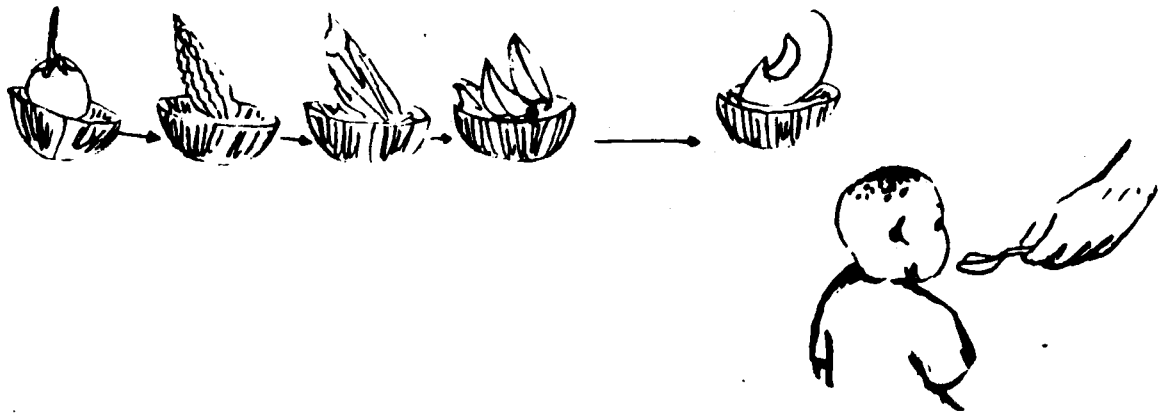
Age of Child	Breastfeeding	Other foods
At birth	Start at birth and whenever the baby asks for breast.	None, unless not enough breastmilk, in which case artificial milk can be given.
4 months	Continue breastfeeding	Give at least one soft food or mashed food 4 times a day. Examples of such foods are boiled egg, mashed ripe banana or papaya, mongo, squash and camote.
6 months	Continue breastfeeding	Give other foods 4 times a day like boiled mongo with leafy vegetables, such as camote leaves or malunggay, or fish sinigang with sitao.
One year and older	Continue breastfeeding up to 2 years of age	Other foods as tolerated.



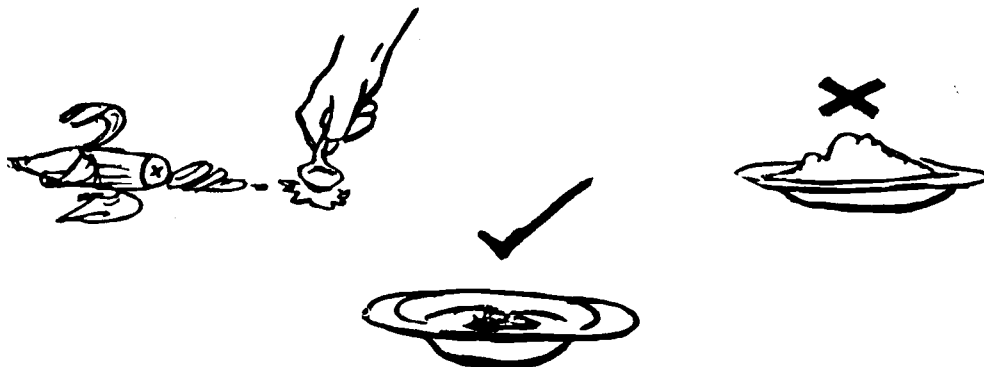
## How to Introduce New Food to the Baby

New food is strange to the baby. To make sure that the baby eats it, introduce new food with care. Here are some helpful points to remember when feeding the baby with new food:

1. Introduce only one food at a time.



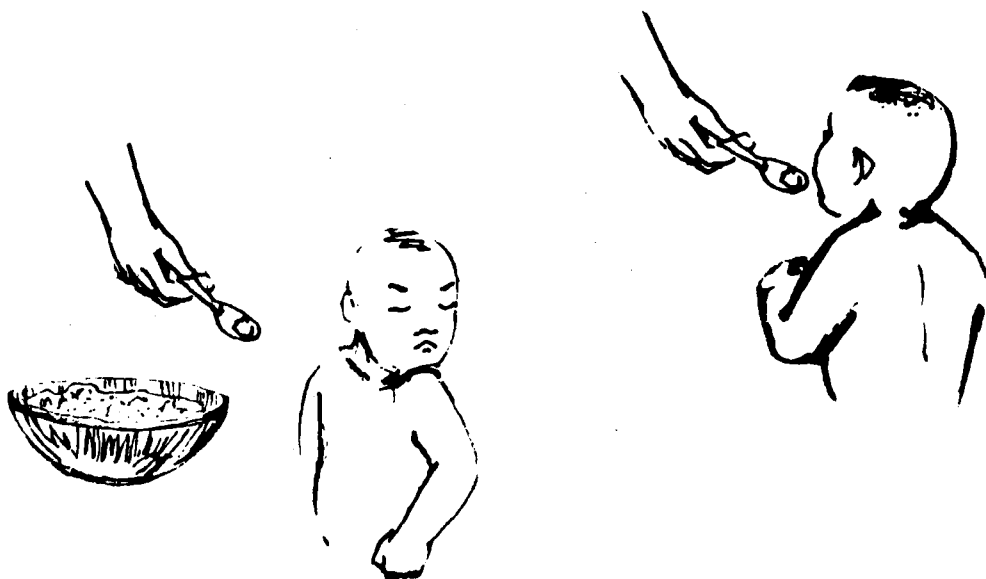
2. Give small amounts of food (one tablespoon or less) at the beginning.



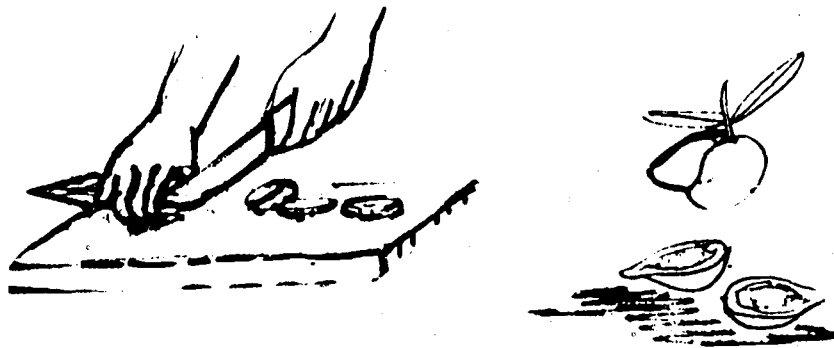
3. Give food of soft consistency when starting with solid foods. Gradually increase consistency.



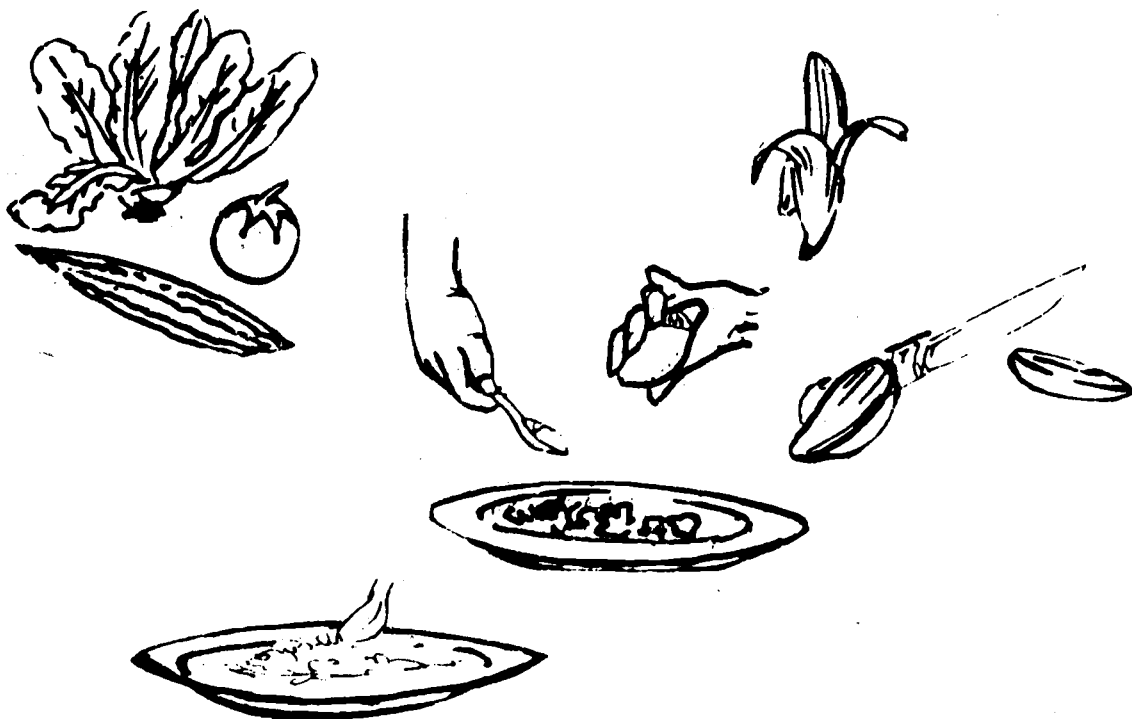
4. Give the baby only as much food as he is willing to take. If the baby refuses to eat a new food, leave it for a week or two, then try again.



5. When the baby is able to chew, gradually give chopped vegetables, fruits and meats.



6. If the baby objects to taking some foods, mix them with other foods he likes until he becomes accustomed to the taste.



## What is Weaning?

Weaning should be done gradually to accustom the child to food other than mother's milk. Weaning eventually leads to complete disappearance of breastmilk about the second year of the baby's life. Wrong weaning practices result in undernutrition.

## What are the Basic Food Groups?

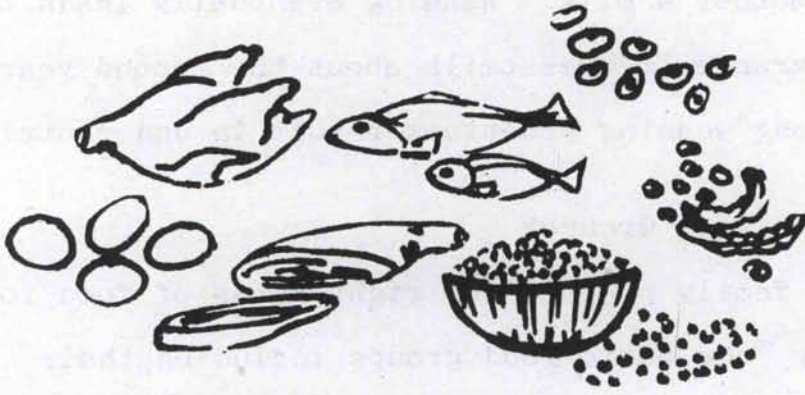
To help the family prepare the right kinds of food for the children everyday, the basic food groups including their functions and some sources are described in the table below.

**BASIC FOOD GROUPS**

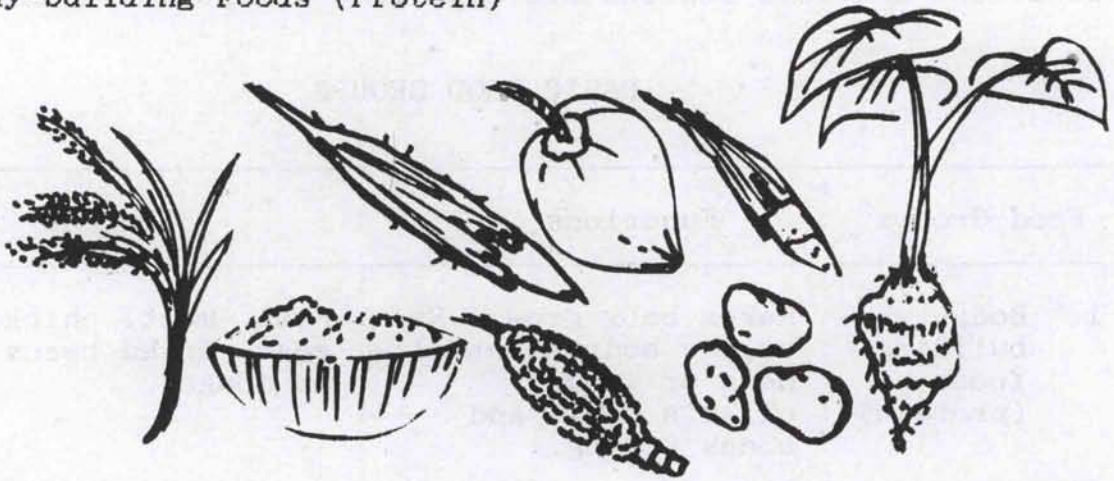
Food Groups	Functions	Sources
1. Body-building foods (protein)	Makes baby grow. Re-builds body after illness or injury. child's teeth and bones strong.	Fish, meat, chicken, eggs, dried beans such as mungo.
2. Energy-giving foods (carbohydrates and fats)	Gives energy for work and play.	Rice, corn, camote, cassava, gabi, ube, sugar, bread, biscuits, coconut, milk, oil.
3. Body-regulating foods (vitamins and minerals)	Keeps body organs in working condition. Helps fight common illnesses.	Fruits such as banana, papaya, guava, atis, mango. Leafy vegetables such as sili leaves, camote leaves, malunggay. Other vegetables like squash, eggplant and tomatoes.



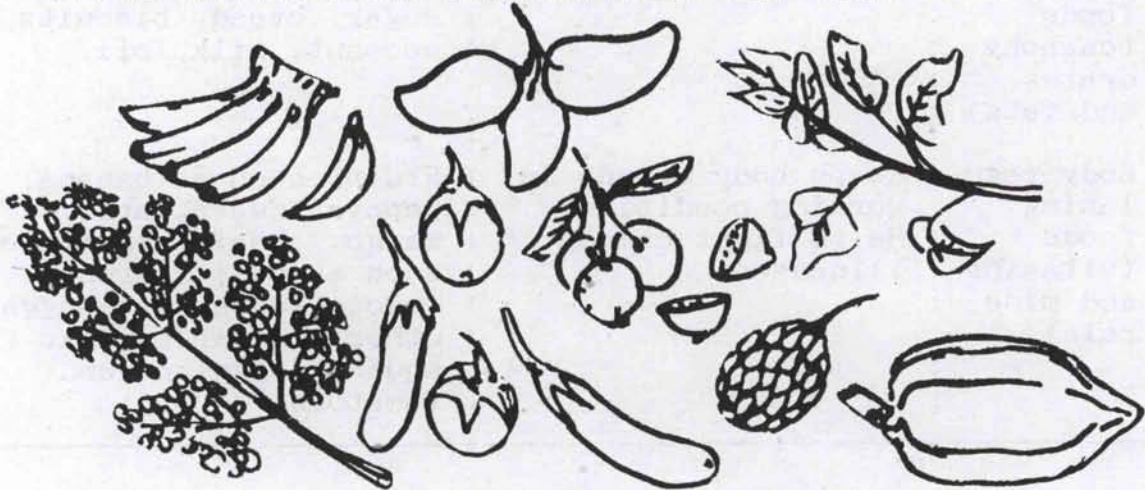
## BASIC FOOD GROUPS



1. Body-building Foods (Protein)



2. Energy Giving Foods (Carbohydrates and Fats)

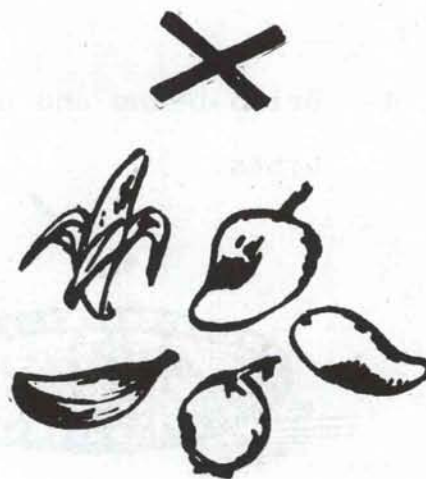
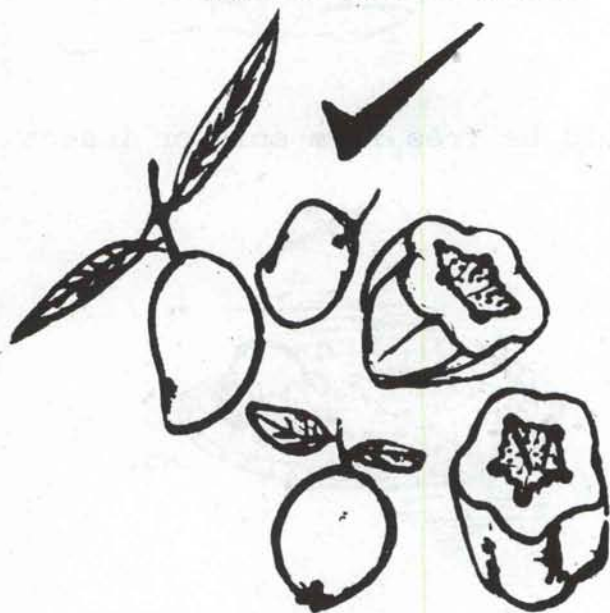


3. Body-Regulating Foods (Vitamins and Minerals)

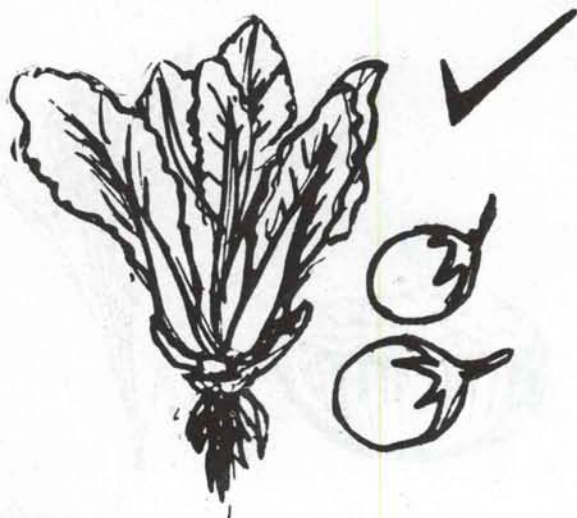
## Well Planned Meals

Well planned meals are not only nutritious but also economical. Here are some tips to keep in mind:

1. Select fruits that are fresh, mature, ripe and free from cuts or insect bites.

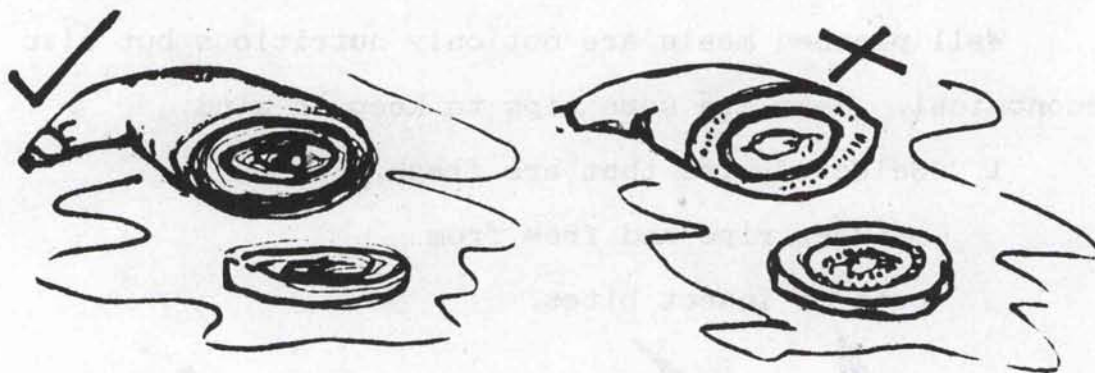


2. Select vegetables that are fresh, mature, tender and free from insect bites.

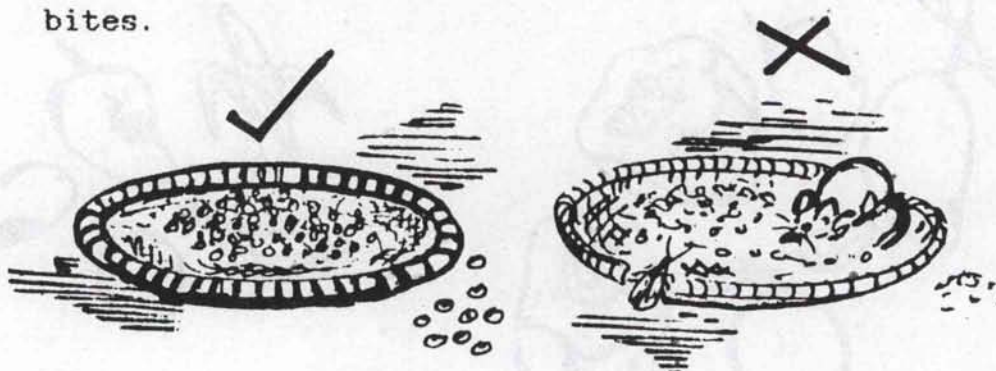




3. Lean meat is more preferable than meat with thick fat.



4. Dried beans and nuts should be free from mold or insect bites.

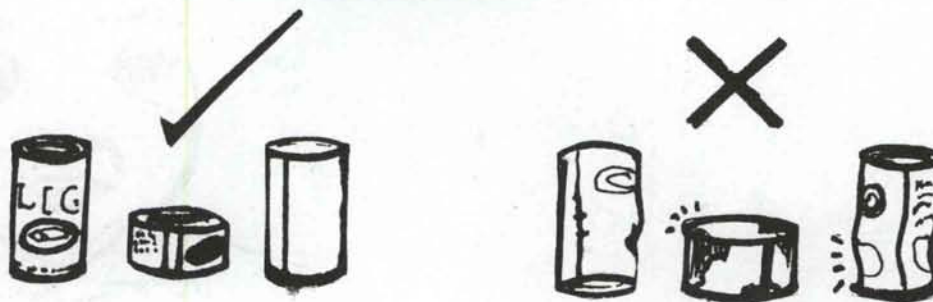


5. Rice and other cereals should be clean and free from small stones.





6. Canned goods should be rust and bulge free.

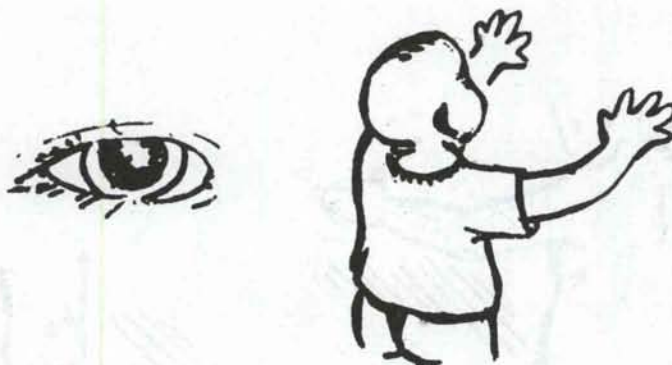


### Signs and Symptoms of Undernutrition

A child who does not get the right kinds and amounts of food shows the following signs and symptoms of undernutrition:



1. Hair - very thin, light colored and easily pulled out

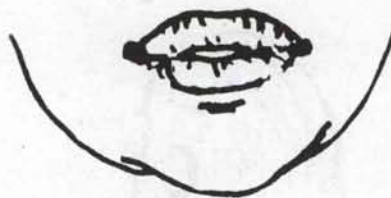


2. Eyes - has difficulty seeing in the dark,  
inside of the eye appears pale

3. Face - wrinkled skin, moon face



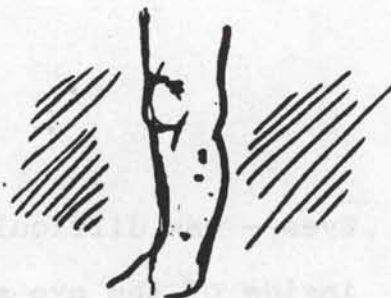
4. Lips - pale with cracks at the corners of the mouth



5. Neck - usually enlarged



6. Skin - pale and scaly





7. Arms and legs - show swelling and muscle wasting



8. Underweight



9. Very inactive and passive, easily fatigued



10. Poor appetite





11. Retarded growth



12. Bleeds easily

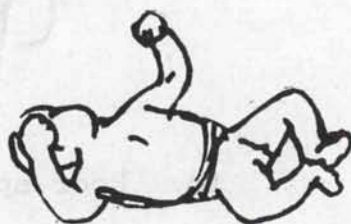
Refer children with the above signs and symptoms to the health center.



### What Can the Baby Do?

Normal children can do certain things as they go through infancy and childhood. The table below describes what a child can do through the first 2 years of life.

Age in Months	What the Child Can Do
Newborn	Closes hands, startles readily



1

Starts to smile



2

Vocalizes (small throaty sounds)



3

Turns head towards sound



4

Can follow moving objects and reach for object



5

Holds head, laughs loudly



6

Sits with support, rolls over





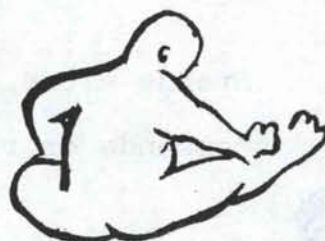
7

Recognizes familiar faces



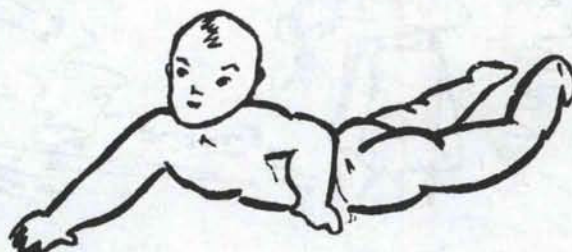
8

Sits without support



9

Creeps



10

Pulls/draggs feet



11

Stands with support; may say two words  
with meaning



12

Stands alone, takes a few steps, obeys  
commands or requests



15

Walks well alone, says four to five  
words





2 years

Runs well, combines 2 or 3 words in sentences



### Immunization

Immunization protects children against germs causing common communicable diseases such as tuberculosis, diphtheria, pertussis, tetanus, cholera and measles. Encourage mothers to bring their child for immunization. Following is a table of the basic immunization for children.

#### SCHEDULE OF BASIC IMMUNIZATION

Type of Immunization	When to Give	Number of Doses
BCG (against tuberculosis)	From 3-14 months	One
	6-7 years	One



DPT (against diphtheria, pertussis, tetanus)	: From 3 months - 3 years	: 2-3 doses at 6 month intervals
Oral Polio	: Under 3 years	: 2 doses at 2 month intervals; 3rd dose 6-12 months later
Measles	: From 9-14 months	: One

---



Following immunization, fever is a usual response of the body to the introduction of a vaccine. Allay the fears of the mother. However, when fever is prolonged, refer the child to the health center.

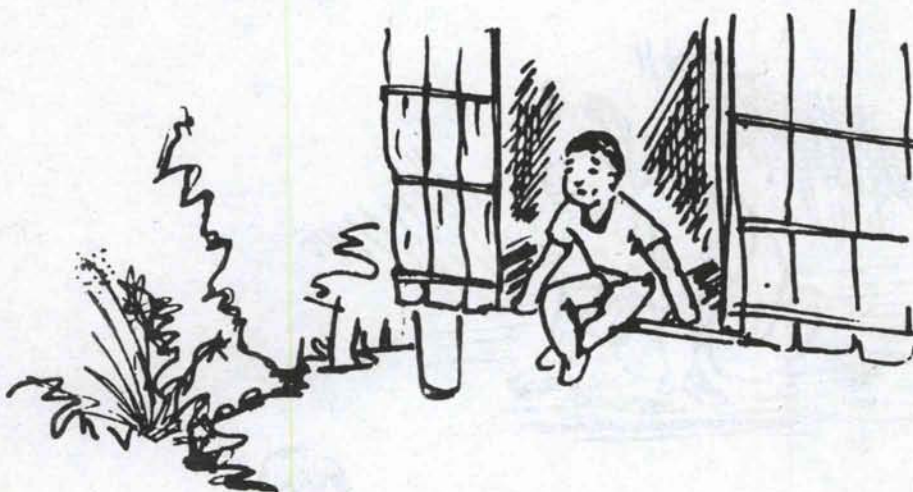
## Common Signs and Symptoms of Childhood Illness

A child who is sick may have one or more of the following signs/symptoms:

### 1. Paleness



### 2. Muscle weakness



### 3. Cough and colds





4. Loss of appetite and sleep



5. Irritability



6. Loss of weight

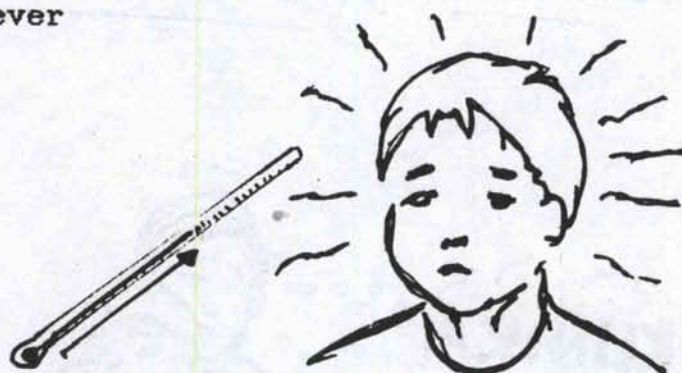




7. Getting easily tired



8. Fever



9. Flushing of face



10. Swollen, reddish eye



11. Nausea and vomiting



12. Dizziness



When a child has any of these signs and symptoms refer him/her to the health center.

**How to Give a Sponge Bath**

Prepare the floor where the baby will be bathed, soap and basin, soft wash cloth or clean old camiseta.



1. Remove unnecessary things on the floor.



2. Sweep the floor and wipe it with a clean, wet piece of cloth.





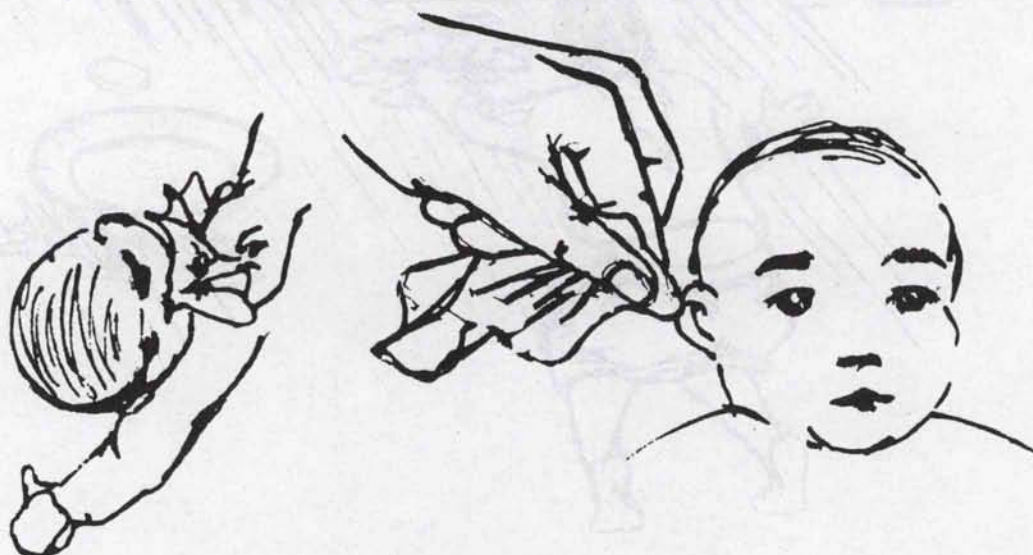
3. Spread a clean piece of cloth on the floor and place the baby on it.



