



SEMINAR ON THE TRAINING AND  
UTILIZATION OF MEDICAL ASSISTANTS

10 December 1974

KHARTOUM, 16 - 21 December 1974

ENGLISH ONLY

LIST OF BACKGROUND MATERIAL

1. World Health Magazine, June 1972 issue
2. The Use of "Medical Assistants" for Improving Health Services  
Document No. 1 Suggested Guidelines for Promoting the Use of Medical Assistants WHO/EDUC/73.163  
Document No. 2 Suggested Guidelines for Planning, Implementing and Evaluating a Programme for the Training and Use of Medical Assistants WHO/EDUC/73.164
3. Report on WHO Travelling Seminar on the Training Utilization of Medical Assistants (Feldschers) in the USSR
4. The Training of Front Line Health Personnel - A Crucial Factor in Development  
By Dr D. Flahault Reprinted from WHO Chronicle Vol.27, No.6 pp 236 - 241
5. Medical Auxiliaries  
Proceedings of the Conference on Medical Assistants held in Bethesda, USA, June 1973 PAHO Scientific Publication No. 278
6. Training and Utilization of Village Health Workers HMD/74.5  
Working Document  
WHO Geneva 1974



HMD / 74 5  
(original French)  
RESTRICTED

# **TRAINING AND UTILIZATION OF VILLAGE HEALTH WORKERS**

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A programme to improve the delivery of health  
services at the peripheral level

—  
by a WHO Working Group

Working Document  
WORLD HEALTH  
ORGANIZATION  
GENEVA 1974

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AS IT STANDS THIS DOCUMENT IS NOT A FINISHED PUBLICATION  
BUT A WORKING DOCUMENT\* .

ITS PURPOSE IS TO COLLECT VIEWS ON THE PROGRAMME FROM THOSE  
WORKING ON HEALTH SERVICE DEVELOPMENT PROJECTS IN WHO MEMBER STATES.

THE FINAL VERSION, TO BE PUBLISHED IN 1975, WILL TAKE ACCOUNT  
OF ANY SUGGESTIONS MADE IN THE DIFFERENT REGIONS.

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\* The French and Spanish versions have also been prepared

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<sup>1</sup> Since this document in its present form is principally aimed at testing the manual - practical guide for the VHW, Chapter 3 has deliberately been set out in detail so as to facilitate its utilization.

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# CHAPTER I

## INTRODUCTION

## 1. Historical background

In many countries, particularly in rural areas, most of the population has no access to basic health services. This is despite the money and effort expended over the years by governments, and by WHO itself, in most parts of the world. "The most single failure of WHO as well as of Member States has undoubtedly been their inability to promote the development of basic health services and to improve their coverage and utilization", as the Director-General wrote in his Annual Report for 1973<sup>1</sup>.

This is by no means a new state of affairs and it could continue for a long time to come, as rural populations are rarely well enough organized to be able to bring pressure to bear on public opinion or on governments. Nevertheless, in 1972<sup>2</sup> the World Health Assembly requested the Director-General "to invite and assist Member States to intensify their efforts to promote the training and utilization of health auxiliaries as far as their present facilities permit, with a view to improving the efficacy of the health services and extending the health coverage of the population". In 1973<sup>3</sup> the World Health Assembly recommended that "the Organization should concentrate upon specific programmes that will assist countries in developing their health care systems for their entire populations, special emphasis being placed on meeting the needs of those populations which have clearly insufficient services" and "encourage and participate in gathering and coordinating local, national, international and bilateral resources for the furthering of national health service goals".

WHO has now been given a mandate and to accomplish it, over the next five years, WHO intends to promote a systematic and extensive effort to improve conditions in those countries which so wish it. Although it would admittedly still be useful to gather more detailed information on the scope and nature of the needs involved, it seems equally clear that this quest for data should not hold up WHO's effort.

Under the guidance of Dr. W.H. Chang, a Programme Steering Committee was formed in January 1974 and recommended the setting up of a Working Group composed of WHO staff members from various Headquarters' divisions and the regions. The Working Group was given until the end of 1974 to prepare a programme for improving and developing health services at village level on the basis of the training and utilization of auxiliary health workers.

The broad outline of an overall plan of action was submitted to the Regional Directors on 18 April 1974. Their response was both constructive and encouraging, enabling the Working Group to continue its work and prepare this first document.

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<sup>1</sup> O.R. 213, page X

<sup>2</sup> WHA25.42

<sup>3</sup> WHA26.35

## 2. Needs and priorities

The Working Group's first task was to specify what the needs and priorities of rural populations were. At first sight these appeared to vary with the state of economic development and with ecological, demographic and social characteristics. Wide variations of this sort certainly do exist but it is none the less true that man's basic needs and problems remain the same wherever he lives. Thus without in any way attempting a final decision (which is the prerogative of national authorities), it seemed feasible to draw up an example list of the most common or most urgent problems encountered at village or rural community level. This example list appears in Annex I and served as the working basis for the present document. Some of the 30 or so problems on the list could obviously be replaced by others more in accord with local conditions. A number of criteria for the addition of problems to the list, or for their removal, has also been suggested. In addition, in view of the importance of community development and the part health workers ought to play in it, it seemed worth while to include two examples of such work as a reminder of what could and should be achieved in this area.

## 3 Philosophy, objectives, methods, programme scope

Although well aware that the assessment of needs and priorities made here is on the theoretical side (which could hardly be avoided in a document attempting to cover as wide a field of application as possible), the Working Group has used them as a basis to prepare problem outlines, describe tasks, set educational objectives, suggest some teaching methods and produce a Manual/Practical Guide to help the health worker learn the acts and activities expected from him within the limits of his assigned sphere of action.

Admittedly, health workers will not be able to solve all the health problems arising in a village. However, the programme is not aimed at producing ideal conditions but at tackling the most common and urgent problems encountered. It seeks to bring about a gradual improvement in the health of various population groups by strengthening the existing health services and by providing a minimum level of service as a point of departure in places where there had been nothing or practically nothing before.

The health worker will give practical expression to the village's own determination to take over responsibility for the health of its people and to make up in part for the deficiencies of the official health services. The health worker will represent the forward outpost of the health services among the population, although his functions and his range of action will be circumscribed and clearly defined. His activities must not only be desired by the village but must also be followed up, supplemented and guided by a supervisor belonging to the official health services. Such supervision is an essential and integral part of the village health worker concept. The village health worker must not be left to stand alone. He should be envisaged only in the context of a national health service, as the advance guard of the health network and as a small part of a much greater whole. The village health worker will be the link between the village and its nearest health centre or hospital. His contribution will be to the development of the outer reaches of the health services and will be given in close liaison with the other levels of the national health administration.

Several grades of village health worker were originally contemplated but it was eventually considered best to stick to a single type whose range of action would vary depending on the equipment supplied to him.

The last three chapters, which appear in no more than rough outline or summary in this document, are intended to indicate the foreseeable implications of the programme and the tactics to be followed in implementing it, since the programme for the training and utilization of the village health worker is not restricted merely to the production of a training manual. It also includes an examination of the logistics of setting up a rural health worker network, in which such problems as supervision, referral or evacuation to hospital, equipment and medical supplies are dealt with.

The programme also includes an assessment of the costs entailed by the suggested proposals, so as to give governments and local communities an idea of the financial repercussions to expect from any action they may take and allow them to see to what extent their resources can match them.

Lastly, the programme contains some organizational and administrative suggestions for smoothing the way to its acceptance by Member States and facilitating its adaptation to local conditions. For this reason, a very flexible approach has been planned to allow gradual implementation of a comprehensive programme that takes account of the local situation and of experience already gained.

The chapter containing the Manual/Practical Guide has been written in a very simple elementary style. A glossary is given in Annex IV. It would also be a good idea to have the Manual translated in local languages to make it more easily accessible to health workers.

All in all, the programme is one among several possible options for improving the delivery of health services at peripheral level. It entrusts health responsibilities to an elementary level of health worker and hence entails certain risks that growing experience and a trial period should manage to reduce to a minimum.

Different forms of assistance could be offered to Member States to help them develop their training and utilization of village health workers.

CHAPTER 2

THE VILLAGE HEALTH WORKER

## 1. ESSENTIAL CHARACTERISTICS

### Who is he?

The Village Health Worker (VHW) is a man or a woman who, if possible, can read and write and is selected by the village authorities or with their agreement to deal with the health problems of individual people and the community.

### Who will he report to?

The VHW will be responsible both to the village authorities and to a supervisor appointed by the official health services of the country

The VHW will be paid (in cash or in kind) by the village for his work, which may be full-time or part-time depending on requirements.

The village will give him a hut or a room to be used only for his health activities.

The VHW will follow the instructions given him by his supervisor and will work in a team with him

### What training will he receive?

The VHW will receive an initial period of training of six to eight weeks from the official health service of the country. He will also be given a regular annual further training lasting two to three weeks. His training will be of a practical nature and will be given near his village. Preferably, his supervisor should give the instruction. The Manual/Practical Guide should be translated into the local language

## 2. ROLE AND TASKS

The work of the VHW will cover both health care and community development, as man's health and that of the community in which he lives is so much affected by any improvement in the quality of his environment.

The health work of the VHW will be restricted to what he has been taught. The VHW must realize his limitations and be aware that there is only a restricted number of things he can do. He will not be able to solve all the problems he meets, but it is hoped that he will be able to help in dealing with the most common and most urgent ones

The community development work of the VHW should serve to encourage the village authorities and the village people to show initiative and take interest in any activity likely to improve living conditions in the village. He should first consider what can be done locally with the village's own resources at the least possible cost.

The VHW's duties will depend on the problems he meets. These will vary from one country to another and it is impossible to draw up a list of problems that will be applicable throughout the world. That is why the example list given earlier should only be taken as a specimen. However, many problems on this list will be

met with by most VHWs. For that reason, it seemed possible to prepare a Manual that would cover nearly all the most common concerns of the VHW even though it was clear that to meet the actual conditions existing in any community some problems might have to be dropped and others added.

a) In view of what has been said above, the VHW should

- 1 care for the health of the villagers and look after community hygiene in the village
- 2 give care and advice, in accordance with the instructions written down in the manual or given by his supervisor, to any villager who consults him
- 3 send patients to the nearest health centre or hospital in any case in which the manual instructs him to do so (evacuation or referral) and in any case not covered by the manual The VHW should therefore confine his care and treatment to those cases, conditions and situations described in the manual
4. with authorization from the village authorities, visit all dwellings and give those living in them advice on how to prevent disease and learn good habits of hygiene

b) In addition, he should

- 1 make regular reports to the village authorities on the health of the villagers and on conditions of hygiene in the village Get the village authorities and the village people to give him the help and support he needs for his work
- 2 keep in as close contact as possible with his superior so as to be able to give of his best in his work and to obtain the equipment and medical supplies he needs
3. promote community development activities and play an active part in them

c) This assumes that the VHW

1. is available any time of the day or night to respond to any emergency calls
2. acts in all circumstances with common sense and devotion to duty and in awareness of his limitations and of his responsibilities
3. does not leave the village without first informing the village authorities
- 4 takes part in the periods of training organized by the health service

The Manual itself gives a detailed description of the VHWs tasks and will thus enable him to deal with about thirty current and urgent problems.

CHAPTER 3

MANUAL - PRACTICAL GUIDE

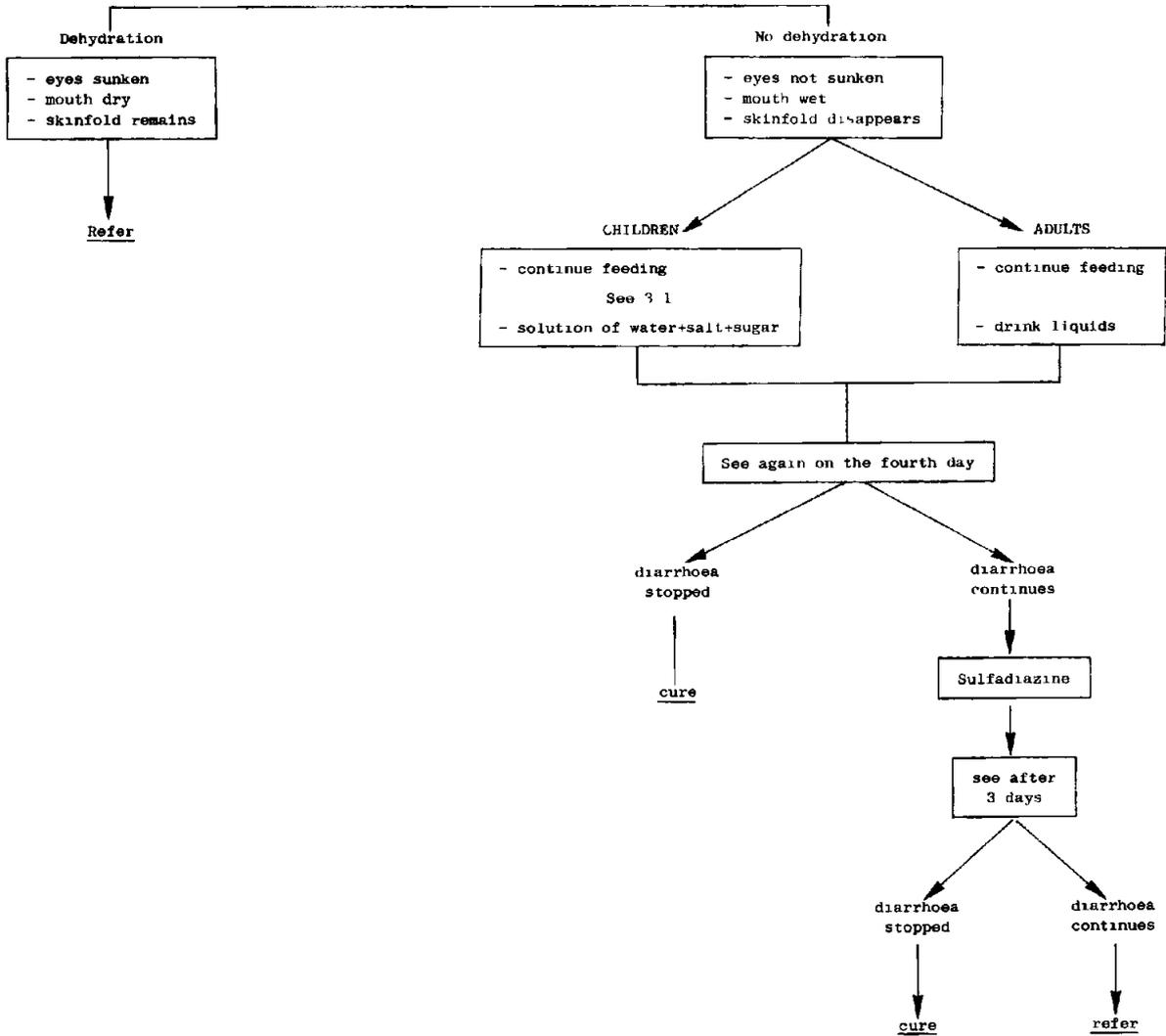
FOR THE

VILLAGE HEALTH WORKER

**MORE THAN 3 LIQUID  
STOOLS PER DAY**

OUTLINE OF THE PROBLEM

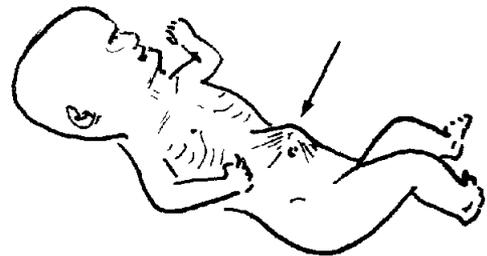
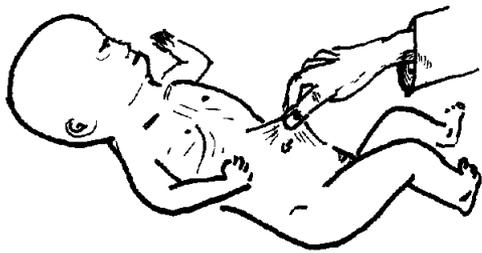
More than 3 liquid stools per day



EDUCATIONAL OBJECTIVES

After you have studied this problem you should be able to

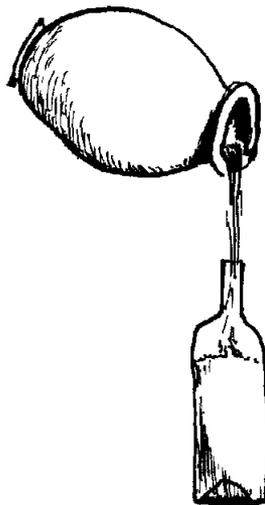
- 1 decide whether a patient has diarrhoea or not
- 2 recognize the 3 major signs which enable a dehydrated person to be distinguished from a non-dehydrated person,
- 3 show a mother whose child has diarrhoea how she should prepare and administer the rehydration fluid
- 4 give the necessary advice to an adult with diarrhoea
- 5 treat diarrhoea which persists in spite of the advice given
- 6 send to hospital or to a health centre any person with diarrhoea
  - 6 1 which is accompanied by dehydration
  - 6 2 which does not respond to treatment



**PINCH THE SKIN**



**THE SKINFOLD REMAINS**



**WATER + SALT + SUGAR**

MORE THAN THREE LIQUID STOOLS PER DAY

---

DID YOU FIND

- the patient's eyes sunken in his head?
- his mouth very dry and tongue red and dry?
- persistence of a fold in the skin for a few minutes after you pinched the skin?

IF SO           Take care!   The situation is serious   the patient may die.  
Send the patient immediately to hospital or the health centre.  
Meanwhile make him drink a lot of water.

IF NOT           Either the person concerned is a child,  
or the person concerned is an adult.

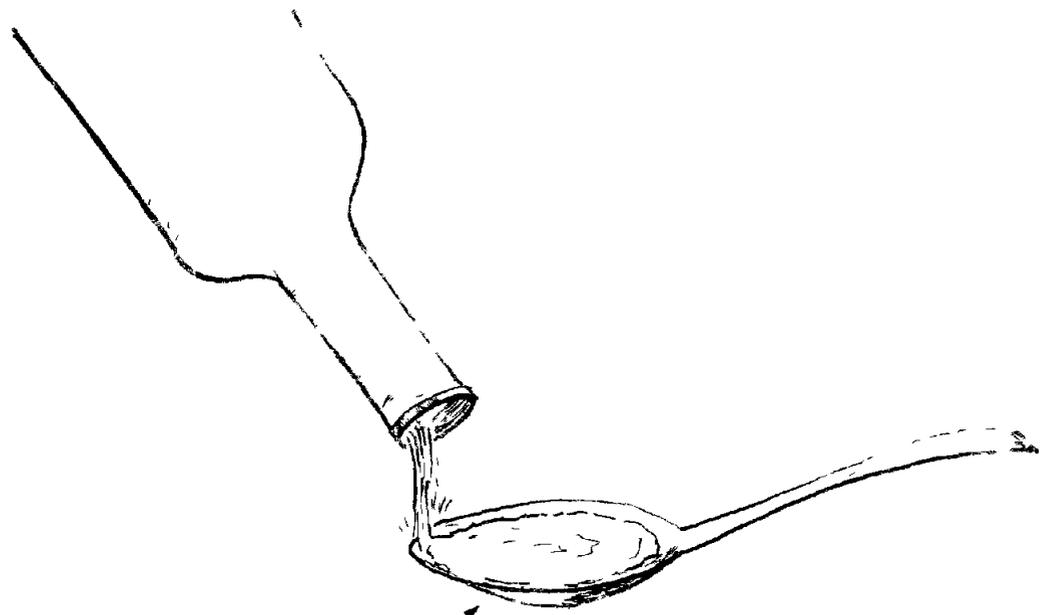
1.   IF THE PATIENT IS A CHILD

1.1.   Tell the mother that she must continue to feed her child.  
See PROBLEM 3.1.   "How to feed a child"

1.2.   The child must drink water containing salt and sugar

HOW IS THIS TO       In a clean one-litre bottle (see drawing)  
BE MADE?           put     a pinch of salt  
  a handful of sugar  
  a litre of water (boiled if possible)  
  and the juice of an orange if possible.

Ask the mother to prepare this bottle while you are there.



**A SPOONFUL** →

WHAT TO GIVE?      If the child is less than 6 months old, he should drink  
                         10 tablespoonsful every 3 hours from the bottle.  
                         If the child is over 6 months old, he will drink  
                         15 to 20 tablespoonsful every 3 hours from the bottle.

1.3. See the child again after 3 days

If the diarrhoea has stopped    advice the mother to feed her  
   child well.    See PROBLEM 3.1.    "How to feed a child".

If the diarrhoea is continuing    give SULFADIAZINE for 3 days.

if the child is under 3 years old, it will be given  
   1 tablet morning, noon and evening.

if the child is over 3 years old, it will be given 2 tablets  
   in the morning and evening.

And don't forget to make the child drink water containing salt and  
   sugar.

See the child again after 3 days of SULFADIAZINE treatment

If the diarrhoea has stopped    the child is cured.    Advise  
   the mother to feed her child well.    See PROBLEM 3.1.  
   "How to feed a child".

If the diarrhoea is continuing    send the child to hospital or  
   the health centre.

2. IF THE PATIENT IS AN ADULT

Tell him or her

2.1. To eat as usual.

2.2. To drink plenty of liquids (water, weak tea, clear vegetable soup . . .)

2.3. To come and see you again on the fourth day

                                 either the diarrhoea will have stopped·    the patient is cured  
                                 or the diarrhoea will be continuing·    give SULFADIAZINE for 3 days  
                                 2 tablets four times a day with plenty of water.

See the patient again after 3 days of SULFADIAZINE treatment.