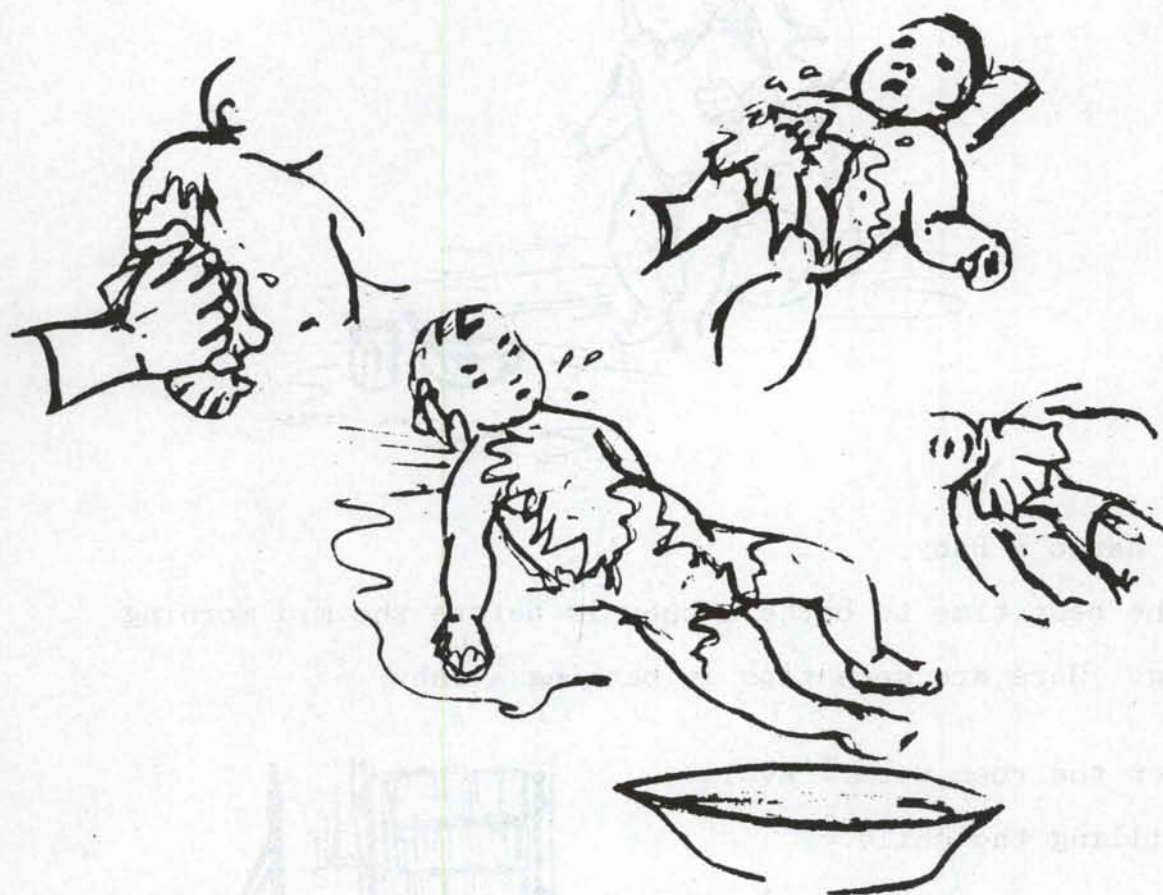
4. Place another clean piece of cloth over the baby.



5. Clean nose and ears with a wet, clean piece of soft cloth.



6. Soap arms, chest, neck, stomach area and lower body. Rinse and dry. Wash genitals.



7. Wipe nose and ears.





8. Change clothes and diaper and then feed the baby.



### How to Bathe a Baby

The best time to bathe a baby is before the mid-morning feeding. Here are some tips in bathing a baby.

1. Keep the room warm. Avoid chilling the child.





2. Check if all the necessary things for bathing are on hand.



3. Always handle the baby with clean hands.



4. Hold the baby securely in the basin while giving him a bath.



5. Soap the baby's head first and rinse over the basin. Be sure water does not enter his ears. Dry the head with a towel or clean cloth.





6. Remove the baby's clothing.



7. Proceed with full bath except in rinsing where wet wash cloth is used instead of allowing water to rinse the body.





## COMMON RESPIRATORY TRACT INFECTIONS AND TUBERCULOSIS

### OBJECTIVES

At the end of this module, the participants should be able:

1. To discuss common respiratory tract infections.
2. To explain the causes, transmission and treatment of tuberculosis.
3. To identify individuals with signs and symptoms of tuberculosis.
4. To discuss the functions of the BHW in tuberculosis control and prevention.

### Respiratory Diseases

#### 1. Cough and common cold

##### a. Facts about cough and common cold

Coughs and colds are not sicknesses but signs of many different illnesses that affect the throat and lungs. For example, among children they are signs and symptoms of broncho-pneumonia, measles, diphtheria, poliomyelitis and primary complex or T.B. of the children. Coughs and colds are very common among children such that very often parents do not pay attention to them. Colds, as a matter of fact, do not need any treatment. A cold will disappear eventually because it is a self-limiting disease. The danger, however, is that if it occurs in the presence of other conditions, like fever, it may lead to complications

such as broncho-pneumonia which can be fatal if not treated properly.

b. Treatment of cough and common cold

1. Rest

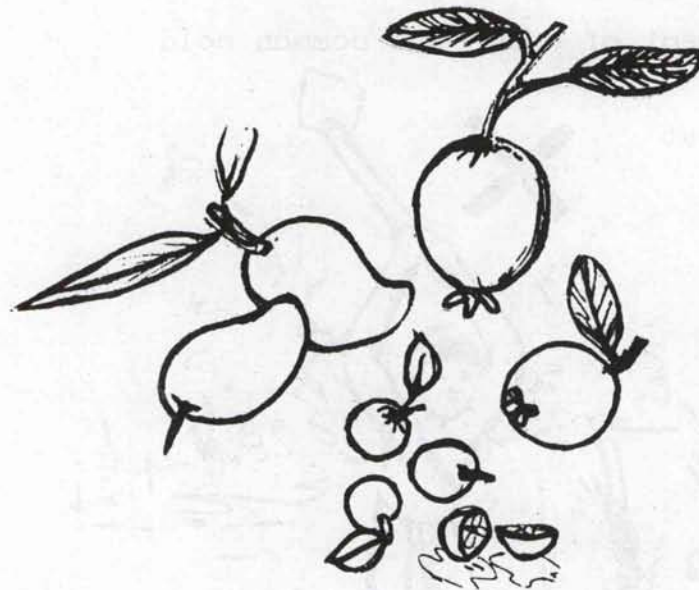


2. Plenty of fluids





3. Vitamin C rich foods like  
guavas, calamansi and mangoes

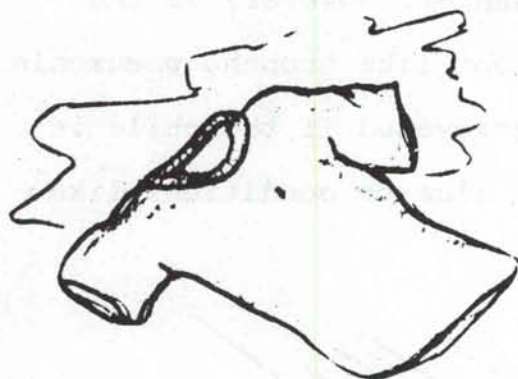


4. Steam inhalation

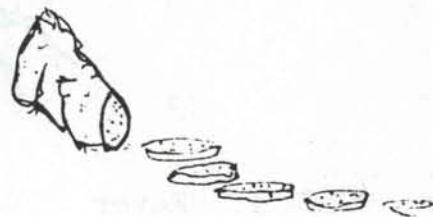
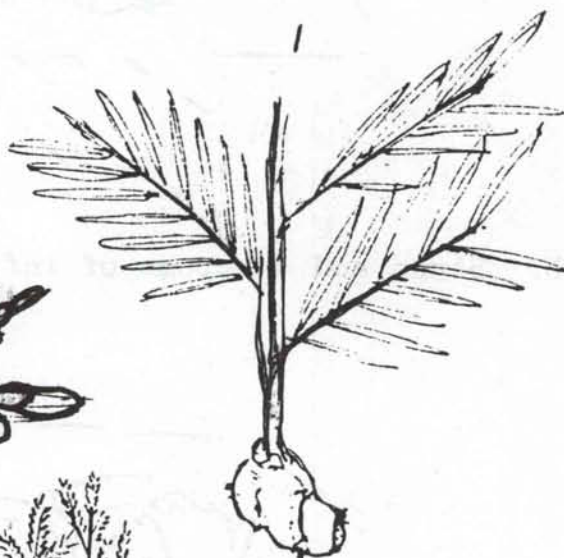
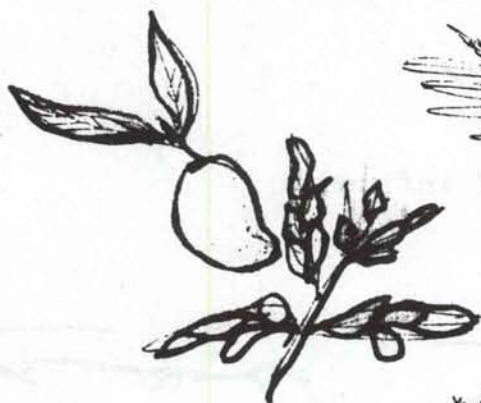




5. Proper clothing



6. Herbal medicine



## 2. Influenza

### a. Facts about influenza

Influenza, or flu as it is commonly known, is also self-limiting. The danger, however, is that it can lead to complications like broncho-pneumonia among adults. This is aggravated if the child is malnourished or has other disease conditions like primary complex.



### b. Signs and symptoms of influenza



#### 1. Fever

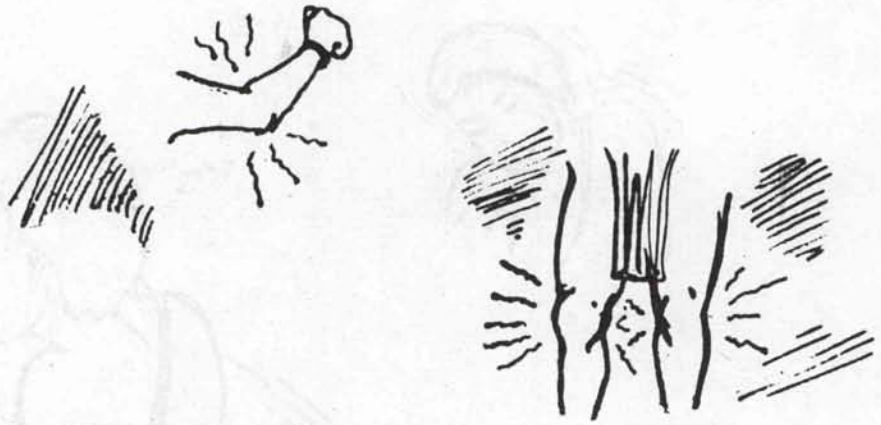


2. Cough and colds



3. Body fatigue





#### 4. Pains in the joints



#### 5. Inflammation of the throat

## 6. Headache



## c. Treatment of influenza

### 1. Rest



2. Plenty of fluids



3. Vitamin C rich foods like  
guavas, calamansi, tomatoes  
mangoes



4. For fever

a. Sponge bath





- b. Anti-pyretic drugs like aspirin and  
herbal medicine



#### Prevention and Control of Influenza

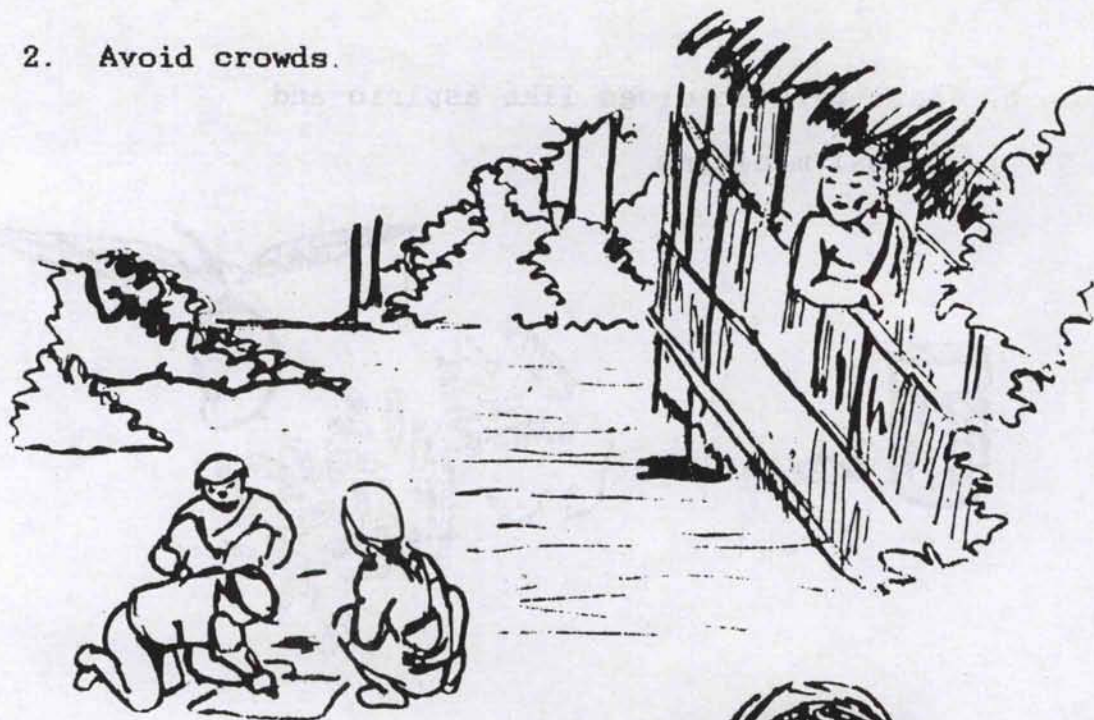
Influenza can be easily transmitted to other members of the household, therefore, to protect the rest of the family observe the following:

1. Sick members should sleep alone.





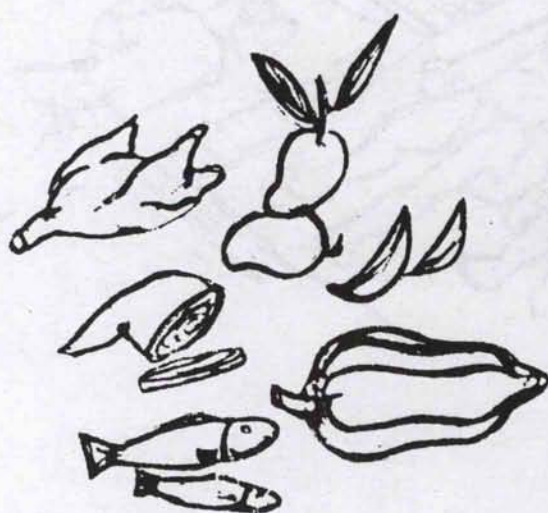
2. Avoid crowds.



3. Cover mouth when coughing.



4. Eat nutritious foods and get plenty of rest.





While it is true that flu is self-limiting, in the event that fever persists for more than a week and is accompanied by difficulty of breathing or chest pains, the patient should be referred to the nearest health center.



## Tuberculosis

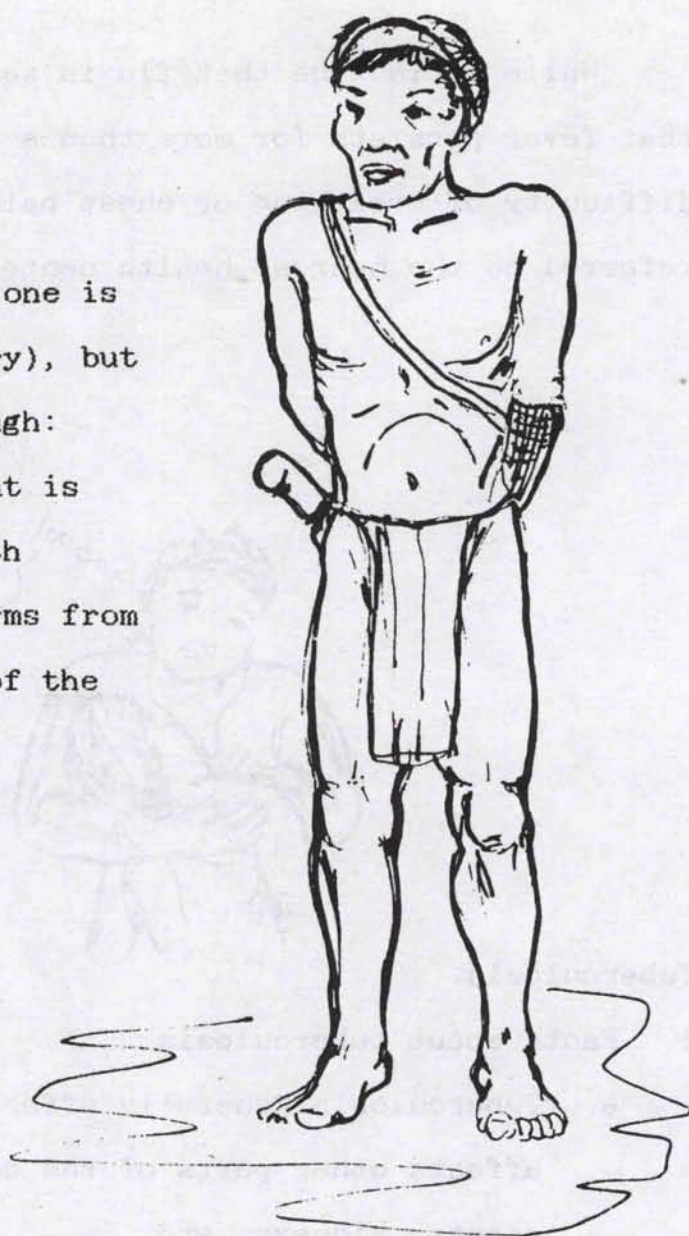
### 1. Facts about tuberculosis

- a. Tuberculosis generally affects the lungs but it also affects other parts of the body such as the bones, joints, kidneys, etc.
- b. Anybody can acquire the disease, and thousands die of it every year.
- c. It is a long lasting communicable disease but it is CURABLE if treatment is done early and completely. The shortest time is at least one year with continuous medication.

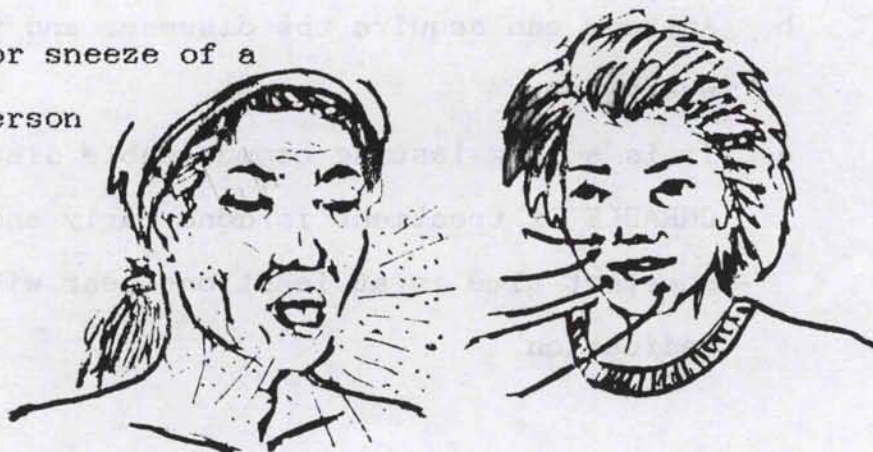


d. It is not a disease one is born with (hereditary), but it is acquired through:

1. Inhaling air that is contaminated with tuberculosis germs from the secretions of the

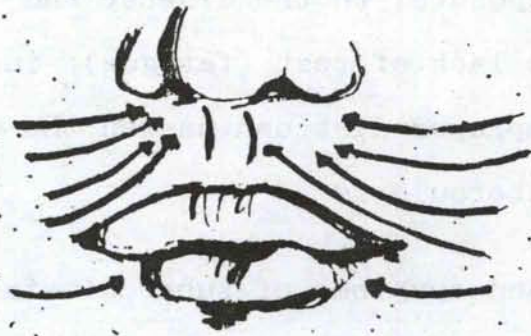


cough or sneeze of a sick person

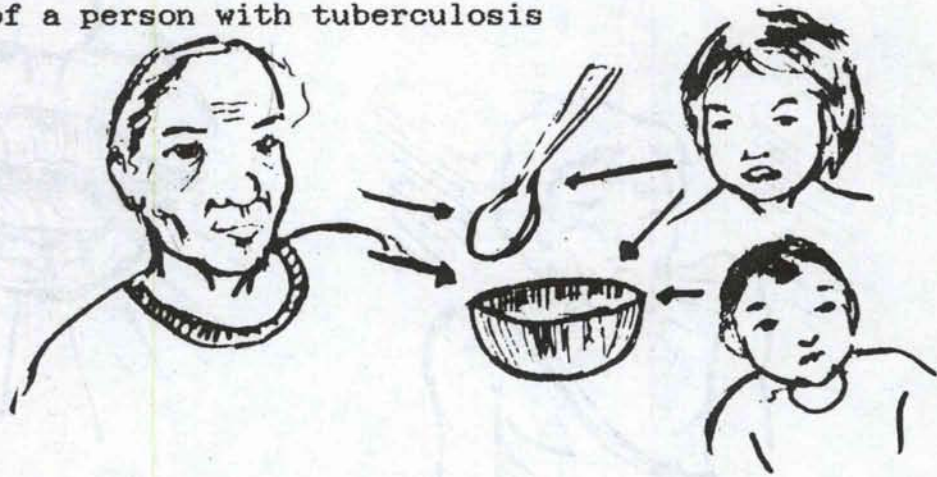




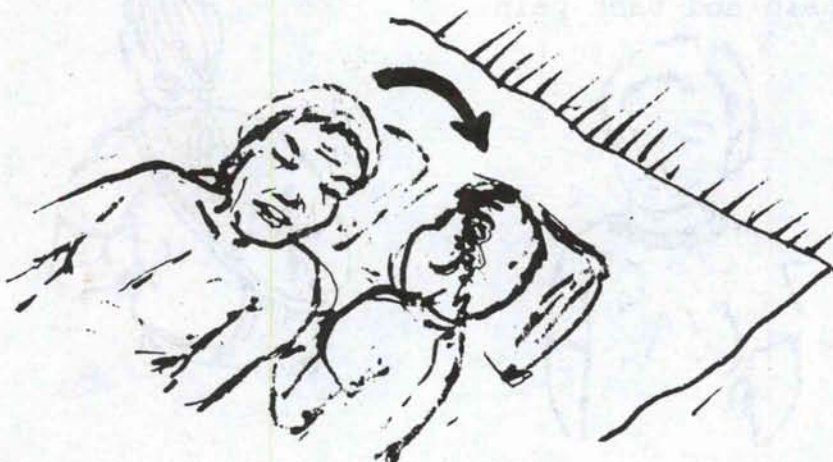
2. Inhaling the dust carrying the germs from the sputum of a tuberculous person



3. Using the utensils and personal things of a person with tuberculosis



4. Sleeping with a tuberculous person



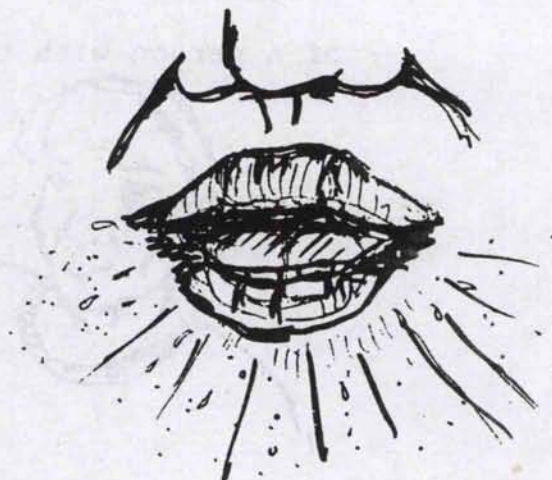


Therefore, people in crowded homes and communities are in great danger of getting the diseases.

- e. Exposure to the disease and lowered body resistance due to lack of rest (fatigue), inadequate sleep, and improper diet can hasten the development of tuberculosis.

## 2. Signs and symptoms of tuberculosis

- a. Prolonged cough of more than one month with abundant phlegm

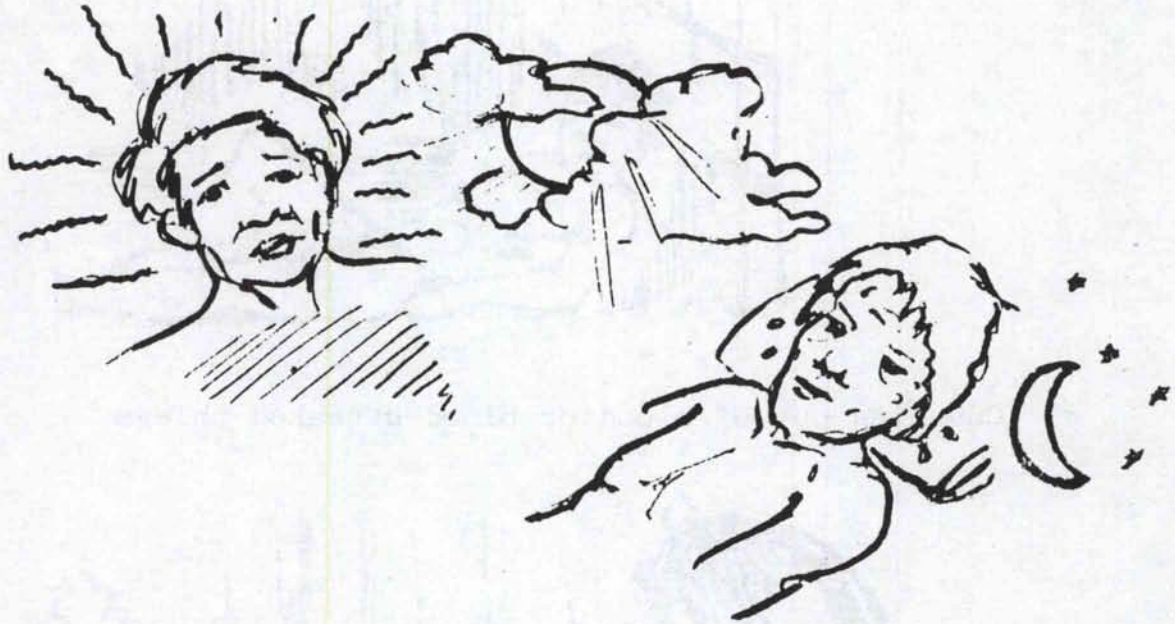


- b. Chest pain and back pain





- c. Fever in the afternoon and sweating at night for one month duration



- d. Loss of appetite



- e. Loss of weight

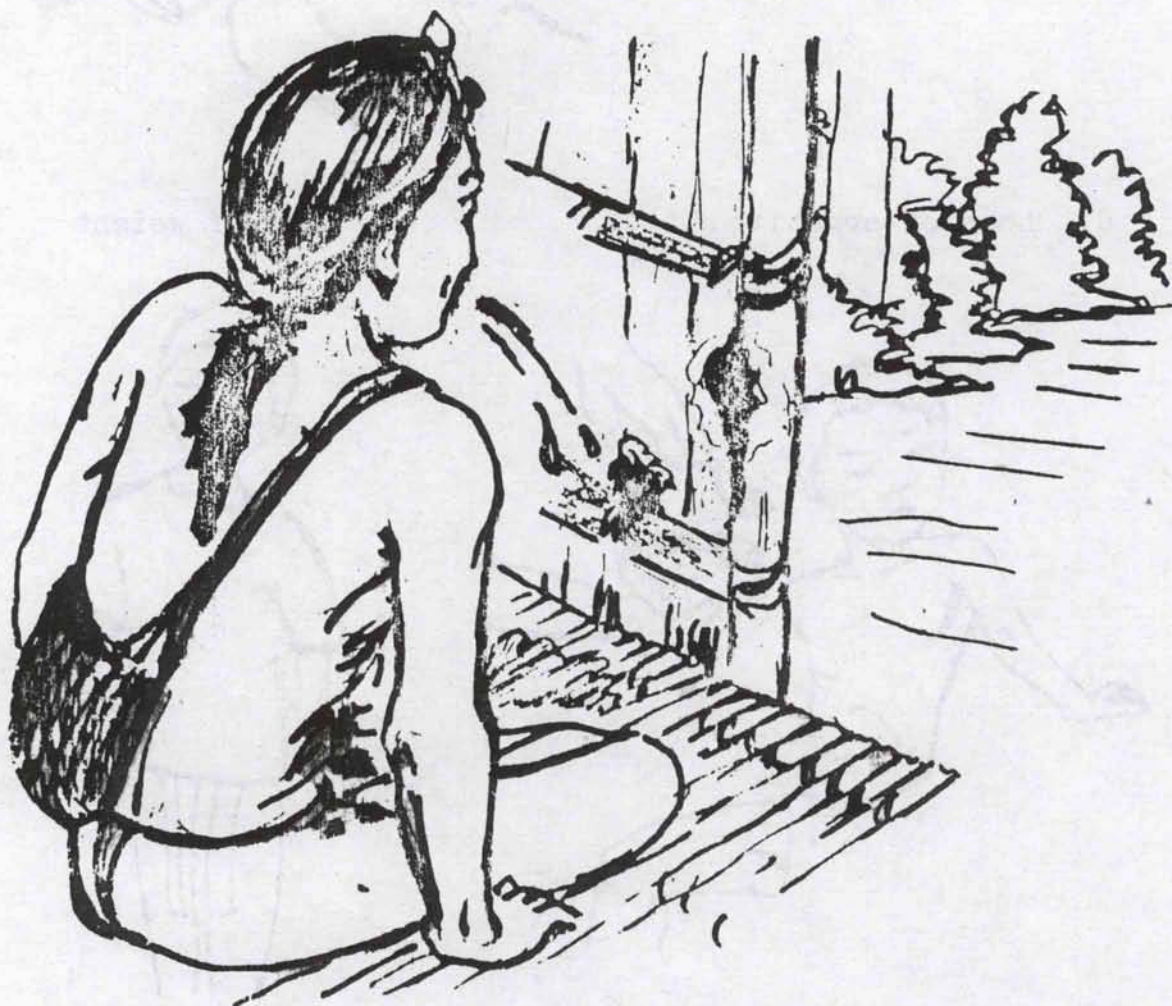




f. General body weakness



g. Coughing out of blood or blood streaked phlegm



## DIARRHEA

### OBJECTIVES

After completion of this unit, you should be able:

1. To describe diarrhea and its causes.
2. To explain the dangers of diarrhea.
3. To discuss how diarrhea should be managed.
4. To describe the signs and symptoms of dehydration.
5. To demonstrate how to prepare and administer ORESOL.
6. To discuss the importance of basic sanitation.
7. To explain the various methods:
  - a. to keep drinking water safe
  - b. to observe food hygiene
  - c. to dispose waste properly
  - d. to keep home and surroundings clean
  - e. to control insects and rodents

### What is Diarrhea?

Diarrhea is the passing of stools that contain more water than normal. It is characterized by loose, watery stools. The passing of two or more loose, watery stools in a day should be considered as diarrhea.