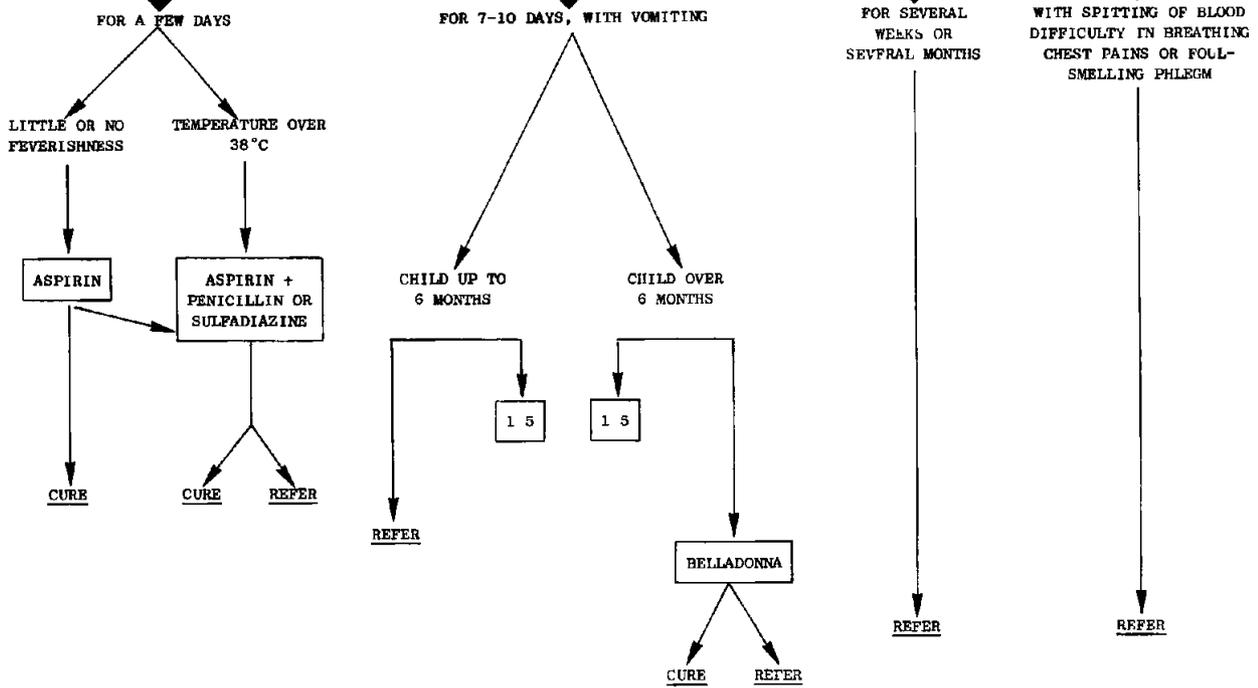
either the diarrhoea will have stopped the patient is cured  
or the diarrhoea will be continuing send the patient to hospital  
or the health centre

PLEASE NOTE. If in any one week you see five patients or more suffering from  
diarrhoea see PROBLEM 1.5. "Five new patients or more come to  
see you with similar conditions in any one week".

**SOMEONE HAS A COUGH**

OUTLINE OF THE PROBLEM

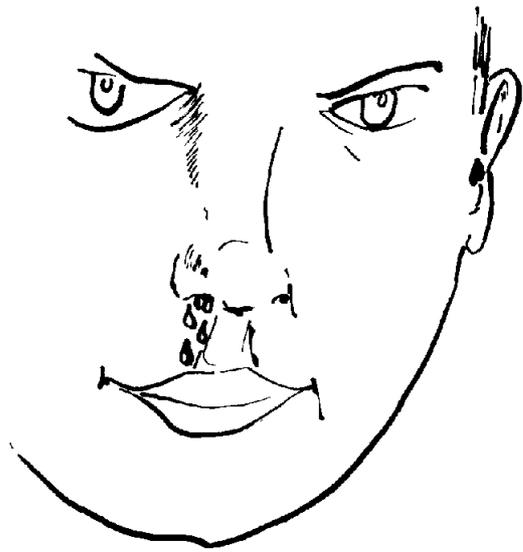
SOMEONE HAS HAD A COUGH



EDUCATIONAL OBJECTIVES

After you have studied this problem you should be able to

- 1 say whether a patient has a cough or not,
- 2 decide whether or not a patient is feverish,
- 3 treat a patient who has had a cough for some days with or without a temperature,
- 4 give a different course of treatment if there is no improvement,
- 5 treat a child who coughs occasionally but turns blue and vomits,
- 6 send to hospital or the health centre
  - 6 1 any person who has had a cough for some days and is feverish but has not got better with treatment,
  - 6 2 any child less than six months old with an occasional cough who becomes blue and vomits,
  - 6 3 any patient who has had a cough for several weeks or several months,
    - who spits blood
    - who has difficulty in breathing at night or when walking
    - who has pains in the chest,
    - who coughs up foul-smelling phlegm



SOMEONE HAS A COUGH

EITHER

1. They have had a cough for a few days
  - 1.1 with little or no feverishness
  - 1.2 with a temperature of over 38°
2. It is a child who has had a cough for 7 to 10 days and who has attacks of vomiting
3. The patient has had a cough for several weeks or several months
4. The patient spits blood, has difficulty in breathing, has pains in the chest or coughs up foul-smelling phlegm

1. IF THEY HAVE HAD A COUGH FOR A FEW DAYS

Take the patient's temperature (see techniques)

1.1 Little or no feverishness = temperature of less than 38°

← either the patient has a runny nose (with a discharge like water or a thicker discharge, like milk)

or the patient has a pain in the throat every time he swallows anything

Give ASPIRIN tablets for three days

for children half a tablet morning, noon and evening

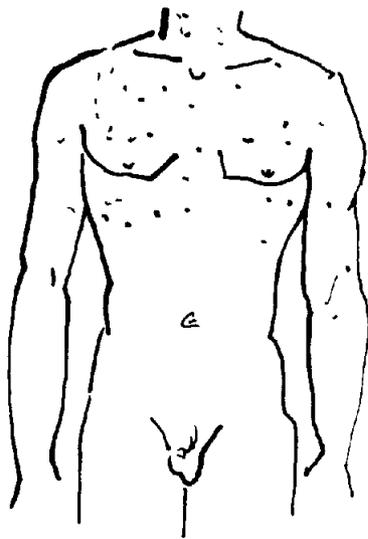
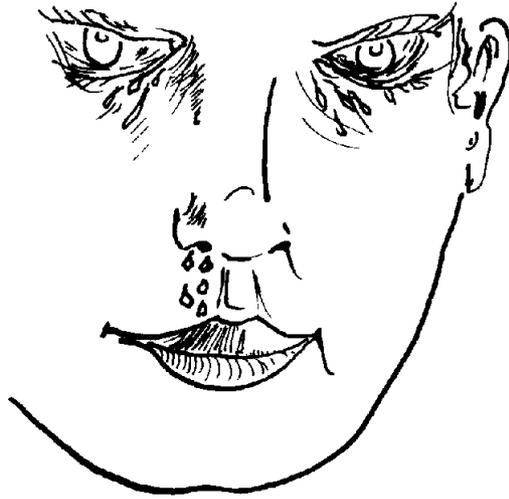
for adults one tablet morning, noon and evening

See the patient again on the fourth day

everything is all right the patient is cured, but tell him to come back if he becomes feverish again, or if he finds it difficult to breathe or if he has earache

there is no improvement the patient still has a temperature or finds it difficult to breathe or has a discharge from one ear

In that case give him a PENICILLIN injection in the buttocks every day



for three days, in children 500 000 units each time

in adults one million units each time (see techniques)

If you have no penicillin, give SULFADIAZINE tablets for five days to children under three years of age one tablet, morning, noon and evening  
to children over three years of age two tablets morning and evening  
to adults two tablets, four times a day

When you give sulfadiazine, always tell the patient to drink plenty of water.

See the patient after treatment

everything is all right the patient is cured

there is no improvement send him to hospital or the health centre.

#### 1.2 Temperature of over 38°

either the patient has difficulty in breathing,

or he has a pain in the throat every time he swallows anything

← or he has red patches on the body and a runny nose and eyes.

Give him, in that case, ASPIRIN and PENICILLIN (if you have no penicillin give him SULFADIAZINE)

Child ASPIRIN, half a tablet, morning, noon and evening for three days

PENICILLIN, 500 000 units in a single injection daily for three days

If you have no penicillin give SULFADIAZINE tablets

children under three years of age, one tablet morning, noon and evening

children over three years of age two tablets, morning and evening

Adult ASPIRIN, one tablet, morning, noon and evening

PENICILLIN, one million units in one injection daily for three days

If you have no penicillin, give SULFADIAZINE tablets

two tablets, four times a day

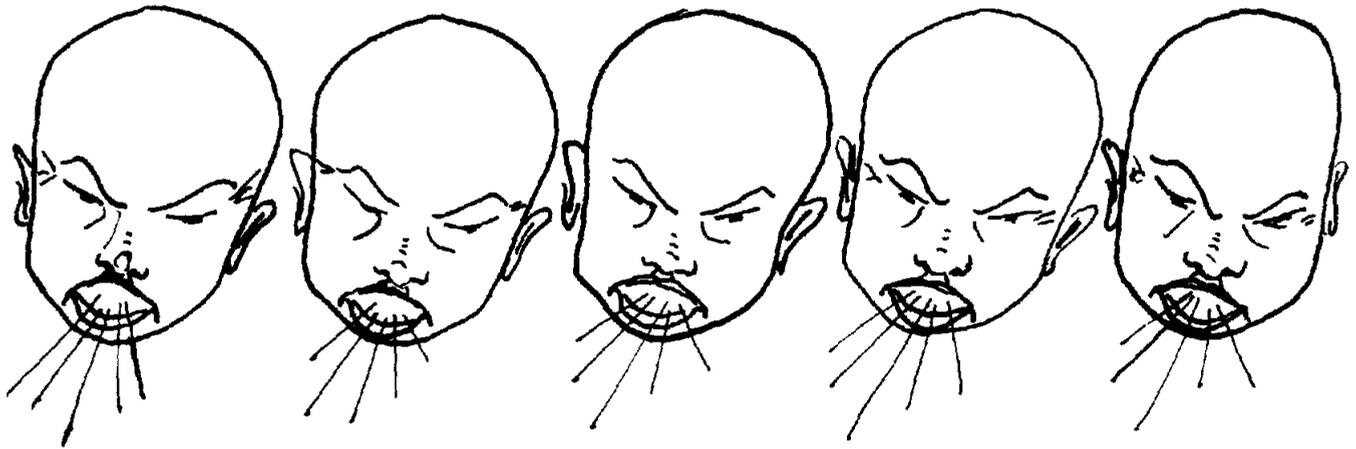
When you give SULFADIAZINE, always tell the patient to drink plenty of water.

See the patient again after treatment

everything is all right the patient is cured

there is no improvement send him to hospital or the health centre.

Note' If you have neither penicillin nor sulfadiazine, send the patient to hospital or the health centre.



**5** IN ONE WEEK

2. THE PATIENT IS A CHILD WHO HAS HAD A COUGH FOR 7 TO 10 DAYS AND HAS ATTACKS OF VOMITING

The patient is a child who at times has a very severe cough, goes completely blue and then vomits phlegm or whatever it has eaten.

2.1 If the child is less than six months old

send it to hospital or the health centre

2.2 If the child is over six months old

give belladonna tablets a quarter tablet three times a day for one week.

Be sure and tell the mother that if the child should become feverish or have difficulty in breathing she must bring it to you immediately, when she does, you will treat it as shown in 1.2 "Temperature of over 38°".

2.3 If, during one week, you see several children who cough from time to time, go completely blue and then vomit phlegm or whatever they have eaten, see

← PROBLEM 1.5 "5 new patients or more come to see you for the same thing in any one week"

3. SOMEONE HAS HAD A COUGH FOR SEVERAL WEEKS OR SEVERAL MONTHS

You must always send to hospital or the health centre any patient who has had a cough for several weeks or several months.

Be sure to tell these patients that they must get treatment and come back and see you after being in hospital or the health centre.

If they have been given a course of treatment to follow, make sure that they follow it.

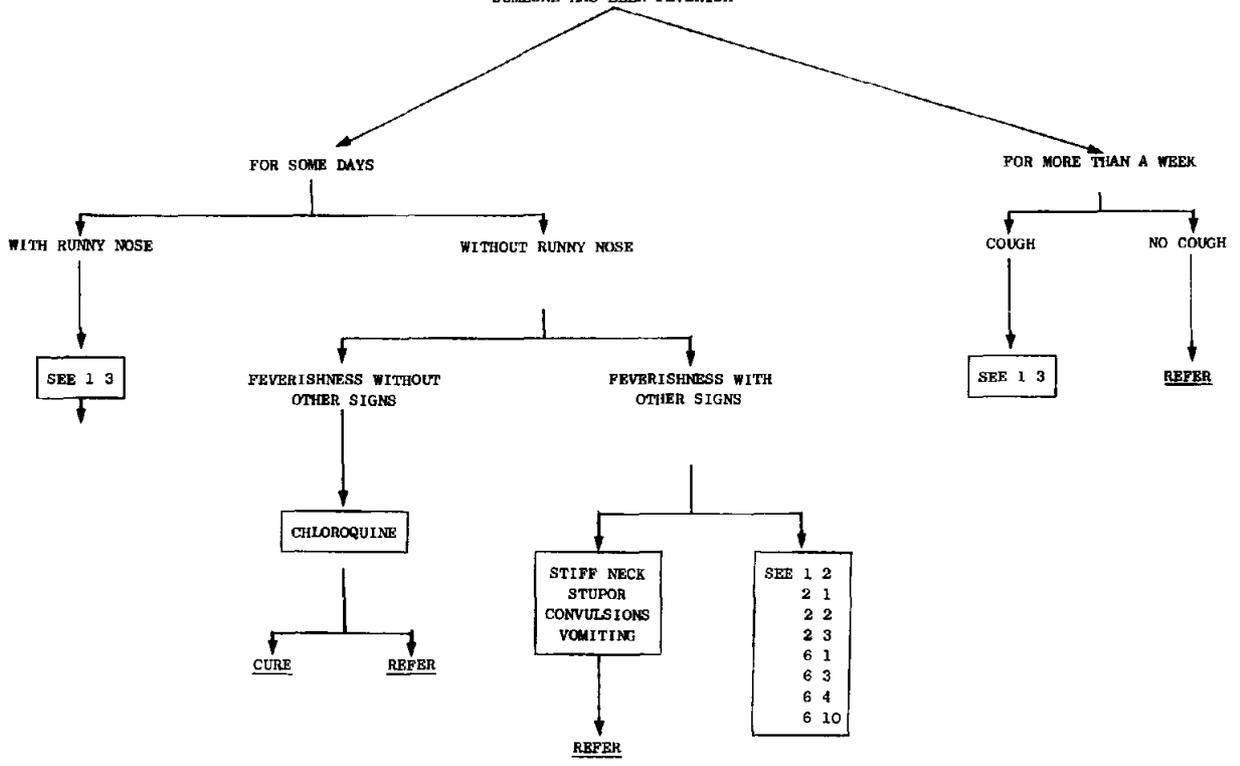
4. THE PATIENT IS SPITTING BLOOD, HAS DIFFICULTY IN BREATHING AT NIGHT OR WHEN WALKING, HAS PAINS IN THE CHEST OR COUGHS UP FOUL-SMELLING PHLEGM

If ever a patient shows one of these signs, send him to hospital or the health centre.

**SOMEONE IS FEVERISH**

OUTLINE OF THE PROBLEM

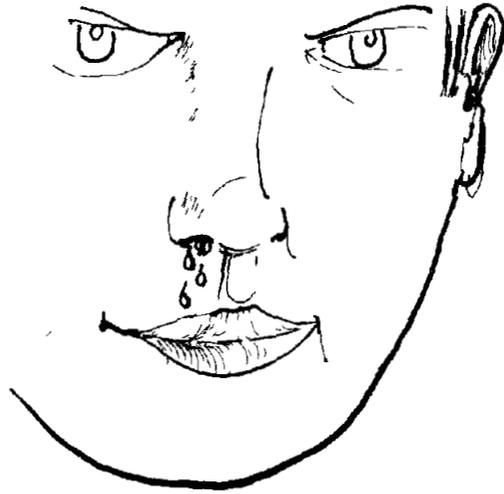
SOMEONE HAS BEEN FEVERISH



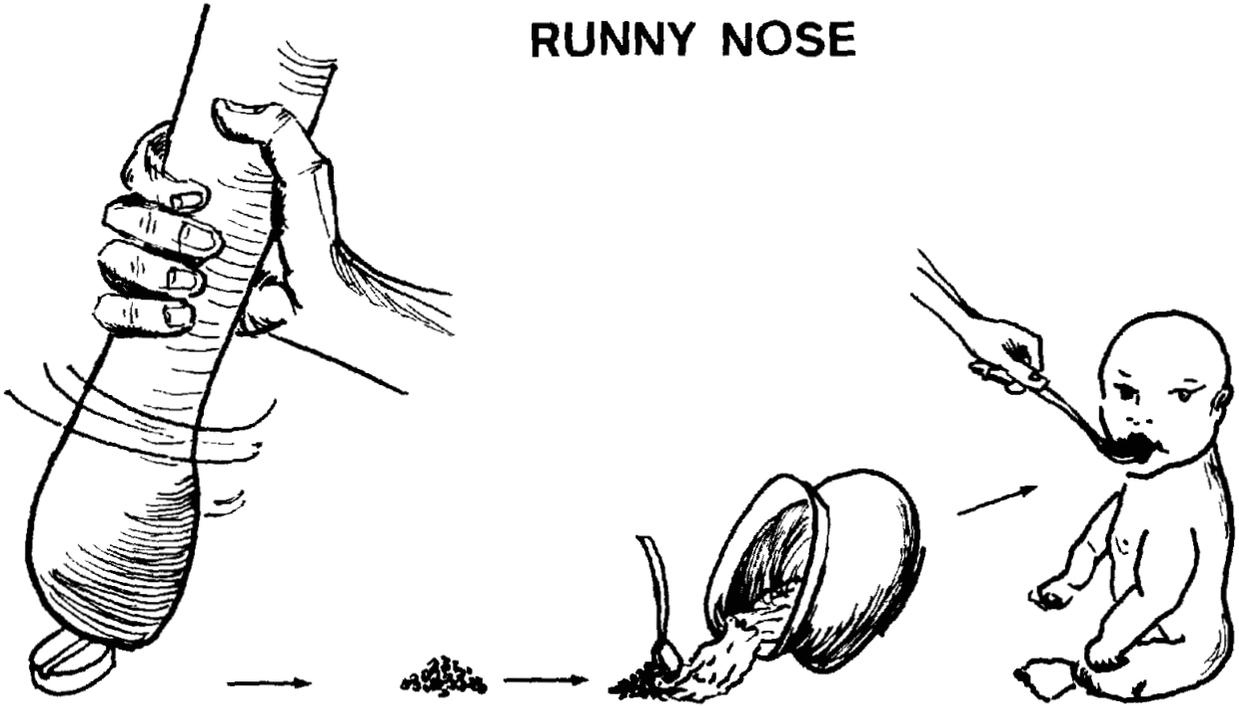
EDUCATIONAL OBJECTIVES

At the end of his training period, the student should be able to

- 1 decide whether a patient is feverish or not
- 2 treat a patient who is feverish but has no other signs, the treatment depending on the patient's age
- 3 send to the hospital or health centre any feverish patient
  - who has a stiff neck
  - who no longer answers when he is spoken to
  - who has convulsions
  - who vomits continuously
  - who has been feverish for over a week but has no cough



**RUNNY NOSE**



**TABLET FOR BABY**

SOMEONE IS FEVERISH

FOR HOW LONG HAS HE BEEN FEVERISH?

1. Feverish only for the past few days
  - 1.1 The feverishness began or is beginning with a runny nose
  - 1.2 It did not begin with a runny nose  
feverish with no other signs,  
feverish with other signs.
2. Feverish for over a week
  - 2.1 The patient has a cough,
  - 2.2 The patient has no cough

1. FEVERISH ONLY FOR THE PAST FEW DAYS

1.1 The feverishness is beginning or began with a runny nose

See PROBLEM 1.3 "Someone has a cough"

1.2 It did not begin with a runny nose

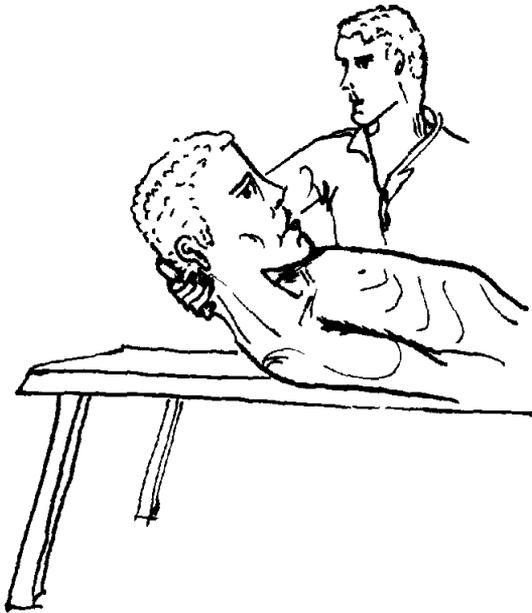
1.2.1 The patient is feverish with no other signs

Give him CHLOROQUINE tablets

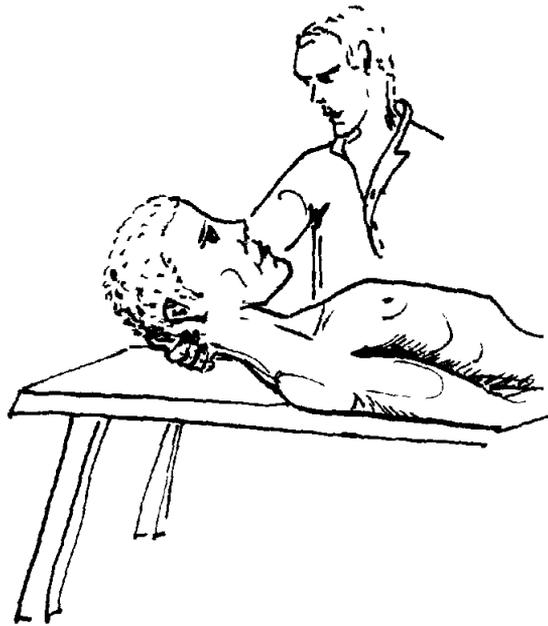
- If the child is less than one year old, crush one tablet into small pieces and mash them up with food (rice, fruit .. ) Get him to swallow the tablet with the food while you are there. Since the tablet has an unpleasant taste mash it up with enough food.

# STIFF NECK ?

NO



YES





4. Or, he has spots on the skin  
see PROBLEM 6.1 "There is something on the skin"
5. Or, he has pains in the joints  
see PROBLEM 6.5 "Pain in one or more joints"
6. Or, he has a headache  
see PROBLEM 6.3 "Someone has a headache"
7. Or, the patient is a woman  
see PROBLEMS 2.1 "A woman is expecting a baby"  
2.2 "A woman is about to have a baby"  
2.3 "A woman has just had a baby"  
6.10 "Conditions that only females have"

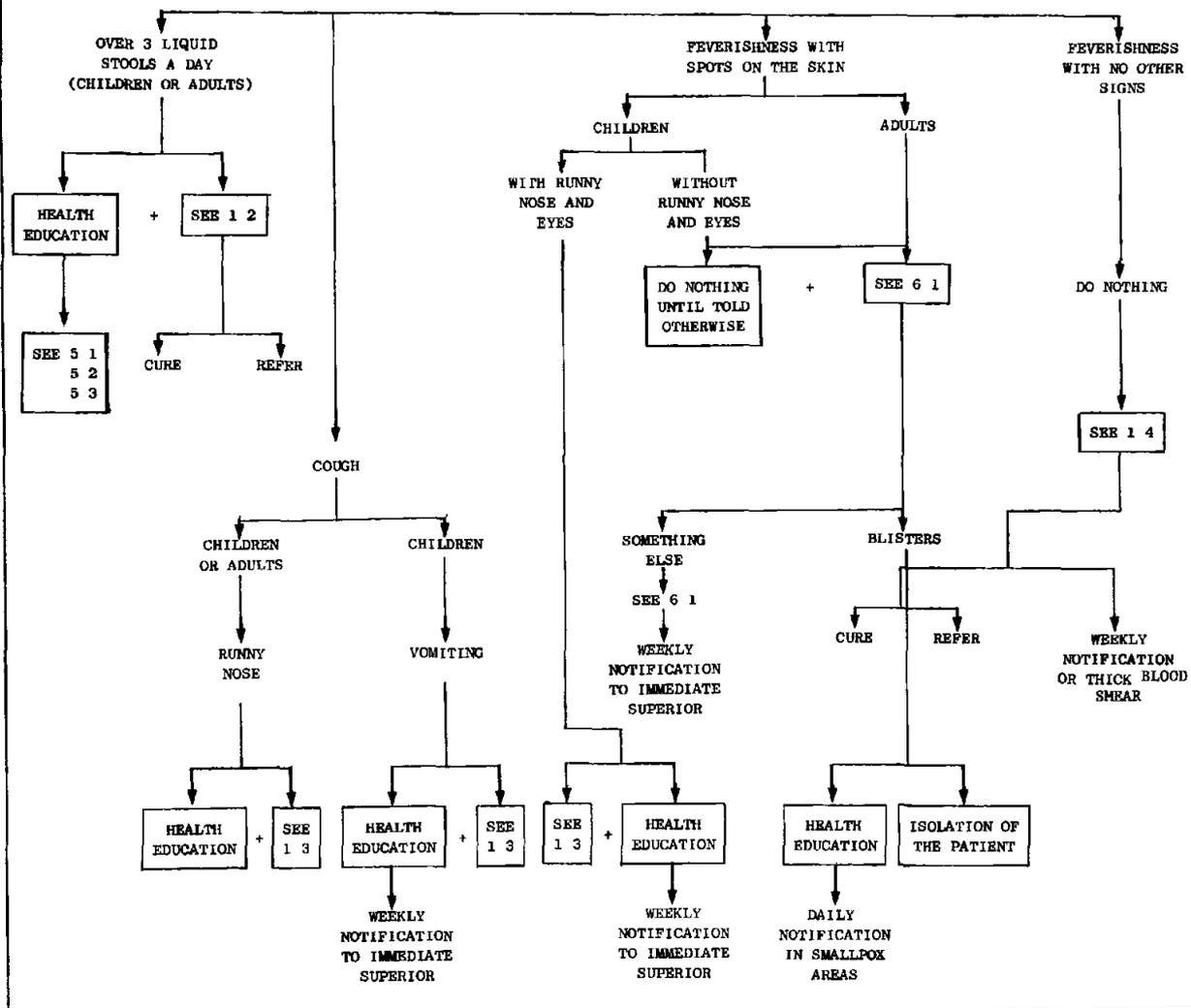
2 FEVERISHNESS FOR OVER A WEEK
--------------------------------

- 2.1 The patient has a cough  
See PROBLEM 1.3 "Someone has had a cough for over a week"
- 2 2 The patient does not have a cough  
Send the patient to the hospital or health centre.

**FIVE NEW PATIENTS  
WITH SIMILAR CONDI-  
TIONS IN ANY ONE WEEK**

OUTLINE OF THE PROBLEM

AT LEAST 5 NEW PATIENTS COME TO SEE YOU FOR THE SAME THING IN ANY ONE WEEK

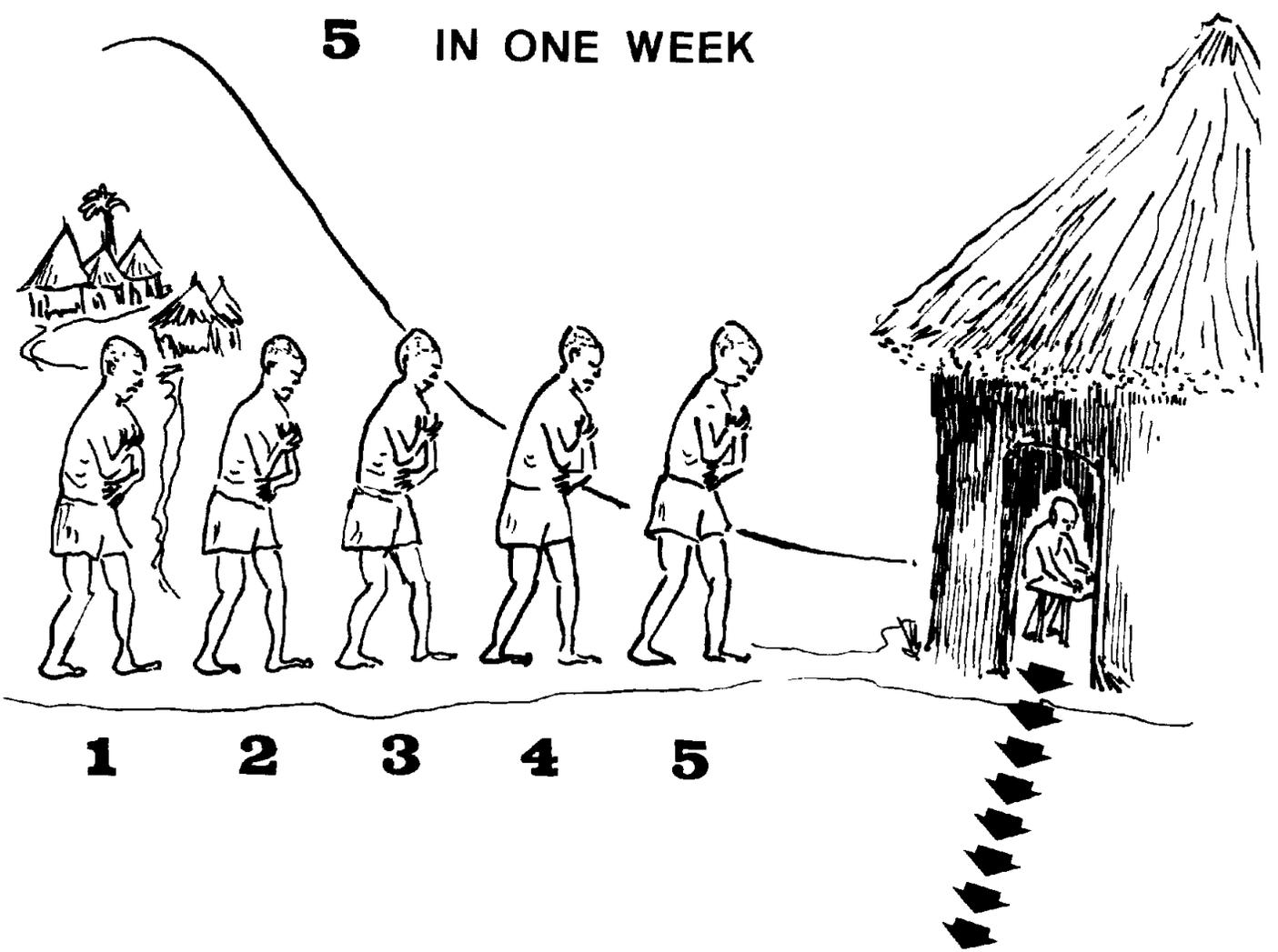


EDUCATIONAL OBJECTIVES

At the end of his training period, the student should be able to

- 1 Give advice on hygiene to the inhabitants of the village if ever 5 new patients or more consult him in the same week for
  - diarrhoea (children or adults)
  - cough with runny nose (children or adults)
  - cough with vomiting (children)
  - feverishness with spots on the skin
- 2 Notify his supervisor every week of all new cases of
  - cough with vomiting (children)
  - feverishness with spots on the skin and runny nose and eyes (children)
  - feverishness with small water blisters on the skin (adults)
  - feverishness with other types of spots on the skin (adults)
- 3 Notify his supervisor daily of every case of feverishness with skin blisters in areas where smallpox is present

**5 IN ONE WEEK**



**SPEAK TO THE CHIEFS**



FIVE NEW PATIENTS WITH SIMILAR CONDITIONS  
IN ANY ONE WEEK

—  
EITHER

- |          |    |  |
|----------|----|--|
| They are | 1. | People who have more than 3 liquid stools per day    |
|          | 2. | People with a cough                                  |
|          | 3. | People who are feverish and have spots on their skin |
|          | 4. | People who are feverish and have no other signs      |

1. PEOPLE WHO HAVE MORE THAN 3 LIQUID STOOLS PER DAY
--

Either children or adults

It is almost always when the weather is hot that these cases occur

To treat them see PROBLEM 1.2 "Someone has more than 3 liquid stools per day"

But take care' This illness is catching and can be dangerous.

Therefore, tell the people living in your village

1. to wash their hands before eating and after going to stool
2. to drink only water that has been boiled
3. to eat only food that has been cooked
4. to use latrines if possible
5. to ask the village chief to help them build wells which will provide them with good water.

## 2. PEOPLE WITH A COUGH

### 2.1 Children and adults with runny noses and a cough

It is almost always when the weather is cold that these cases occur.

Take care! This illness is catching and can be dangerous, particularly for small children and old people.

To treat them see PROBLEM 1.3 "Someone has a cough"

And tell the people living in your village

1. to stay at home when they have a cough and a runny nose
2. not to stay out in the cold and to put plenty of clothes on
3. to take good care of children and old people and to consult you immediately if after a few days someone has a high temperature, difficulty in breathing or a discharge from an ear.

### 2.2 Children have a severe cough, turn completely blue and vomit

To treat them see PROBLEM 1.3 "Someone has had a cough for 7 to 10 days and has attacks of vomiting"

But take care! This disease is catching and may be dangerous, particularly among small children.

Therefore, tell the people living in your village

1. if they have small children, not to let them play with children who are ill
2. if they have children who are ill to keep them at home while the cough is severe and they are vomiting, and to bring them to you immediately if they have a high temperature or difficulty in breathing.

Every week report the new cases to your supervisor.

## 3. PEOPLE WHO ARE FEVERISH AND HAVE SPOTS ON THEIR SKIN

Either they are children  
or they are adults.

3.1 They are children

3.1.1 Either they have a cough and runny nose and eyes

To treat them see PROBLEM 1.3 "Someone has a cough"

But take care! This illness is catching and may be dangerous.

Therefore, tell the people living in your village

1. if they have children, not to allow them to play with children who are ill
2. if they have sick children, to keep them at home while they are feverish and have spots on their skin, and to bring them to you immediately if they have difficulty in breathing.

And every week report the new cases to your supervisor.

3.1.2 Or they have something on the skin but have no cough and no runny eyes

To treat them see PROBLEM 6.1 "There is something on the skin".

Do nothing unless your supervisor asks you to.

3.2 They are adults

3.2.1 Either they have small watery blisters on the skin

Take care! This illness could be dangerous.

Therefore, tell the people living in your village

1. if they have a sick person in their house to keep him in bed and ask their neighbours and friends not to visit them
2. if you live in a country where smallpox occurs, warn your supervisor and the village authorities straight away.

And report each new case to your supervisor.

3.2.2 Or it is something else

To treat this see PROBLEM 6.1 "There is something on the skin"

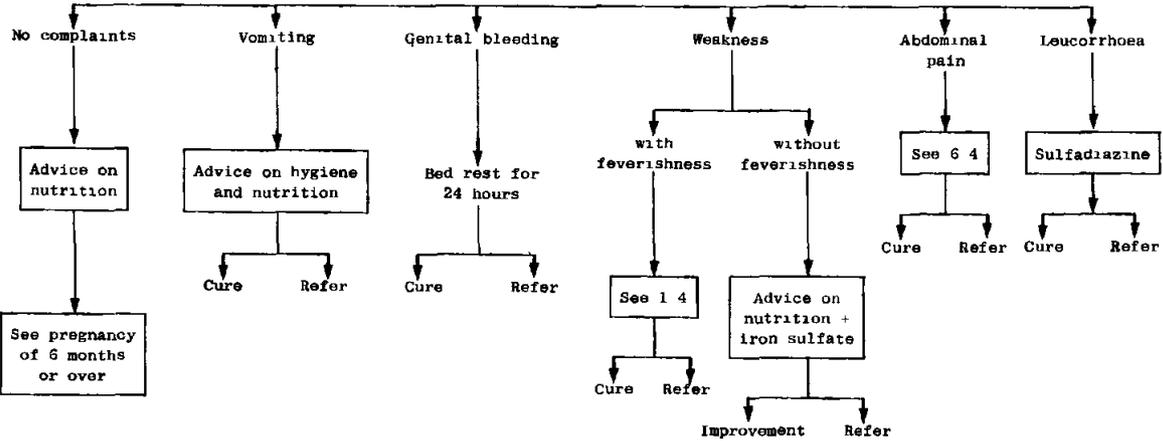
And report the new cases every week to your supervisor

**A WOMAN IS EXPECTING  
A BABY**

OUTLINE OF THE PROBLEM

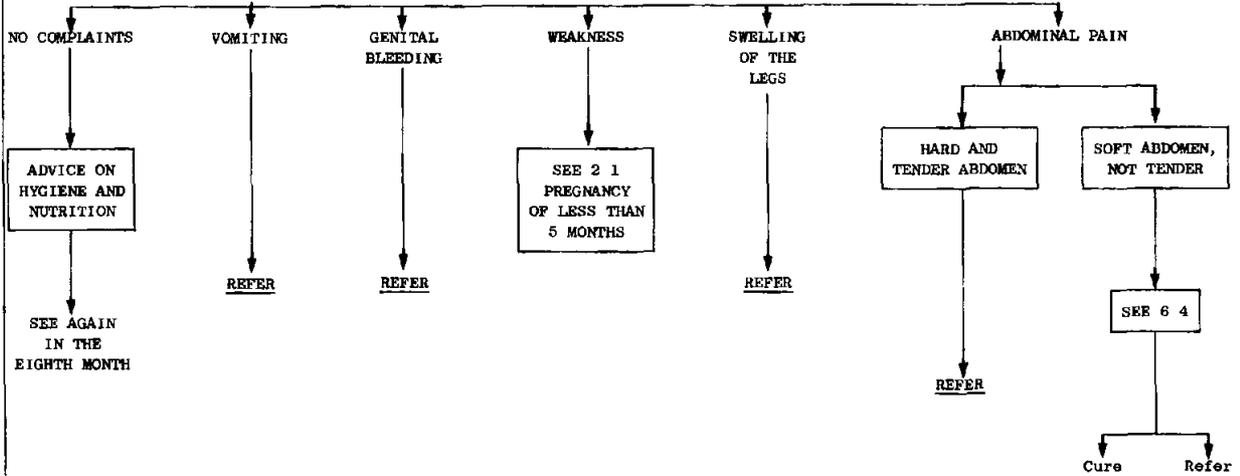
A WOMAN IS EXPECTING A BABY

1 Pregnancy of less than 5 months (absence of periods + womb below the navel)



A WOMAN IS EXPECTING A BABY

2 Pregnancy of 6 months or over (absence of periods + womb above the navel)

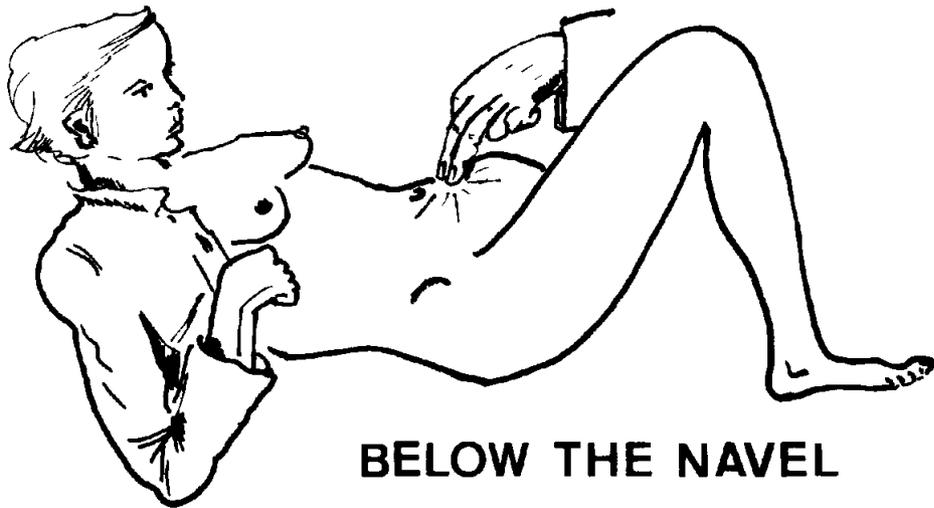


EDUCATIONAL OBJECTIVES

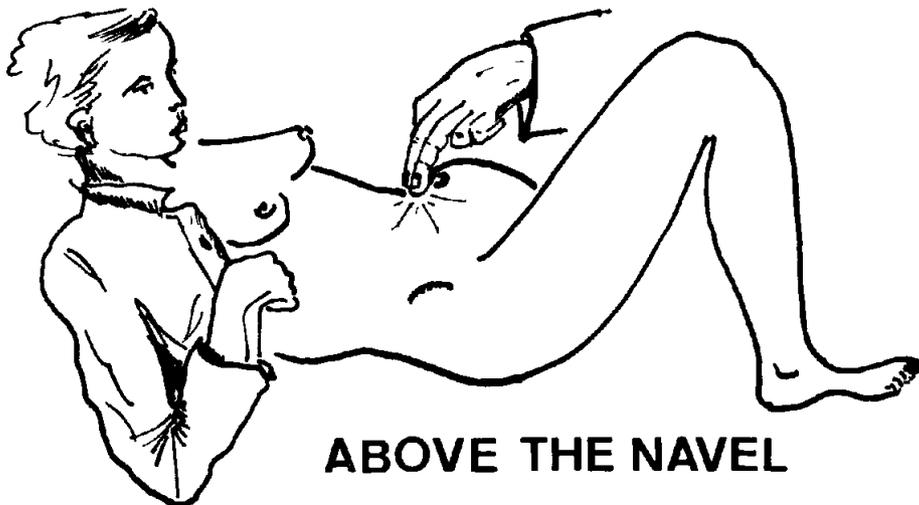
At the end of his training period the student should be able to

- 1 Decide whether a woman is pregnant or not
- 2 Decide whether a woman is less than five months pregnant or six months pregnant and over
- 3 Determine in a pregnant woman the upper level of the womb
- 4 Give advice on hygiene and nutrition to a pregnant woman
- 5 Decide whether a pregnant woman is feverish or not
- 6 Treat a pregnant woman who complains of being tired with or without feverishness
- 7 Decide by feeling the woman's belly whether it is hard or not
- 8 Send to hospital or a health centre any pregnant woman  
who is suffering from vomiting  
directly if the vomiting occurs in the last four months of pregnancy  
after treatment has failed if vomiting occurs in the first five months  
who is losing blood from below (the vagina)  
who continues to feel tired after one month's treatment  
who has discharges which stain her underpants and does not respond to  
treatment  
who during the last four months of pregnancy has swollen legs, or a hard  
and tender belly

**WHERE IS THE BABY ?**



**BELOW THE NAVEL**



**ABOVE THE NAVEL**

A WOMAN IS EXPECTING A BABY

EITHER

1. The woman is less than five months pregnant
  - 1.1 She has no complaints
  - 1.2 She suffers from vomiting, particularly in the morning
  - 1.3 She loses blood from below
  - 1.4 She feels tired and weak
  - 1.5 She has pains in the belly
  - 1.6 She has discharges which stain her underpants
- 2 The woman is six months or more pregnant
  - 2.1 She has no complaints
  - 2.2 She suffers from vomiting
  - 2.3 She loses blood from below
  - 2.4 She feels tired and weak
  - 2.5 She has swollen feet and legs
  - 2.6 She has pains in the belly

PUT YOUR HAND  
ON THE WOMAN'S  
BELLY

EITHER the top of the baby is below the navel (see drawing)  
and the woman tells you she does not feel it move.

This woman is less than five months pregnant

OR the top of the baby is above the navel (see drawing)  
and the woman tells you that she feels the baby move.

This woman is six months or more pregnant

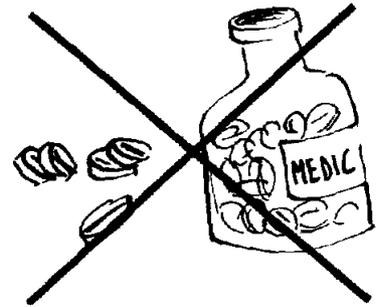
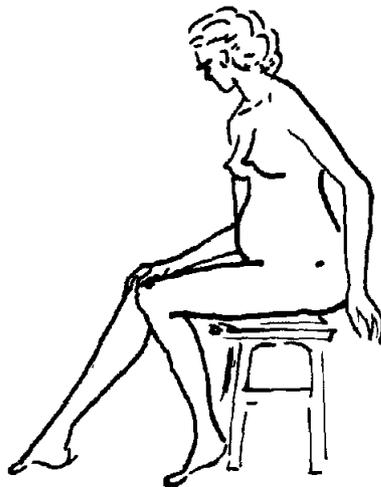
# LESS THAN 5 MONTHS....