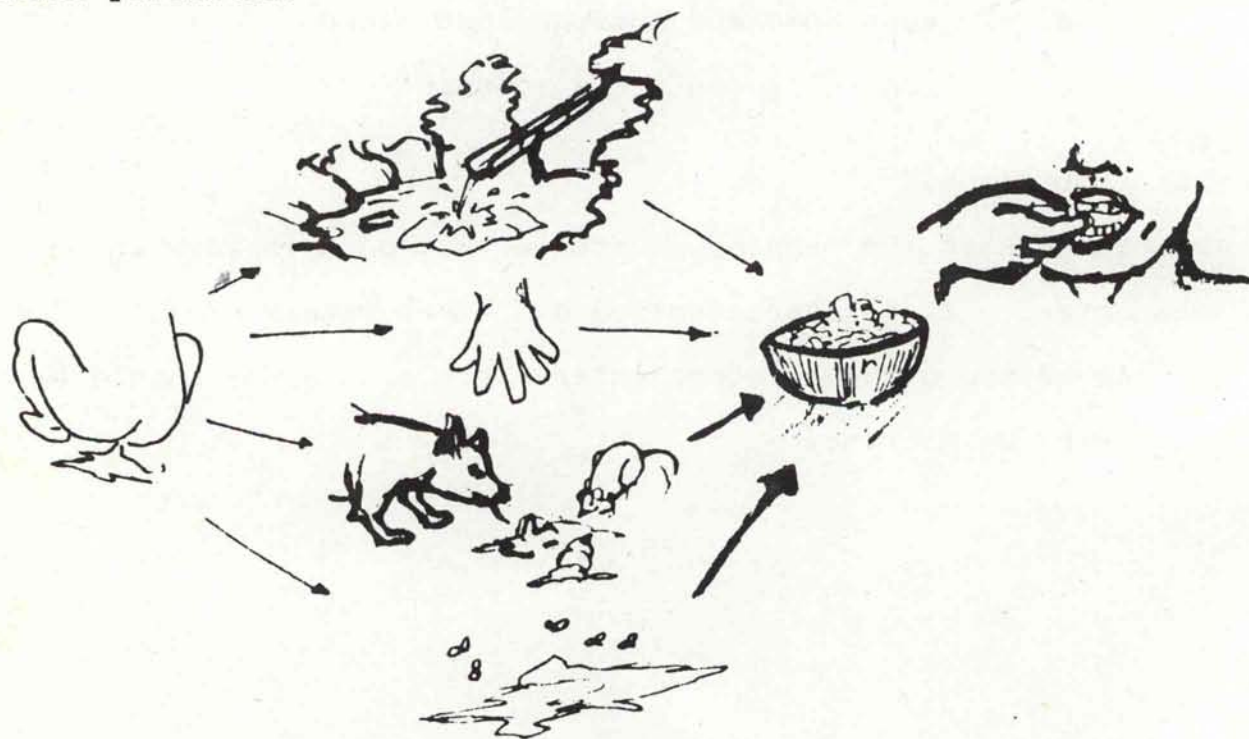
## What Causes Diarrhea?

Diarrhea often occurs when germs enter the intestines and afflict the bowels. These germs cannot be seen. They are introduced into the intestines through the mouth in one of the following ways:

1. through dirty or old food
2. through dirty water or other liquids
3. through dirty hands
4. through dirty cooking or eating utensils.

The germs in the stools can be passed from one person to another (see below). The germs leave the bowels through the stools, by which they can infect hands, liquids or food. Insects and dirt may also transfer germs from the stools to food.

Diarrhea may also be caused by malnutrition and by worms and other parasites.

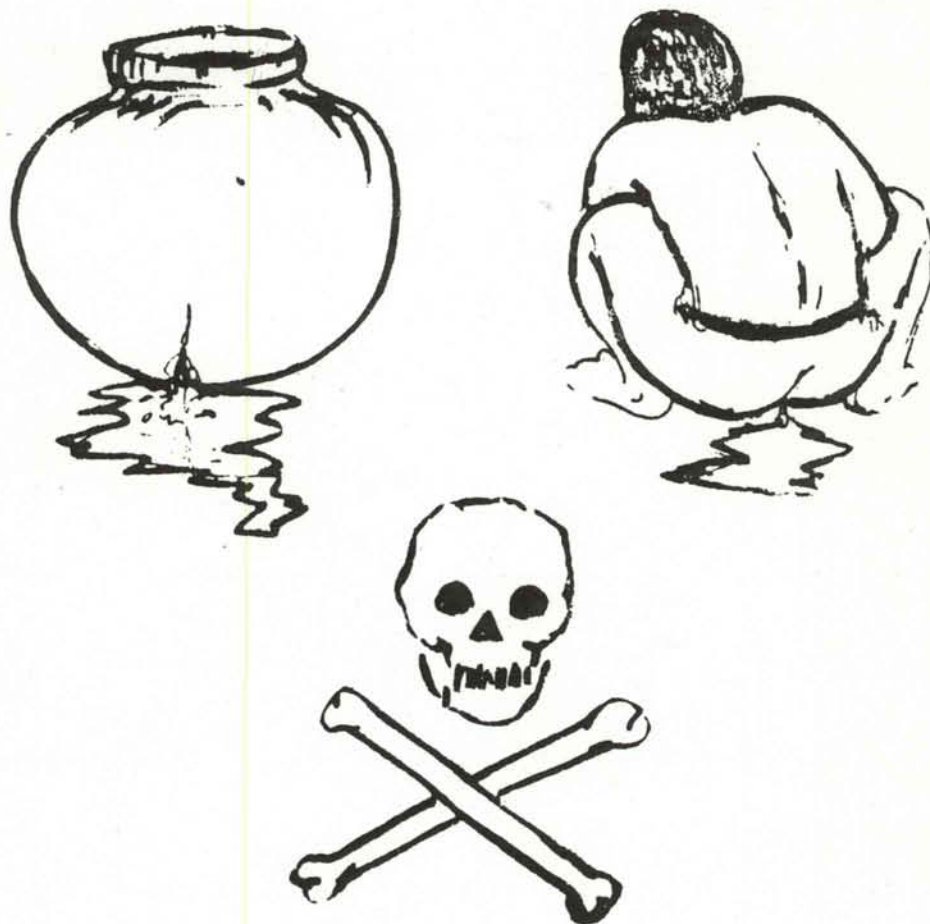


## What are the Dangers of Diarrhea?

The two main dangers of diarrhea are dehydration and under-nutrition. Both can lead to death.

### Dehydration

When a child has diarrhea, he has loose, watery stools which lead to the loss of a large amount of body fluids (water and salt). This results in DEHYDRATION or drying-out. The idea of dehydration is illustrated by the leaking jar in the picture below. If the body loses too much liquid, death will result.

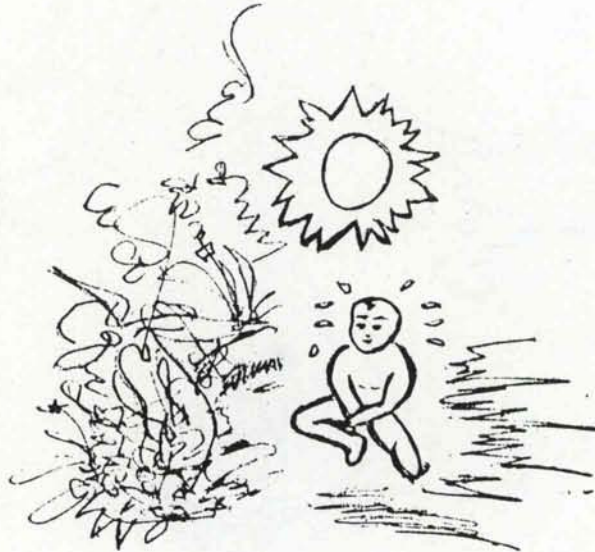




The body normally takes in salt and water it needs through drink and food. It loses water and salt through the stool, vomitus, urine and sweat. When someone is healthy, water and salt are absorbed into the body as food passes through the intestine. When diarrhea occurs, the intestine does not work normally. Water and salt are not absorbed so well, and more water and salt leave the body through the stool. The more diarrhea a child has, the more water and salt he loses. If more water and salt are lost from the body, the person becomes dehydrated. This is what happens in diarrhea.

Dehydration occurs faster:

1. In infants and small children because they need more water in proportion to their body weight.
2. In a hot climate because it induces sweating.



3. In patients with fever because of sweating and fast breathing which results in more water evaporation.

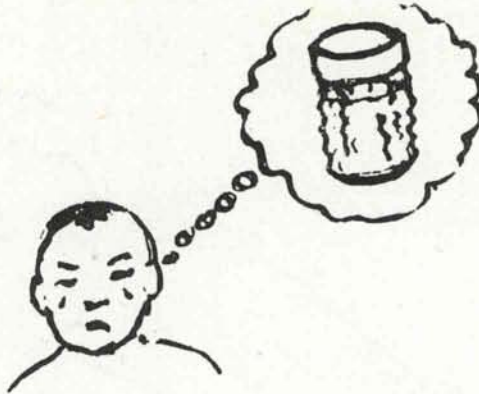


4. In a patient who vomits because of loss of body fluid and lack of liquid input.





The signs of dehydration are:



1. Thirst - this is the first sign of dehydration. A young child will show signs of thirst by crying.



2. Loss of weight - when a child becomes dehydrated, his body becomes lighter. A severely dehydrated child may have lost ten percent of his normal body weight. This weight loss occurs in a few hours or days.



3. Sunken, tearless eyes - this is a very important sign. The eyes of the child sink back because he has lost the fat behind them.



4. Dry mouth - a dehydrated child cannot produce enough saliva. His mouth and tongue then become dry and red.

5. Sunken fontanelle - the fontanelle is the soft place between the bones on the top of a baby's head. When a baby becomes dehydrated, his fontanelle sinks. The mother can feel the edge of his skull bones around it.



6. Loss of skin elasticity - the skin of a normal child is elastic. If the skin of his abdomen is pinched and then released, the skin quickly goes flat again. A dehydrated child's skin is dry and less elastic. It sticks up for some seconds before it goes flat.





7. Fast breathing - because of dehydration, a child's pulse is faster and weaker.
8. Little urine - a healthy child urinates about every three hours. Urination is reduced and less frequent in a dehydrated child because he tries to save water. When a dehydrated child is treated, he passes much urine again.
9. Shock - this is caused by severe dehydration. A child is quiet and his skin is pale and cold. Shock is a very serious sign. It requires intravenous fluids immediately.



#### How should Diarrhea be Treated?

There are two important things to do in the treatment of diarrhea:

1. To prevent dehydration from occurring if possible, and
  2. To treat dehydration quickly and effectively if it does occur.
1. Prevention of dehydration

Dehydration can usually be prevented in the home by giving more fluids than the usual amount as soon as

diarrhea starts. The typical fluids are breastmilk (for infants with diarrhea), water, fruit juices and homemade sugar and salt solutions.

Homemade sugar and salt solution is an effective liquid in the prevention of dehydration. The requirements and procedure in the preparation of this fluid as well as the recommended dosage are described below.

Requirements:



1. a teaspoon



2. a clean container



3. salt, as used  
on food for  
cooking



4. sugar of any sort, unrefined  
lump sugar or purified



5. drinking water or  
(clean or boiled water)

Steps in the Preparation of Sugar and Salt Solution:

1. Measure one liter of drinking water into the container (if water is not safe to drink, boil for five minutes and let cool). Some empty containers

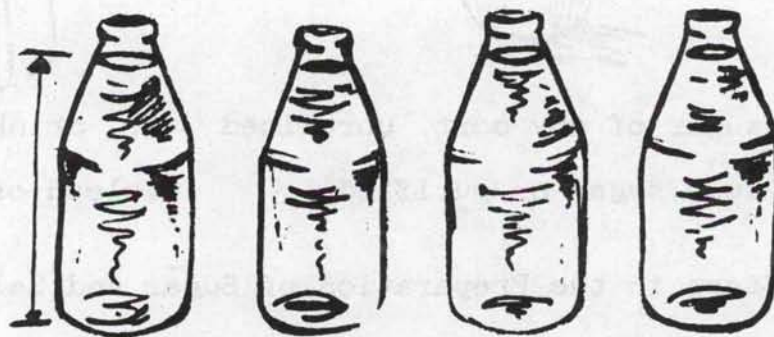


which may be used for measuring one liter of water are as follows:

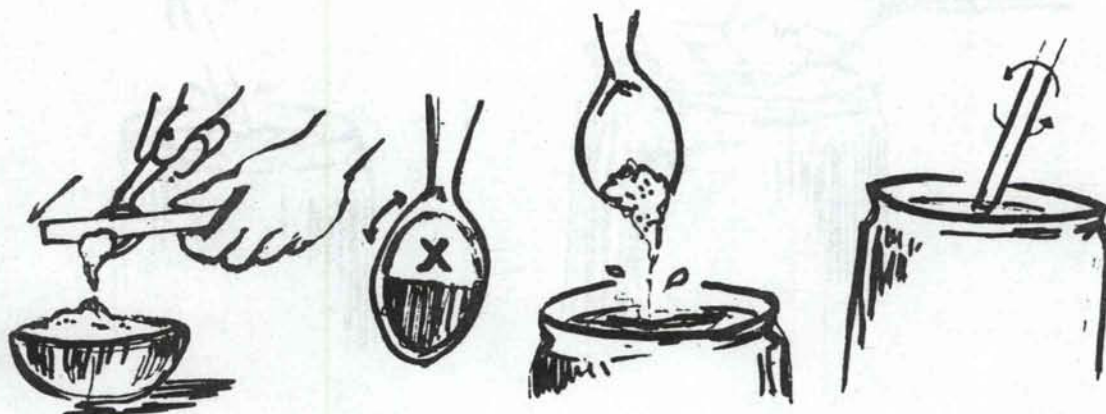
- a. Five small Nescafe diamond glasses filled with water until the horizontal line.



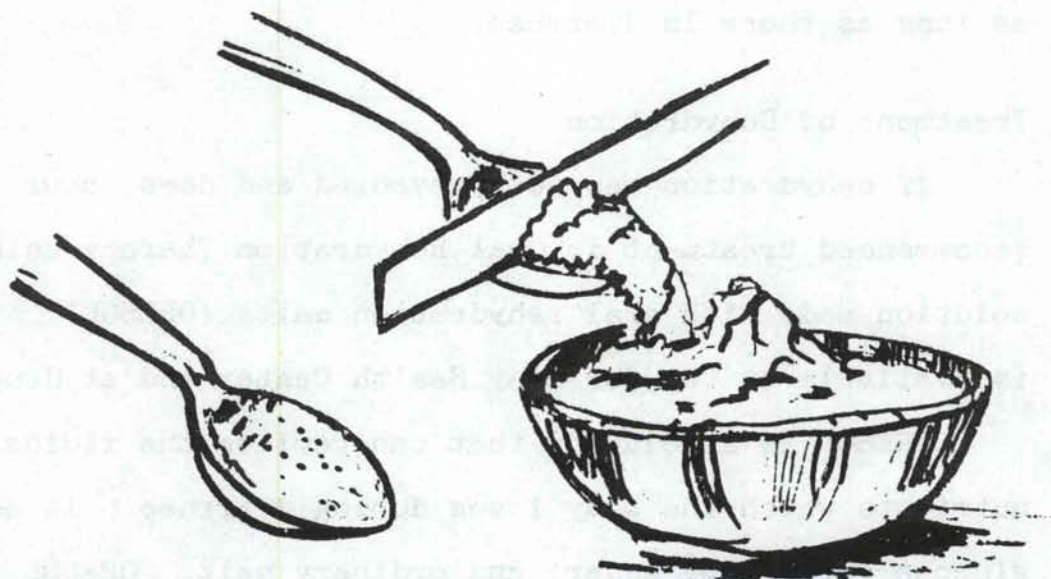
- b. Four gin bottles filled with water.



2. Take salt in a teaspoon, level it with a knife or flat object. Take  $\frac{1}{2}$  of it and add it to the water and mix well.

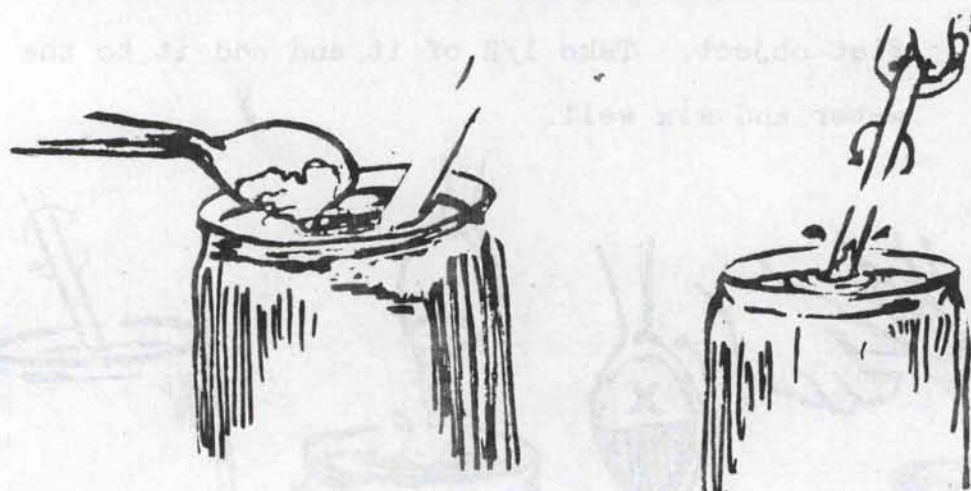


3. Take two level spoonfuls of sugar.





4. Put the sugar in the water and mix well.



**Recommended Dosage (of Sugar and Salt Solution) for Children:**

Give small amount, a few teaspoonfuls at a time. A child needs a cupful of this solution to replace water lost in each stool. One cupful for each diarrhea stool. Continue as long as there is diarrhea.

**2. Treatment of Dehydration**

If dehydration was not prevented and does occur, the recommended treatment is Oral Rehydration Therapy using a solution made with oral rehydration salts (ORESOL). This is available at the Barangay Health Center and at drugstores.

ORESOL is a solution that can replace the fluids and nutrients which the body loses during diarrhea. It contains glucose (a form of sugar) and ordinary salt. ORESOL is an effective treatment for dehydration in children and adults alike.

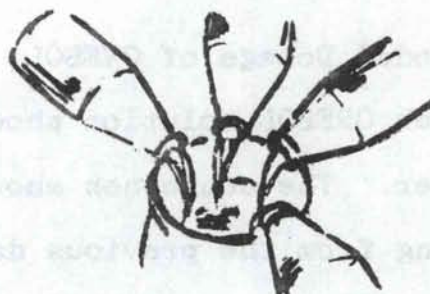
The requirements and steps in the preparation of ORESOL and the recommended dosage are as follows:

**Requirements:**

1. a clean container
2. drinking water (clean or boiled water)
3. a clean spoon for mixing the liquid
4. one packet of ORESOL powder

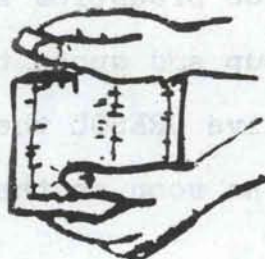
**Steps in ORESOL preparation:**

1. Measure one liter of drinking water into the container (if water is not safe, boil for five minutes and let cool).



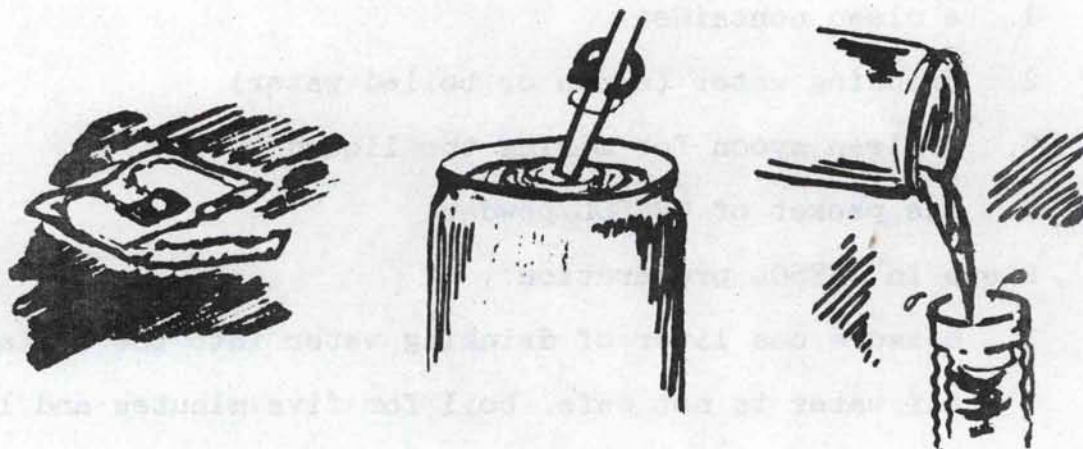
The measuring containers (family size soft drink bottle, Nescafe diamond glass or gin bottle) mentioned earlier may be used for measuring one liter of water.

2. Open both compartments of the ORESOL packet and empty all contents of the packet into the container with one liter of water.





3. Mix all the contents of the two compartments of ORESOL in the water until all the powder is dissolved.



#### Recommended Dosage of ORESOL

Fresh ORESOL solution should be mixed each day in a clean container. The container should be kept covered. Any solution remaining from the previous day should be thrown away. The recommended dosages for children are given below.

#### Infants Less than One Year

Give  $\frac{1}{3}$  to  $\frac{2}{3}$  of a glass of ORESOL every hour for six hours. Give water after every two parts of ORESOL. Continue giving ORESOL as long as there is diarrhea. For infants who are breastfed, do not use feeding bottles when giving ORESOL. The child might not like to be breastfed again and this could cause undernutrition. Use a cup and spoon to give ORESOL. For infants who are not breastfed, give ORESOL the same way that they are fed food and other fluids. As soon as they get well, give them solid foods.

### Children One Year to Less than Two Years

Give 2/3 of a glass of ORESOL every hour for six hours. Give water after every two parts of ORESOL. Continue ORESOL treatment as long as diarrhea continues.

### Children Two Years and Above

Give 1-1/2 glasses of ORESOL every hour for six hours. Give additional water. Continue ORESOL while there is diarrhea. ORESOL should be stored in a cool place. In case the contents of the ORESOL packet have melted, become brown or caked, it can still be used if dissolved completely in water.

Other things that should be noted when using ORESOL treatment are:

1. Sometimes, vomiting may occur when giving ORESOL. This is not a bad indication, and treatment should be continued. Let the patient rest for 5-10 minutes, then resume giving ORESOL in small amounts at frequent intervals.
2. Breastfeeding should be continued. Liquids, soft foods and the usual foods should be given as tolerated. The amount should be increased as the patient recovers. The stomach should not be rested during a diarrhea episode.
3. If edema around the eyelids occur, stop administering ORESOL temporarily and continue giving other fluids like rice water or fruit juices.
4. If the patient's condition does not improve, take or refer him to the nearest health center or hospital.



## **Prevention of Undernutrition**

The other danger of diarrhea is undernutrition. It can be prevented by giving enough and the correct food during diarrhea.

Children fed throughout the serious stage of diarrhea get enough nutrients and gain more weight than unfed children. During oral rehydration by ORESOL and other fluids, the mother should continue to give her milk, alternating it with ORESOL and other liquids. The mother should breastfeed the baby now and then since the baby may be weak and tired.

During oral rehydration, give food especially prepared for infants. Choose foods that are very nutritious and which the baby likes. Give these five or more times daily. To let the child take as much milk as he can, feed him after oral rehydration.

During diarrhea, the child uses his stored energy. As soon as diarrhea stops, the child's appetite greatly increases. Take this chance to give him his usual food in addition to some or all the food he missed during illness.

## **Basic Sanitation**

Diarrhea can be prevented by observing sanitary measures.

These include drinking safe water, food hygiene, proper disposal of waste, home sanitation and control of insects and rats.



#### 1. Drinking water

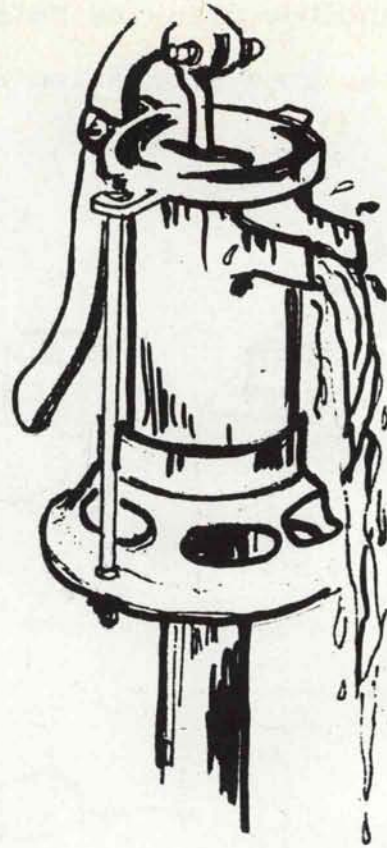
Water is safe to drink when it is taken from safe sources and does not contain germs, chemicals or materials that can cause disease or even death.

Sources of water that are safe for drinking include:

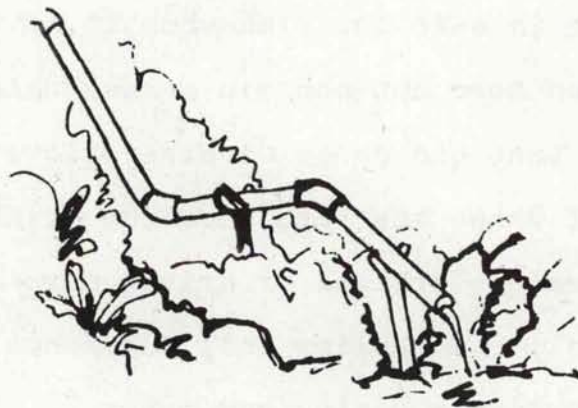
- a. Deep well - drilled or driven more than 100 feet.
- b. Dug well - a shallow well dug manually and enclosed with concrete casing and cover.
- c. Piped water - comes from a safe source through pipes.



- d. Artesian well - a shallow or deep well where water is under pressure and may or may not rise above the ground level.



- e. Spring - natural flow of water coming from the ground usually at the foot of a hill or mountain.



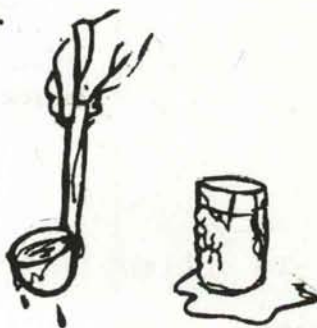
- f. Rainwater - as long as it is properly collected.



Some practices to keep water safe for drinking are as follows:



- a. Use a jar with cover for storage.



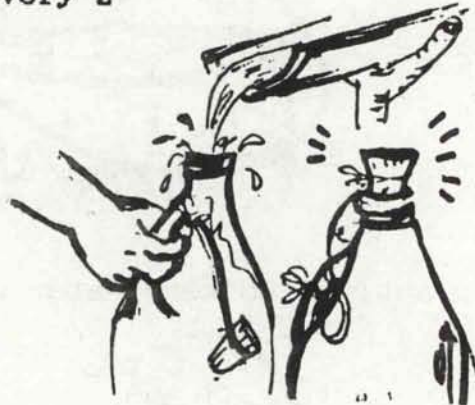
- b. Use a clean dipper to get water from the container to the drinking glass or cup.



- c. Use a clean container for storage.



- d. Change the water every 2 or 3 days.



- e. Clean drinking glass or cup with soap and water.



To collect and transport drinking water from a safe source:

- a. Use clean, covered container.
- b. Wash hands and container when fetching water.

Unsafe water can be made safe for drinking by:

- a. Boiling the water for 5 minutes after boiling bubbles have appeared.



- b. Disinfection using chlorine tablets.

Ask your sanitary inspector for instructions.

## 2. Food Hygiene

Observance of food hygiene includes the measures below:

- a. Food sources - make sure that:
  1. Meat comes from healthy animals.





2. Fish, shells come from clean water.



3. Vegetables and fruits are fresh and come from clean sources.



4. Tins of canned foods do not bulge and are free from rust.



b. Food storage

1. Store food in clean containers and keep cool.



2. Protect food from flies, insects, rats, etc.



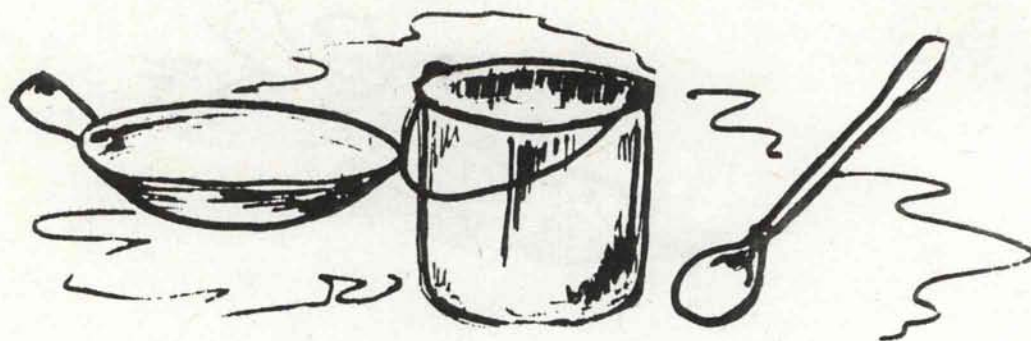
3. Discard spoiled food.





c. Food preparation

1. Prepare food with clean utensils/equipment.



2. Prepare food with clean hands.



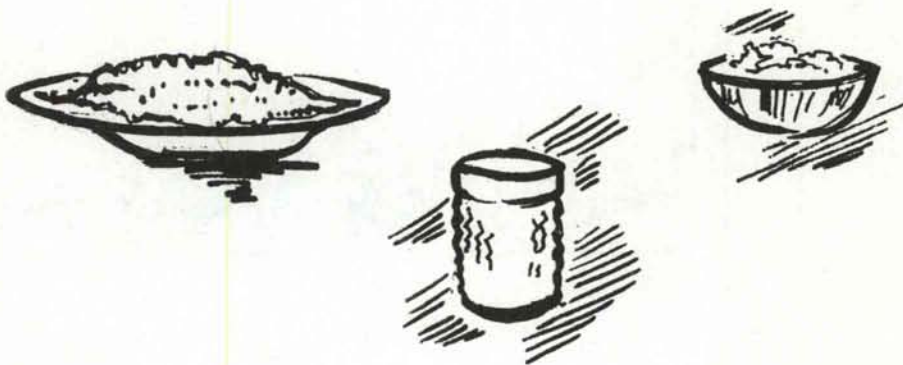
3. Cook food properly.



4. Food should be prepared by a healthy member of the family.



5. Serve food in clean containers.



### 3. Waste Disposal

Proper waste disposal is important because it:

- a. Prevents contamination of fingers, food and water by germs, worm eggs and other parasites that pass out of the stools or are present in garbage.
- b. Prevents the spread of diseases such as diarrhea to other members of the family and community.



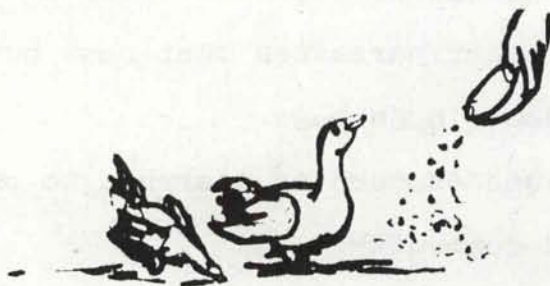
- c. Prevents insects, such as flies, cockroaches and ants, rodents and animals from coming into contact with waste.
- d. Waste can be disposed in the following ways:
  - 1. Burying - deposit in a pit and cover with soil.