**SHE EATS  
THESE**



- 
- 
- 
- 

**SHE RESTS**



1 THE WOMAN IS LESS THAN 5 MONTHS PREGNANT

1.1 The woman has no complaints

Do not give her medicines for some of them may harm the baby.

Advise her not to overtire herself and to eat well, if possible meat, fish, vegetables and fresh fruit.

Ask her to come to see you again in the sixth and eighth months. See below "The woman is six months or more pregnant"

1.2 The woman suffers from vomiting, particularly in the mornings

This is something that often happens, particularly when a woman is expecting her first baby.

Do not give her any medicines for some of them may harm the child.

Advise her to eat less but more frequently and not to drink while she is eating. Tell her that she must rest and eat nourishing food and that if possible her diet should include meat, fish, vegetables and fresh fruit.

See her again after a week or two

she is no longer suffering from vomiting ask her to see you again in the sixth and eighth months,

she is still suffering from vomiting send her to hospital or the health centre.

1.3 The woman is losing blood from below (the vagina)

Tell her to drink plenty of water and to remain in bed for a whole day.

See her again the next day

she is no longer losing blood keep an eye on her and tell her not to overtire herself and to eat well. She must see you again in the sixth and eighth months,

she is still losing blood send her to hospital or the health centre.

1.4 The woman feels tired and weak

Take her temperature (see techniques)

either she is feverish,

or she is not feverish.

1.4.1 The woman is feverish

See PROBLEM 1.4 "Someone is feverish"

1.4.2 The woman is not feverish

Advise her to take plenty of rest and food, including if possible, meat, fish, vegetables and fresh fruit.

Ask her to take IRON SULFATE one tablet while she is eating, morning, noon and evening, that is to say three tablets a day during meals.

The woman must take these tablets for a month and then come to see you again. If she feels better after a month of this treatment, advise her to continue in the same way for two weeks. If she does not feel better, send her to hospital or the health centre.

Note If a woman takes iron tablets, her stools will be black. This is normal, but you must tell her or else she may become anxious and stop the treatment.

1.5 The woman has abdominal pains

See PROBLEM 6.4 "Someone has pains in the belly"

1.6 The woman has discharges (not blood) which stain her underpants

Give her SULFADIAZINE tablets two tablets, morning, noon and evening for five days, and tell her to drink plenty of water

See her again after a week

she no longer has any discharge she is cured,

the discharge continues send her to hospital or the health centre.

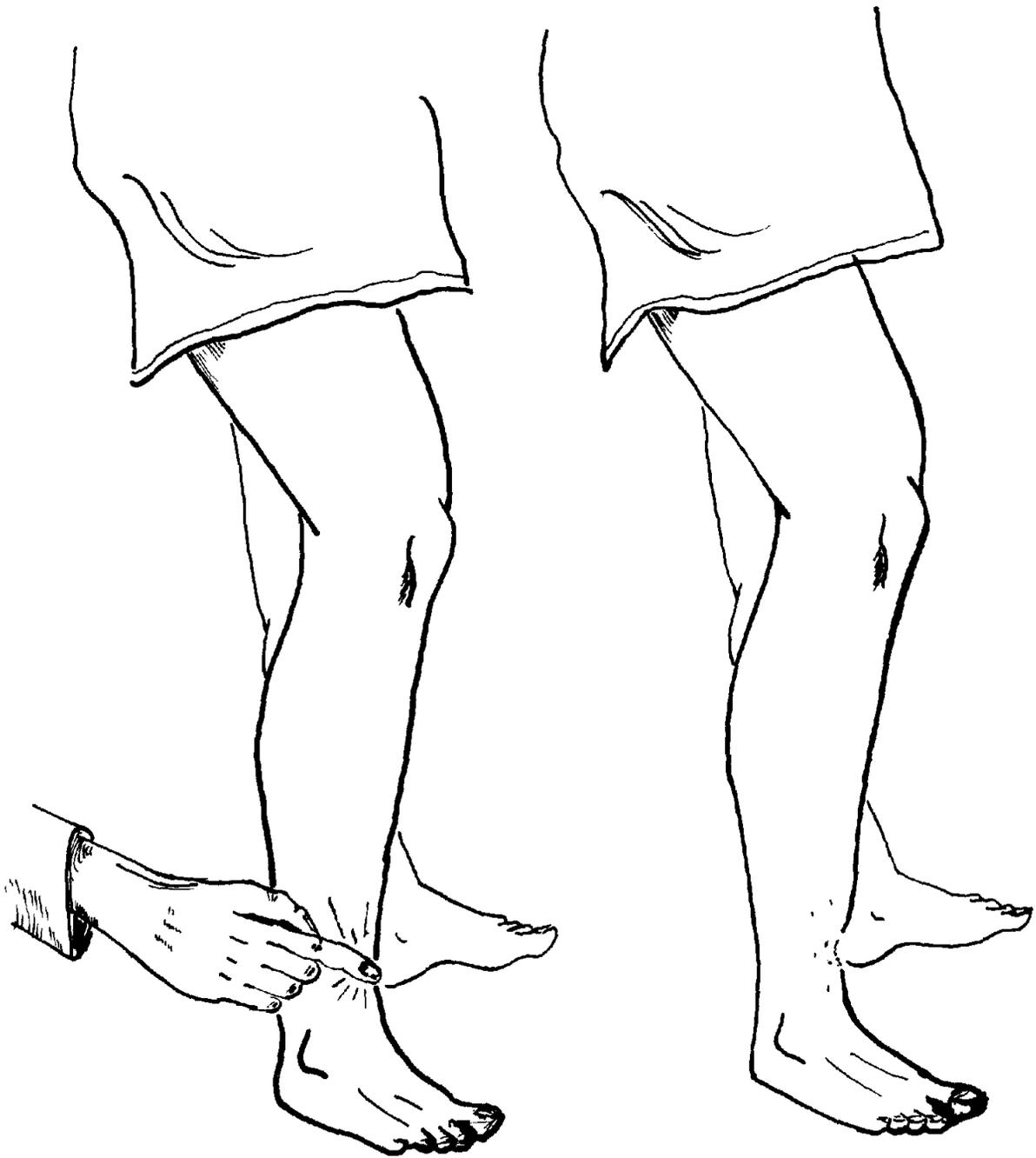
2. THE WOMAN IS 6 MONTHS OR MORE PREGNANT
---

2.1 She has no complaints

Do not give her medicines for they may harm the child.

Advise her not to overtire herself and to eat plenty of food, including if possible meat, fish, vegetables and fresh fruit

Ask her to come back in the eighth month.



**PRESS WITH THE FINGER ► THE DENT PERSISTS**

2.2 The woman suffers from vomiting

This may be serious, particularly if she complains of headaches or if she has swollen legs.

Send her to hospital or the health centre.

2.3 The woman is losing blood from below (the vagina)

This may be serious Send her immediately to hospital or the health centre.

2.4 The woman feels tired and weak

Treat her in the same way as a woman less than five months pregnant who feels tired and weak, but ask whether she has any other complaints such as headaches, swollen legs ...

2.5 The woman has swollen feet and legs

When you press with your finger in the swollen area the dent made by the finger persists for several minutes (see drawing)

If you find this sign, the situation is always serious. Send the woman immediately to hospital or the health centre. Meanwhile ask her to drink very little and not to eat meat or salt.

2.6 The woman has pains in the belly

Put your hand flat on her belly (see drawing)

Either her belly is hard and your hand hurts her

in that case send her immediately to hospital or the health centre.

Or her belly is not hard or tender

in that case see PROBLEM 6.4 "Someone has pains in the belly"

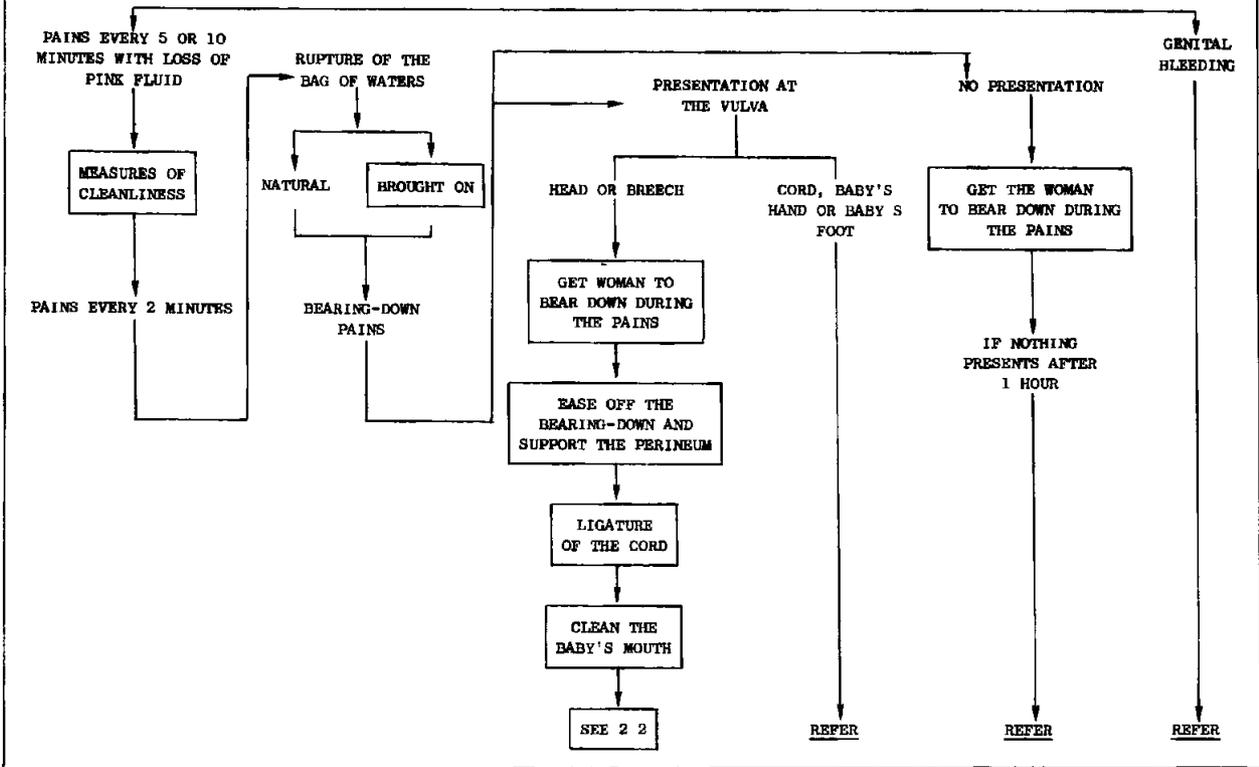
IMPORTANT NOTE' If the woman has pains which come back every five or 10 minutes and is losing a little pink fluid, see PROBLEM 2.2 "A woman is about to have a baby"

**A WOMAN IS ABOUT TO  
HAVE A BABY**

OUTLINE OF THE PROBLEM

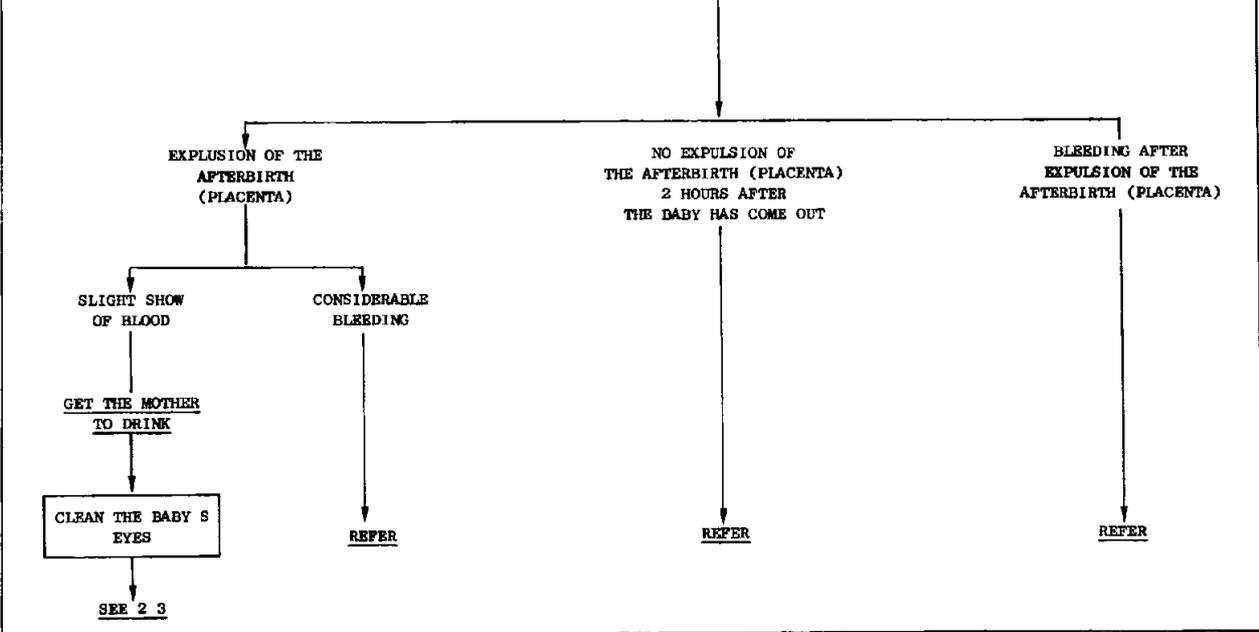
A WOMAN IS ABOUT TO HAVE A BABY

1 THE BABY HAS NOT YET COME OUT



2 THE BABY HAS ALREADY COME OUT

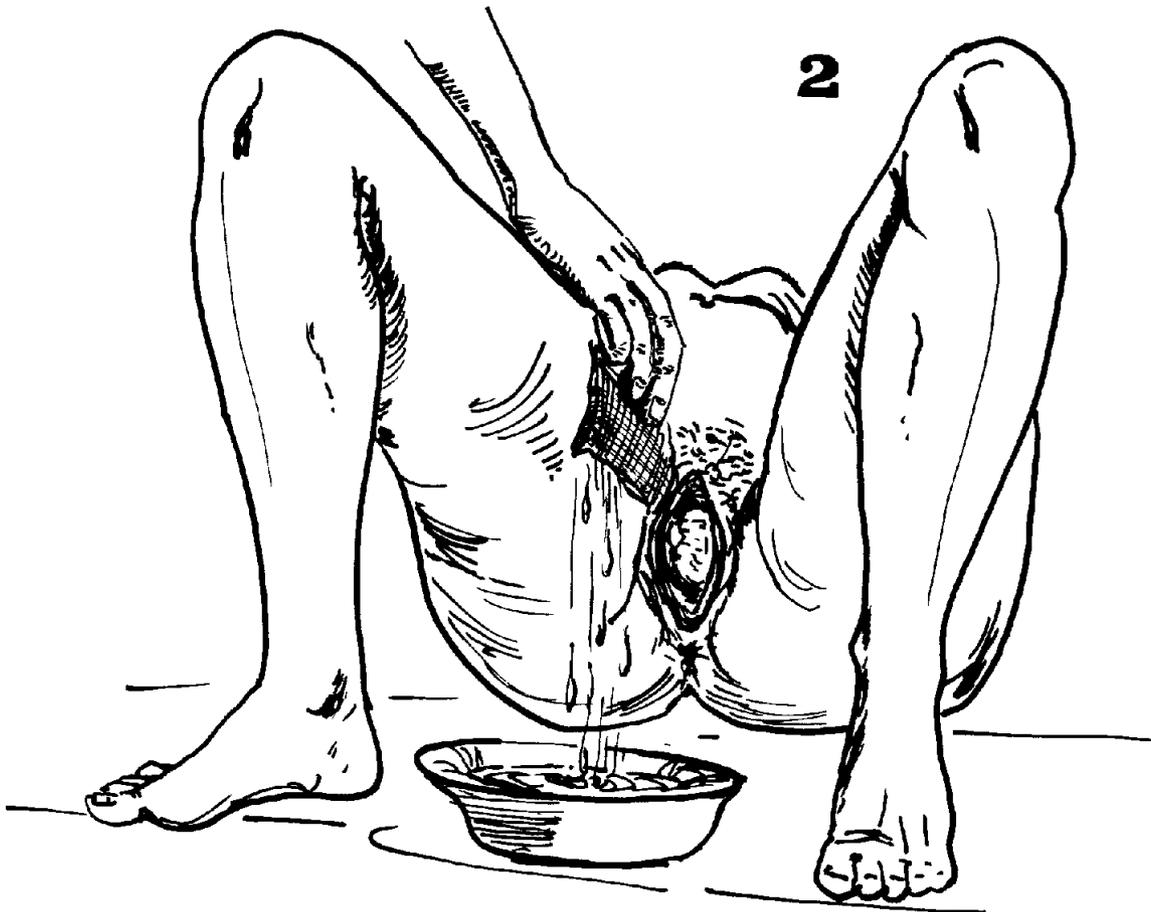
THE PAINS COME BACK FOR HALF-AN-HOUR TO ONE HOUR



EDUCATIONAL OBJECTIVES

At the end of his training period the student should be able to

- 1 Decide whether labour is beginning or not,
- 2 Take suitable measures of hygiene when labour begins,
- 3 Recognize the presenting part,
- 4 Slow down the forward movement of the presenting part while supporting the perineum,
- 5 Tie and cut the cord
- 6 Clean out the baby's mouth after birth,
- 7 Provoke the breaking of the bag of waters if necessary,
- 8 Send to hospital or a health centre any woman in labour,
  - in whom the cord or the baby's hand or foot is the presenting part,
  - in whom there is no presentation despite severe pains,
  - who is losing a lot of blood before or after expulsion of the afterbirth (placenta)



A WOMAN IS ABOUT TO  
HAVE A BABY

---

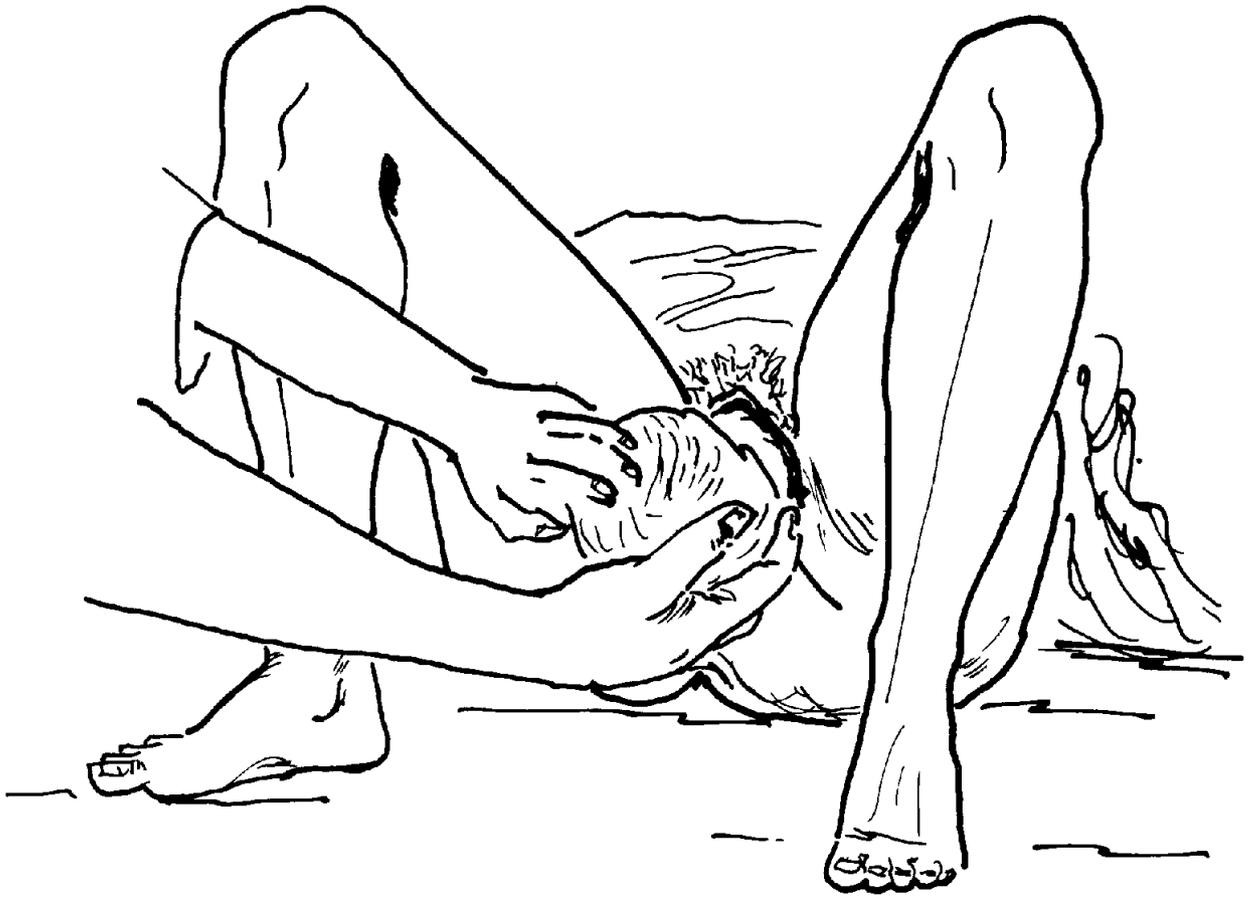
1. How can you see that a woman is about to have a baby?
2. What to do BEFORE the baby comes out
3. What to do WHILE the baby is coming out
4. What to do AFTER the baby has come out

1. HOW TO SEE WHEN A WOMAN IS ABOUT TO HAVE HER BABY

She will be a woman nine months pregnant (rarely 7 to 8 months pregnant) who begins by having severe pains every 5 to 10 minutes in the lower belly or in the lower part of the back and who discharges a little pink fluid from below, followed by a large quantity of water (which is the water from the bag in which the baby has lived in his mother's belly)

2. WHAT TO DO BEFORE THE BABY COMES OUT

- 2.1 First of all tell the woman that everything is all right and that she must be patient.
- 2.2 Do not allow more than one or two persons to remain in the room
- 2.3 Ask the woman to try to pass water so that her body is free and not to drink or eat before the baby is born.
- 2.4 Wash the woman's genitals with water and soap and then wash your own hands and forearms.
- 2.5 If the woman tells you that the waters were broken before you arrived, ask her to remain lying down till the baby is born.
- 2.6 If she tells you that the waters have not yet broken, do nothing and see paragraph 3.
- 2.7 Stay with the woman continuously as soon as the pains become stronger and are repeated every two minutes.