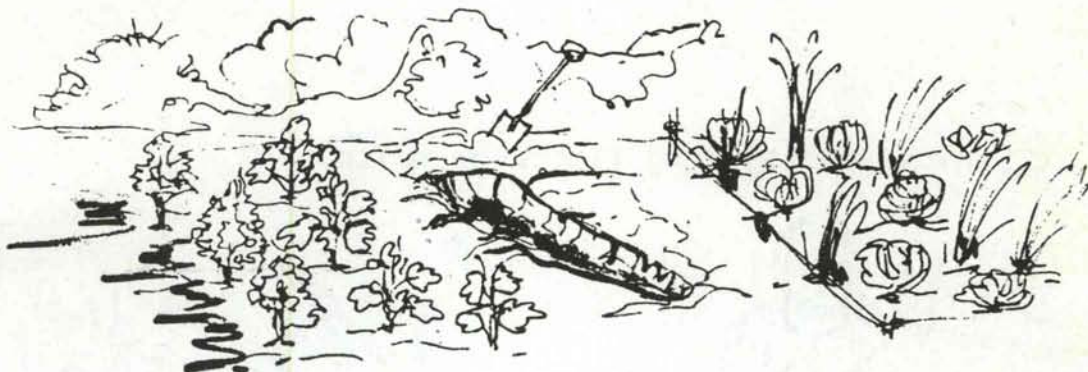
- 2. Burning - in a pit or on the ground.



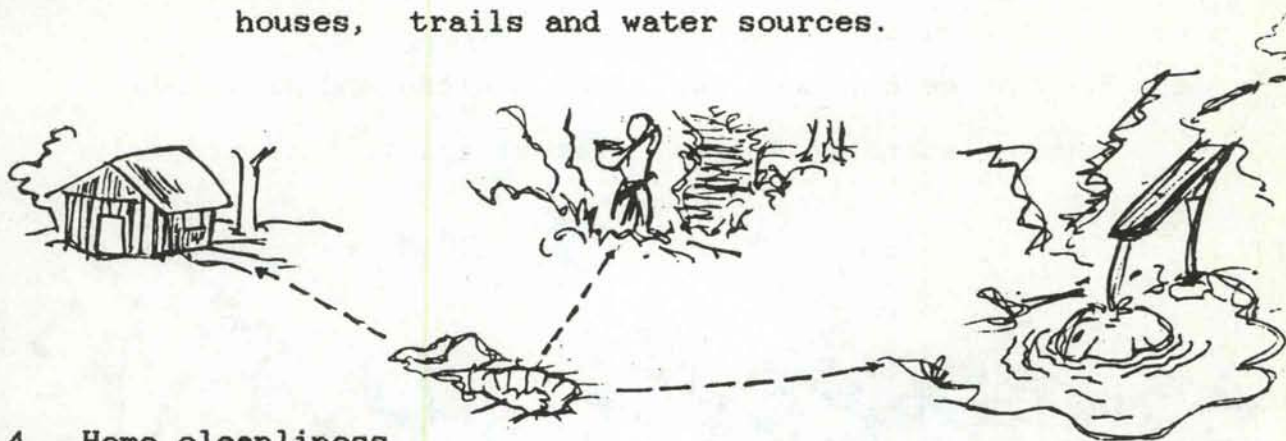
- 3. Feeding to animals - left over food and other garbage can be fed to pigs, chickens and other poultry or livestock.



4. Composting - decompose garbage, leaves, rubbish and animal waste in a pit and cover with soil. This compost can later be used as soil conditioner and fertilizer.

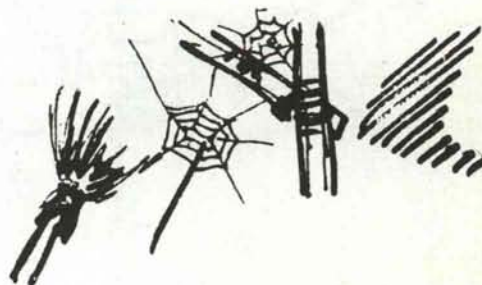


5. Be sure that compost pits are distant from houses, trails and water sources.



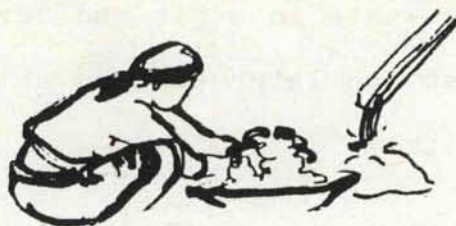
#### 4. Home cleanliness

- a. Sweep floor daily. Remove cobwebs and clean walls regularly.





b. Wash clothes frequently.



c. Avoid spitting on floors or walls.



d. Keep house surroundings clean. Clean and drain old tins of standing water. Dispose all rubbish properly.



- e. Keep domestic animals from licking children. Keep other animals from play area of children.

## 5. Insect and Rat Control

Household pests are carriers of many diseases. For instance, gastroenteritis, diarrhea, cholera, dysentery and typhoid germs are carried by flies. Malaria and H-fever are transmitted by mosquitoes. Destroying the breeding and harboring places of insects and vermin prevents the spread of disease. The table below describes the breeding and harboring places of common household insects and rats and how to get rid of them.

Insect/vermin	Breeding and Harboring Places	Ways of Eliminating
1. Mosquitoes	Slow flowing or stagnant water, tin cans, tree holes, large leaves holding rain water	Drain stagnant water, remove tin cans and leaves, change water in storage tanks weekly.
2. Flies	Unsanitary toilet, garbage dumping places, animal manure, other decaying organic matter.	Improve toilet. Cover dumping site with soil at least 2 feet deep, remove all manure and other decaying organic matter.
3. Cockroaches	Dark, damp places	Clean areas and cover food and garbage areas.
4. Rats	Unsanitary toilet, garbage dumping places.	Improve toilet. Cover dumping site with soil at least 2 feet deep.



Insect/vermin	: Breeding and : Harboring Places	: Ways of Eliminating
5. Ants	: Near or under house, : near food sources.	: Destroy mounds and : store food properly, : clean garbage : areas, remove food : materials from the : areas.

## INTESTINAL PARASITISM

### OBJECTIVES

After mastery of this section, you are expected to be able:

1. To discuss intestinal parasitism, its causes and modes of transmission.
2. To explain the effects of intestinal parasitism on the health of the infected person.
3. To describe the signs and symptoms produced by worms.
4. To explain how intestinal parasitism should be treated.
5. To discuss the various methods of prevention and control of intestinal parasitism.

**What is Intestinal Parasitism and how is it Caused and Transmitted?**

Intestinal parasitism is an infection in which parasitic worms live in the intestines and harm the infected person.

Intestinal worms are transmitted by the ingestion of fertile eggs present in dirty hands, food and water which have been contaminated by the stools of infected individuals.

Some intestinal worms are transmitted by other ways. The mode of infection is by penetration of the skin by infective eggs when a person comes in contact with soil such as by walking bare-foot or by playing with soil as in the case of children.



# Life Cycle of Worms



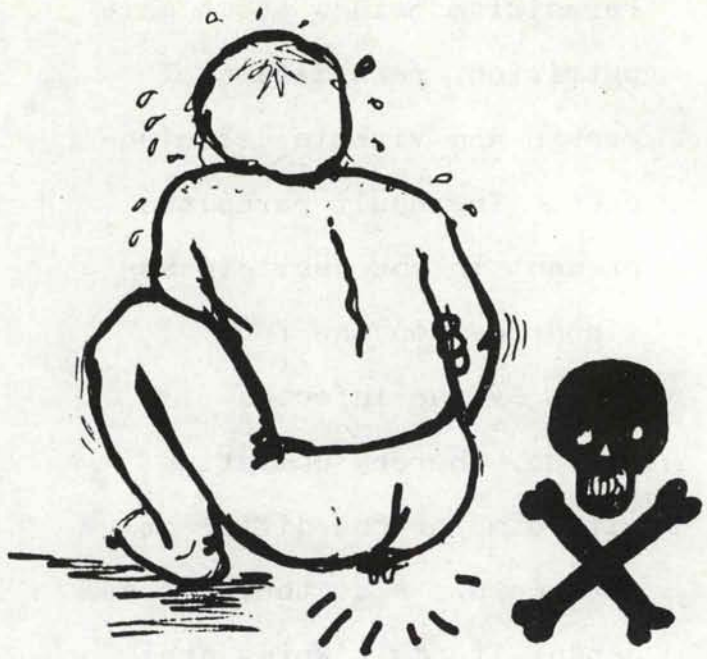
## What are the Effects of Intestinal Parasitism on the Health of the Infected Person?

1. Parasitism brings about malnutrition, retardation of growth and vitamin deficiencies. The adult parasites present in the small intestines feed on the food eaten by the infected person, thereby competing with him for the different nutrients. Also there is a danger if adult worms are vomited because the worms may block the air passages and cause suffocation and death to the infected person. The worms may also try to pass through the ears and produce ear infection. Inside the small intestines, the worms may get entangled and produce a bolus which can obstruct the intestines or the worms can go to

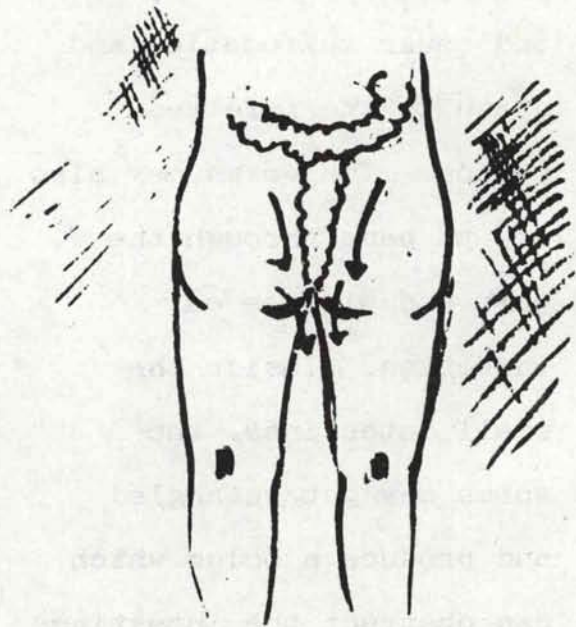




other organs of the body.  
Any of these conditions  
may cause death to the  
infected person.



2. Very heavy infection may cover the whole length of the large intestine up to its terminal portion. This causes weakening of the intestinal wall resulting in protrusion of the rectum.



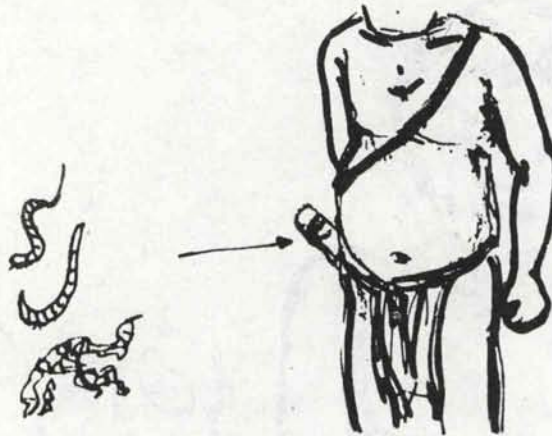
3. Parasitism may also result  
in anemia due to the sucking  
of blood by the adult  
parasites.



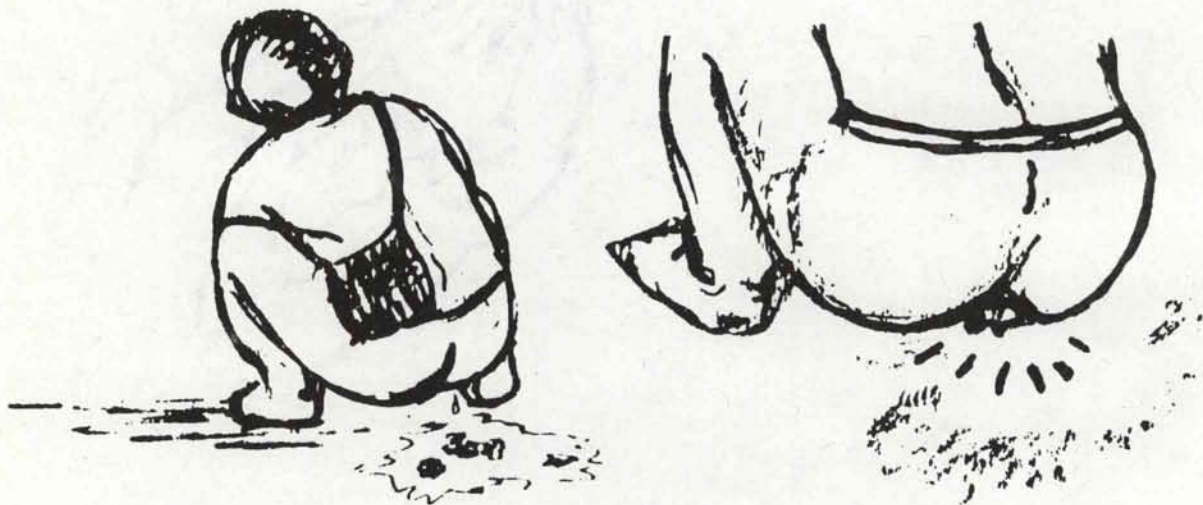


## What are the Signs and Symptoms of Intestinal Parasitism?

1. The symptoms due to parasite infection are vague abdominal discomfort and acute abdominal pains. Sometimes adult worms are passed out through the anus or nose or are vomited. Children with many large intestinal worms often have very large and swollen abdomens.



2. Diarrhea to severe dysentery (bloody stools). The rectum can be seen protruding outside the anus in very severe cases.



3. If the infection is heavy, symptoms of anemia appear such as pallor of the skin, lips and eyelids.



#### How is Intestinal Parasitism Treated?

Intestinal parasitism can be treated with the use of ipil-ipil seeds.

Preparation: Crush mature ipil-ipil seeds into a powder.

Age	:	Amount of powdered seeds needed
Adult	:	1 teaspoon
10-12 years	:	1/2 teaspoon
7-9 years	:	1/4 teaspoon

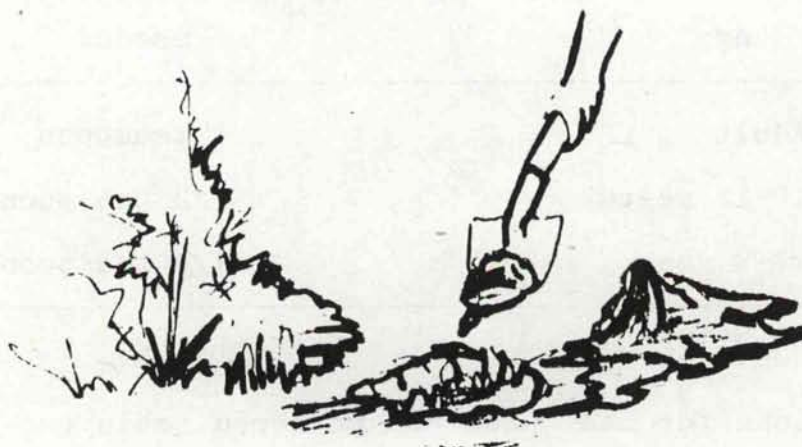
Directions for use: Eat the powdered seeds two hours after supper.



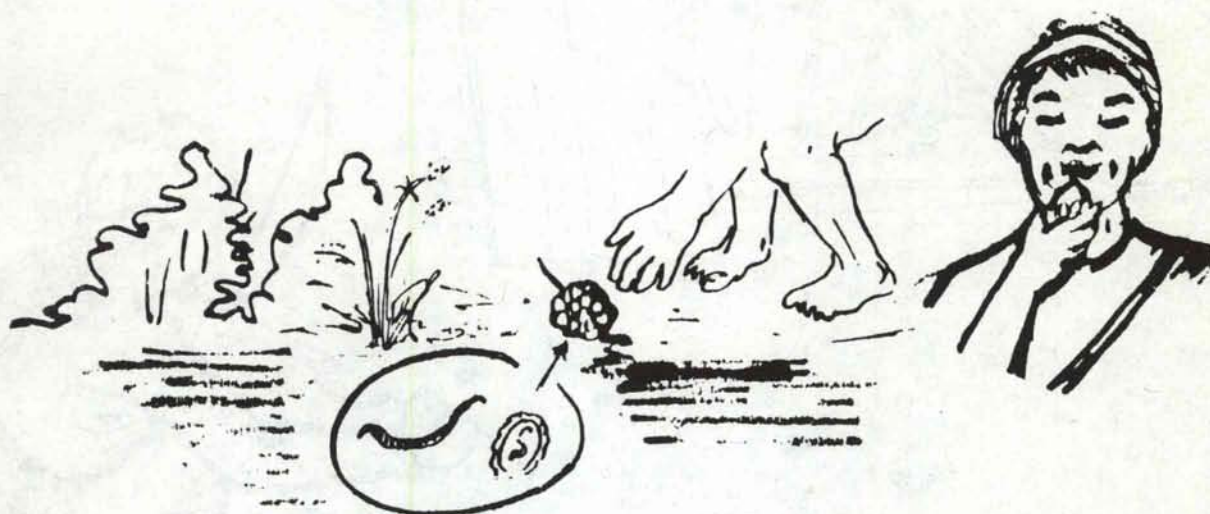
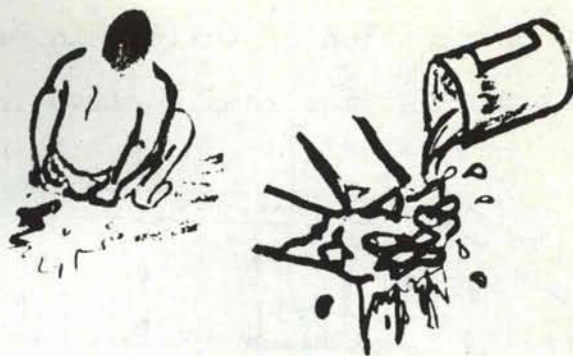
**What are the Preventive and Control Measures for Intestinal Parasitism?**

Infections where the infective eggs of the parasites are passed by human feces and the mode of transmission to a new host is by ingestion of the infective eggs, the preventive and control measures should include:

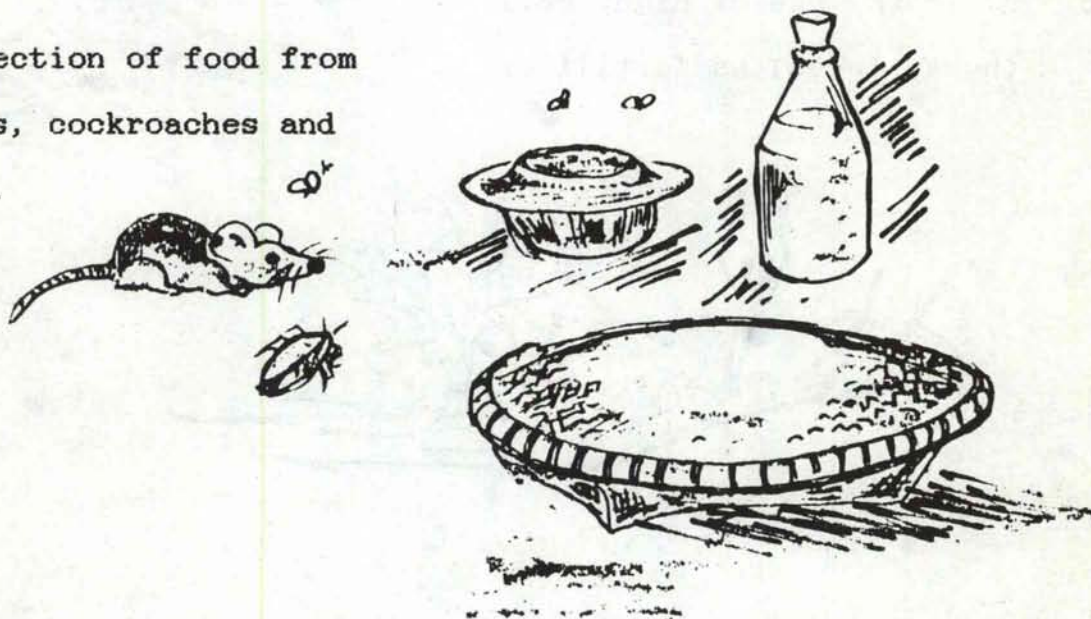
1. Proper disposal of human feces to prevent soil contamination.



2. Observance of hygienic practices, particularly washing of hands after defecation and avoidance of eating food which has been dropped on the ground or floor.

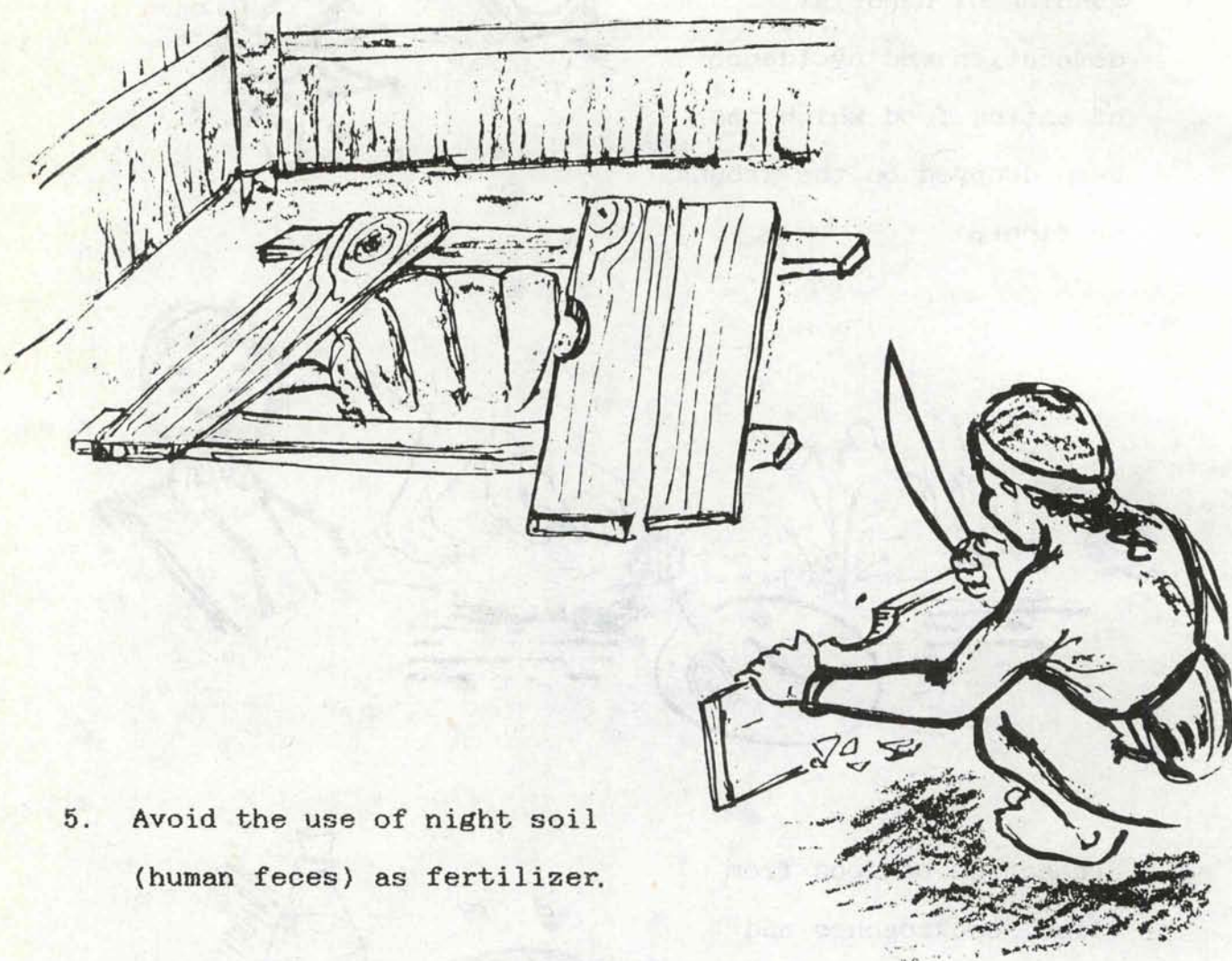


3. Protection of food from flies, cockroaches and rats.





4. Construction of toilets in order to prevent infective eggs that may remain alive in the soil from spreading.



5. Avoid the use of night soil (human feces) as fertilizer.



6. Adequate treatment of infected individuals.



7. Control measures against insects and rodents.



In parasite infection where the mode of transmission is by the penetration of the skin by the infective larvae, prevention and control measures should also include the avoidance of skin contact with the soil.



In addition to the measures already mentioned, other measures should include:

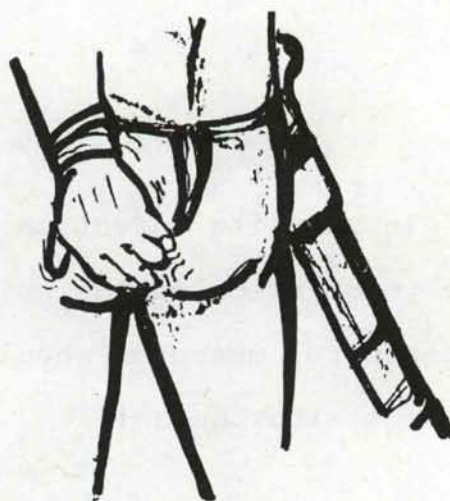
1. Daily bathing



2. Proper cleaning of the anal area with soap and water after each defecation



3. Avoidance of nail biting and scratching of the perineal area





4. Frequent changing of clothes



5. Reduction of overcrowding



6. Maintenance of sanitation inside/outside the house





## MALARIA

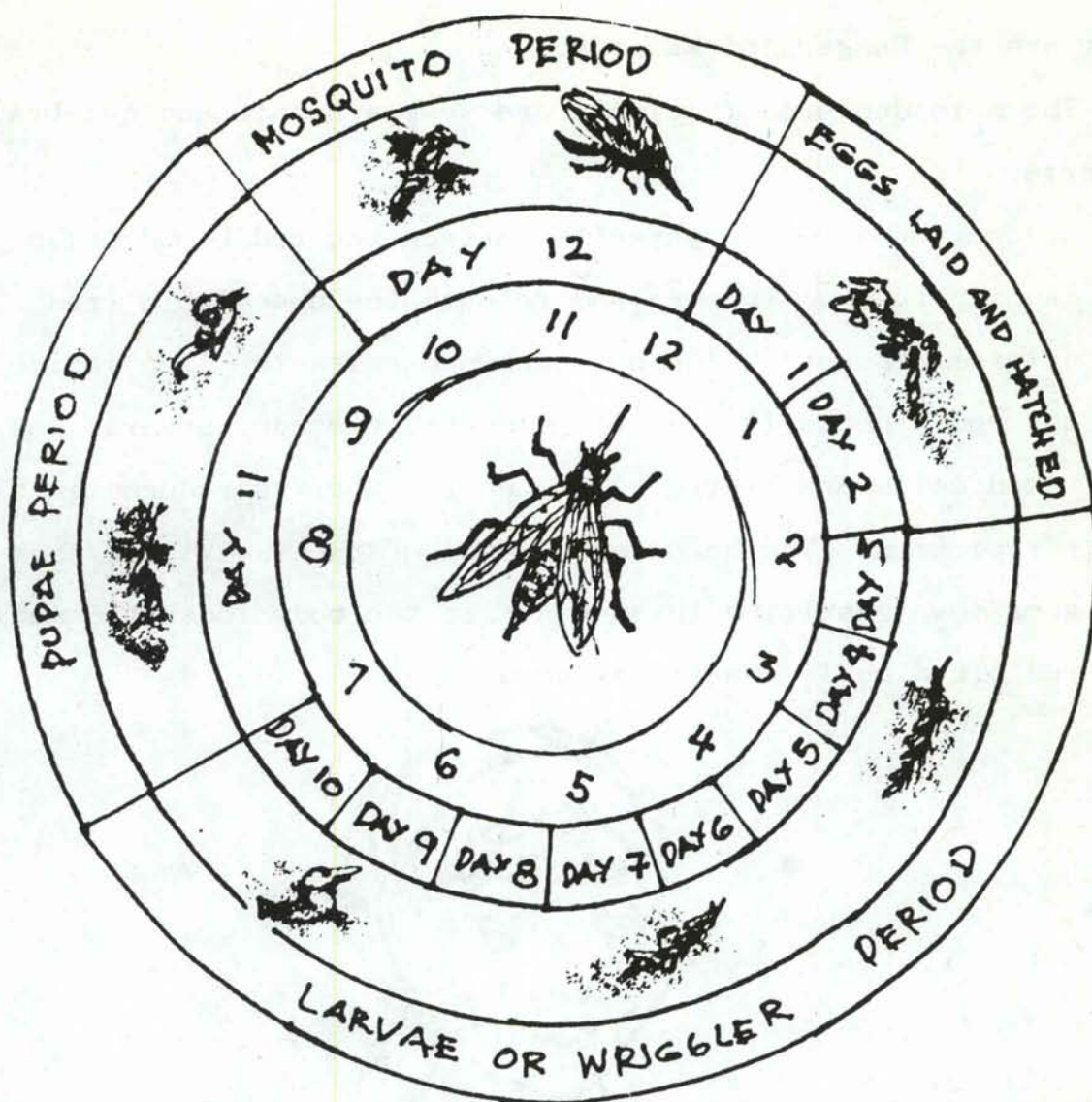
### OBJECTIVES

After review of this module, you should be able:

1. To describe malaria and its cause.
2. To discuss the dangers of malaria.
3. To describe the signs and symptoms of malaria.
4. To explain how malaria should be treated.
5. To discuss the various methods of prevention and control of malaria.

#### What is Malaria and its Cause?

Malaria is an infection caused by parasites. These parasites are transmitted from an infected person to another person through the bites of the adult female anopheles mosquito. The adult female mosquitoes lay their eggs on the surface of stagnant water in marshes, streams, muddy holes, pits, containers such as cans and bottles, tree holes, bark of trees, and large leaves holding rain water. The eggs hatch into larvae (wigglers), the larvae change into comma-shaped pupae and from pupae adult mosquitoes emerge. The following figure shows the development of the mosquito.





## What are the Dangers of Malaria?

The main dangers of malaria are severe anemia and cerebral malaria.

1. Severe anemia - the parasites attack the red blood cells causing them to rupture and release the hemoglobin (red colored pigment). The hemoglobin carries the iron inside the red blood cell. As the disease proceeds, several red blood cells are destroyed so their number is reduced in blood circulation. The hemoglobin level of the individual thus goes down resulting in anemia. If the body loses too many red blood cells, death may occur.



2. Cerebral malaria - the parasites may also invade the brain which reacts to their presence in the form of inflammation. This is characterized by convulsions, disorientation (loss of sense of direction or location), delirium (mental confusion) or coma (loss of consciousness). Infection of the brain by the malarial parasites may interfere with the growth and development of this organ especially during the first four years of life.

## What are the Signs and Symptoms of Malaria?

The typical attack occurs every 2 or 3 days. It has three stages:

1. It begins with chills and often headache. The individual shivers or shakes.



2. Chills are followed by fever. The person is weak, flushed (red face), and at times delirious (not in his right mind). The fever lasts several hours.





3. Finally the person begins to sweat and his temperature goes down. After the attack, the person feels weak.



Usually malaria causes fever every 2 or 3 days, but in the beginning it may cause fever daily. Also, in small children and persons who have had malaria before, the fever pattern may not be regular or typical. For this reason anyone who suffers from unexplained fever should have his blood tested for malaria.

Chronic (long standing) malaria often causes an enlargement of the spleen (where the dead or destroyed red blood cells are disposed) and anemia.

#### How Should Malaria be Treated?

1. If you suspect malaria or observe a person suffering from repeated fever, he or she should have a blood smear taken.
2. In the meantime while waiting for the results of the blood smear Aralen (Chloroquine), Fansidar (Sulfadoxinepy

rimethamine) or whatever herbal medicine known to work best in the area should be given to the patient. Using Aralen with 150 mg. of chloroquine base, adults should take 3 tablets once a day for 3 days. For children's dosages, refer to the following tables.

---

C H L O R O Q U I N E (ARALEN) for 3 days

---

Age group	: 1st Day : :No. of tablets :	: 2nd Day : :No. of tablets :	: 3rd Day : :No. of tablets :
Under 6 months	: 1/4 :	: 1/4 :	: 1/4 :
6-11 months	: 1/2 :	: 1/2 :	: 1/2 :
1-2 years	: 1 :	: 1/2 :	: 1/2 :
3-6 years	: 1 :	: 1 :	: 1 :
7-11 years	: 2 :	: 1-1/2 :	: 1-1/2 :
12-14 years	: 3 :	: 2 :	: 2 :

---

For dosages using Fansidar, refer to the table below.

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F A N S I D A R (single dose)

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Age-group	: No. of tablets
0-4	: 1/2
4-8	: 1
8-14	: 2
Adult	: 3

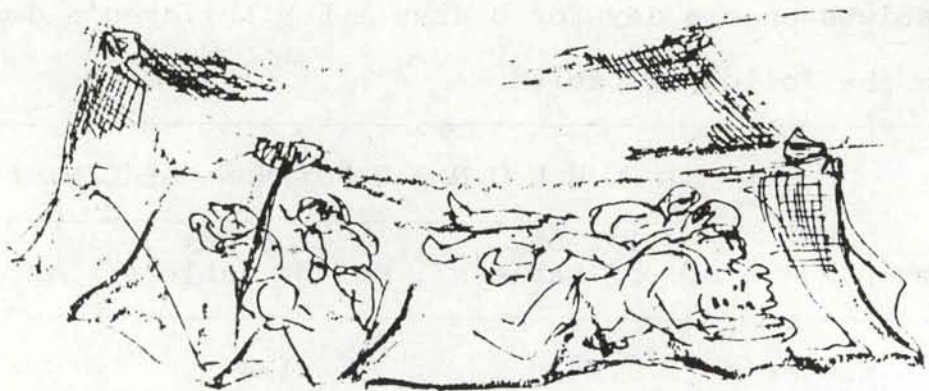
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3. If a person who possibly has malaria begins to have fits, he may have cerebral malaria. Refer him to the nearest health center.

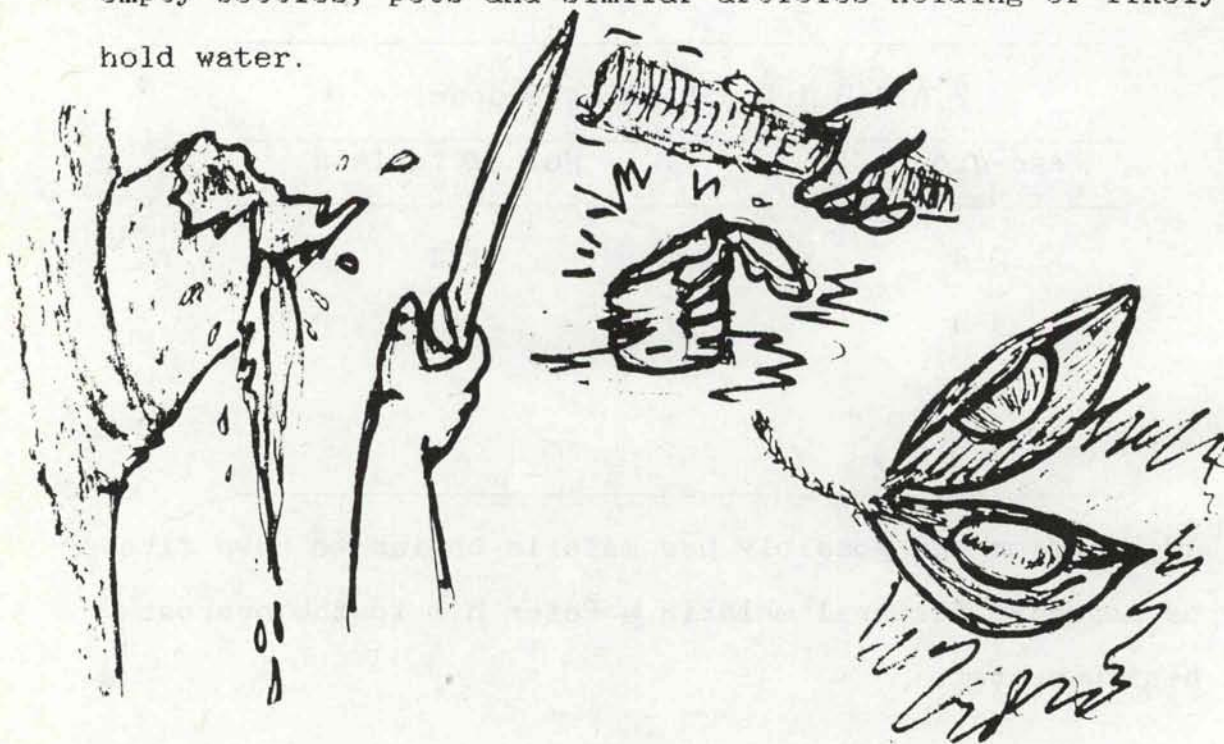


## How to Prevent and Control Malaria?

1. Avoid mosquitoes. Sleep underneath a mosquito net or a thin cloth.



2. Destroy the adult mosquitoes and their larvae (wigglers). Clear the community of ponds, canals, pits or containers that collect water. Fill with soil or drain ponds, canals and pits to prevent accumulation of water. Ensure proper disposal or destruction of containers such as cans, broken or empty bottles, pots and similar articles holding or likely to hold water.



3. If you suspect malaria, get treatment immediately. After you have been treated, mosquitoes that bite you will not pass malaria to others.



4. Malaria can also be prevented or its effects greatly reduced by taking different doses of anti-malaria medicines on a regular schedule. Aralen can be taken each week in the following dosages:

Children under 3 years -  $\frac{1}{4}$  tablet

Children 3-7 years -  $\frac{1}{2}$  tablet

Children 8-12 years - 1 tablet

Adults - 2 tablets

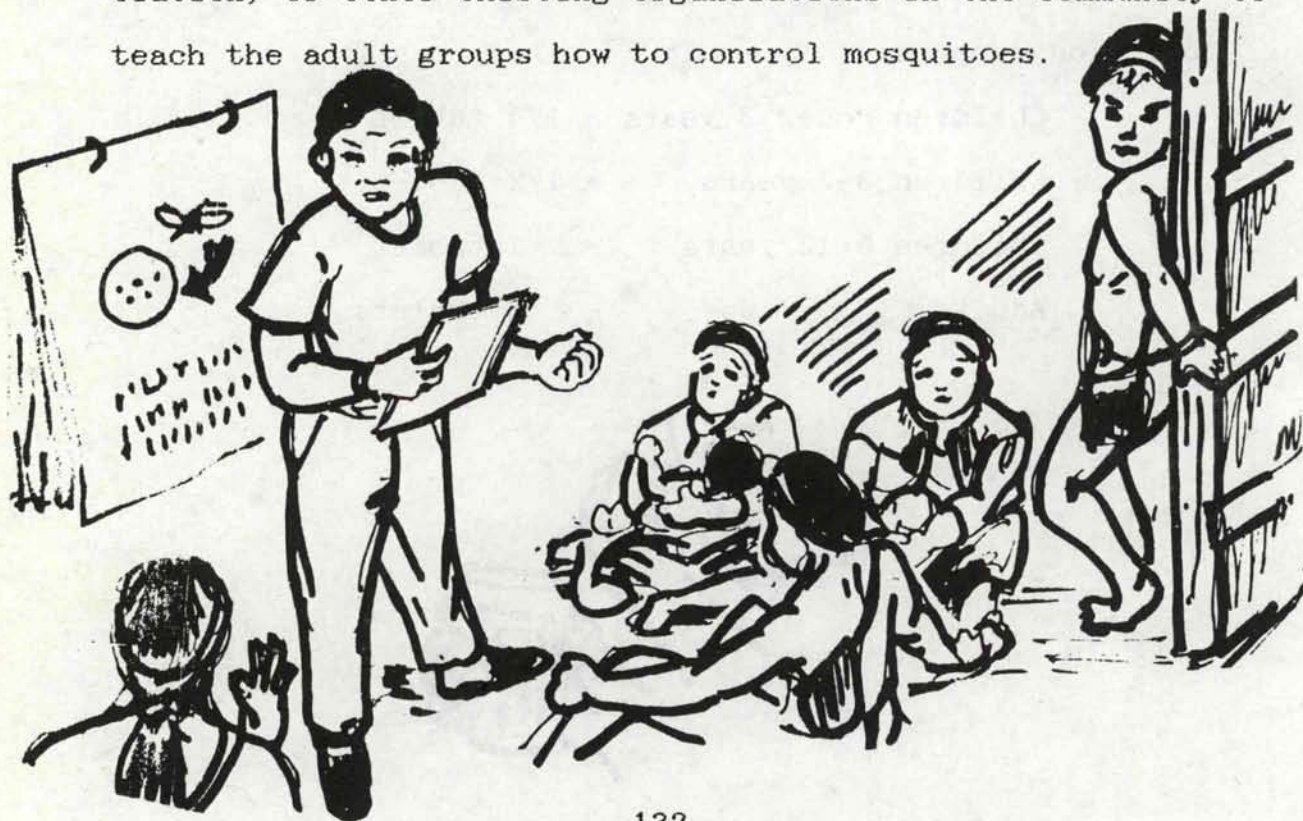




5. Utilize the schools to teach the pupils the fundamentals of controlling mosquitoes so that they could apply their acquired knowledge in their own homes and premises.



6. Utilize the barangay council, Parents - Teachers Association, or other existing organizations in the community to teach the adult groups how to control mosquitoes.





## FIRST AID

### OBJECTIVES

At the end of this module, the trainees should be able:

1. To enumerate the important things to remember in an emergency situation.
2. To demonstrate:
  - a. artificial respiration
  - b. how to stop or minimize bleeding
  - c. how to make splints for the different parts of the body
3. To discuss first aid treatment for burns and poisoning and snake bites.

### What is First Aid?

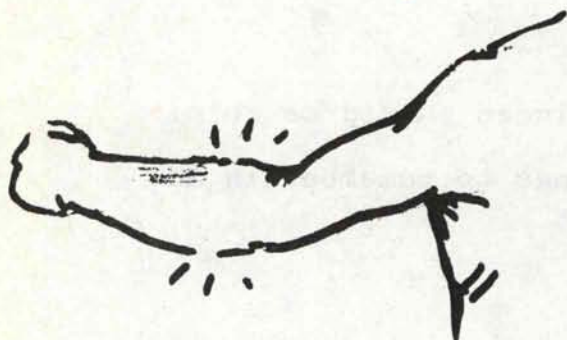
First aid is immediate treatment given to a sick or injured person. It includes life saving emergency measures. After first aid is administered, the patient should be referred to the health center or taken to a hospital. The conditions that require first aid measures include the following:

1. Bleeding

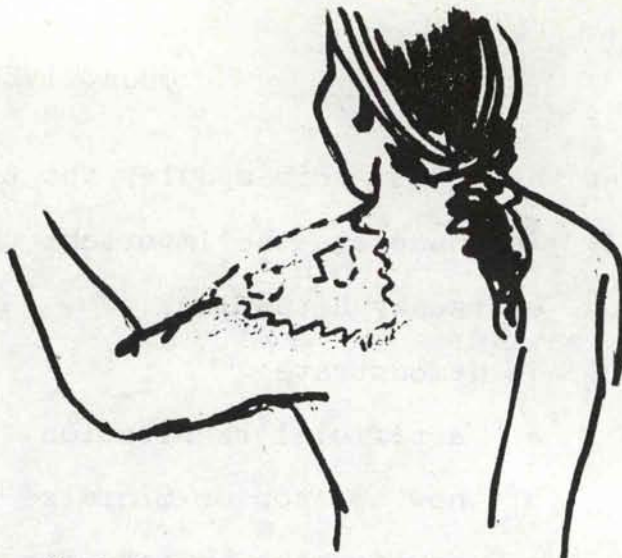




2. Fractures



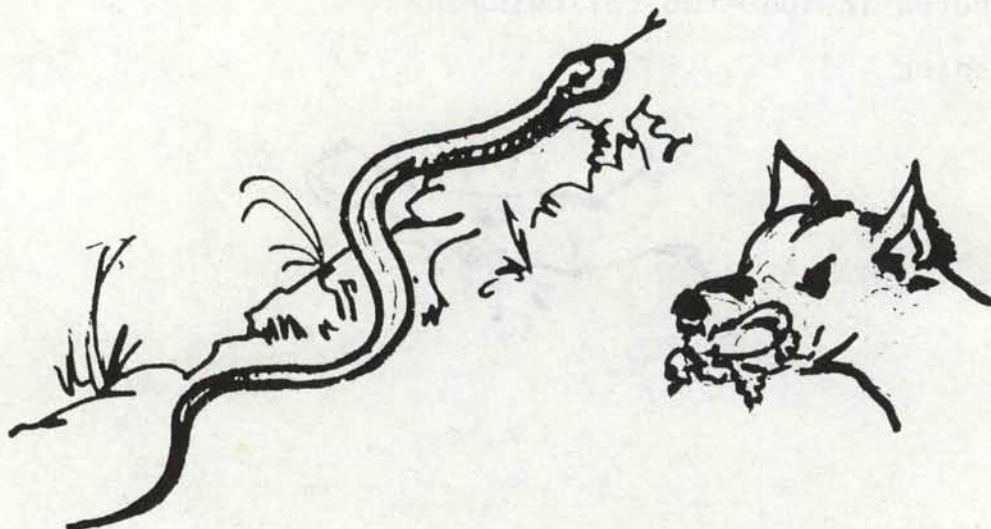
3. Burns



5. Poisoning

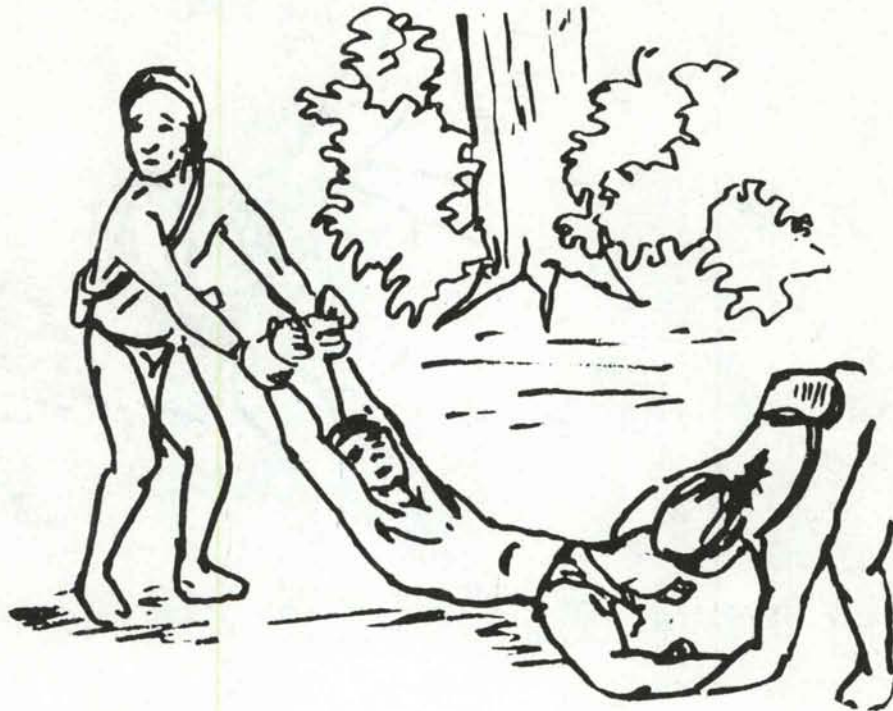


5. Animal bites



### Reminders in Case of Injury

1. Do not move an injured person immediately from the position in which he was found unless it is absolutely necessary to avoid further injury.



2. Check breathing.





- a. If the person is not breathing or is breathing with difficulty, clear his nose, mouth and throat of anything that can block the passage of air such as vomit, blood or saliva.



3. Stop any bleeding.

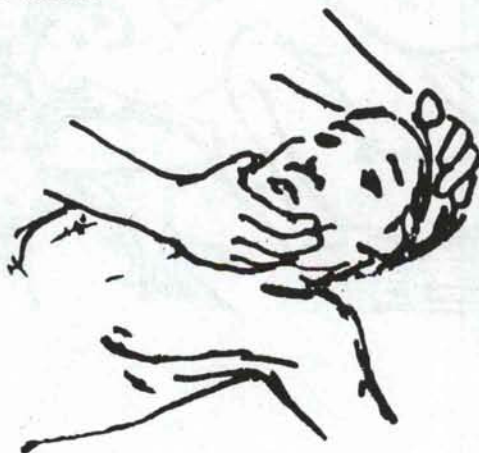


4. If the person is unconscious but breathing normally, do the following:

- a. Turn him on his side with head lowered but not if he has serious neck or back injuries.

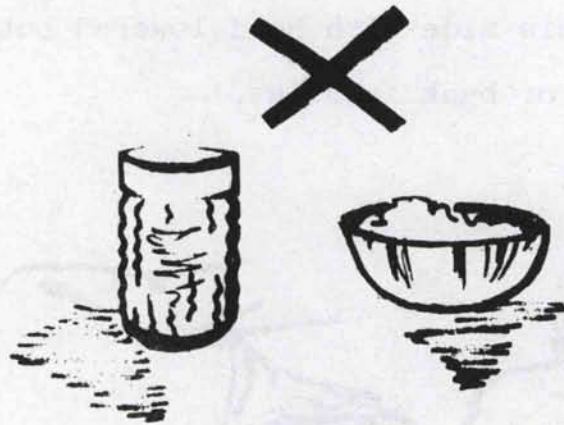


- b. Remove from the nose, mouth and throat anything that can block passage of air.





c. Do not give water or food.



5. Cover serious wounds or burns with a clean dressing cloth or banana leaves.



6. Place splints on broken and dislocated limbs.



7. Seek medical help immediately.





## How to Stop Bleeding

### 1. In the arms and legs.

- a. Raise the injured part, if there are no broken bones.

More harm will be done by moving the injured part.



- b. Press hand directly on the wound with a clean cloth (or the palm of your hand if there is no cloth). Continue pressing or apply a tight bandage until the bleeding stops.

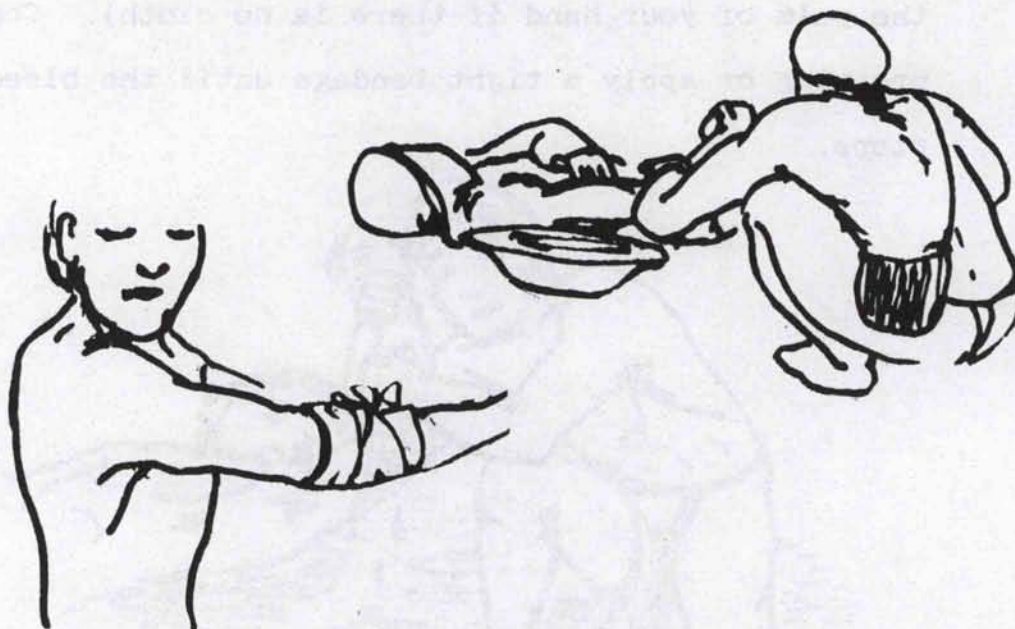


- c. If the wound continues to bleed:
1. Place another pad and continue to apply pressure.





2. Keep the wounded part washed.

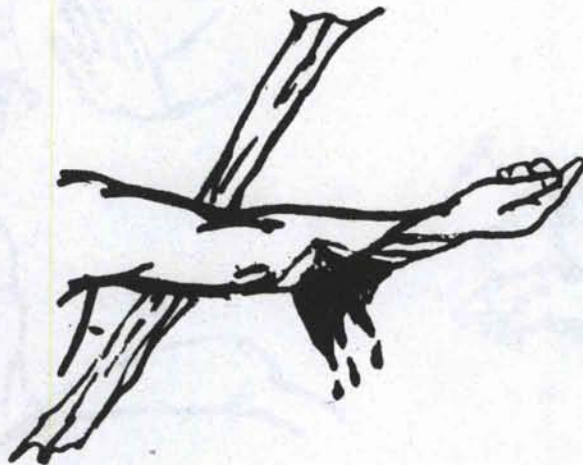


3. Apply tourniquet to the injured arm or leg between the wound and the heart. Use folded cloth or belt as tourniquet. Never use rope, string or wire.

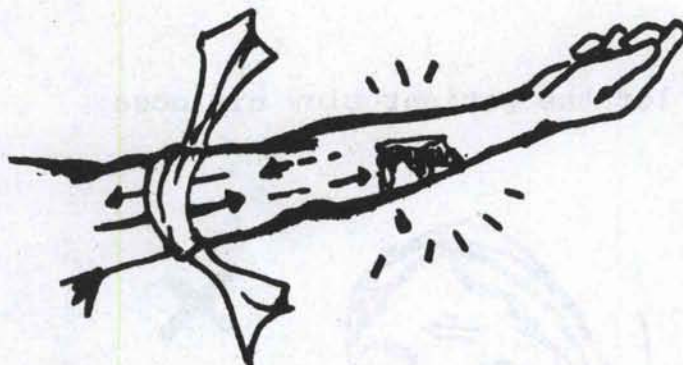


Precaution in applying a tourniquet:

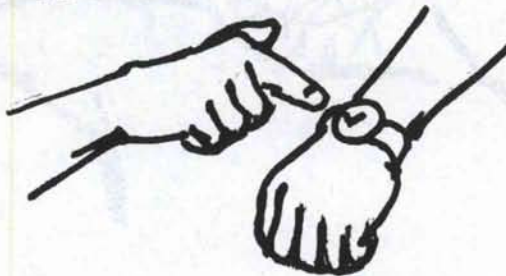
1. Apply tourniquet only if bleeding is severe and can not be controlled by direct pressure.



2. Loosen the tourniquet every half hour to see if the bleeding has stopped and to let the blood circulate.



3. If the person will be transported with the tourniquet, inform the person who receives him of the time the tourniquet was applied.





2. In the nose.

a. Ask patient to sit quietly.



b. Do not let the patient blow his nose.

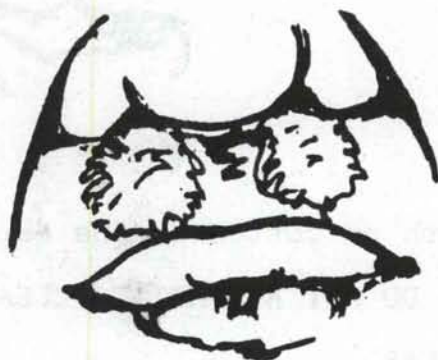


c. Pinch the nose until bleeding stops.

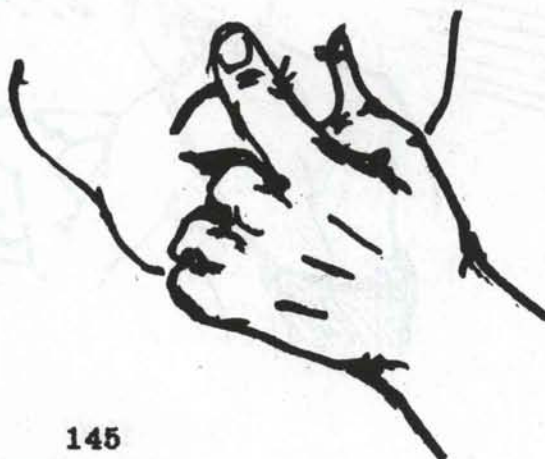


d. If bleeding continues, pack the nostrils with cotton.

Be sure that part of the packing is sticking out, otherwise there will be difficulty removing the packing.

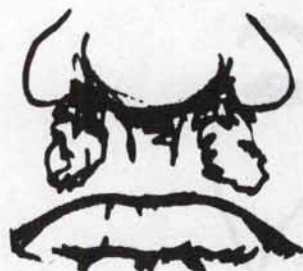


e. Pinch the nostrils again.





- f. Allow the packing to remain for a few hours after bleeding stops. Very carefully remove the packing.

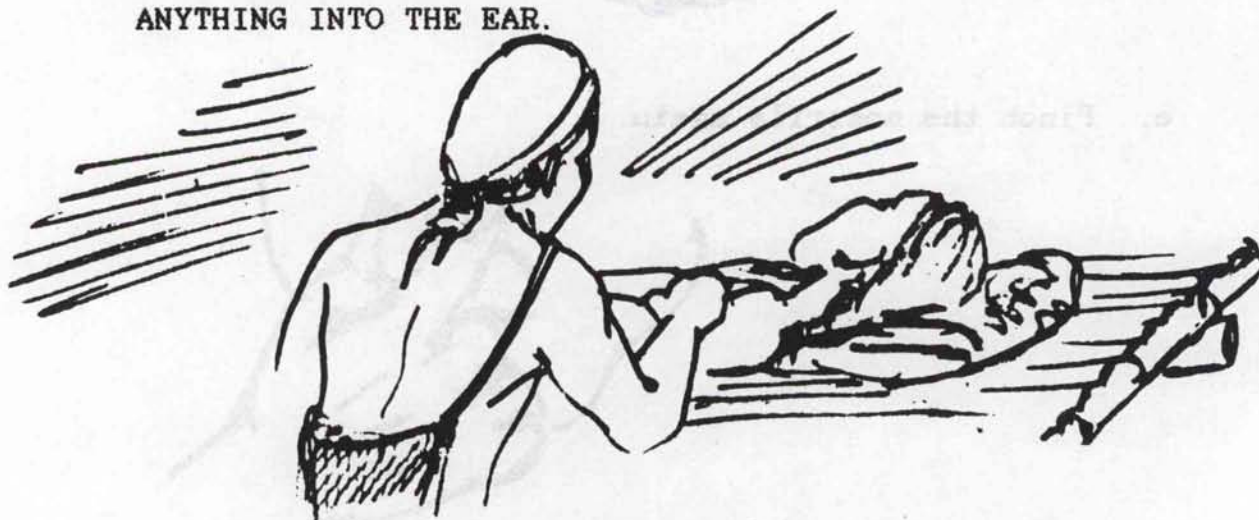


3. Bleeding from the ear canal.

- a. Lay the person down.



- b. Place a pad of cloth or cotton on the ear opening and keep it in place. DO NOT ATTEMPT TO CLEAN OR INSERT ANYTHING INTO THE EAR.



c. Seek medical help immediately.



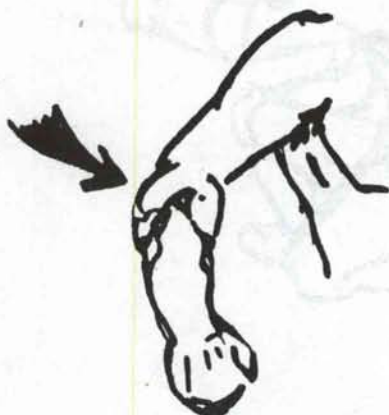
### Fractures and their Treatment

When there is a fractured bone, the most important thing to do is to keep the bone in a fixed position (not movable). This prevents further damage. The signs and symptoms of fracture are:

1. Severe pain when moving the injured part.



2. Severe tenderness, swelling or deformity of the injured part.



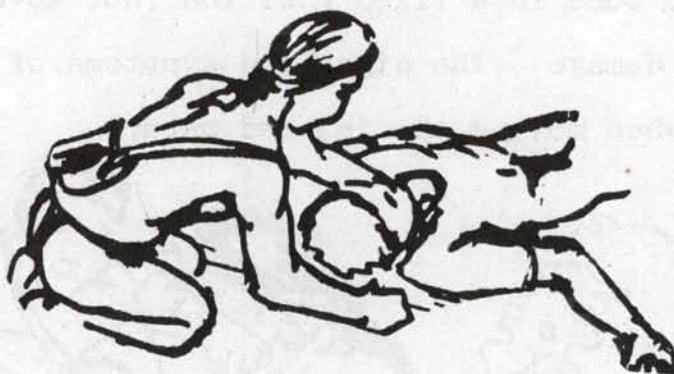


3. Bone may be seen through the open wound.



**What to Do?**

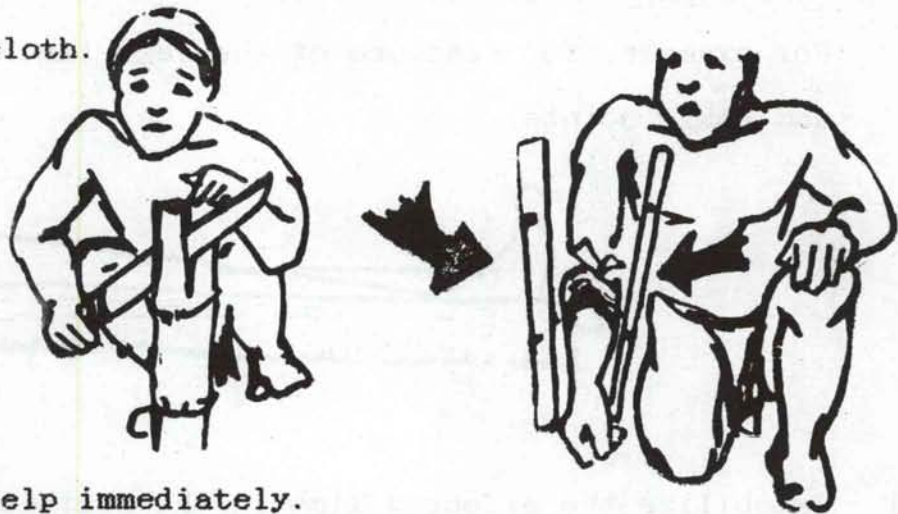
1. Check for all injured parts. Make sure air passages are not blocked.



2. Stop bleeding.



3. Immobilize the fracture. Cover all open fractures with a clean pad of cloth.

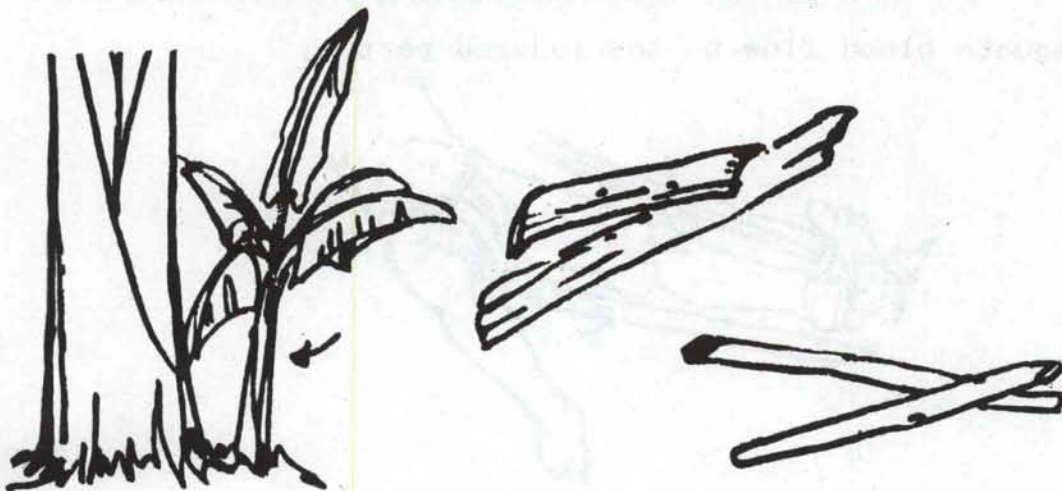


4. Seek medical help immediately.



Things to remember when immobilizing fractures:

1. Immobilize all fractures before transporting an injured person. Use banana trunks, folded newspaper, pieces of wood, bark or cardboard as temporary splints.