### 3. WHAT TO DO WHILE THE CHILD IS COMING OUT

When the pains occur every two minutes, uncover the woman's genitals and look between her legs when she has her pains

#### 3.1 The baby's head appears at the outlet hair is visible. See drawing.

Ask the woman to bear down to help the child come out only when she has a labour pain, and to stop bearing down when the pain stops. After she has borne down a few times you will see that the baby's head remains at the outlet even when the pains stop. From that moment on, every time that the woman has pains and bears down, put your left hand on the baby's head to stop it coming out too quickly, damaging the woman's genitals, and hook your right hand against the part of the woman where the baby's face will appear. See the drawing.

Once the head has come out, the shoulders and the rest of the body will come out easily.

Once the baby has come out, tie and cut the cord. (See drawing on the next page.) Then take the baby by the feet with its head downwards and use a clean cloth to clean its mouth in order to remove any blood or liquid it might have swallowed on its passage out of its mother's body. Then see below "What to do after the baby has come out".

#### 3.2 It is not the baby's head that appears at the outlet

This is very rare, but take care! The situation is almost always dangerous,

##### 3.2.1 It is the baby's breech which appears no hair is visible

Here the baby will come out breech first, body next and the head last.

In general, labour will last longer and be more painful.

Therefore explain to the woman that she must be brave and all will go well.

When the baby has come out, see below "What to do after the baby has come out"

##### 3.2.2 It is the cord, the baby's hand or the baby's foot which appears

Take great care! This situation is serious, for the baby and/or the mother may die.

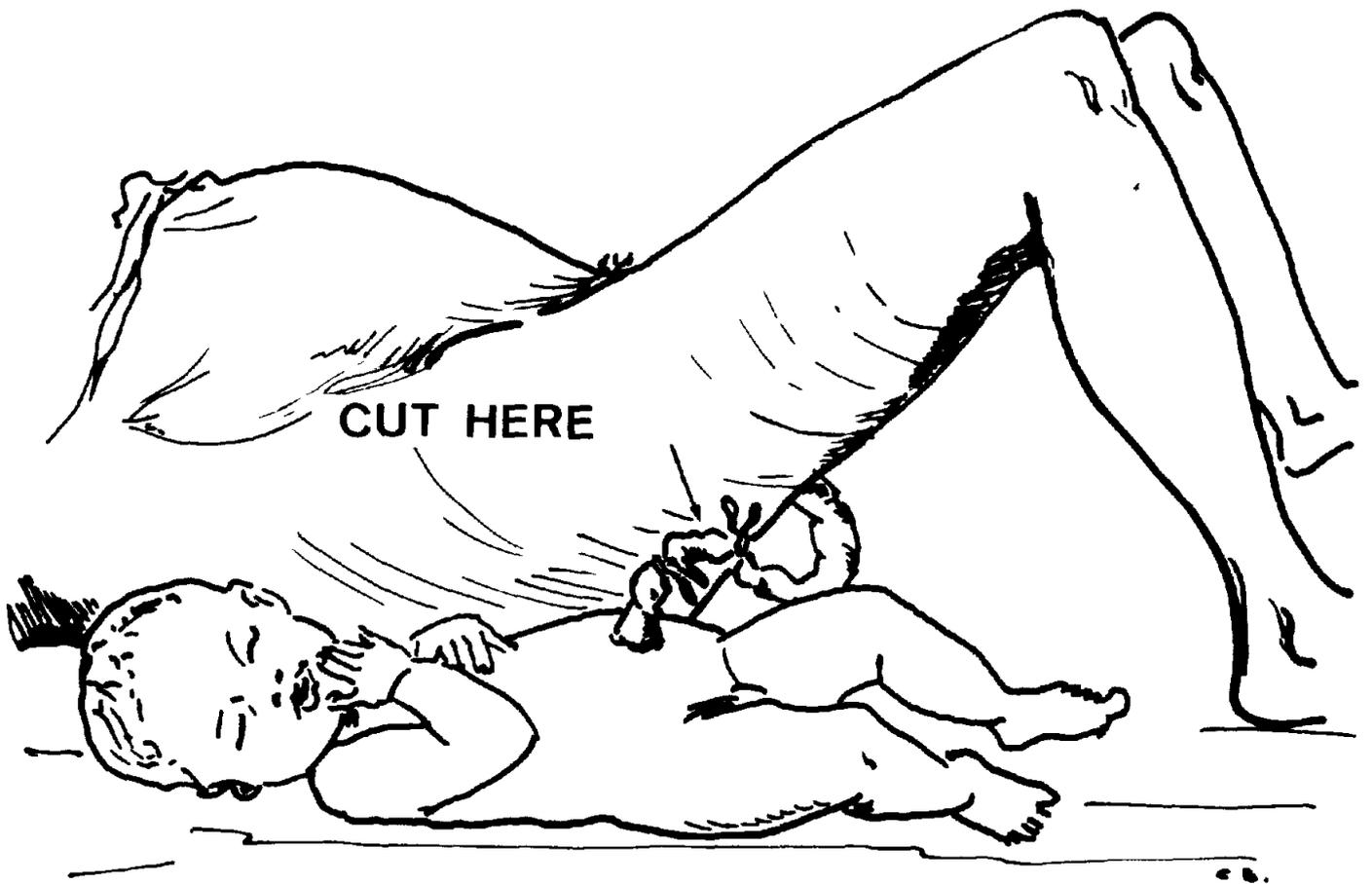
Send the woman to the hospital or the health centre immediately.

##### 3.2.3 Nothing appears

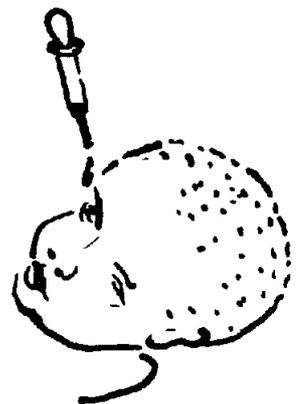
The woman has pains every 2 or 3 minutes but nothing appears at the outlet.

Sometimes, even, the pains stop

Wait for an hour and if nothing appears send the woman to the health centre or the hospital.



**WITH A CLEAN RAZOR BLADE**



3.2.4 It is the bag of waters which appears

Before coming into the world, the baby lives in a bag of waters inside the mother's belly. When the baby is due to come out, this bag of waters breaks open. It nearly always breaks open when the pains become severe but it may happen that it fails to break. In this case when the woman bears down during the labour pains, you will see a bag appearing. You must then break it open yourself by making a cut of a few centimetres long with clean forceps or a clean pair of scissors. Do not forget to ask the woman to remain lying down once the bag of waters has broken.

3.2.5 A large quantity of blood is discharged

Send the woman immediately to the health centre or the hospital.

Tell her to drink plenty of water

4. WHAT IS TO BE DONE AFTER THE BABY HAS COME OUT
---

4.1 Give the mother something to drink

4.2 After a quarter of an hour to half an hour the pains come back. It is then that the piece of flesh which attached the baby to its mother's belly must come out.

After a few pains you will see this flesh appear at the outlet. Do not pull on the cord, because it may tear. Wait till the piece of flesh comes out by itself.

4.3 When this piece of flesh has come out, go back to the baby and wash it and clean its eyes (see drawing). Then put a dressing on the baby where the cord was (see drawing).

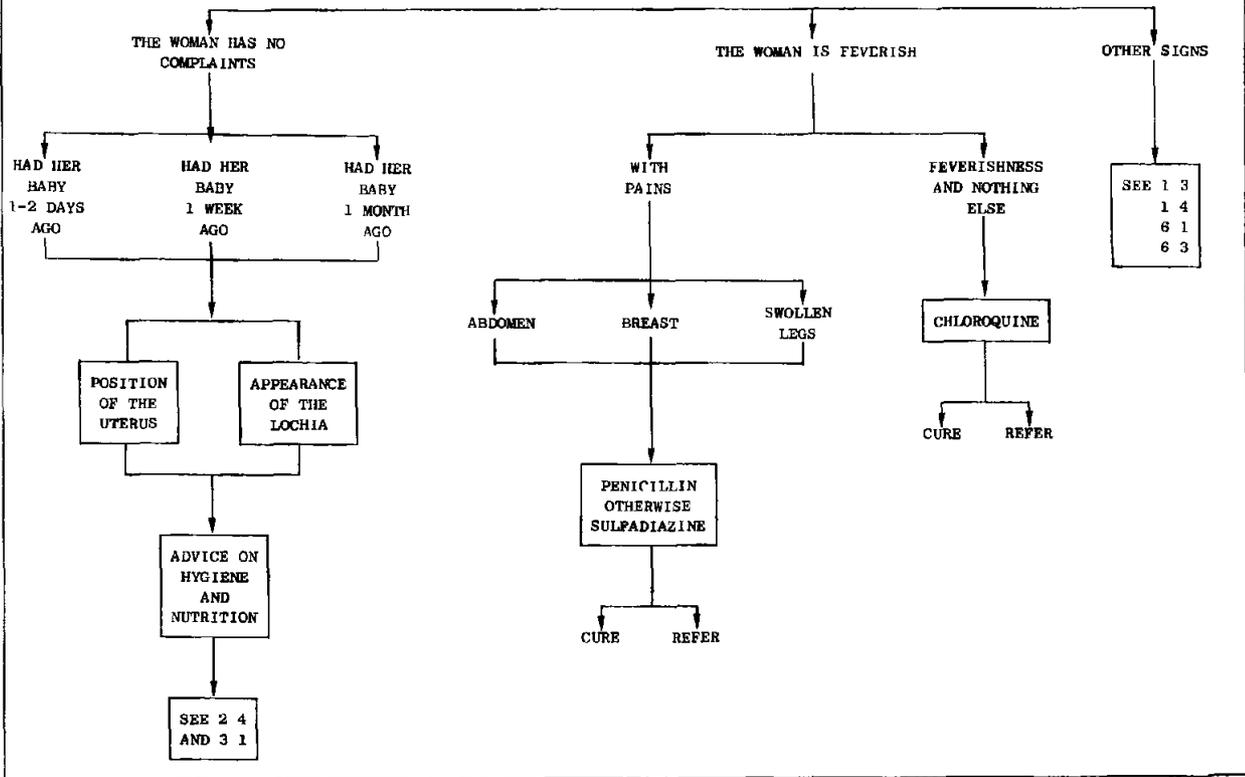
4.4 If the piece of flesh has not come out two hours after the birth, send the mother to the hospital or health centre.

4.5 If the woman loses a lot of blood after the piece of flesh has come out, ask her to drink plenty of water and send her immediately to the hospital or health centre.

**A WOMAN HAS JUST HAD  
A BABY**

OUTLINE OF THE PROBLEM

A WOMAN HAS HAD A BABY

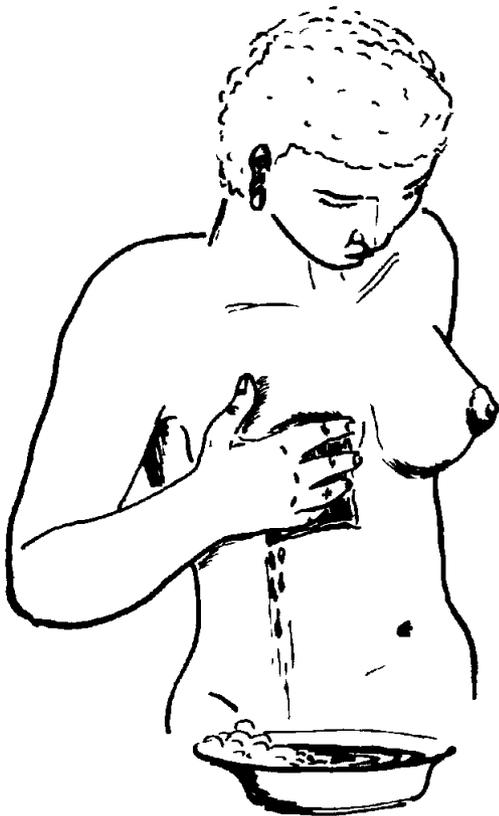
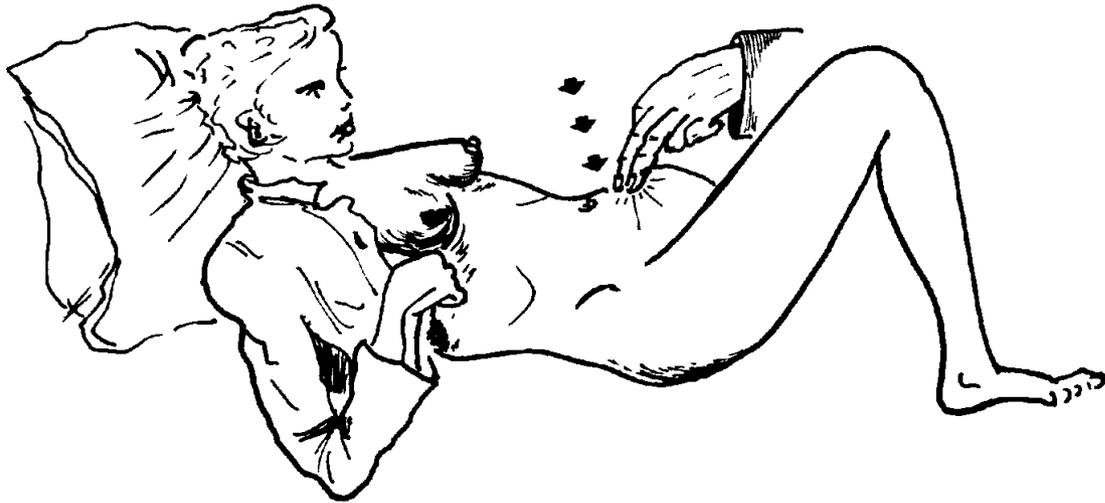


EDUCATIONAL OBJECTIVES

At the end of his training period, the student should be able to

- 1 Determine the top of the uterus in a woman who has had a baby
- 2 Give advice on hygiene and nutrition to a woman and her baby
- 3 Treat a woman who has had a baby who complains of pain or constipation
- 4 Decide whether a woman who has had a baby is feverish or not
- 5 Treat any woman who has had a baby and who in addition to a high temperature has pains in the abdomen or a breast or a leg
- 6 Treat any woman who has had a baby and who is feverish with no other signs
- 7 Send to hospital or the health centre any woman who has had a baby and whose feverishness or pains have not responded to treatment

## WOMB AT THE NAVEL



**SHE WASHES HERSELF.... ...AND THEN WASHES BABY**

A WOMAN HAS HAD  
A BABY

—  
EITHER

1. She has no complaints
  - 1.1 She had her baby a day or two ago
  - 1.2 She had her baby a week ago
  - 1.3 She had her baby a month ago
2. The woman is feverish
  - 2.1 with pains in the belly
    - in a breast
    - in a leg
  - 2.2 and nothing else
3. The woman has some other complaint

1. THE WOMAN HAS NO COMPLAINTS

1.1 She had her baby a day or two ago

The womb is hard and the top of it reaches the navel (see drawing).

Milk is beginning to come out of the nipples.

The woman has a discharge of red blood.

Advise her

1. to feed the baby every 3 or 4 hours, beginning about 10 hours after delivery,
2. to wash carefully every day with soap and water the baby, her breasts and her genitals,

3. to drink only water the first day and to go back to her ordinary diet on the following days, this, if possible, should include meat, fish, vegetables and fresh fruit,
4. to walk about a little but not to tire herself,
5. if she has slight stomach pains, give her 3 tablets of ASPIRIN a day for 3 days.

If she is constipated, advise her to eat fruit with her breakfast, to try to go to the toilet in the morning after eating, even if she does not need to go, and to drink a large glass of water in the morning when she gets up and in the evening when she goes to bed.

1.2 She had her baby a week ago

The upper part of the womb is situated between the navel and the pubic hair (see drawing on page 72).

The woman discharges from below a liquid which is first of all brown then whitish-yellow.

The baby takes well to the breast or the bottle every 3 or 4 hours.

The cord has dried out and fallen off by itself

Advise the mother

1. to give the baby a good feed every 3 or 4 hours,
2. to carefully wash the baby, her breasts and her genitals with soap and water,
3. gradually to take up her ordinary occupations again without overtiring herself,
4. to go back to her usual diet, which should include, if possible, meat, fish vegetables and fresh fruit,
5. not to have another child for some years. See PROBLEM 2.4 "A woman does not wish to have a child for the time being"

1.3 She had her baby a month ago

The womb cannot be felt when the hand is put on the woman's belly.

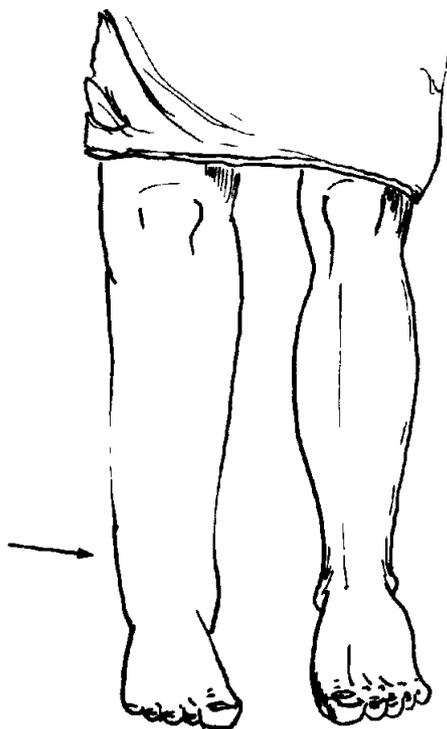
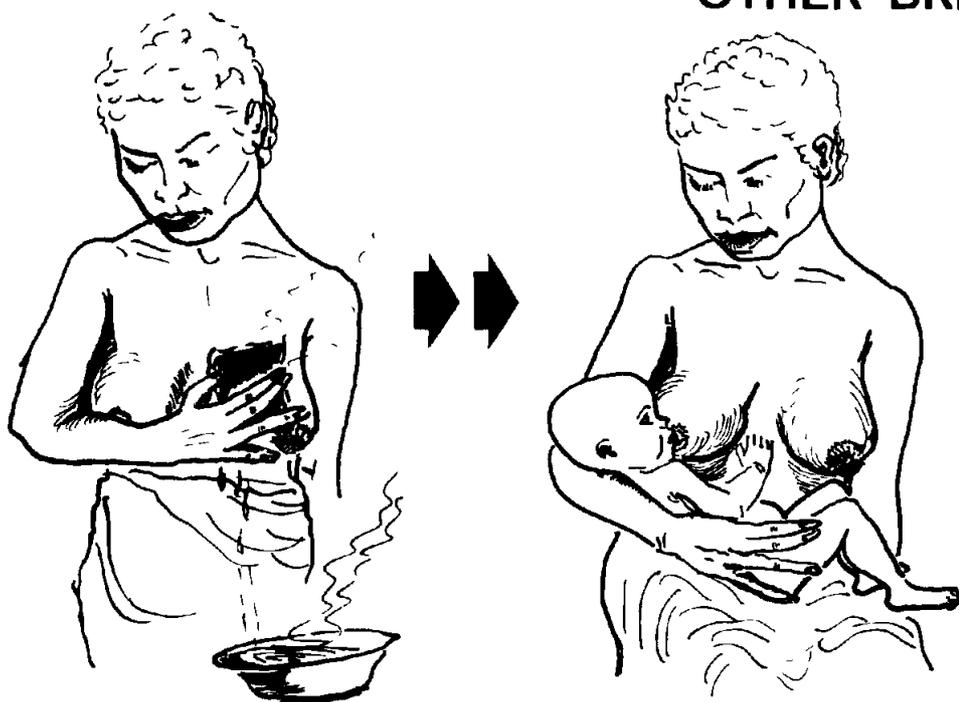
The woman has no vaginal discharge

Advise the mother

1. to feed her baby well and wash it carefully,
2. to eat well, not to overtire herself, and to wash herself carefully,
3. not to have another child for some years. See PROBLEM 2.4 "A woman does not wish to have a child for the time being". Tell her that her periods will come back in 6 to 8 months, but that she may become pregnant at any time.

**PAIN IN ONE BREAST....**

**BABY SUCKS ON THE  
OTHER BREAST**



**A LEG IS SWOLLEN**

## 2. THE WOMAN IS FEVERISH

### 2.1 With pains

#### 2.1.1 in the stomach with or without foul-smelling discharge from below.

Give the woman, morning and evening for 5 days, an injection of 1 000 000 units of PENICILLIN in the buttock and give her 3 tablets of ASPIRIN per day for 3 days.

If you have no penicillin, give her SULFADIAZINE tablets and tell her to take 2 tablets 4 times a day for 5 days with plenty of water.

See the patient again on the sixth day

there is an improvement      the patient is cured

there is no improvement      send her to hospital or the health centre.

#### 2.1.2 in one breast

Ask the mother to give the baby milk only from the breast which is not painful and to put hot compresses on the painful breast 4 times a day. Give her an injection of 1 000 000 units of PENICILLIN every day for 3 days.

If you have no penicillin, give her 2 tablets of SULFADIAZINE 4 times a day for 3 days.

If the pains are severe, give in addition 3 tablets of ASPIRIN per day for 2 to 3 days.

See the patient again on the fourth day

everything is all right      the patient is cured.      She will give the  
baby the breast which has been painful  
only when the pain has gone altogether.

there is no improvement      send the patient to hospital or the  
health centre.

#### 2.1.3 in a leg which is swollen

Ask the woman to remain lying down for 2 weeks and give her the same treatment as for breast pains.

### 2.2 Feverish and nothing else

In this case, get the woman to swallow 6 tablets of CHLOROQUINE (100 mg) all together, and see her 2 days later

everything is all right      the patient is cured

there is no improvement      send her to the hospital or the health centre.