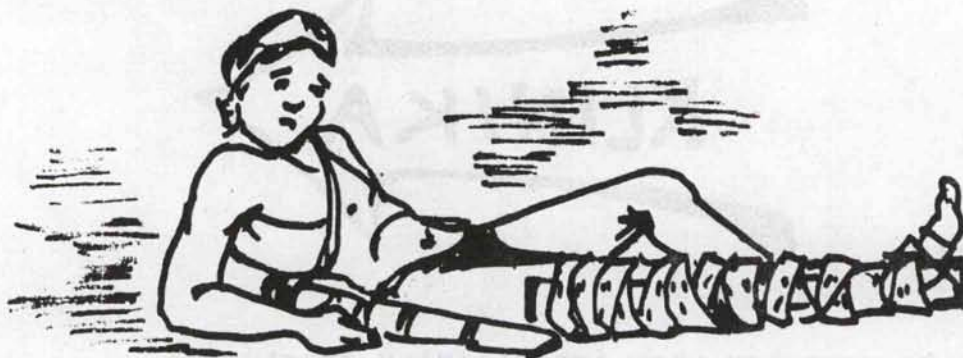




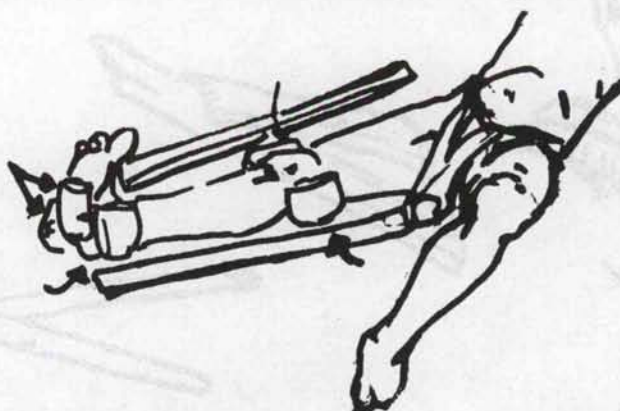
2. Immobilize the joints above and below the fracture site.  
For example, for fracture of the leg, immobilize the knee and ankle joints.



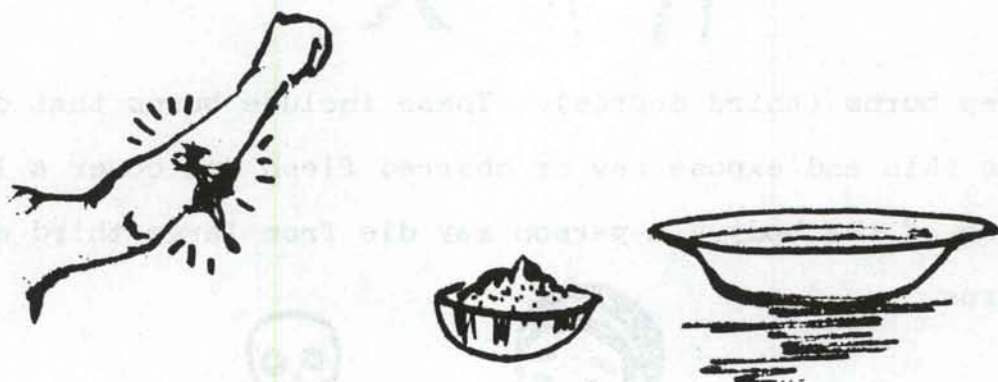
3. Immobilize the affected limb in the position most comfortable to the individual.



4. Put pads to fill in the natural hollows of the body under the ankle and knee. Pad also any bony joints. In applying splints, the knot should not be too tight to allow for adequate blood flow to the injured part.



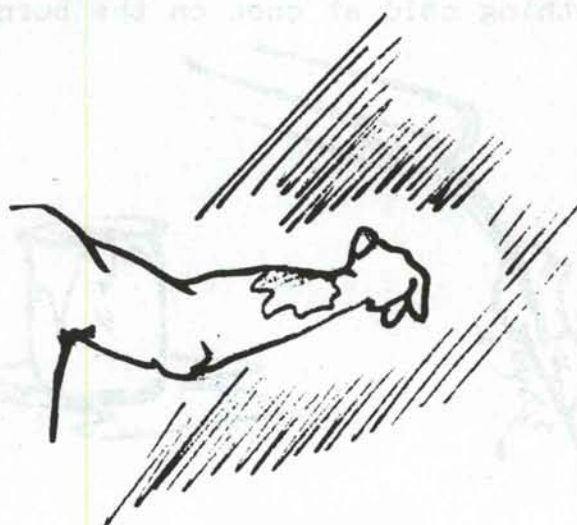
5. In case of open fractures, never put the bone back into position. Wash the wound with sterile solution of salt and water. Cover the wound, splint and take the patient to the health center.



### Burns and their Treatment

There are three types of burns:

1. Minor burns (first degree). These include burns that do not form blisters and involve only a small area of the body. There is only redness and pain in the affected area.





2. Burns with blisters (second degree).



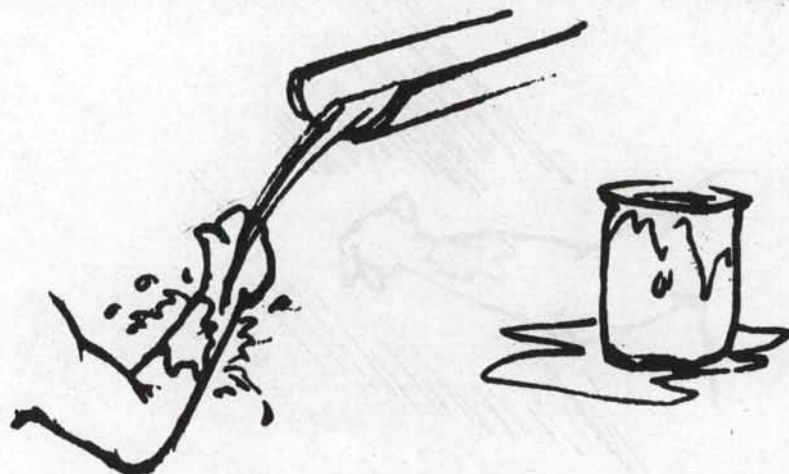
3. Deep burns (third degree). These include burns that destroy the skin and expose raw or charred flesh and cover a larger area of the body. A person may die from large third degree burns.



What to Do?

1. Minor burns.

- a. Apply something cold at once on the burned parts.



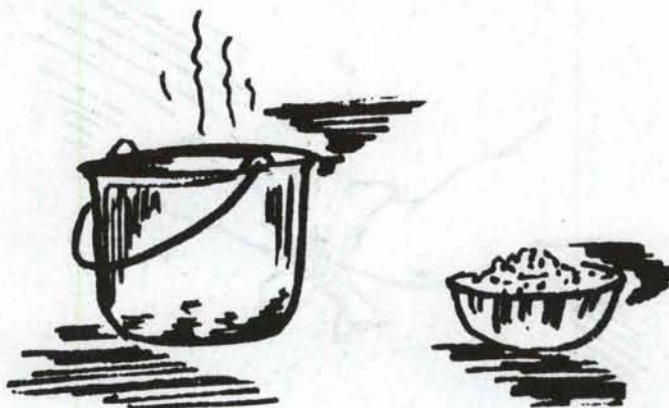
2. Burns with blisters.

- a. Do not break the blisters.



- b. If the blisters are broken, wash with any of the following:

1. Solution of boiled water and salt



2. Guava leaves decoction

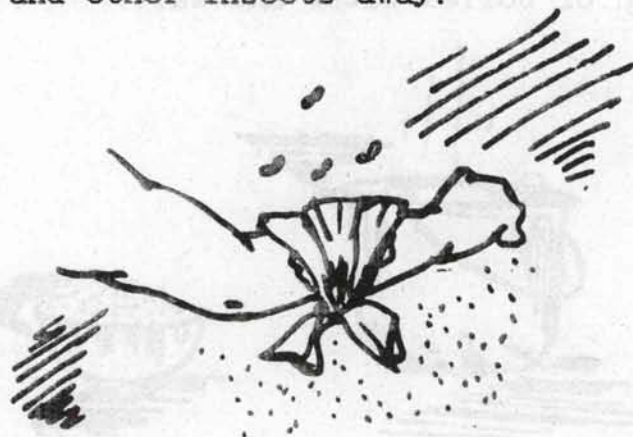




### 3. Water and soap



- c. The burn may be loosely bandaged or covered to keep dirt, dust, flies and other insects away.



- d. Remove dead skin with a clean, soft piece of cloth that has been boiled.



- e. Seek medical treatment at the nearest health center.



A minor burn can become a serious condition if infection sets in. Contamination of the burned part can be avoided by not touching it unnecessarily and using only clean materials.





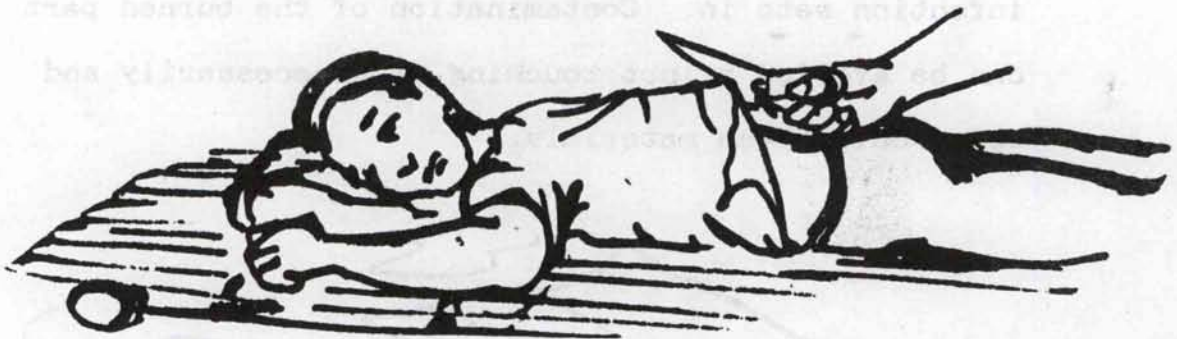
### 3. Deep burns



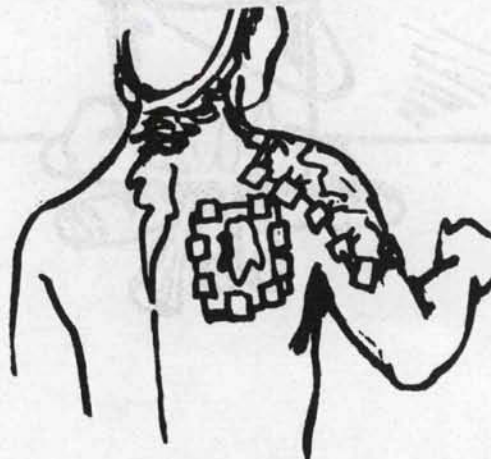
Burns of this type need immediate medical attention.

Remember the following:

1. Tear away the person's clothing. Moisten those clinging to the skin with boiled water that has cooled.



2. Cover the burned part with sterile dressing or clean cloth.



3. Give plenty of fluids like water or fruit juice with a pinch of salt.



NEVER PUT INK, GREASE, POMADE, FAT, TOMATOES ON BURNS.



## Poisoning and its treatment

### Common causes of poisoning

#### 1. Kerosene





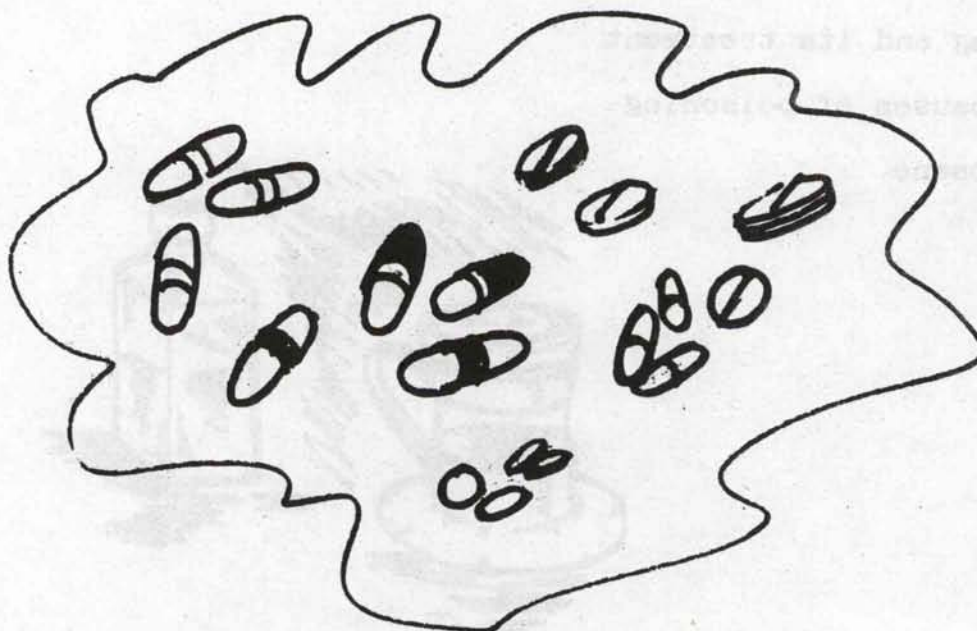
2. Rubbing alcohol



3. Merthiolate



4. Drugs (any kind when there is an overdose)



### What to Do?

1. If the person is unconscious, call the nurse or midwife at the health center.



2. If the person is conscious, find out what poison was taken.



3. If the person has burned lips, mouth or tongue or if she/he has taken acid or kerosene, - DO NOT MAKE THE PERSON VOMIT.



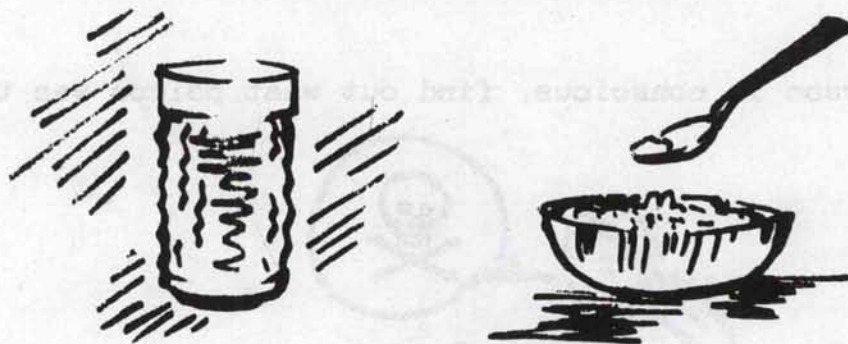


4. Refer immediately to the health center.



5. If other poison was taken, make the victim vomit by:

- a. Giving a glass of warm water with salt in it.

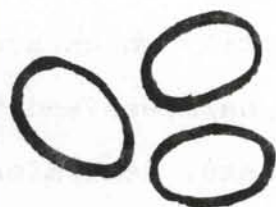


- b. Putting a finger down the throat.



6. After he has vomitted, give him any of the following:

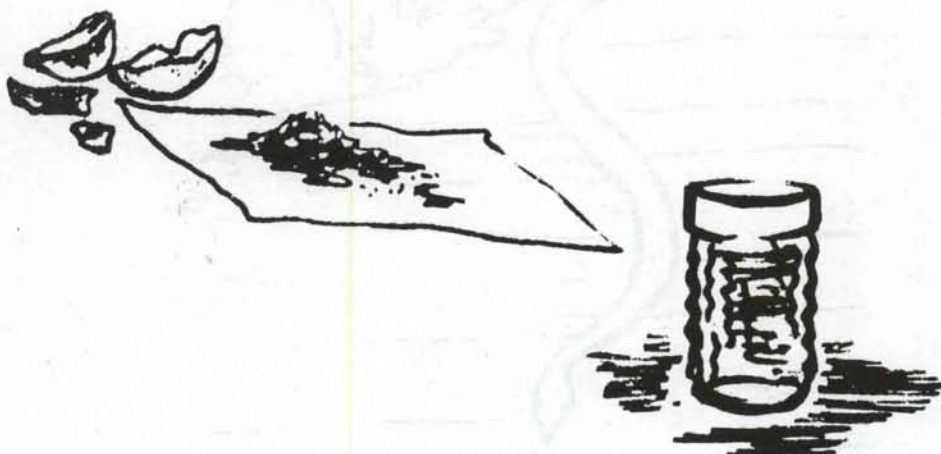
a. Eggs



b. Cassava flour mixed with water



c. Activated charcoal or powdered coconut  
shell charcoal mixed with water





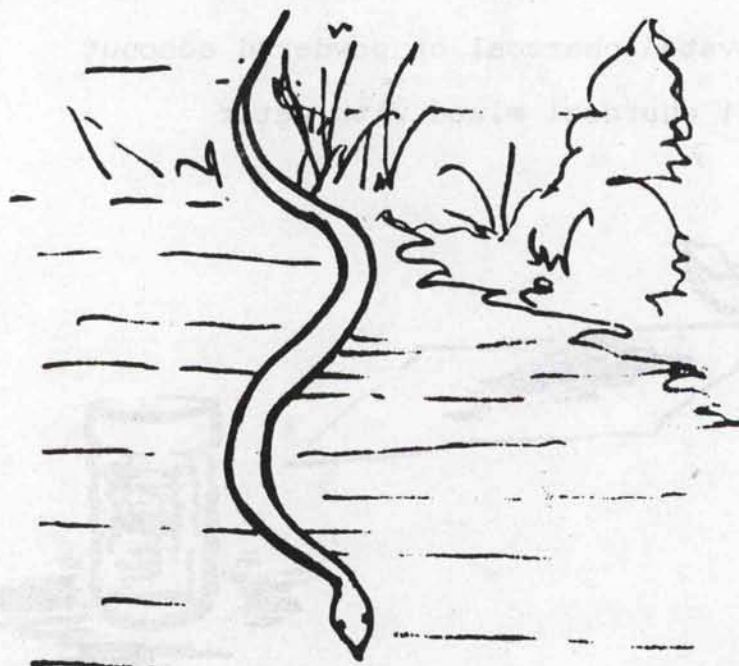
## Snake Bites and their Treatment

Not all snakes are poisonous. It is very important that the health worker is able to identify which are the poisonous snakes. The non-poisonous snakes are harmless and they can be left alone. If a person is bitten by a snake, determine whether the snake is poisonous or not. This can be done by examining the marks caused by the bite. The bite of a poisonous snake is different from the bite of a non-poisonous snake.

### How to Differentiate the Bite of a Poisonous from a Non-poisonous Snake

The bite of a poisonous snake leaves fang marks and sometimes smaller marks caused by teeth.

The bite of a non-poisonous snake is characterized by two rows of marks caused by the teeth but without fang marks (most snakes in the Philippines are non-poisonous).



## What to Do if Bitten by a Poisonous Snake

1. Keep the victim still. Do not move the affected area since the poison will spread more rapidly by moving it.



2. Tie the limb just above the bite.





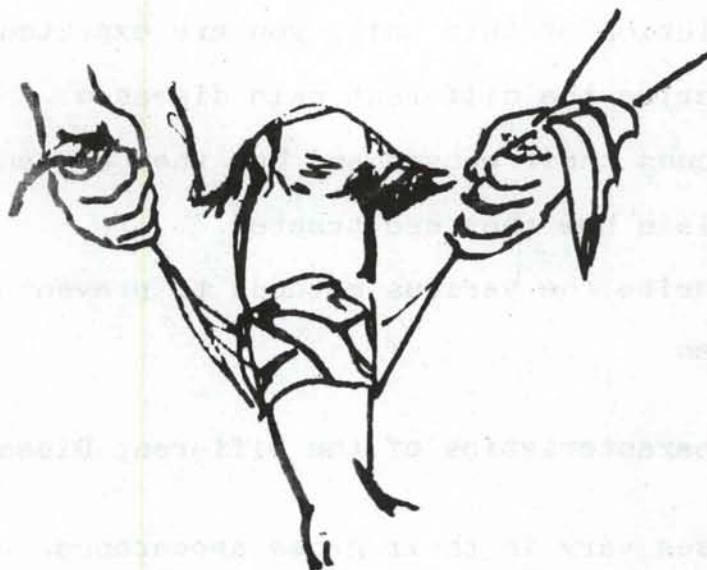
3. With a knife or blade, if possible passed over a flame several times, make a cut perpendicular to each fang mark about 1 cm. long and 1/2 cm. deep.



4. Suck and spit out the poison. Be sure that you do not have any wounds or open sores in your mouth or tongue. If the bite is more than half an hour old, there is no need to cut or suck the bite.



5. Do the above steps as fast as possible.





## SKIN DISEASES

### OBJECTIVES

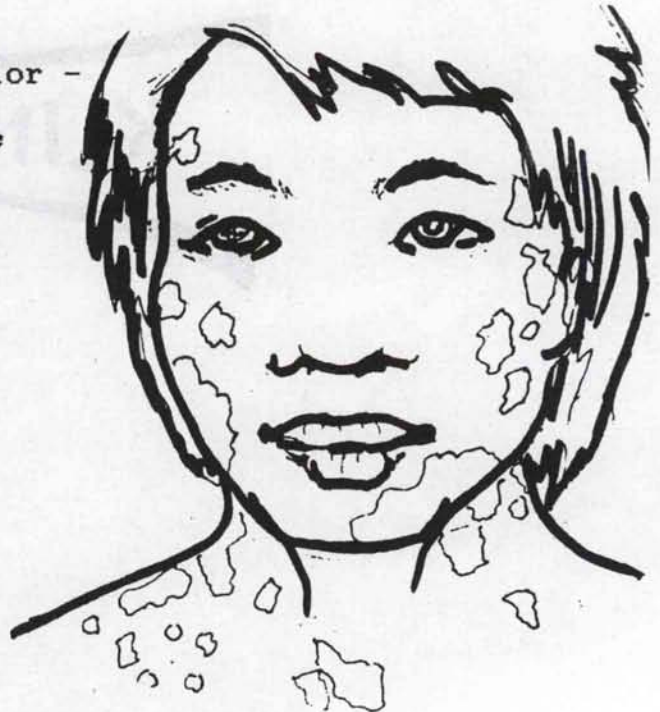
After completion of this unit, you are expected to be able:

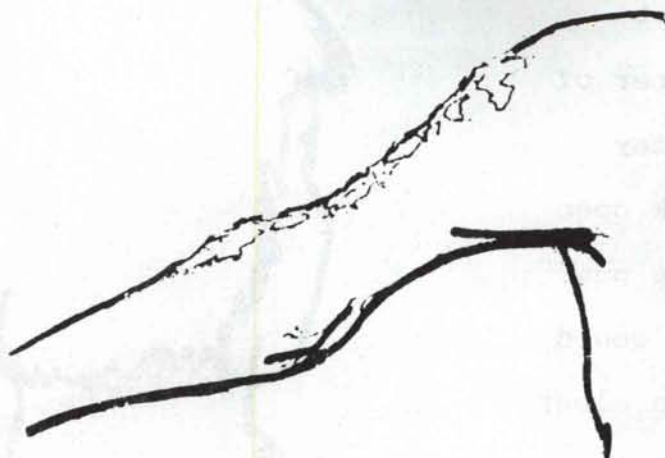
1. To describe the different skin diseases.
2. To discuss their causes and how they are acquired.
3. To explain how they are treated.
4. To describe the various methods to prevent skin diseases.

**What are the Characteristics of the Different Diseases of the Skin?**

Skin diseases vary in their gross appearance, that is, according to shape, color, size and accompanying signs and symptoms. Those diseases of the skin which can be encountered among the populace and their corresponding characteristics are the following.

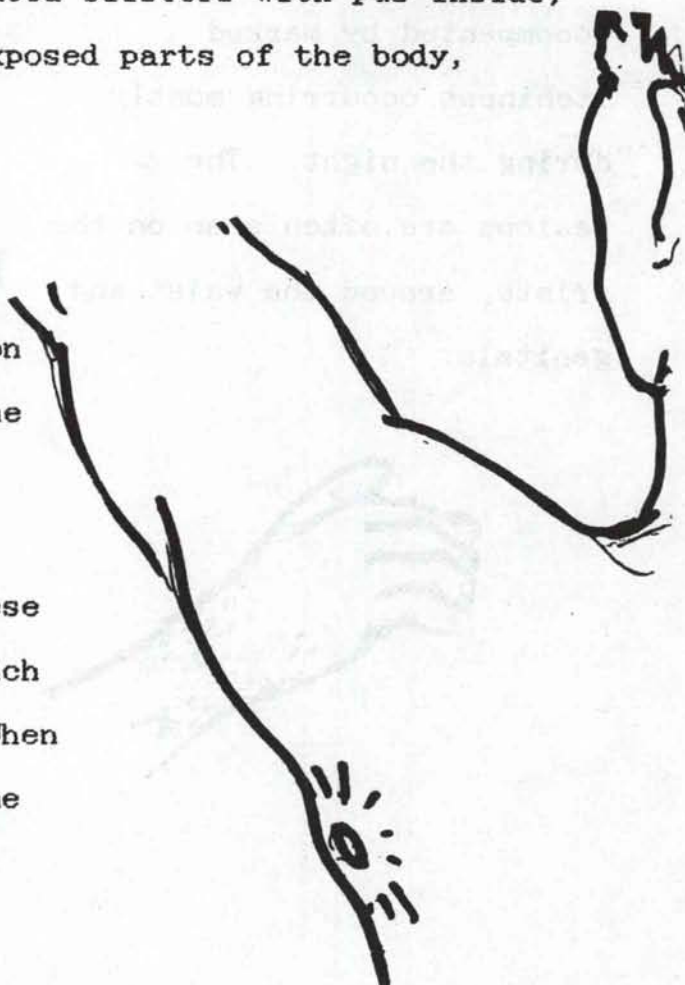
1. Tinea flava or tinea versicolor - they are either dark or white spots with irregular borders, often seen on the face, neck, chest and back. They do not cause itching usually.





2. Impetigo - is a contagious infection of the skin caused by bacteria. It is characterized by the appearance of skin eruptions like vesicles (elevated blisters with fluid inside) or pustules (elevated blisters with pus inside) located on the face and exposed parts of the body, especially among children.

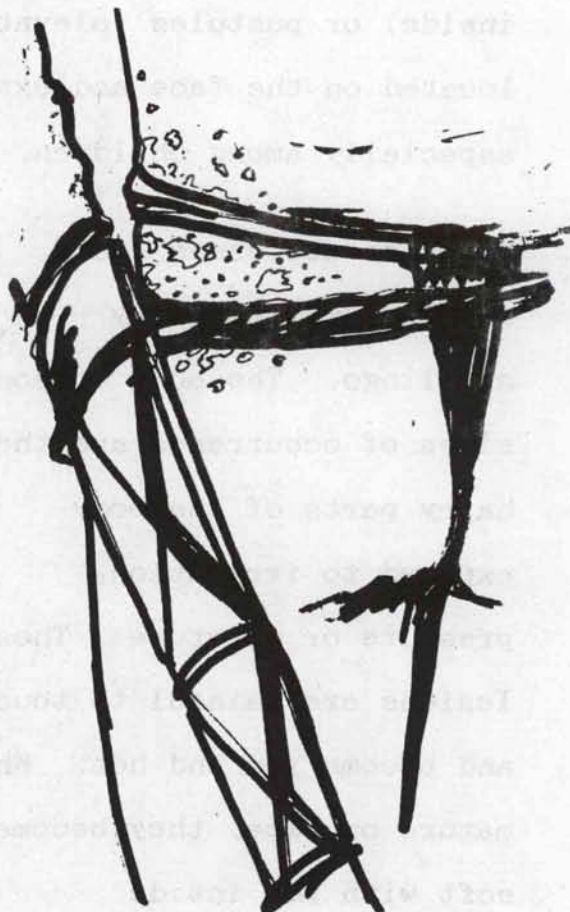
3. Boils or abscesses - are sac-like inflammatory swellings. The most common sites of occurrence are the hairy parts of the body exposed to irritation, pressure or moisture. These lesions are painful to touch and become red and hot. When mature or ripe, they become soft with pus inside





and a yellowish spot appears in the center of the lesion. This may spontaneously break open with release of the pus. If not treated, it could develop into a skin ulcer.

4. Scabies are small vesicular (blister with fluid inside) or pustular eruptions (vesicle with pus inside) accompanied by marked itchiness occurring mostly during the night. The lesions are often seen on the wrists, around the waist and genitals.



5. Miliaria or prickly heat (bungang araw) is characterized by burning, itching, small papules or vesicles (blisters) on covered areas of the body during hot and moist weather.



6. Eczema occurs both in children and adults. In younger children it appears as a red patch on the cheeks with vesicles (small blisters) that ooze or burst and leak fluid.



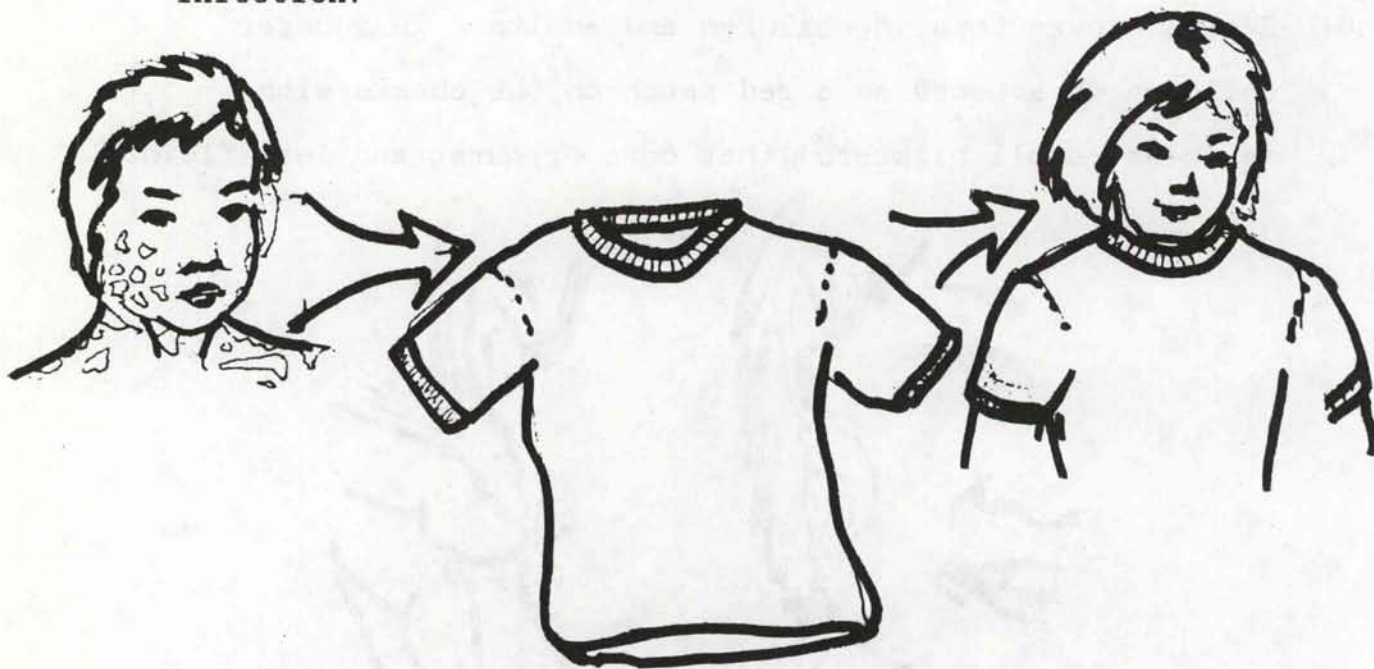


In older children and adults, it is drier, leathery and is most common behind the knees and on the inside of the elbows. The condition is often associated with personal or family history of asthma or allergy.