3. THE WOMAN HAS OTHER SIGNS

In this case see the PROBLEMS corresponding to the situation

for example, PROBLEM 1.3 "Someone has a cough"

PROBLEM 1 4 "Someone is feverish"

PROBLEM 6.1 "There is something on the skin"

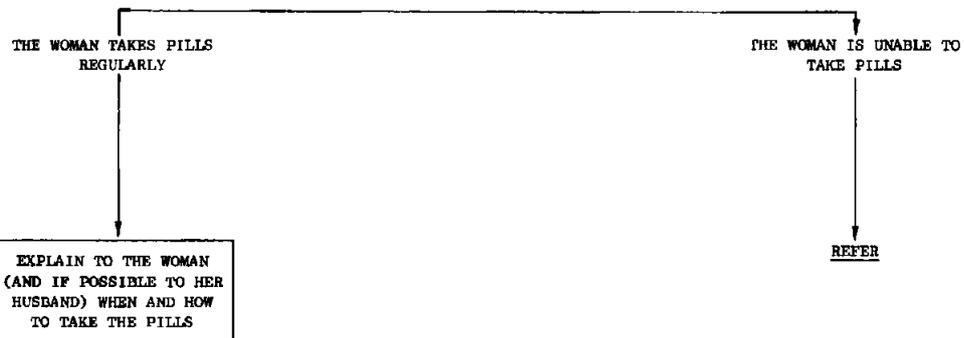
PROBLEM 6.3 "Someone has a headache"

etc. . .

**A WOMAN DOES NOT WISH  
TO HAVE A CHILD FOR  
THE TIME BEING**

OUTLINE OF THE PROBLEM

A WOMAN DOES NOT WISH TO HAVE A CHILD FOR THE TIME BEING



EDUCATIONAL OBJECTIVES

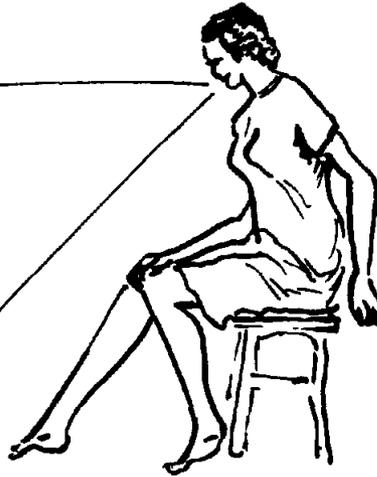
At the end of his training period, the student should be able to

- 1 State clearly when and how pills should be taken to avoid having a baby
- 2 Send to hospital or the health centre any woman who does not wish to have a baby but who cannot take the pills



**1<sup>st</sup> DAY OF THE PERIOD**

**5<sup>th</sup> DAY OF THE PERIOD: TAKE THE FIRST PILL**



- DAY WITHOUT A PILL
- DAY WITH A PILL

When to take the pill? In the evening before going to bed. So that she does not forget to take the pill, advise the woman to put the box of pills in the place where she sleeps.

For how many days? The woman must take a pill every evening for 21 or 22 days.

As a box contains 21 or 22 pills, the woman, beginning on the fifth day of her period, must take one pill every evening until there are no more pills left in the box.

When she has finished taking the 21 or 22 pills, the woman must go 7 days without taking pills, then she must begin again and take 21 or 22 pills. Then she must stop for 7 days. Then go on again for 21 or 22 days. Then stop again for 7 days and so on and so forth (see drawing)

When you have carefully explained to the woman and her husband how the pills must be taken, tell the woman

1. to repeat how she must take the pills, so that you can see whether she has understood you properly,
2. that if she takes the pills regularly, it is impossible for her to become pregnant,
3. that if she forgets on one occasion to take the pill in the evening, she can take one the following morning, but that she must not forget to take another that evening,
4. that if she forgets to take the pill for a few days she may become pregnant,
5. that once she has begun to take the pill she must not bother any more about her periods. In almost every case the period will come during the 7 days when she is not taking the pill, but it may happen that it does not come at all, the woman will nevertheless not be pregnant.

THEREFORE

- |  |
|--|
| <ol style="list-style-type: none"><li>1. She must begin to take the pills on the fifth day of her period.</li><li>2. She must take one every evening for 21 or 22 days (a whole boxful).</li><li>3. She must then stop for 7 days.</li><li>4. She must then take the pills again for 21 or 22 days.</li><li>5. She must not bother any more about her periods.</li></ol> |
|--|

2. THE WOMAN IS UNABLE TO TAKE THE PILLS

If it is impossible for a woman to take pills regularly in order to avoid pregnancy, because, for example

- it is impossible to obtain the pills in the region,
- the pills cost too much and the woman has no money to buy them with,
- the woman tells you that she is ill every time she takes these pills,
- the woman does not understand how the pills must be taken,

then explain to her that she must go to the hospital or the health centre to be advised and fitted with a more suitable means to avoid pregnancy.

# **HOW TO FEED A CHILD**

EDUCATIONAL OBJECTIVES

At the end of his training period, the student should be able to

1. Show a mother the advantages of breast-feeding,
2. Tell a mother the foods she must give her child, how to prepare them and how to suit the food to the age of the child.

MOTHER'S

MILK

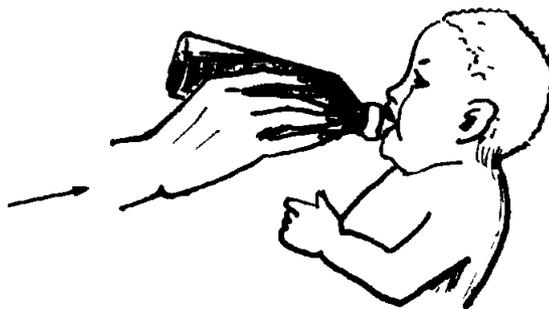
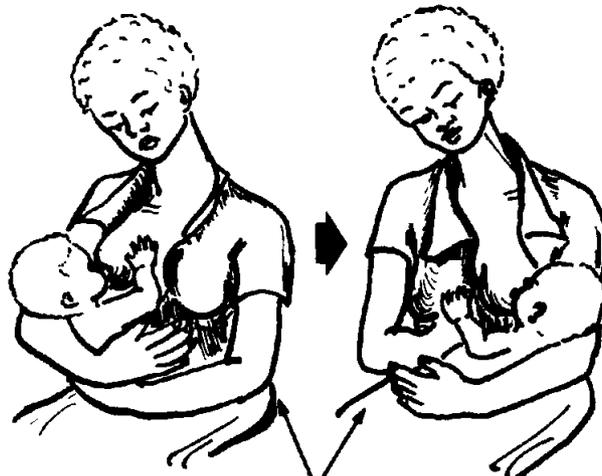
IS

**10 MINUTES ON EACH BREAST**

BETTER THAN

MILK FROM

A BOTTLE



HOW TO  
FEED A CHILD

---

EITHER

1. The child is less than 3 months old
2. The child is 3 months old
3. The child is 4 to 6 months old
4. The child is 7 to 8 months old
5. The child is 9 months to 1 year old
6. The child is over 1 year old

1. THE CHILD IS LESS THAN 3 MONTHS OLD

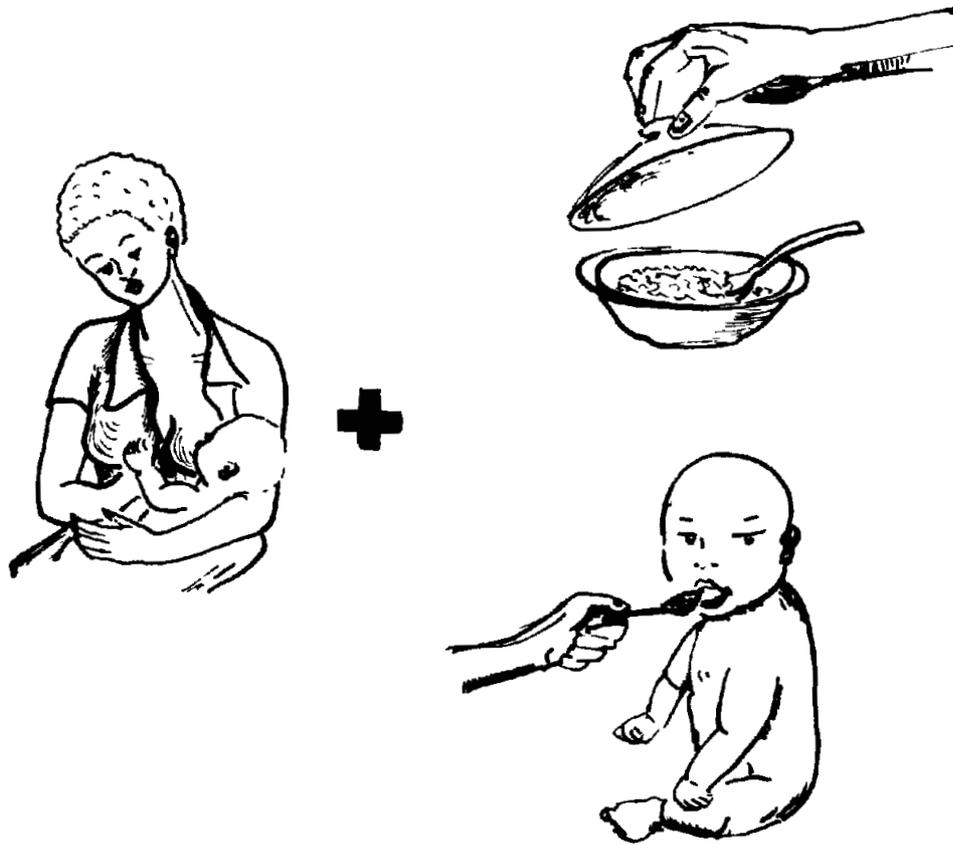
Always advise a mother to breast-feed her child, mother's milk is best because it is neither too hot nor too cold,  
it is always clean,  
it costs nothing.

Always advise a mother who is breast-feeding her child

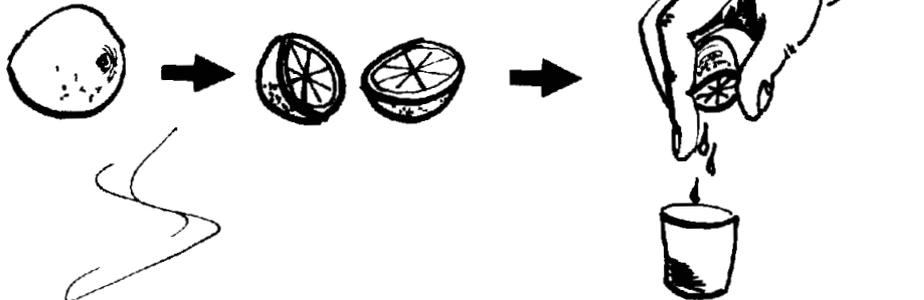
- 1.1 to eat well, including, if possible, meat, fish, vegetables and fresh fruit,
- 1 2 not to have another child for some years for the sake of her own health and her child's and in the interests of her family's happiness.

See PROBLEM 2.4 "A woman does not wish to have a child for the time being".

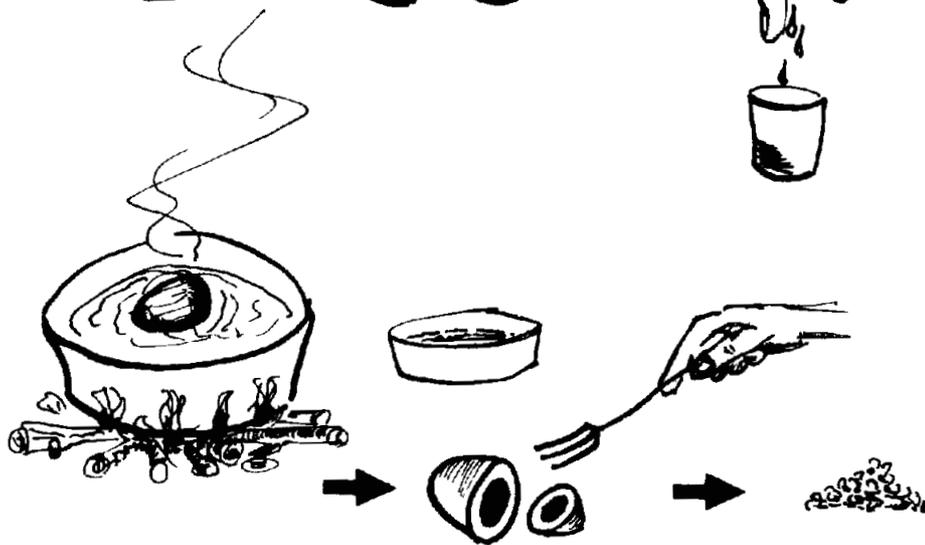
If the mother is not breast-feeding her child, tell her to visit the baby clinic at the hospital or health centre at regular intervals so that she can learn how to prepare the baby's bottle and how much milk to give the child.



**ORANGE**



**EGG**



2 THE CHILD IS 3 MONTHS OLD

Milk is still the best food, but it is no longer enough by itself to help the child develop properly. The child must therefore get used to eating other foods as well as milk

Advise the mother

- 2.1 to give the new food when the child is hungry and always before giving him milk,
- 2.2 always to begin by giving a very little of the new food. If the child spits it out, try again the next day and then gradually increase the amount so that the child gradually gets used to the food,
- 2.3 never to start more than one new food at a time and to wait several days before starting on another new food,
- 2.4 not to give food that is too heavily spiced or salty,
- 2.5 that, when the weather is hot and the child is thirsty, he should be given water (boiled if possible) to drink, but in between meals and never more than three cups of water in a day,
- 2.6 to give and prepare food in clean utensils.

Foods to give	How much	How often
1. Fresh orange juice *	1 tablespoon	3 times a week
2. Mashed hard-boiled egg *	1/4 egg	3 times a week
3. Rice pap *	1 to 2 tablespoons	every day

\* To prepare orange juice Cut the orange in two and squeeze the halves into a very clean glass, if possible do this through a small sieve to keep pips and peel out of the juice.

\* To prepare mashed hard-boiled egg Boil an egg in water for 10 minutes. Mash it up very small and mix with rice pap.

\* To prepare rice pap Add a tablespoon of rice to a cup of cold water and cook the two together for 15 minutes. Mash up the rice in the water in which it was cooked, passing the mixture if possible through a clean sieve in the process.

3 THE CHILD IS FROM 4 TO 6 MONTHS OLD

Foods to give	How much	How often
1. Orange juice	2 tablespoons	3 times a week
2. Mashed hard-boiled egg	1/2 egg	3 times a week
3. Rice pap	2 tablespoons	twice a day
4. Green vegetables or pumpkin (boiled, and cut in small pieces or mashed)	1 tablespoon	3 times a week
5. Meat or fish (with all bones taken out), boiled and mashed	1 tablespoon	3 times a week
6. Mashed papaw or banana	1 to 2 tablespoons	every day

4. THE CHILD IS FROM 7 TO 8 MONTHS OLD

Foods to give	How much	How often
1. Orange juice	1 orange	3 times a week
2. Chopped hard-boiled egg	1 egg	3 times a week
3. Rice pap	3 to 4 tablespoons	twice a day
4. Green vegetables or pumpkin	1 to 2 tablespoons	every day
5. Meat or fish	1 to 2 tablespoons	every day
6. Grated papaw or mashed banana	1 slice 1 banana	every day

5. THE CHILD IS FROM 9 MONTHS TO ONE YEAR OLD

Foods to give	How much	How often
1. Orange juice	1 orange	3 times a week
2. Whole hard-boiled egg	1 egg	3 times a week
3. Rice pap	1 bowl	twice a day
4. Green vegetables or pumpkin	2 tablespoons	every day
5. Meat or fish	2 tablespoons	every day
6. Papaw or banana	1 slice or 1 banana	every day

6. THE CHILD IS OVER ONE YEAR OLD

The child gradually begins to eat what adults eat.

However, advise parents to feed their children well and tell them that the best foods for children are meat, fish, eggs, fresh fruit and vegetables.

**A CHILD IS NOT GROWING  
LIKE THE OTHER CHILDREN**

OUTLINE OF THE PROBLEM

A small child is not growing the way others do

The child is smaller and thinner than normal children of the same age

The child is just skin and bone or his legs are swollen

Weigh and measure the child

Compare weight and height with age

Is the child well fed?

Is the child sick?

See 3 1

See 1 2  
1 3  
1 4  
6 1  
6 6  
6 7

The child is very cold

The child is very hot

The child is neither too hot nor too cold

Refer

Refer

The child can still eat

The child can no longer eat

Extra feeding + see 3 1

Spoon-feeding with liquid food

Cure

Refer

Cure

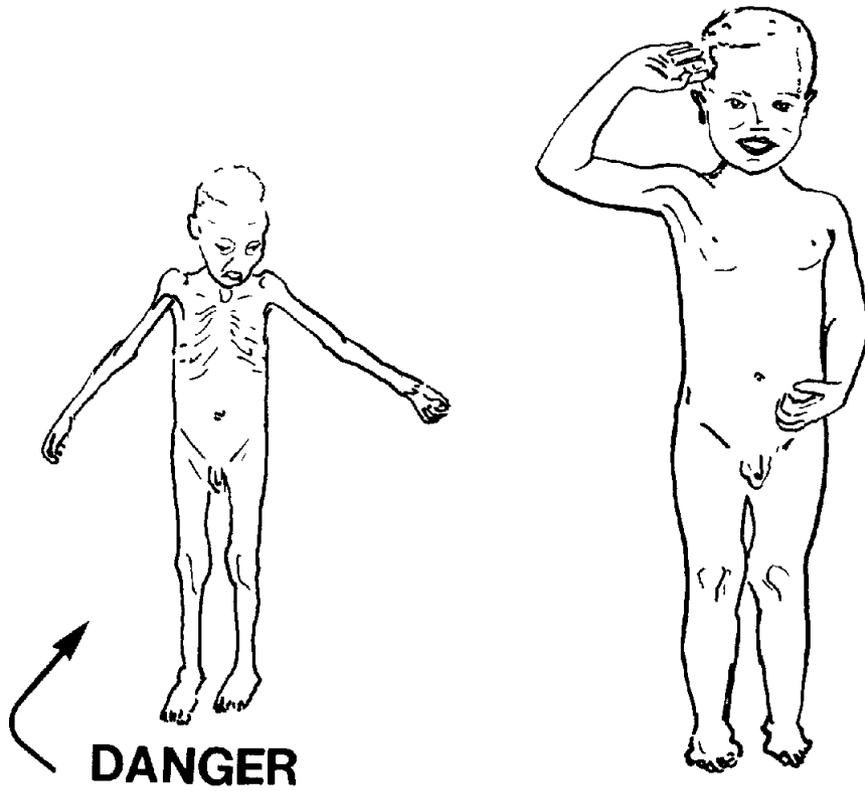
Refer

See 3 1

EDUCATIONAL OBJECTIVES

At the end of his training period, the student should be able to

- 1 Weigh and measure a child,
- 2 Decide whether the child has the right weight and height for his age,
- 3 Recognize the 2 major signs of malnutrition,
- 4 Show a mother how to prepare a bottle of liquid to feed a child suffering from malnutrition, when the liquid is to be given either in addition to the child's usual diet or by itself with a spoon,
- 5 Send to the hospital or health centre any child suffering from severe malnutrition if he is very cold or very hot  
or any child suffering from mild malnutrition who does not improve after 10 days treatment



A CHILD  
IS NOT GROWING  
LIKE THE OTHER CHILDREN

---

EITHER

1. The child is smaller and thinner than normal children of the same age.
2. The child is just skin and bone, or his legs are swollen.



1. THE CHILD IS SMALLER AND THINNER THAN NORMAL CHILDREN OF THE SAME AGE

Ask the age of the child and then look at the table on the next page.

Is the child the normal weight and height for his age as shown on the table?

If so, the child is normal

If not

1.1 Is the child well fed?

To find out, see PROBLEM 3.1 "How to feed a child".

1.2 Is the child sick?

- has he more than 3 liquid stools a day? see PROBLEM 1.2
- has he a cough? see PROBLEM 1.3
- is he passing or vomiting worms? see PROBLEM 6.6
- is he feverish? see PROBLEM 1.4
- has he something on his skin? see PROBLEM 6.1
- is he tired all the time? see PROBLEM 6.7

WEIGHT AND HEIGHT TABLE FOR NORMAL CHILDREN

WHAT THE WEIGHT AND HEIGHT OF CHILDREN SHOULD BE FROM 4 MONTHS TO 7 YEARS OLD

At 4 months	a boy should weigh	6	kilos	and have a height of	61 cms
	a girl " "	5.6		" "	60
At 6 months	a boy " "	7.6		" "	67
	a girl " "	7		" "	65
At 9 months	a boy " "	8.5		" "	71
	a girl " "	7.9		" "	69
At 1 year	a boy " "	9.1		" "	75
	a girl " "	8.7		" "	73
At 1 and a half years	a boy " "	10.3		" "	81
	a girl " "	9.7		" "	80
At 2 years	a boy " "	11.4		" "	86
	a girl " "	10.6		" "	85
At 2 and a half years	a boy " "	12.2		" "	89
	a girl " "	11.8		" "	89
At 3 years	a boy " "	12.8		" "	93
	a girl " "	12.3		" "	91
At 3 and a half years	a boy " "	13.8		" "	96
	a girl " "	13		" "	95
At 4 years	a boy " "	14.4		" "	99
	a girl " "	13.9		" "	99
At 4 and a half years	a boy " "	15.2		" "	102
	a girl " "	14.4		" "	101
At 5 years	a boy " "	15.8		" "	106
	a girl " "	15.2		" "	105
At 6 years	a boy " "	17.3		" "	110
	a girl " "	17		" "	110
At 7 years	a boy " "	18.7		" "	116
	a girl " "	18		" "	115

2. THE CHILD IS JUST SKIN AND BONE or else HIS LEGS ARE SWOLLEN

TAKE CARE' The child will die unless he is treated very soon

Either, the child is very cold

Or, the child is very hot (high temperature)

Or, the child is neither too hot nor too cold

2.1 The child is very cold

Wrap him up in a blanket and send him at once to the hospital or health centre.

In the meantime, ask for him to be given milk to drink, or else sweetened water.

2.2 The child is very hot

Give him an injection of PENICILLIN (500 000 units) in the buttocks and send him at once to the hospital or health centre. If you have no Penicillin make him swallow half a tablet of aspirin.

In the meantime, ask for him to be given milk to drink, or else sweetened water.

2.3 The child is neither too hot nor too cold

2.3.1 The child can still eat

Tell the mother to give the child what he usually has to eat and see PROBLEM 3.1 "How to feed a child".

However, as well as this, the child should drink each day the contents of a litre-sized bottle containing

3 tablespoons of vegetable oil

13 tablespoons of sweetened condensed milk

and filled up with water, boiled if possible.

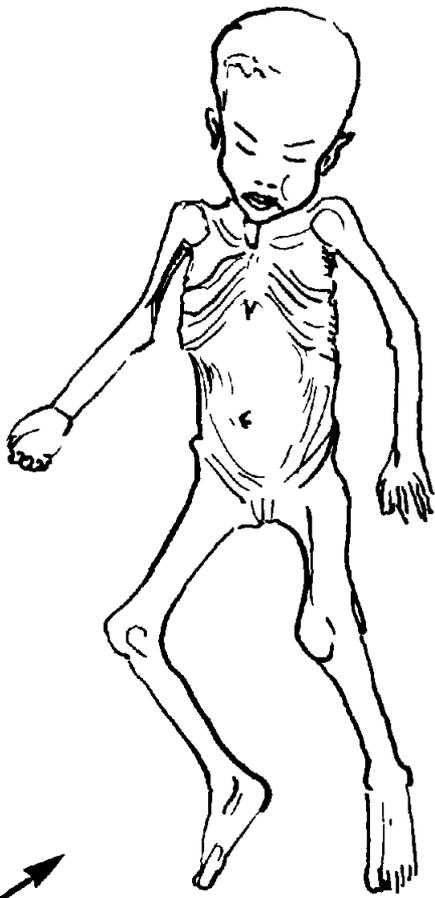
See the child again after 10 days and weigh and measure him.

If the child has got fatter, go on with the same treatment for 1 month

If the child has got thinner, send him to the hospital or health centre.

2 3 2 The child can no longer eat

Tell the mother to use a spoon to feed her child and make him drink a litre and a half of the bottle of water, vegetable oil and sweetened condensed milk described in 2.3 1.



THE BONES SHOW

FEET SWOLLEN

**DANGER**

EVERY DAY :



**3**



OIL

**13**



SWEETENED MILK

+

+

= ->



WATER

See the child again after 10 days and weigh and measure him.

If the child has got fatter, go on with the same treatment for 1 month

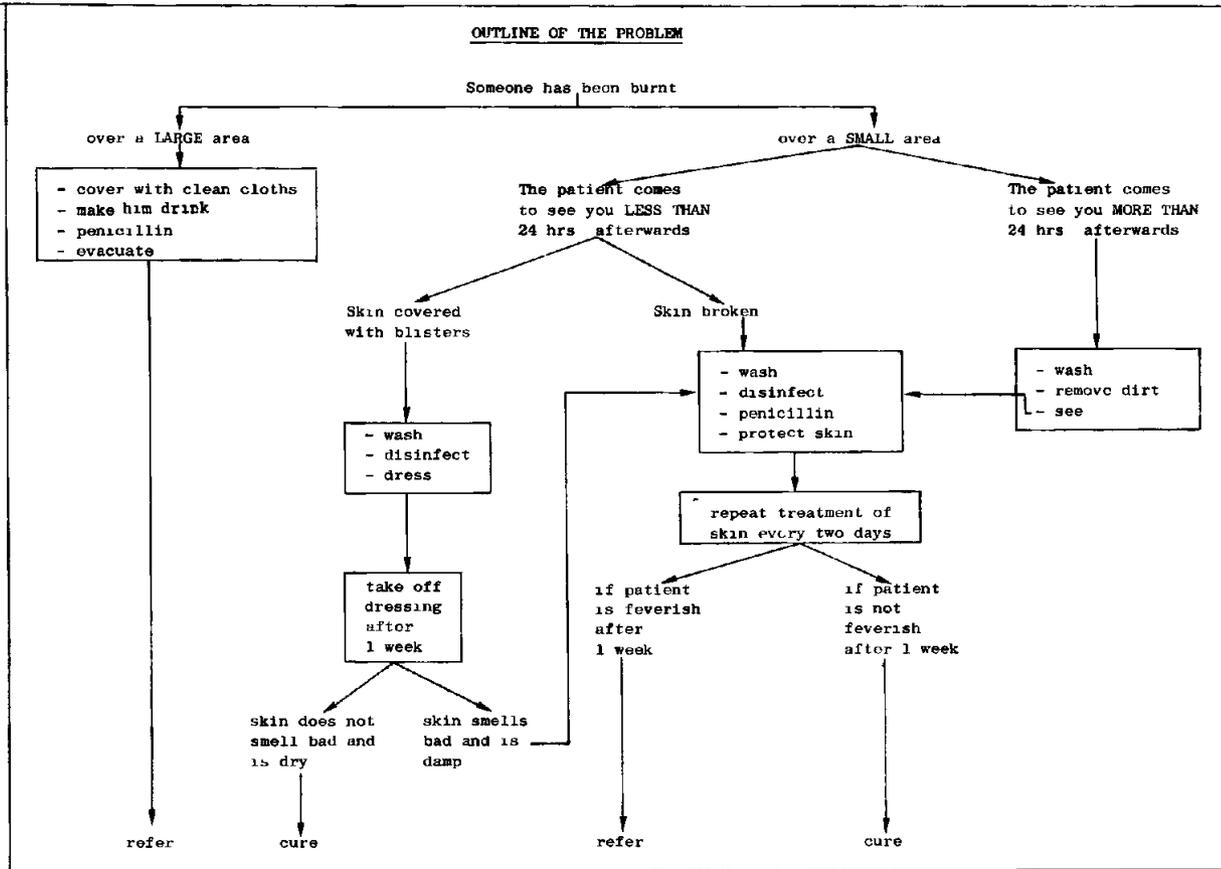
If the child has got thinner, send him to the hospital or health centre.

Keep seeing these children once a month and treat them as described in

PROBLEM 3.1 "How to feed a child".

**SOMEONE HAS BEEN BURNT**

OUTLINE OF THE PROBLEM



#### EDUCATIONAL OBJECTIVES

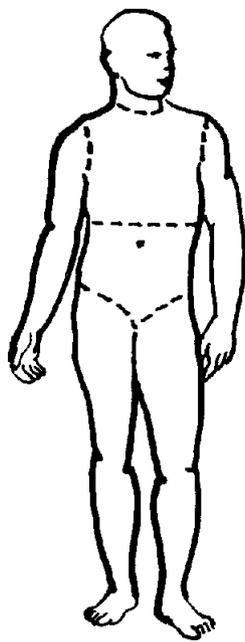
At the end of his training period, the student should be able to

- 1 Tell whether the burn covers a small or a large area,
- 2 Tell when a patient with burns should be sent to the hospital or health centre,
- 3 Tell whether the skin is covered with blisters only,
- 4 Tell whether the skin is broken or has been removed,
- 5 Clean a wound,
- 6 Treat blisters and skin which is broken or has been removed,
- 7 Treat a wound that smells bad or from which a yellowish fluid is coming out,
- 8 Tell the patient and his family how to prevent burns

#### TEACHING METHODS

To reach all these educational objectives, the following methods are suggested

- 1 Draw a man on a piece of paper and show on the drawing when the extent of the burn is large enough for the patient to be sent to the hospital or health centre (see drawing on p 108),
- 2 Describe everything that must be done before sending a severe burn case to the hospital or health centre,
- 3 4 Show on a patient, or on a drawing made for the purpose (see also the drawings in the Manual) what the skin is like when it is covered with blisters only and what it is like when it is broken,
- 5 6 Carry out treatment for a burn which has dirt in it and for a burn with blisters and broken skin, do this either on a patient or on the arm of a friend,
- 7 Describe the differences between treatment for a wound which smells bad and treatment for a wound which does not smell bad



SOMEONE HAS BEEN

BURNT

---

EITHER

- |     |   |
|-----|---|
| 1   | A large area of the skin has been burnt             |
| 2   | A small area of the skin has been burnt and is seen |
| 2.1 | less than 24 hours after the burn                   |
| 2.2 | more than 24 hours after the burn                   |

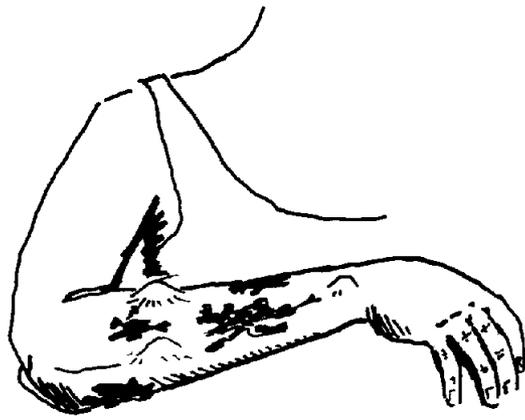
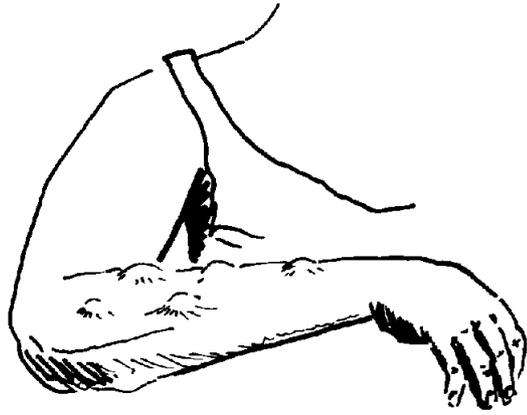
1	A LARGE AREA OF THE SKIN HAS BEEN BURNT
---	---

- 1.1 Lay the patient on a stretcher.
- 1.2 Cover the burnt parts with clean cloths.
- 1.3 Give the patient plenty of water to drink.
- 1.4 Give him, if possible, an injection of PENICILLIN in the buttocks (child 500 000 units, adult 1 000 000 units).
- 1.5 Send him to the hospital or health centre.

N.B. A large area of the skin has been burnt whenever more than one arm, or more than one leg, or more than the head, or more than half the back or more than half the chest has been burnt. Otherwise, a small area of the skin has been burnt.

2.	A SMALL AREA OF THE SKIN HAS BEEN BURNT
----	---

- 2.1 The patient comes to see you less than 24 hours after the burn

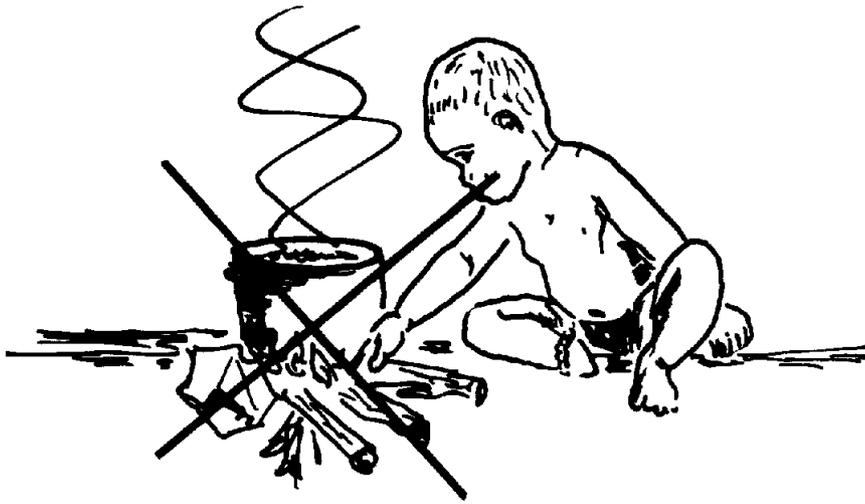


◀ 2.1 1 The skin is covered with blisters only

- Wash gently with soapy water and a clean cloth
- Paint over with iodine without damaging the blisters
- Put on a loose dressing
- Tell the patient not to take off the dressing or dirty it
- Take off the dressing after 1 week
  - if the skin smells bad or if fluid is coming out of it, see 2.1.2
  - if the skin does not smell bad and it is dry, leave the skin uncovered and the patient will get better by himself.

◀ 2.1.2 The skin is covered with blood, or it is broken, or it smells bad one week after having been dressed

- Wash gently with salt water and a clean cloth
- Paint the skin with iodine
- In the case of a leg or an arm, lay the limb on a clean cloth soaked in salt water
- In the case of another part of the body, pat with a cloth soaked in salt water
- Leave the skin uncovered but tell the patient to keep flies away from the burnt skin
- Every day for 5 days give an injection of PENICILLIN
  - for a child 500 000 units, for an adult 1 000 000 units
  - if you have no Penicillin give SULFADIAZINE tablets
    - for children under 3 years 1 tablet morning, noon and evening for 5 days,
    - for children over 3 years 2 tablets morning and evening for 5 days,
    - for adults 2 tablets morning, noon and evening for 5 days
- Don't forget to tell the patient to drink plenty of water when he is taking Sulfadiazine tablets
- Repeat treatment of the skin every 2 days until a thin scab has covered the wound



**GUARDED FIRE**



- Then put on a dressing
- If the patient is feverish after a week send him to the hospital or health centre

2 2 The patient comes to see you more than 24 hours after the burn

2 2 1 Wash the skin with soap and warm water, cleaning away any dirt on the skin as gently as you can with a clean cloth, until the skin begins to bleed slightly,

2 2.2 Then follow the instructions in 2 1 2

TAKE CARE! Teach the people living in the village how to put large stones around their fires so as to prevent children from burning themselves (see drawing).

**TORN SKIN**

**OUTLINE OF THE PROBLEM**

The skin is broken

1 Is the patient losing a lot of blood from the wound?

YES

- press on the wound
- tight bandage
- make drink
- evacuate

NO

- see 2
- see "treat the wound"

2 Is the patient very tired and weak?

NO

TREAT THE WOUND

YES

- make drink
- evacuate

Is there a fracture?

NO

YES

See 4 3

Did the patient get a heavy blow on the head, chest or belly?

NO

YES

- keep an eye on the patient
- evacuate him if he shows signs of extreme weakness

Small wound

- wash
- disinfect
- dress

Large wound

- wash
- disinfect
- clips or sticking plaster
- penicillin

take dressing off after 5 days, take out clips

wound smells bad and is damp, or patient is feverish

- wash
- disinfect
- penicillin

after 1 week wound still smells bad or patient is still feverish

refer

wound does not smell bad and is dry, patient is not feverish

after 1 week wound no longer smells bad, patient is no longer feverish

put on a dressing every 10 days

cure

refer

#### EDUCATIONAL OBJECTIVES

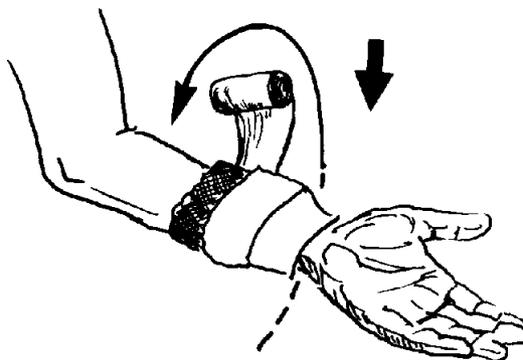
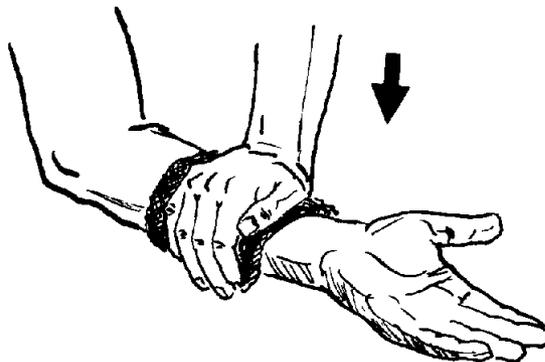
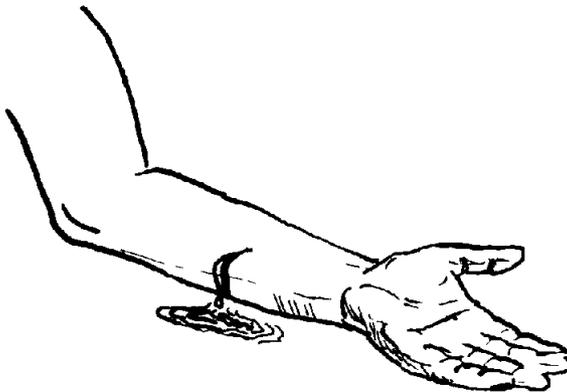
At the end of his training period, the student should be able to

- 1 Stop blood flowing from a wound by pressing on the wound,
- 2 Decide whether the flow of blood from a wound is very heavy or not,
- 3 Recognize the major signs of extreme weakness,
- 4 Decide when a wounded person should be sent to the hospital or health centre,
- 5 Clean a wound, put disinfectant on it and put on a dressing,
- 6 Bring the edges of a deep wound together in a straight line using either clips or sticking plaster,
- 7 Keep an eye on a patient who has had a heavy blow on the head, belly or chest,
- 8 Put a bandage round a dressing,
- 9 Tell a person with a wound what he must do when he goes home after his initial treatment,
- 10 Treat an old wound from which a yellowish fluid is coming out

#### TEACHING METHOD

To reach all these educational objectives, the following methods are suggested

- 1 Show, on a classmate's arm, how to put pressure on a heavily bleeding wound,
- 2 Show, by means of a tap or a container full of water, how fast blood flows when there is heavy bleeding and when there is slight bleeding,
- 3 Describe the 3 major signs of extreme weakness,
- 4 Say when a wounded person should be sent to the hospital or health centre,
- 5 Show, on a classmate's arm, how to clean a wound thoroughly, how to put disinfectant on it and how to dress it,
- 6 Make a cut in an orange a papaw or a melon (or any other fruit), take out a section and try to close the space thus made with sticking plaster,
- 7 Say what can happen to a patient who has had a heavy blow on the head, belly or chest,
- 8 Tell each student to put a bandage on a classmate's arm or leg. Make them walk about or move the bandaged limbs to see whether the bandage holds properly,
- 9 List the problems that a wound that has just been treated can give rise to after the patient has gone home,
- 10 Describe the differences between treatment of a wound from which a yellowish fluid is coming out and treatment of a normal wound



TORN SKIN

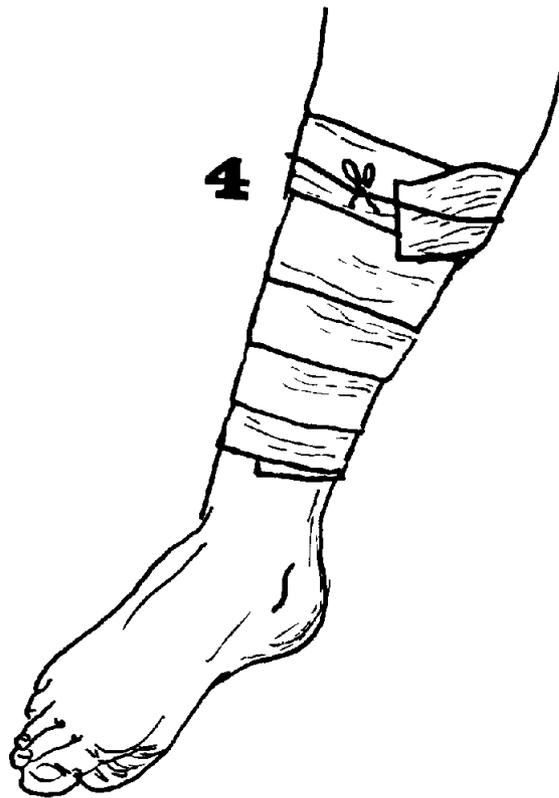
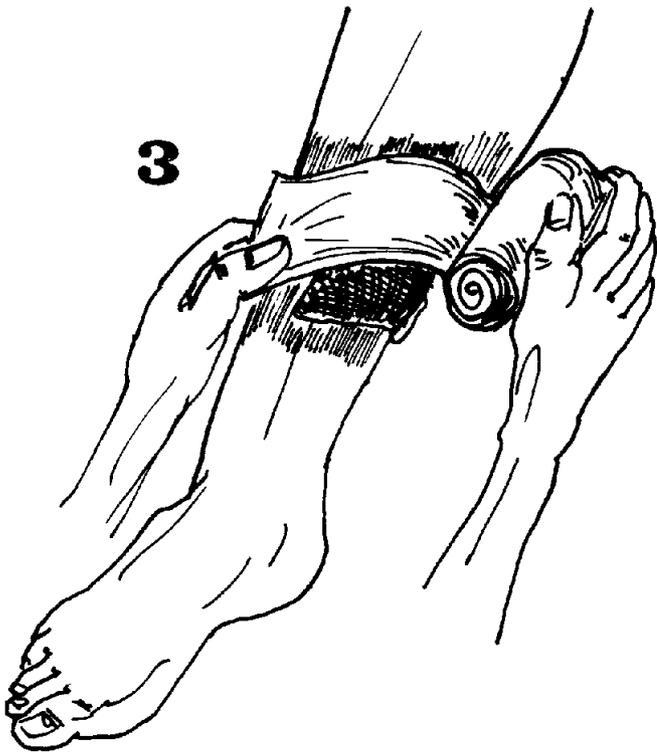
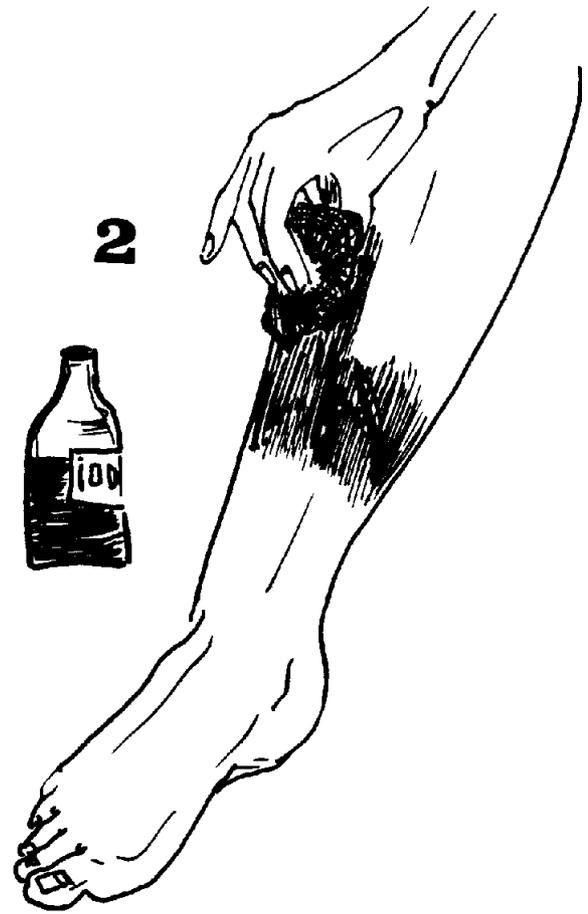
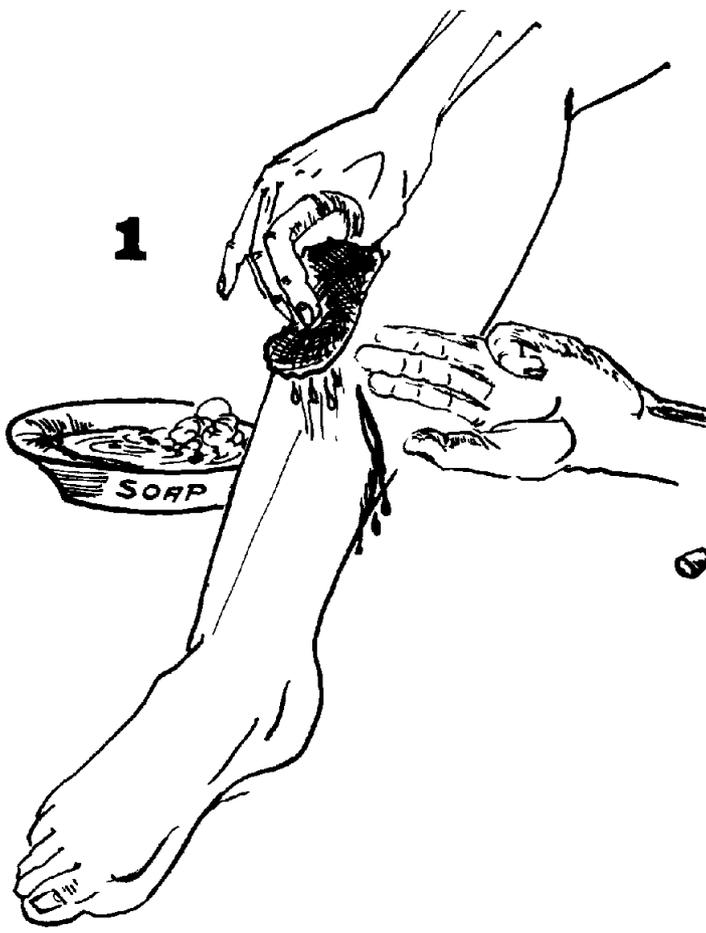
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- 1 Is the patient losing a lot of blood from the wound?
  - 1.1 Yes
  - 1 2 No
2. Is the patient very tired and weak?
  - 2.1 Yes
  - 2.2 No
3. Treating the wound or wounds
  - 3.1 Is there a fracture?
  - 3.2 Did the patient get a heavy blow on the head, chest or belly?
  - 3 3 Is the wound large or small?