#### What are the Causes of these Skin Diseases and How are they Acquired?

The skin diseases that were previously mentioned are mostly infectious in nature and the rest have variable causes. The specific cause or causes of each of these skin diseases and how they are acquired are as follows:

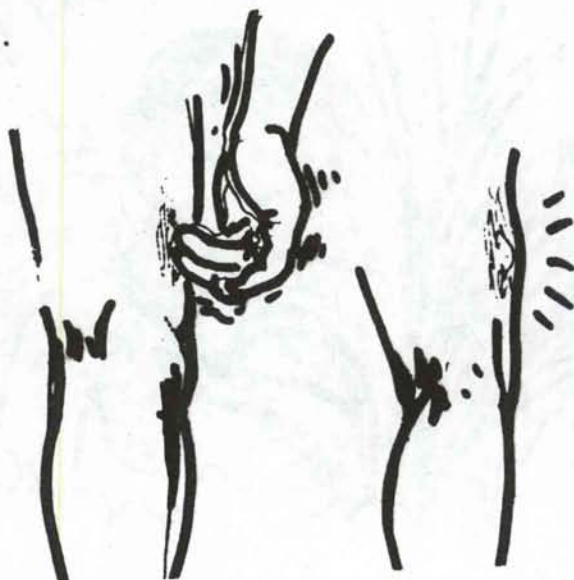
1. Tinea flava is a fungus infection of the skin. It is transmitted indirectly through contaminated clothing materials, water, and washing/bathing objects and rooms. Moisture and heavy perspiration favor this type of fungus infection.



2. Impetigo is caused by infectious bacteria and is acquired by skin contact with infected persons or indirectly by contaminated clothing materials.



3. Boils and abscesses are caused by infectious bacteria acquired through irritation, puncture of the skin by contaminated pointed objects or plugging of the pores of hair follicles.





4. Scabies is caused by the little insect called the itch mite that makes tunnels under the skin. It is spread by contact with infected persons, contaminated beddings and clothes. Sleeping with infected individuals or close contact with them favors the transmission of this infection.



5. Miliaria or prickly heat is acquired through exposure to a hot and moist environment; the pores of the sweat glands are plugged and become swollen, thus rupturing the sweat glands to produce an irritating reaction.



6. Eczema has no exact cause but is associated with a family history of asthma, allergy, or eczema itself.



#### How are these Skin Diseases Treated?

1. Tinea flava

Pound enough fresh bawang cloves to tract the juice. Apply the juice on the affected skin 2 times daily for 2 to 3 weeks.

2. Boils

Pound enough fresh gumamela flower buds or sambong leaves. Apply as poultice over the boil. Change the poultice once a day.

3. Scabies

Extract the juice by pounding enough fresh malunggay leaves. After bathing, apply juice on the affected skin 2 times daily.



How are these Skin Diseases Prevented and Controlled?

1. Tinea flava

- a. Avoid sleeping with another person who has this disease.



- b. Avoid exchange of clothing unless these are washed or cleaned first.



- c. Treat any infected person at once to reduce transmission to other persons.



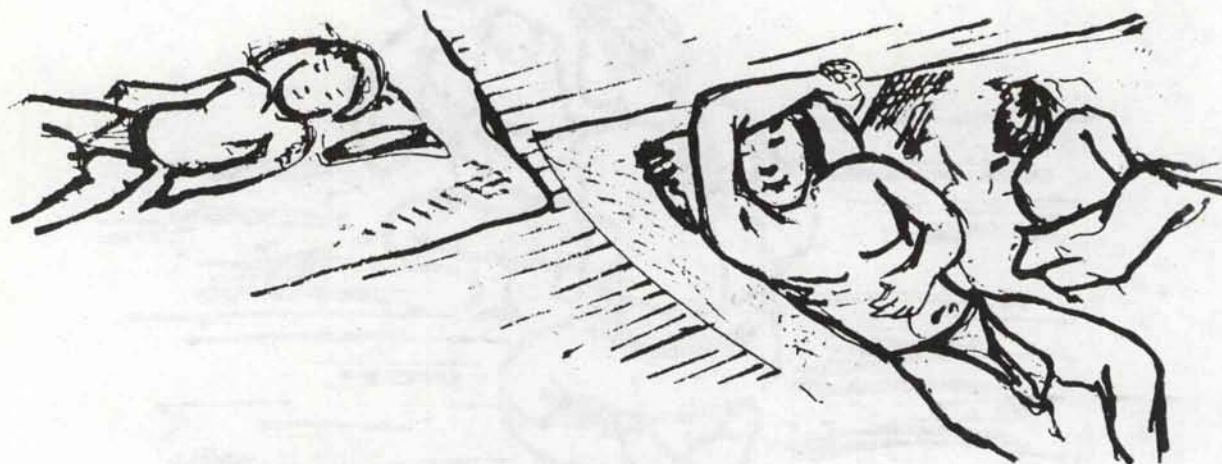
## 2. Impetigo

- a. Washing the hands and taking a bath frequently with soap and water helps in prevention of this skin infection.





- b. Do not let a child with impetigo play or sleep with other children.



- c. Treat immediately all children with impetigo.



### 3. Boils and abscesses

Prevention and control are the same as that of impetigo since both of them are bacterial in nature.

### 4. Scabies

- a. Bath and change clothes daily.



- b. Wash all clothes and hang them under the sun.



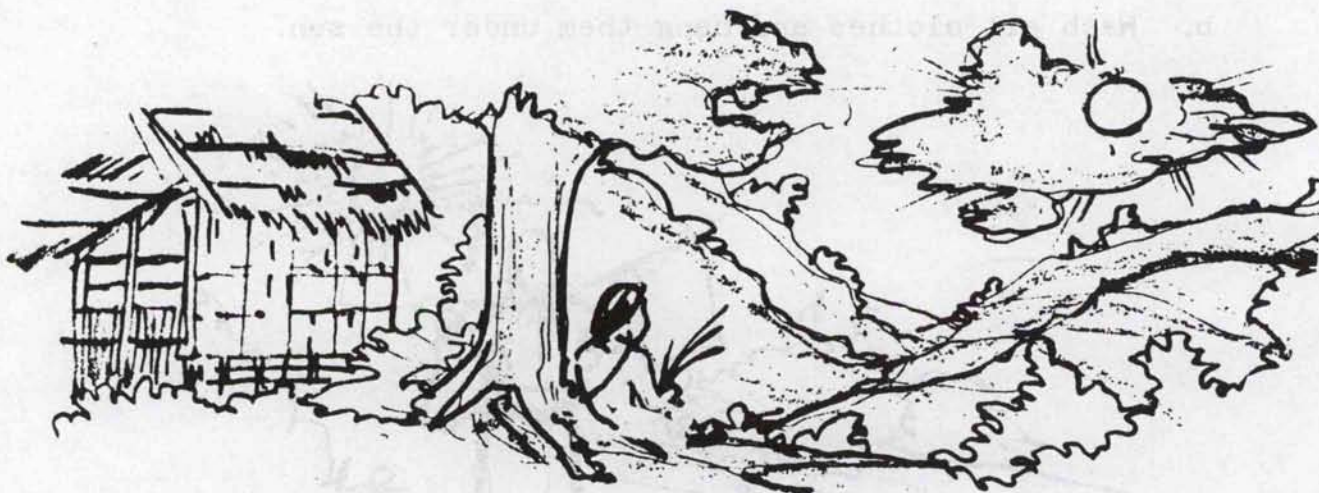


- c. If one member of the family has scabies, he should be treated immediately.



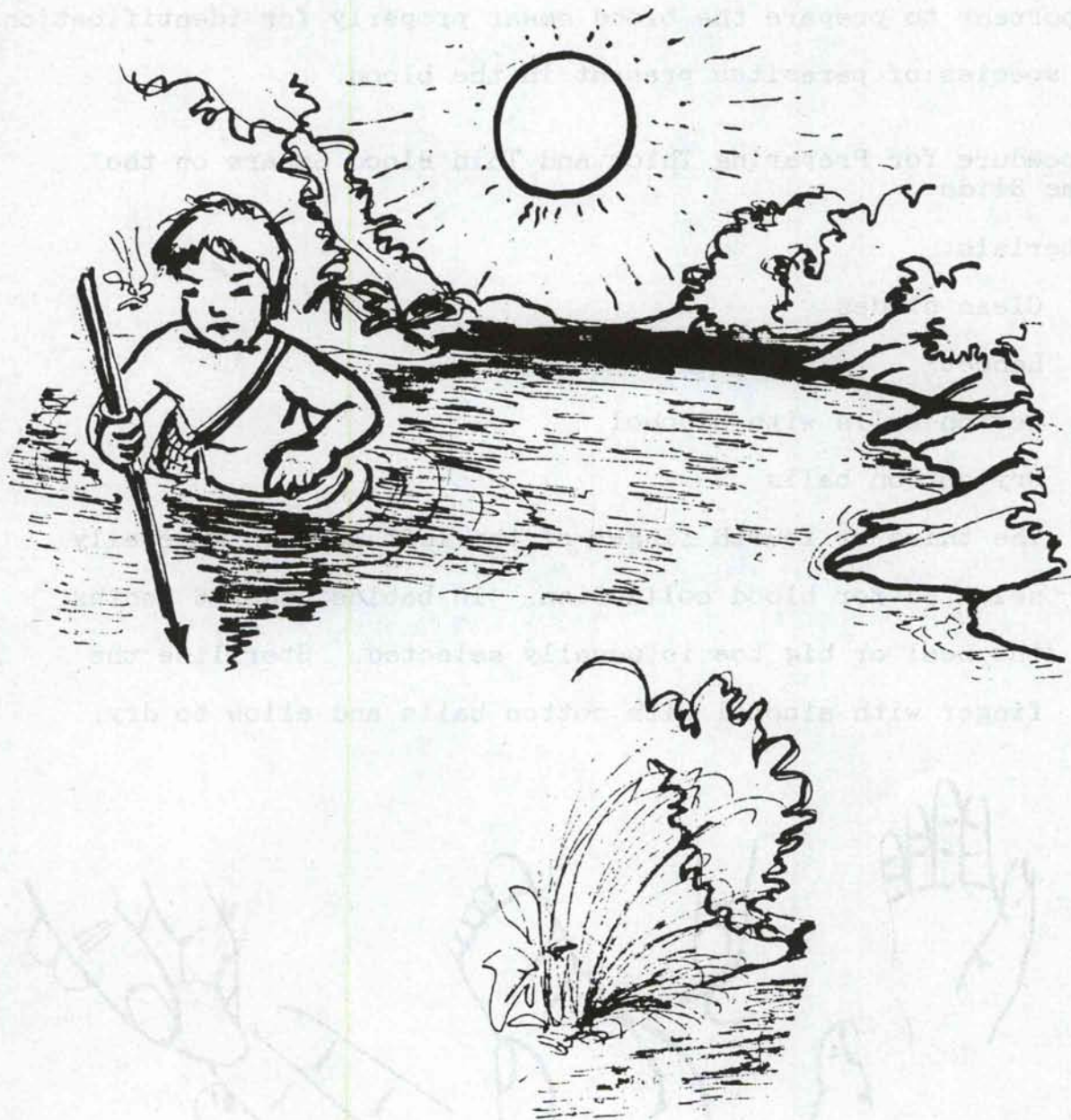
## 5. Miliaria

- a. Provide favorable conditions such as proper temperature, ventilation and humidity.



## 6. Eczema

- a. Avoid excessive temperature changes and stress to minimize abnormal skin changes and sweat response.





## MALARIAL SMEAR

Blood smear examination for parasites: Malaria and filaria infections are diagnosed by blood smear examination. It is important to prepare the blood smear properly for identification of species of parasites present in the blood.

Procedure for Preparing Thick and Thin Blood Smears on the Same Slide:

Materials:

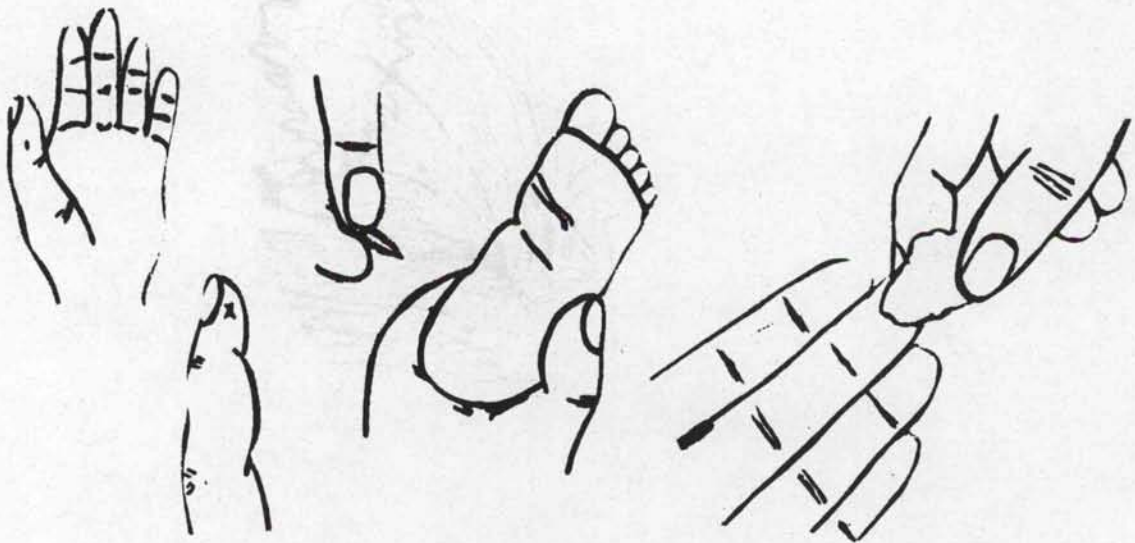
Clean slides

Lancet

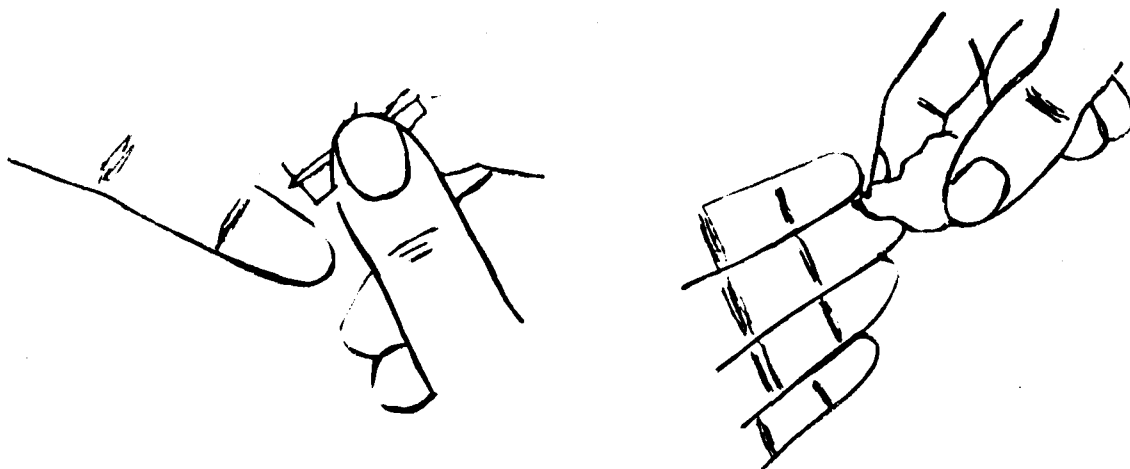
Cotton balls with alcohol

Dry cotton balls

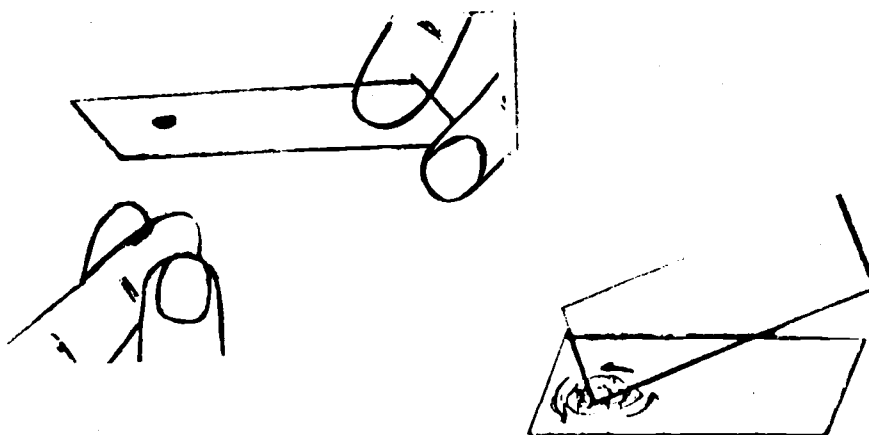
1. The third or fourth finger of the left hand is generally selected for blood collection. In babies under 6 months, the heel or big toe is usually selected. Sterilize the finger with alcohol with cotton balls and allow to dry.



2. Pierce the finger with a lancet or any suitable pricker at the side of the ball of the finger (this is less sensitive than the tip). Wipe off the first drop of blood with pledget of dry cotton.

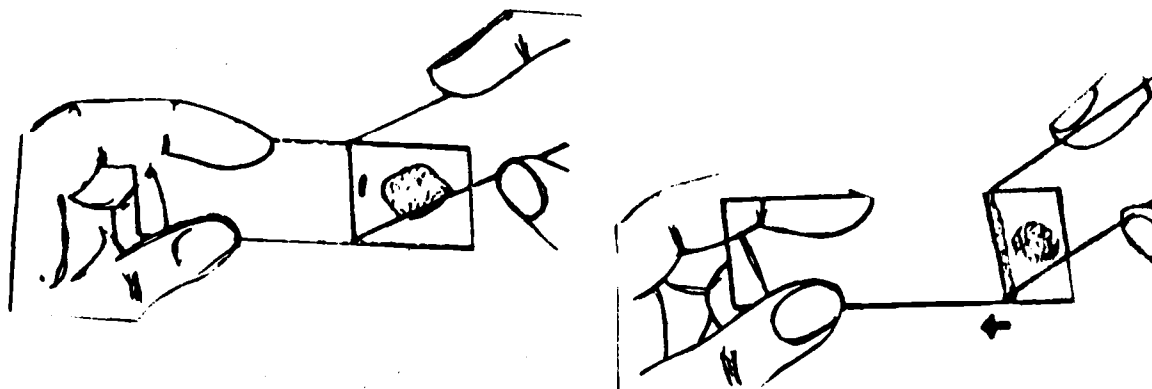


3. Gently squeeze the finger until a second drop forms. Touch this drop near the end of a clean slide. Spread the drop of blood with the corner of another slide to make a circle about 1 cm in diameter. This is the thick smear.

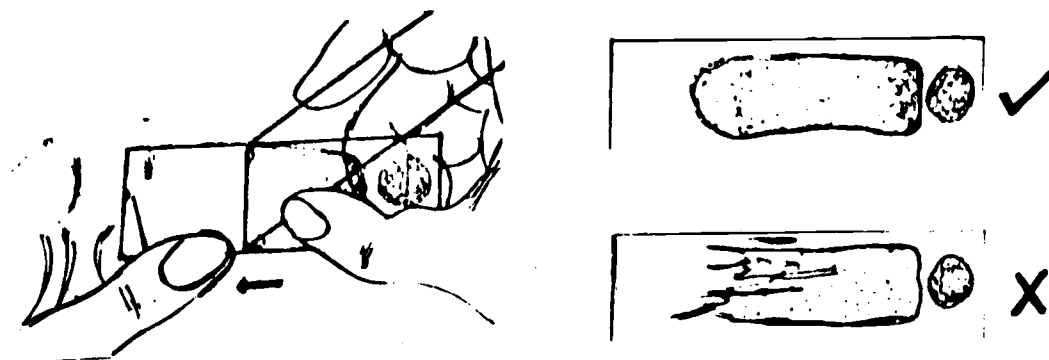




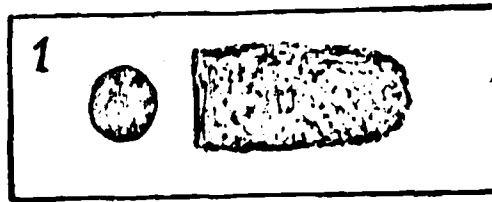
4. Put a new drop of blood on the left margin of the thick film. Place the slide on the table and place the end of another clean slide to be used as spreader to the drop of blood until a continuous film is formed at the edge of the spreader.



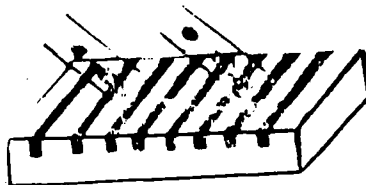
5. Holding the spreader at an angle of  $45^{\circ}$ , push it forward with a rapid but not too brisk a movement. All the blood should be used up before you reach the end of the slide.



6. With glass pencil, write the code number of the patient at one end of the slide (near the thick smear).



7. Allow the blood smear to dry in the air. Never blot the slide.



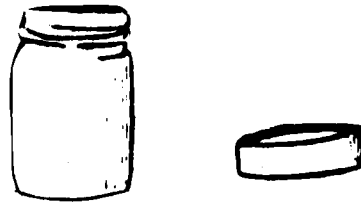
8. Wrap with paper and pack firmly with tape or string or rubber band.
9. BHW writes his/her name and barangay/purok where specimen was collected on top of the paper.
10. Send or give immediately to Rural Health Midwife.





## COLLECTION OF SPUTUM SPECIMEN

1. Explain reason for collection of sputum.
2. Ask patient to wash/rinse his mouth.
3. Prepare materials needed:
  - a. Clean empty bottle (such as pomade bottle), or



- b. Plastic container (ice cream plastic cup), or



- c. Improvised from bamboo tube.



4. Demonstrate/teach how to produce a good specimen from deep down the lungs.
  - a. Ask patient to place both hands on his hips and press the abdomen with both his hands.
  - b. Then instruct him to take a deep breath and at the height of the inspiration ask him to cough vigorously two or three times to produce sputum/phlegm.

- c. Then ask him to spit out the sputum into container without spilling/soiling the outside portion of the container.
5. Examine the sputum specimen to make sure it is sufficient and the right type of specimen.

Characteristics of the right type of sputum specimen is mucoid, thick yellowish, sometimes it is greenish in color and maybe blood streaked.

If the specimen collected do not have the above characteristics repeat step 4 (a to c).

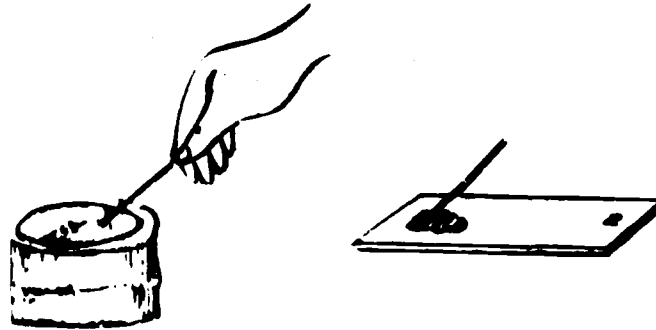
#### PREPARATION AND LABELING OF SPUTUM SMEAR

1. Prepare materials needed:
  - a. one glass slide
  - b. 1 or 2 coconut midrib cut to about 5 inches long
2. Smear should be prepared immediately after collection.
3. Number the right end of the glass slide to conform with the numbers assigned to BHW by the RHU Midwife and the listing of names of patient in their notebook. Be careful not to interchange the numbers of the slide and the listing of the BHW.

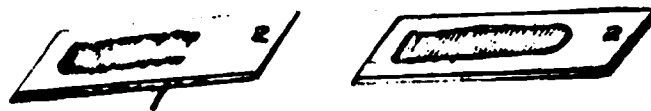




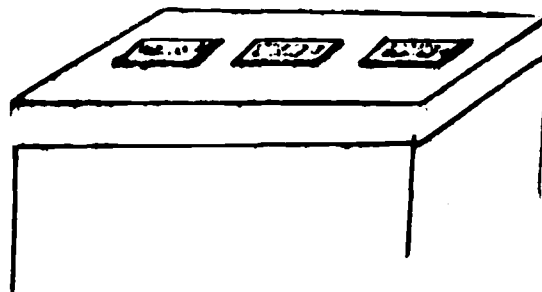
4. Get one or two coconut midribs about 3 inches in length and select/pick up the thickest purulent mucoid or blood stained part of the specimen and transfer to glass slide.



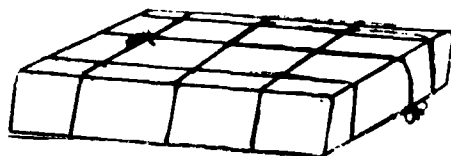
5. Then with the use of coconut midribs spread evenly and thinly the sputum on the glass slide covering about 3/4 of the glass slide, making sure not to touch or erase the number inscribed.



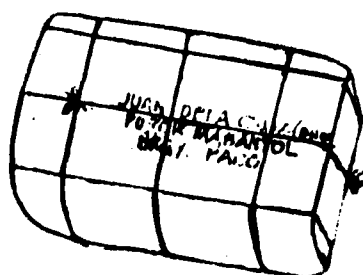
6. Dry the specimen by placing it on an even surface and expose to air.



7. Wrap with paper and pack firmly with tape or string or rubber band.



8. BHW writes his/her name and Barangay/Purok where specimen was collected on top of the box.



9. Send or give immediately to Rural health midwife.





## MEDICINAL PLANTS

### Medicinal Plants for Fever

Plant material	Preparation	Direction for use
	Use only one of the plant materials listed.	
SAMBONG, leaves		Use the decoction to sponge the febrile patient.
TAMARIND, leaves	Boil 2 to 4 handfuls of the plant material in a small pot of water for 5 minutes.	
MANGO, leaves		
KAMYAS, leaves		
ALAGAW, leaves		
LAGUNDI, leaves	<p><u>Amount of chopped leaves needed</u></p> <p style="text-align: center;"><u>If dried</u></p> <p>Adult 4 tbsp.  7-12 yrs. 2 tbsp.  2-6 yrs. 1 tbsp.</p> <p style="text-align: center;"><u>If fresh</u></p> <p>Adult 6 tbsp.  7-12 yrs. 3 tbsp.  2-6 yrs. 1 1/2 tbsp.</p> <p>Boil the needed amount of leaves in 2 glasses of water for 15 minutes or until one glass of liquid is left. After boiling, add water to make the decoction lukewarm.</p>	Divide the decoction into 2 parts. Drink 1 part every 3 or 4 hours.

Plant material	Preparation	Direction for use
YERBA-BUENA, leaves	Boil 3 glasses of water with 15 tablespoon of dried leaves until 1 1/2 glass of liquid is left.	Drink the decoction while lukewarm.

#### Medicinal Plants for Dizziness

	Use only one of the plant materials listed.	
ORANGE, leaves		Let the person sniff the crushed plant material.
LEMON, leaves	Crush enough fresh plant material.	
GUAVA, leaves		
BALANOY, leaves		
YERBA BUENA-leaves		

#### Medicinal Plants for Headache

	Use only one of the plant materials listed.	
DAMONG-MARIA, leaves		
LAGUNDI, leaves	Heat enough fresh leaves in a small fire. Crush and add a few drops of cooking oil.	Put the crushed plant material on the forehead and temples. Put a cloth bandage to keep the plant material in place.
MANSANILYA, leaves		



Plant Material	Preparation	Direction for use
	Use only one of the plant materials listed	
MAYANA, leaves	Heat enough fresh leaves in a small fire. Crush and add a few drops of cooking oil.	Put the crushed plant materials on the fore- head and temples. Put a cloth bandage to keep the plant material in place.
PANDAN MABANGO, leaves		
SUOB-KABAYO, leaves		
GARLIC, cloves	Crush 1 or 2 clove of garlic.	Massage the crushed garlic clove in the temples.
SAMBONG, leaves	Heat enough fresh plant material over a small fire. Crush.	Put the crushed plant material on the forehead and temples. Put a cloth bandage to keep the plant material in place.

#### Medicinal Plants for Toothache

	Use only one of the plant materials listed.	
BALANOY, leaves	Chop enough fresh leaves Press the juice and wet a small piece of cotton.	Insert the wet cotton in the aching tooth. Remove after 15 minutes.
YERBA-BUENA, leaves		
SUOB-KABAYO, leaves		
LAGUNDI, leaves	Boil chopped leaves in 2 glasses of water for 15 minutes or 4 glasses of water in 5 minutes. Strain when lukewarm.	Divide the decoction into 2 parts. Drink 1 part every 3 or 4 hours.

Plant material	Preparation	Direction for use
GUAVA, young leaves	Get 2 or 3 fresh leaf tops.	Chew the fresh leaf tops.  Leave the chewed leaves on the aching tooth.  Do not swallow the leaves.
GARLIC, cloves	Peel a clove of garlic. Crush.	Insert the crushed garlic clove into the aching tooth. Remove after 15 minutes.  Precaution: If burning sensation is felt, do not repeat the procedure.
CASHEW, leaves	Soak 5 tablespoonfuls of chopped kasuy leaves in 1 glass of hot water for 30 minutes. Strain.	Use the infusion as a gargle.  Leave the infusion in the mouth for a few minutes before spitting it out.  Do not swallow the infusion.

#### Medicinal Plants for Swollen Gums

	Use only one of the plant materials listed.	
GUAVA, leaves	Boils 5 tablespoonfuls of chopped leaves in 2 glasses of water until 1 glass of liquid is left.	Use the decoction as a mouth wash.
DUHAT, leaves		Do this 3 times a day to reduce swelling of the gums.



Plant material	Preparation	Direction for use
CASHEW, leaves		

#### Medicinal Plants for Cough

TAMARIND, leaves	<u>Amount of leaves needed</u>	Divide the decoction into 3 parts.
	<u>If dried</u>	Take 1 part 3 times a day.
	Adult 8 tbsp.	
	7-12 yrs. 4 tbsp.	
	2-6 yrs. 2 tbsp.	
	<u>If fresh</u>	
	Adult 10 tbsp.	
	7-12 yrs. 5 tbsp.	
	6-2 yrs. 2-1/2 tbsp.	
	Boil the needed amount of leaves in 2 glasses of water until 1 glass of liquid is left. Cool and strain.	
GINGER, rhizome	Boil 2 thumb-sized rhizome of ginger in 4 glasses of water for 5 minutes (for adults). Cool and strain. For children, use half the adult dose.	Divide the decoction into 3 parts.
		Take 1 part 3 times a day.
ALAGAW-leaves	<u>Amount of chopped leaves needed</u>	Divide the decoction into 3 parts. Drink 2 parts 3 times a day.
	<u>If dried</u>	
	Adult 6 tbsp.	
	7-12 yrs. 3 tbsp.	
	2-6 yrs. 1-1/2 tbsp.	

Plant material	Preparation	Direction for use
	<u>If fresh</u>	
	Adult 8 tbsp.	
	7-12 yrs. 4 tbsp.	
	2-6 yrs. 2 tbsp.	
	Boil the needed amount of leaves in 2 glasses of water until 1 glass of liquid is left. Cool and strain.	
BALANOY, leaves	<u>Amount of chopped leaves needed</u>	Divide the decoction into 3 parts. Drink 1 part 3 times a day
	<u>If dried</u>	
	Adult 4 tbsp.	
	7-12 yrs. 2 tbsp.	
	<u>If fresh</u>	
	Adult 6 tbsp.	
	7-12 yrs. 3 tbsp.	
	Boil the needed amount of leaves in 2 glasses of water until 1 glass of liquid is left. Cool and strain.	
LAGUNDI, leaves	<u>Amount of chopped leaves needed</u>	Divide the decoction into 3 parts. Drink 1 part 3 times a day
	<u>If dried</u>	
	Adult 4 tbsp.	
	7-12 yrs. 2 tbsp.	
	2-6 yrs. 1 tbsp.	
	<u>If fresh</u>	
	Adult 6 tbsp.	
	7-12 yrs. 3 tbsp.	
	2-6 yrs. 1-1/2 tbsp.	



Plant material	Preparation	Direction for use
	Boil the needed amount of leaves in 2 glasses of water until 1 glass of liquid is left. Cool and strain.	

#### Medicinal Plants for Continuing Cough

MANGO, tops	<u>Amount of chopped leaves needed</u>	Divide the decoction into 3 parts
	<u>If dried</u>	Take 1 part 3 times a day
	Adult 4 tbsp.	
	7-12 yrs. 2 tbsp.	
	1-6 yrs. 1 tbsp.	
	<u>If fresh</u>	
	Adult 6 tbsp.	
	7-12 yrs. 3 tbsp.	
	1-6 yrs. 1-1/2 tbsp.	
	Boil the needed amount of leaves in 2 glasses of water until 1 glass of liquid is left. Cool and strain.	
OREGANO, leaves	<u>Amount of chopped leaves needed</u>	Divide the decoction into 3 parts. Drink 1 part 3 times a day
	<u>If dried</u>	
	Adult 2 tbsp.	
	7-12 yrs. 1 tbsp.	
	<u>If fresh</u>	
	Adult 4 tbsp.	
	7-12 yrs. 2 tbsp.	

Plant material	Preparation	Direction for use
	Boil the needed amount of leaves in 2 glasses of water until 1 glass of liquid is left. Cool and strain.	
KALAMANSI, fruits	Press the juice of 2 or 3 pieces of kalamansi in 1 glass of lukewarm water. Add sugar to taste.	Drink 1 glass 3 or 4 times a day

#### Medicinal Plants for Intestinal Worms

IPIL-IPIL, seeds	Crush mature ipil-ipil seeds into powder.	Eat the powdered seeds 2 hours after supper.
	<u>Amount of powdered seeds needed</u>	
	Adult 1 tsp.	
	10-12 yrs. 1/2 tsp.	
	7-9 yrs. 1/4 tsp.	

#### Medicinal Plants for Stomach Pain

GUAVA, leaves	<u>Amount of chopped plant material needed</u>	Drink the decoction while lukewarm.
	<u>If dried</u>	
	Adult 2 tbsp.	
	7-12 yrs. 1 tbsp.	
	<u>If fresh</u>	
	Adult 3 tbsp.	
	7-12 yrs. 1-1/2 tbsp.	

Plant material	Preparation	Direction for use
	Boil the needed amount of plant material in 1 glass of water until 1/2 glass of the liquid is left. Strain when lukewarm.	

#### Medicinal Plants for Constipation

PAPAYA, fruit	Slice the ripe fruit.	Eat 1 to 2 medium sized pieces of the ripe fruit.
		Follow with water.
	Use only one of the plant materials listed.	
SWEET POTATO, leaves	Cooked as desired.	At supper time, eat 1 or 2 cups of the cooked vegetables.
MALUNGgay, leaves		Follow with water.
KANGKONG, leaves		
CASSAVA, leaves		
	Use only one of the plant materials listed.	
CASHEW, seeds	Cook as desired.	Eat 1/4 to 1/2 cup of the cooked seeds.
LINGA, seeds		Follow with water.
RICE, bran	Boil 2 teaspoons of rice bran in 1 glass of water for 5 minutes. Cool.	Mix and drink.



Plant material	Preparation	Direction for use
COCONUT, fruit	Get the cream from coconut meat.	Drink 1 or 2 table- spoon of coconut cream.
KANYA- PISTULA, fruit	Crush 1 or 2 ripe fruit in 1 glass of water.	Drink the decoction.
TAMARIND, fruit	Get ripe fruit as many as you can.	Eat the ripe fruit. Follow with water.

#### Medicinal Plants for Diarrhea

GUAVA, leaves	<u>Amount of chopped leaves</u> <u>needed</u>	Divide the decoction into 4 parts.
	<u>If dried</u>	Drink 1 part every 2 or 3 hours.
	Adult 6 tbsp.	
	7-12 yrs. 3 tbsp.	
	2-6 yrs. 1-1/2 tbsp.	
	<u>If fresh</u>	
	Adult 8 tbsp.	
	7-12 yrs. 4 tbsp.	
	2-6 yrs. 2 tbsp.	
	Boil the needed amount of leaves in 2 glasses water for 15 minutes or until one glass of the liquid is left. Cool and strain.	
DUHAT, fruit	Get ripe fruit.	Eat 20-30 pieces every 4 hours.
MANGO, bark, seeds	Boil 2 tablespoon of chopped bark or 4 table- spoon of chopped seeds in 2 glasses of water until 1 glass is left. Cool and strain.	Divide the decoction into 4 parts. Drink 1 part every 3 or 4 hours a day.

Plant material	Preparation	Direction for use
PALAY, rice	Make a porridge or get am.	Eat the porridge or drink the am.

#### Medicinal Plants to Replace Water, Salt and Sugar Lost Due to Diarrhea

COCONUT, fruit	Get water from young coconut fruit. For every 2 glasses of coconut water, add an equal amount of clean drinking water, 1 tablespoon sugar and 1/4 teaspoon table salt.	Drink the mixture as tolerated (for adults). For children, the following volume of the mixture should be consumed every 3 hours: 6-12 yrs. 1 glass 2-5 yrs. 3/4 glass 1-2 yrs. 1/2 glass
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#### Medicinal Plants for Gaseous Distention

	Use only one of the plant materials listed.	Drink the decoction while lukewarm.
TANGLAD, leaves	<u>Amount of chopped plant material needed</u>	
SAMBONG, leaves	<u>If dried</u>	
	Adult 1 tbsp.	
YERBA-BUENA, leaves	7-12 yrs. 1/2 tbsp.	
	<u>If fresh</u>	
	Adult 2 tbsp.	
	7-12 yrs. 1 tbsp.	

Plant material	Preparation	Direction for use
	Boil the needed amount of plant material in 1 cup of water for 5 minutes. Strain when lukewarm.	
	Use only one of the plant materials listed.	
GINGER, rhizome	Boil 1 teaspoon chopped rhizome in 1 glass of water for 5 minutes. Strain when lukewarm.	Drink the decoction while lukewarm.
DILAW, rhizome		For 7-12 years give 1/2 teaspoon.
DAMONG-MARIA, leaves	Heat enough fresh leaves in a small fire. Crush.	For children 2-6 years. Apply the crushed leaves on the abdomen.
	Chop 8 fresh leaves. Add a few drops of cooking oil or alcohol. Heat in a small fire.	For children, apply the chopped leaves on the abdomen.
	Boil 4 fresh or 8 dried leaves in 1 glass of water. Strain.	Drink the decoction while lukewarm.
ALAGAW, leaves	Heat enough fresh leaves in a small fire. Crush.	For children 2-6 years. Apply the crushed leaves on the abdomen.
	Chop 1 or 2 leaves add a few drops of cooking oil.	Apply the chopped leaves on the abdomen.
	Boil 2 or 3 fresh of dried leaves in 1 glass of water. Strain.	For adults, drink the decoction while lukewarm.



Plant material	Preparation	Direction for use
BALANOY, roots	Boil 1 tablespoon of chopped roots in 1 glass of water for 5 minutes. Strain when lukewarm.	Drink the decoction.
GUGO, seeds	Heat enough chopped seeds in a small fire and add a few drops of cooking oil.	Apply on the abdomen while the chopped seeds are still warm.
MANSANILYA, leaves, flower	Heat enough fresh leaves on a small fire. Crush and add a few drops of cooking oil.	For children, 2-6 years. Apply the crushed leaves on the abdomen.
	Chop 13 dried flowers and soak in 1/2 cup of lukewarm cooking oil for 30 minutes. Strain and place in a small bottle.	Apply the oil on the abdomen.
MAYANA, leaves	Boil 1/2 glass of water with 3 leaves for 15 minutes. Strain.	Drink the decoction while lukewarm.
IKMO, leaves	Heat enough fresh leaves on a small fire. Crush and add a few drops of cooking oil.	Apply the crushed leaves on the abdomen while the leaves are still warm.

#### Medicinal Plants to Increase the Amount of Urine (Diuretic)

SAMBONG, leaves	<u>Amount of chopped leaves needed</u>	Divide the decoction into 3 parts.
	<u>If dried</u>	Drink 1 part 3 times a day.
	Adult 4 tbsp.	
	7-12 yrs. 2 tbsp.	

Plant material	Preparation	Direction for use
	<u>If fresh</u>	
	Adult 6 tbsp.	
	7-12 yrs. 3 tbsp.	
	Boil the needed amount of leaves in 2 glasses of water for 15 minutes or until one glass of liquid is left.	
CORN, corn hair	<u>Amount of corn hair needed</u>	Divide the decoction into 3 parts.
	Adult 1 cup	
	7-12 yrs. 1/2 cup	
	2-6 yrs. 1/4 cup	
	Boil the needed amount of leaves in 2 glasses of water for 15 minutes or until one glass of liquid is left.	
COGON, roots	<u>Amount of chopped roots needed</u>	Divide the decoction into 3 parts.
	Adult 6 tbsp.	
	7-12 yrs. 3 tbsp.	
	2-6 yrs. 1-1/2 tbsp.	
	Boil the needed amount of leaves in 2 glasses of water for 15 minutes or until one glass of liquid is left.	
COCONUT, fruits	Get 7 glasses of water from young coconut fruit.	Drink the water for the whole day.
PANDAN-MABANGO, leaves	Boil chopped leaves in 2 glasses of water for 15 minutes or until 1 glass of liquid is left.	Divide the decoction into 3 parts. Drinkle 1 part 3 times a day.

## Medicinal Plants to Relieve Itching

Plant material	Preparation	Direction for use
GUAVA, leaves	Boil 1 to 2 handfuls of chopped plant material in a small pot of water for 5 minutes. Cool and strain.	Use the decoction to wash the itchy skin.
	Use only one of the plant materials listed.	
CASSAVA, starch	Prepare as a thick starch solution.	Apply the starch solution on the itchy skin.
CORN, starch		
PALAY, starch		
KALATSUTSI, sap	Mix 8 teaspoonfuls of sap in 1 tablespoon of oil from the coconut.	Apply on the itchy skin.

## Medicinal Plants for Joints and Muscle Pain

	Use only one of the plant materials listed.	
SAMBONG, leaves	Chop enough materials needed. Heat in a small fire.	Apply in the affected part before going to bed or when there is on and off pain.
BALANOY, leaves		
LANTANA, leaves	Chop 13 fresh leaves and add a few drops of cooking oil. Heat in a small fire.	Apply in the affected part while lukewarm.



Plant material	Preparation	Direction for use
KULATSUTSI, sap	Mix 1/2 teaspoon of kulatsutsi sap to 1 teaspoon coconut oil. Heat in a small fire.	Massage the lukewarm mixture in the affected part before going to bed and when there is on and off pain.
LINGA, seeds	Make oil from the seeds.	Massage in the affected part.

#### Medicinal Plants for Sprains

	Use only one of the plant materials listed.	
TUBANG BAKOD, leaves	Heat enough fresh plant materials over a small fire. Pound.	Apply the pounded plant material while warm on the sprained joint.
MAYANA, leaves		
IKMO, leaves		
LANTANA, leaves		
GUGO, seeds	Crush a handful of seeds and add water to make a poultice.	Apply on the sprained parts.
SABILA, leaves	Crush 1 fresh leaf.	Apply on the affected part.

#### Medicinal Plants for Superficial Burns

Use only one of the plant materials listed.
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Plant material	Preparation	Direction for use
GUMAMELA, flower buds	Press the juice out from enough fresh plant material.	Apply the juice on the affected parts.
OREGANO, leaves		Do this 2 times a day. Maintain cleanliness during the entire procedure.

#### Medicinal Plants for Scratches and Superficial Cuts

	Use only one of the plant materials listed.	
GINGER, rhizome	Press the juice out from sufficient fresh plant material.	Apply the juice on superficial cuts or scratches. Maintain cleanliness through out the procedure.
DILAW, rhizome		
IKMO, leaves		
GARLIC, leaves		
SUOB KABAYO, leaves		

#### Medicinal Plants as Wound Wash

	Use only one of the plant materials listed.	Use the decoction to wash the wound.
GUAVA, leaves	Boil 1 or 2 handfuls of the plant material in a small pot of water for 5 minutes. Cool and strain.	Do this once or twice daily.
TAMARIND, leaves		

Plant material	Preparation	Direction for use
BALANOY, leaves		
KALANTAS, leaves		
DAMONG-MARIA, leaves		
LAGUNDI, leaves		
SUOB-KABAYO, leaves		
TANGAN- TANGAN, leaves		

#### Medicinal Plants to Hasten Pointing of Boil

	Use only one of the plant materials listed.	Apply as poultice over the boil.
GUMAMELA, leaves	Pound enough fresh plant material	Change the poultice once a day.
SAMBONG, leaves		
KAMANTIGI, leaves		
	Use only one of the plant materials listed.	Apply as poultice over the boil.
MANSANILYA, flower	Pound enough fresh plant materials	Change the poultice over a day.
SUOB-KABAYO, leaves		



## Medicinal Plants for Scabies

Plant material	Preparation	Direction for use
MALUNGGAY, leaves	Extract the juice by pounding enough fresh fresh plant material.	After bathing, apply the juice on the affected skin 2 times daily.
AKAPULKO, leaves	Pound enough fresh leaves	Apply on the affected part 2 times a day.
KALATSUTSI, bark	Boil 1/2 cup of chopped dried bark to 1/2 cup cooking oil for 10 minutes. Strain when lukewarm.	Apply the oil in the affected skin 2 or 3 times a day.
SORO-SORO, leaves	Pound 3 leaves.	Apply on the affected part.

## Medicinal Plants for Tinea Flava, Ringworm and Athlete's Foot

	Use only one of the plant materials listed.	
GARLIC, cloves	Pound enough fresh plant material and extract the juice.	Apply the juice on the affected skin 2 times daily for 2 to 3 weeks.
BALANOY, leaves	Use only one of the plant materials listed.	Apply the juice on the affected skin 2 times daily for 2 to 3 weeks.
KAMANTIGI, flower	Pound enough fresh plant material and extract the juice.	
KANYA-PISTULA, leaves		

### Medicinal Plants for Superficial Bleeding

Plant material	Preparation	Direction for use
	Use only one of the plant materials listed.	
MALUNGgay, leaves		Apply as poultice on superficial wound to control bleeding.
GULASIMAN, stems and leaves	Crush enough fresh plant material.	Maintain cleanliness throughout the procedure.
GATAS-GATAS, stems and leaves		

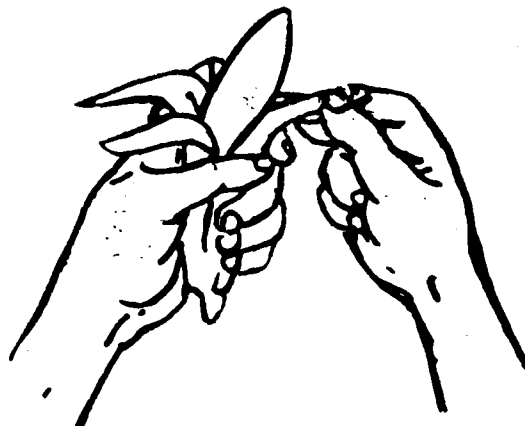
### Medicinal Plants for Otitis Media

SORO-SORO leaves	Boil 1 or 2 fresh leaves. Extract the juice.	Apply 2 or 3 drops of juice on the affected ear 2 times a day.
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## BANANA POWDER FOR DIARRHEA

### Preparation and directions for use

1. Wash and peel a green latundan banana.

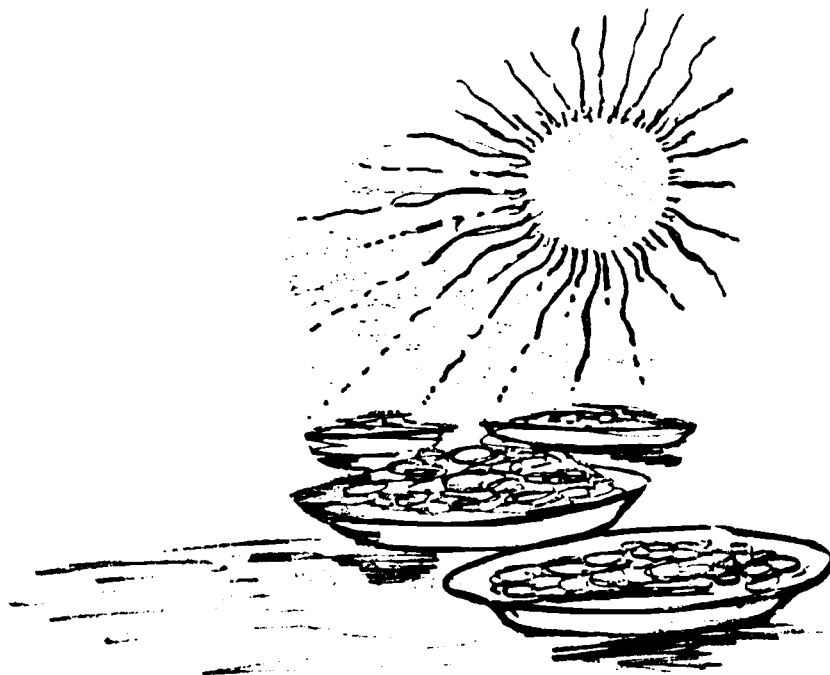


2. Cut the banana into thin slices.

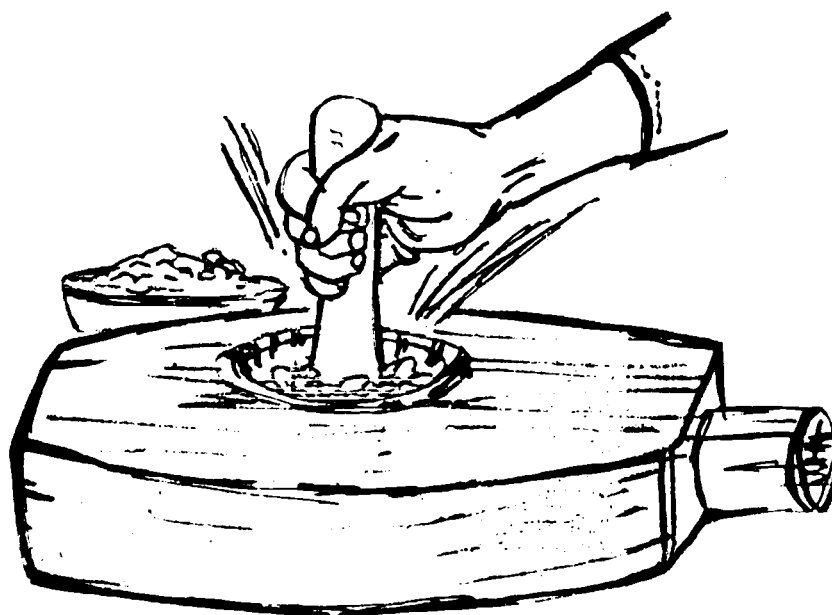




3. Dry the thin slices under the sun for one day.



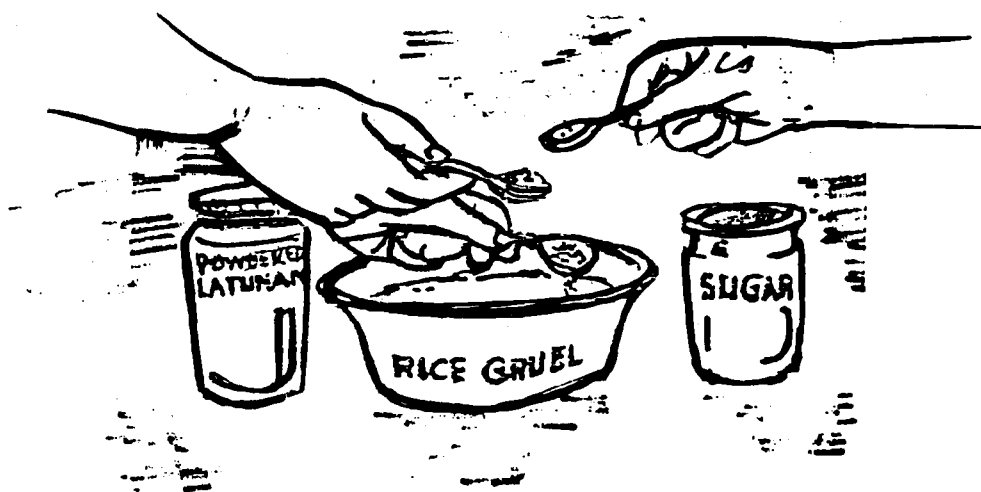
4. Pound the dried banana slices into a powder.



5. Store the powder in plastic bags or tightly sealed containers.



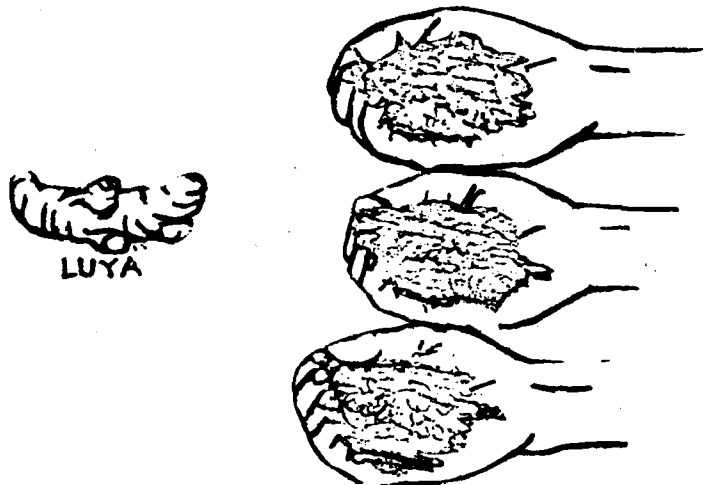
6. The banana powder can be mixed with soft foods like lugaw (rice gruel). Use two teaspoons of the powder for every cup of lugao. Add one teaspoon of sugar.



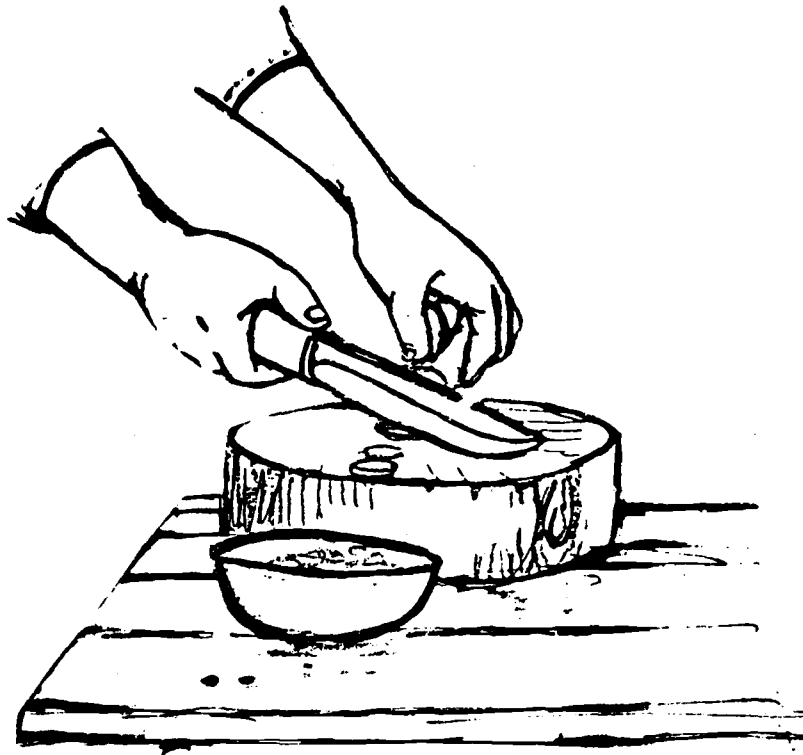
## SLK COUGH SYRUP

### Preparation and directions for use

1. Get three handfuls of fresh sampalok (tamarind) leaves and one medium-sized luya (ginger).

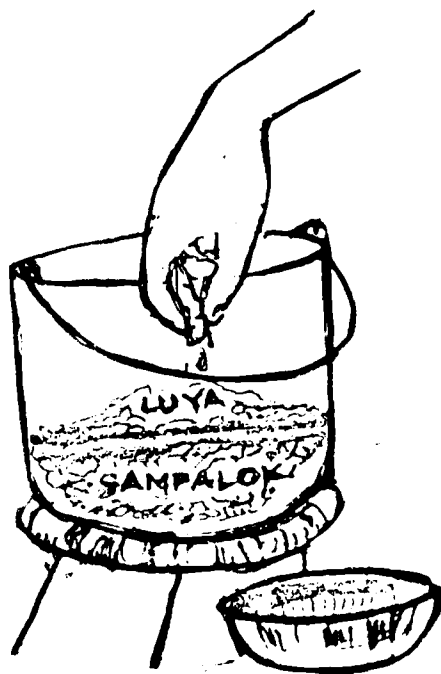


2. Cut the luya into thin slices.

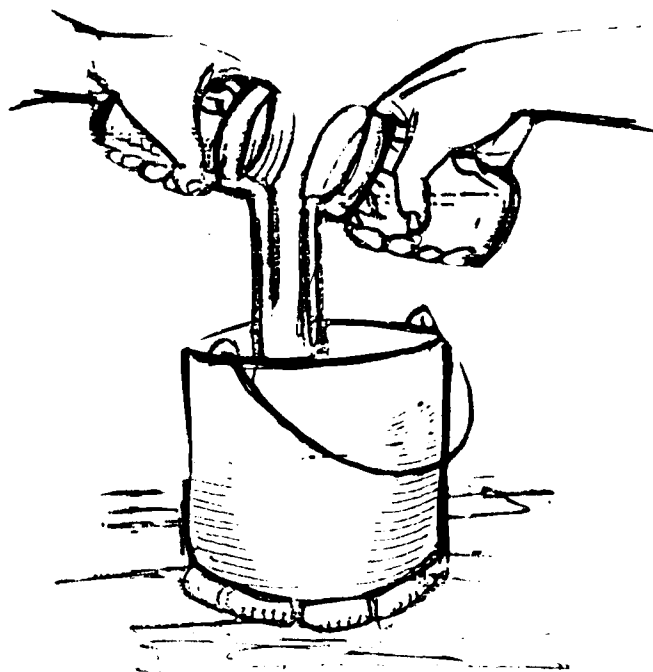




3. Put the sampalok leaves at the bottom of a pot. Then put the slices of luya on top of the sampalok leaves.



4. Add two glasses of water.



5. Boil for about 30 minutes or until there is only one glass of liquid left.



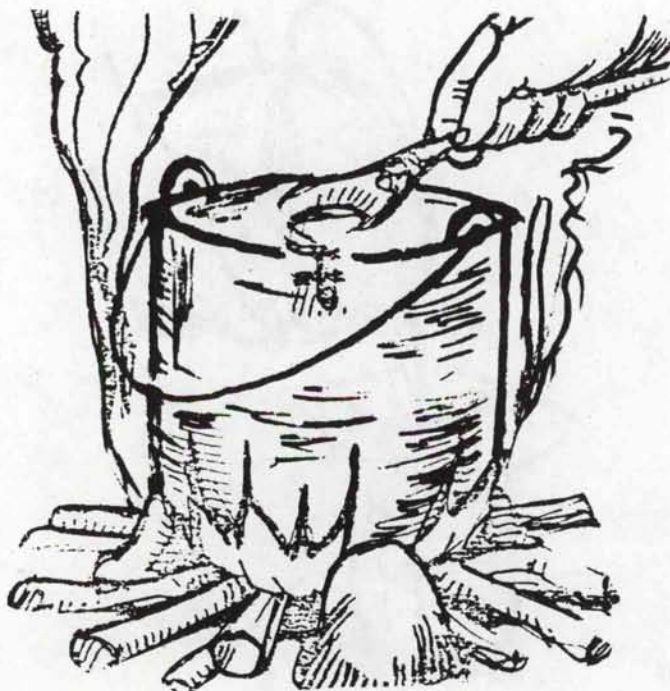
6. Strain the mixture to obtain the liquid (decoction).



7. Measure the amount of liquid and add sugar. For every glass of liquid, add one-half glass of sugar.

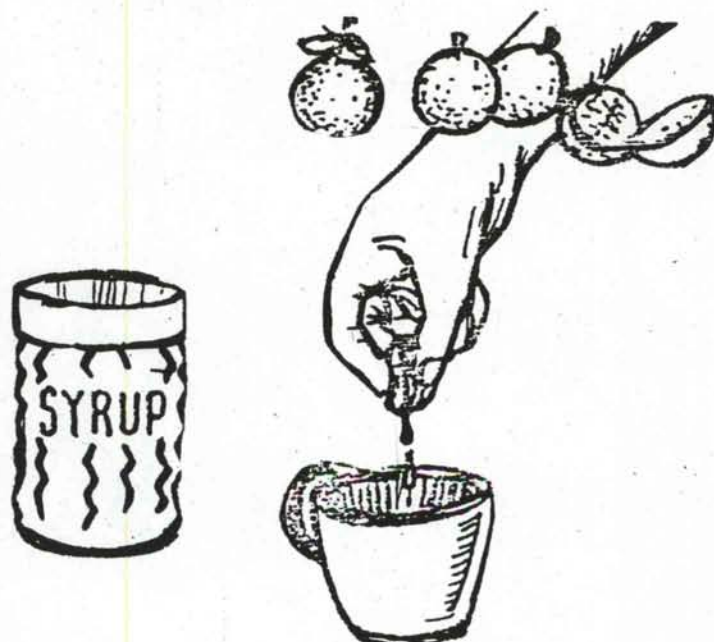


8. Boil the liquid and the sugar until the mixture becomes a thick syrup.





9. Let the mixture cool down. Then add the juice from 3-5 kalamansi (limes) for flavoring.



10. Give the syrup every 3-4 hours. For adults, give 1 tablespoon each time, for children, give 1 teaspoon.



This handbook attempts to provide tribal health workers, particularly the Mangyan, with the basic concept and features of Primary Health Care. It is the outcome of a collaboration among three groups, the De La Salle University Research Center, the Department of Health (DOH) and the Hanunuo Mangyan health workers in Barangay Binli, Bulalacao, Oriental Mindoro.

The major contents of this resource material are the following: (1) The features of Primary Health Care (PHC) and the roles, functions and activities of Barangay Health Workers in promoting health, prolonging life and preventing disease within the PHC context; (2) Maternal care and family planning; (3) Child care and nutrition; (4) The treatment and prevention of different types of illnesses common in tribal communities, i.e., upper respiratory tract infection, tuberculosis, diarrhea, parasitism, malaria and skin diseases; (5) Procedures in preparing blood smear for malaria and tubercular sputum smear; and (6) The uses and preparation of medicinal plants.

Although this handbook was originally designed for the training of the Hanunuo Mangyan health workers, it may serve as a useful material to prospective health workers of other Mangyan tribes as well as other cultural communities. It may also be a valuable health care manual to the households and other sectors of Mangyan tribes and other Philippine tribal groups.