1. IS THE PATIENT LOSING A LOT OF BLOOD FROM THE WOUND?

1 1 YES

- 1 1 1 Press hard on the wound, using compresses, so as to stop the bleeding
- 1 1 2 Keep on pressing down for a few minutes, then take off the compresses and see if blood is still flowing
- 1.1 3 If the bleeding has stopped, see whether the patient is very tired and weak  
See 2 and treat the wound or wounds (see 3)
- 1.1.4 If there is still bleeding, do as in 1.1.1, then bandage tightly over the place which is bleeding and see 1.1.3
- 1 1 5 If the blood comes through the bandage, put on a second bandage and tie it even more tightly than the first
- 1 1 6 Make the patient drink plenty of water and send him to the hospital or health centre on a stretcher



- 1 2 NO (slight bleeding from the wound or wounds)
- 1.2 1 See whether the patient is very tired and weak (see 2)
- 1.2.2 Treat the wound or wounds (see 3).

## 2. IS THE PATIENT VERY TIRED AND WEAK?

See PROBLEM 6 7 "Someone feels weak or tired".

### 2.1 YES

Make the patient drink plenty of water and send him at once to the hospital or health centre.

### 2 2 NO

Treat the wound or wounds (see 3).

## 3. TREATING THE WOUND OR WOUNDS

3 1 Is there a fracture? If so, see PROBLEM 4.3 "Broken bone"

3.2 Has the patient had a blow on the head, chest or belly?

If so, see whether the patient is very tired and weak,  
he is weak send him to the hospital or health centre,  
he is not very tired treat the wound or wounds, but keep  
seeing the patient twice daily. If the patient becomes very  
tired send him to the hospital or health centre. Otherwise,  
keep an eye on the wound or wounds (see 3.3).

3.3 Is the wound small or large?

3.3.1 The wound is small (less than three fingers long)

- 1 Wash the wound with soap and water, using a compress.
- 2 Clean away any dirt and shave away any hair round the wound.
3. Put iodine on the wound and all round the wound.
- 4 Cover the whole wound with a compress and fix the compress in place with sticking plaster, string, cord or a piece of creeper.



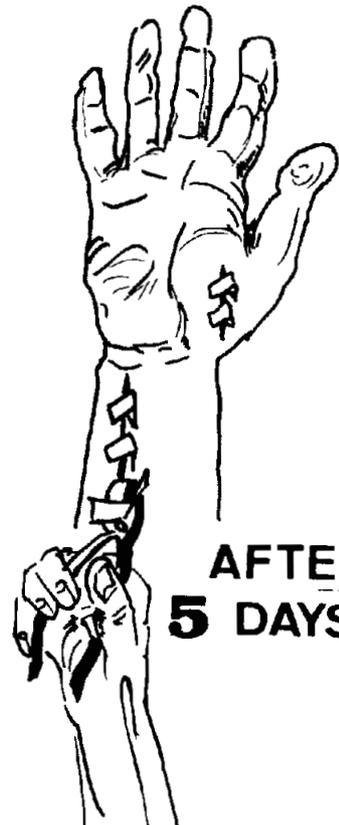
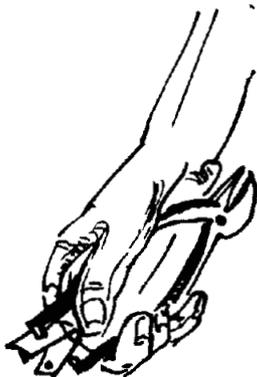
**SHAVE ALL ROUND**



**STICKING  
PLASTER**



**OR CLIPS**



**AFTER  
5 DAYS**

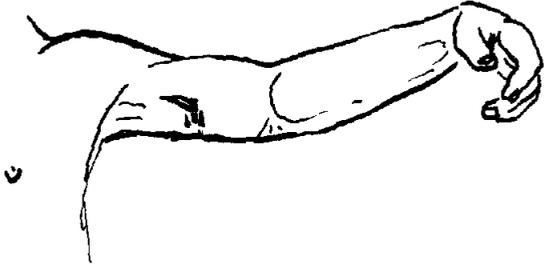
- 5 Tell the patient not to dirty his dressing or take it off.
6. Take off the dressing after 5 days.
7. When you take off the dressing on the 6th day, if the wound smells bad or if fluid is coming out of it or if the patient is feverish see 3.3.2 - 8.

3.3 2 The wound is large (more than three fingers long)

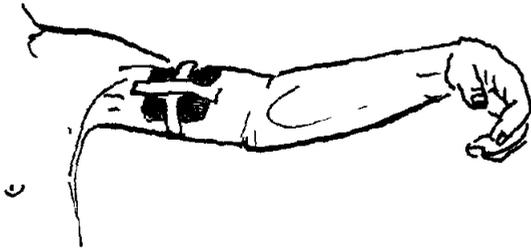
1. Wash the wound with soap and water, using a compress.
2. Clean away any dirt and shave away any hair round the wound.
- 3 Put iodine on the wound and all round the wound.
- 4 Put in 2 or 3 clips to bring the edges of the wound together (see drawing).
- 5 If you have no clips, bring the edges of the wound together with sticking plaster (see drawing).
6. Cover the whole wound with a compress and fix the compress in place with sticking plaster, string, cord or a piece of creeper and tell the patient not to take the dressing off or dirty it.
7. Give the patient one injection of PENICILLIN daily for 3 days
  - in the case of a child 500 000 units
  - in the case of an adult 1 000 000 units
 If you have no Penicillin, give SULFADIAZINE tablets
  - child 1 tablet morning, noon and evening for 3 days
  - adult 2 tablets 4 times a day for 3 days
8. Take the dressing off after 5 days

8 1 The wound smells bad or fluid is coming out of the wound or the patient is feverish

- take out the clips (see drawing)
- wash the wound with salt water
- let it dry, then put iodine on the wound and around the wound and put on a dressing which you will change every 2 days
- give an injection of PENICILLIN or give SULFADIAZINE as in 3 3.2 - 7. Don't forget to change the dressing every 2 days!
- if, after a week, the wound still smells bad or if liquid



**SMALL WOUND**



**SMALL DRESSING**

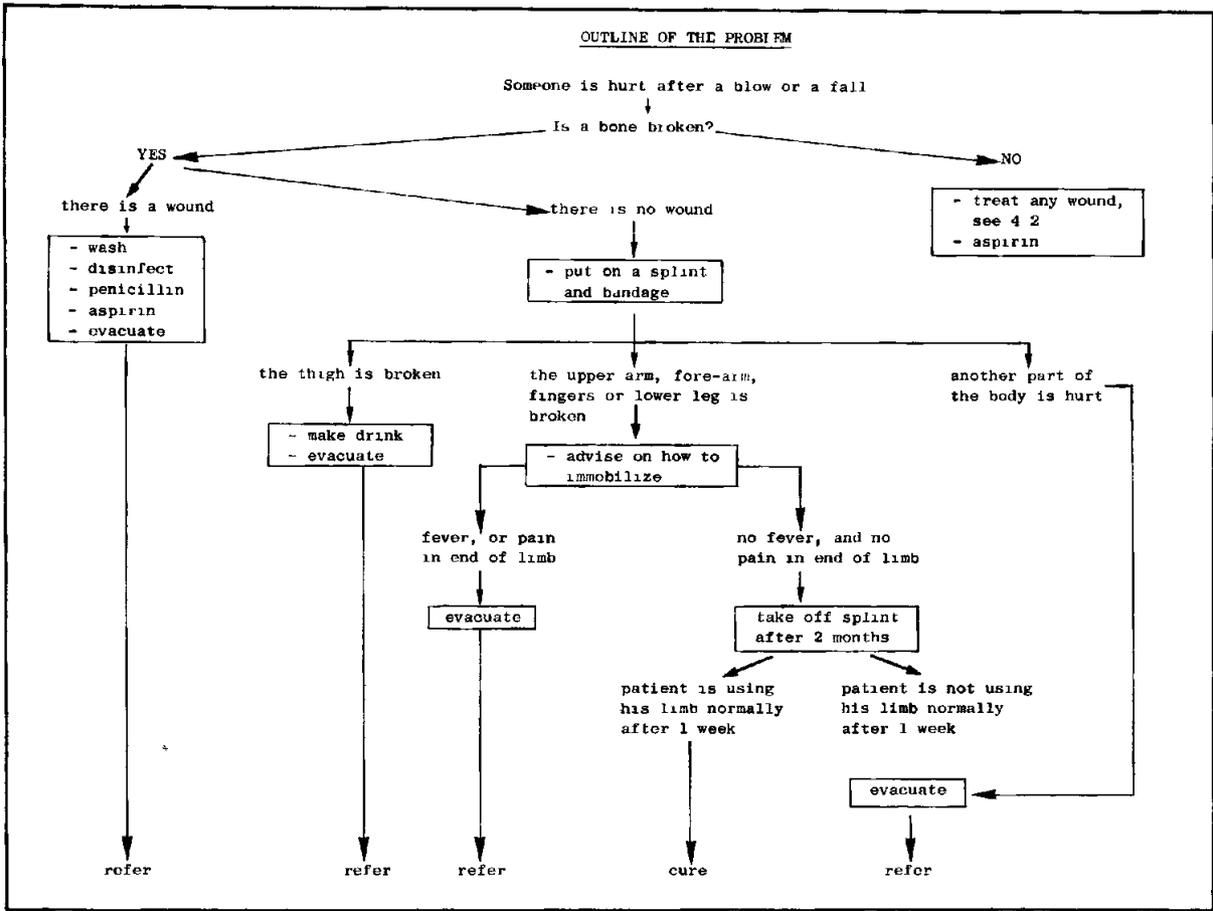
is still coming out of the wound or if the patient is still feverish, send the patient to the hospital or health centre

- otherwise, just put a new dressing on every 10 days until the wound is cured.

8.2 The wound does not smell bad, no fluid is coming out of the wound and the patient is not feverish

- take out the clips (see drawing)
- put on iodine
- put on a dressing, which you will change every 10 days until the wound is cured.

**BROKEN BONE**



#### EDUCATIONAL OBJECTIVES

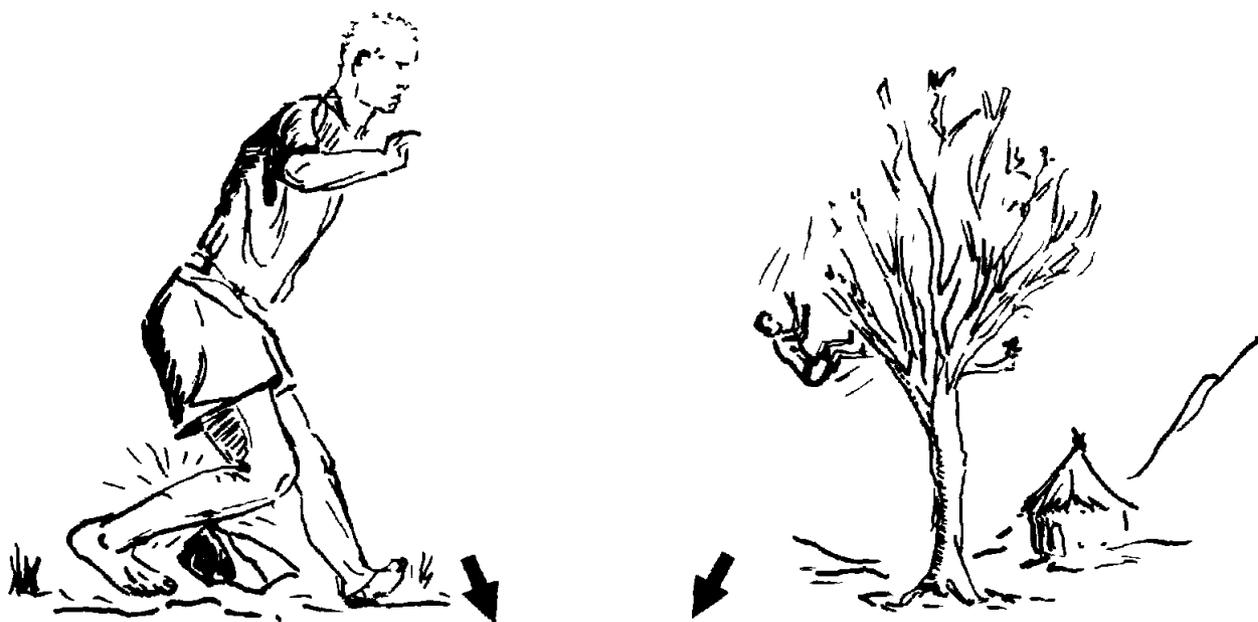
After you have studied this problem, you will be able to

- 1 Find out what kind of accident has taken place,
- 2 Undress someone who has been hurt,
- 3 Ask the patient where he hurts,
- 4 Tell whether the patient can move his limbs, whether he is breathing properly or whether he is fully conscious,
- 5 Tell whether one of the patient's limbs (upper arm, fore-arm, hand, foot lower leg or thigh) is out of shape or not,
- 6 Decide whether a bone is broken or not by using both hands to move a limb about,
- 7 Straighten a broken bone by stretching the limb gently,
- 8 Raise a limb in which the bone is broken and slide a flat length of wood (splint) under it,
- 9 Put a bandage round the broken limb and the splint in such a way as to prevent the limb from moving
- 10 Tell what kind of fracture must be sent to the hospital or health centre,
- 11 Tell how much time should pass before you see the patient again,
- 12 Say what you should tell the patient or his family to do during the time before your next visit to the patient

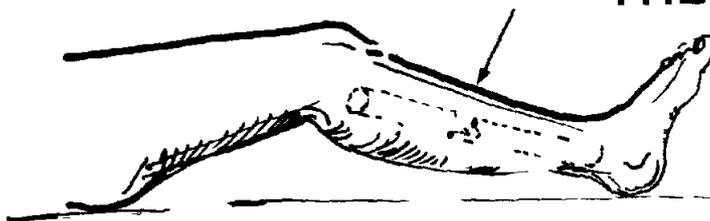
#### TEACHING METHOD

To reach all of these educational objectives, the following methods are suggested

- 1 During the course of a discussion, describe all possible opportunities for someone living in the village to break a leg
- 2 Have the shirt and trousers taken off a classmate, trying to move his limbs about as little as possible in the process,
- 3 4 Act the part of a person who has fallen out of a high tree,
- 5 Have drawings made of the limbs of the body, showing when they are normal and when they are out of shape
- 6 Move the upper and lower limbs of a classmate, carrying out in this way all the normal movements of the limb,
- 7 Break a piece of wood into 2, 3 or 4 pieces and ask to have it put back together again,
- 8 9 Put a bandage round a splint (flat length of wood) and the broken pieces of stick, then have the splint turned over to see whether or not the pieces of stick move around under the bandage,
- 10 Describe all the cases in which a patient with a fracture must be sent to the hospital or health centre,  
Roll a classmate from the ground onto a stretcher without bending his body or limbs,
- 11 12 Have a group discussion on what the patient or his family should be told to do once the patient is back at home with a splint on



**THE LEG BREAKS**

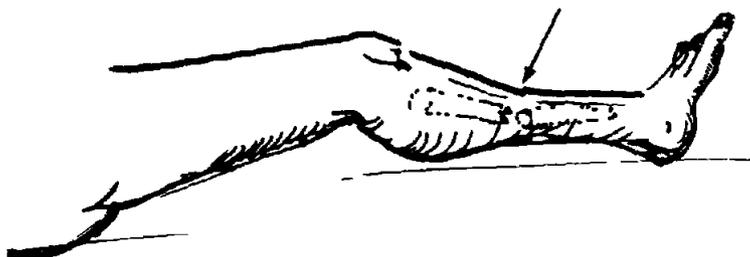


**LIKE**



**A STICK**

**LEG OUT OF SHAPE**



## BROKEN BONE

---

Someone comes to see you because he is in great pain after an accident he can no longer move one of his limbs in the usual way.

Make the patient lie down and undress him.

Ask the patient or his family what happened.

If he hit something very heavily a bone is probably broken.

### WHAT MUST BE DONE?

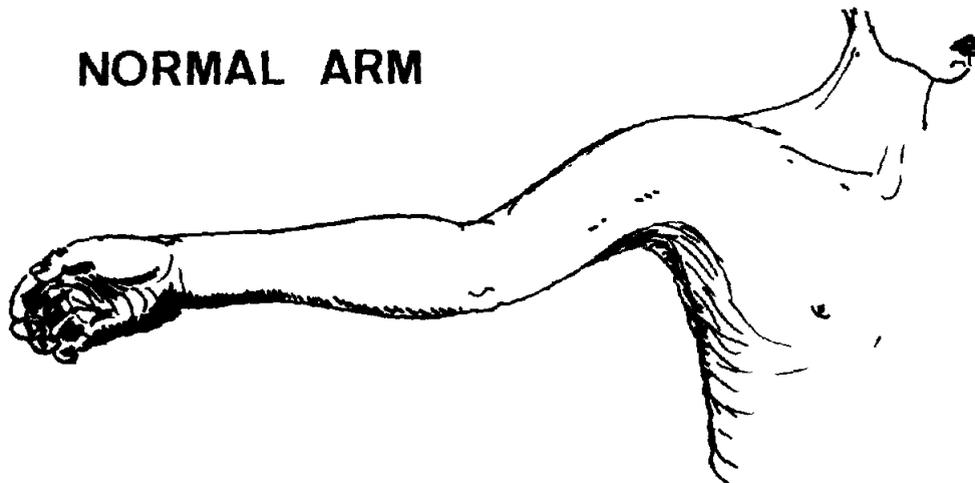
1. Is a bone broken?
2. What bone is broken?
  - 2.1 the thigh
  - 2 2 the upper arm, fore-arm, fingers or lower leg
  - 2 3 another part of the body is hurt

#### 1. IS A BONE BROKEN?

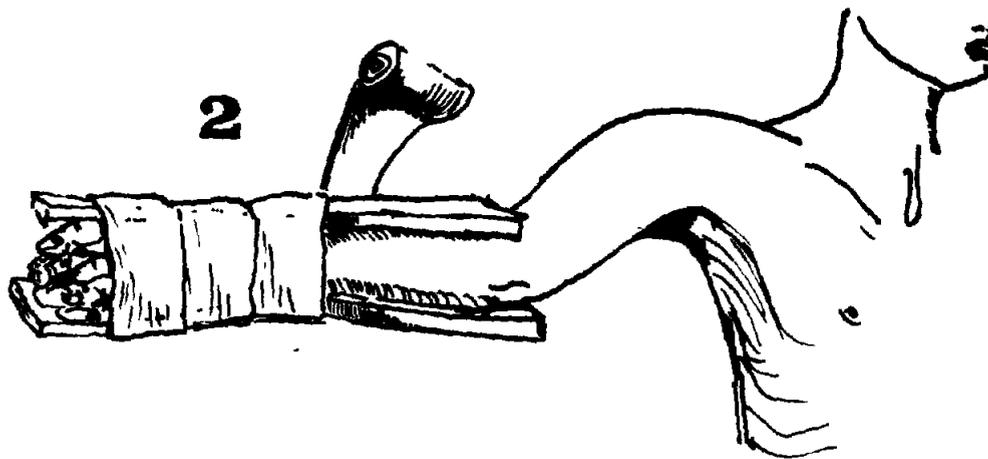
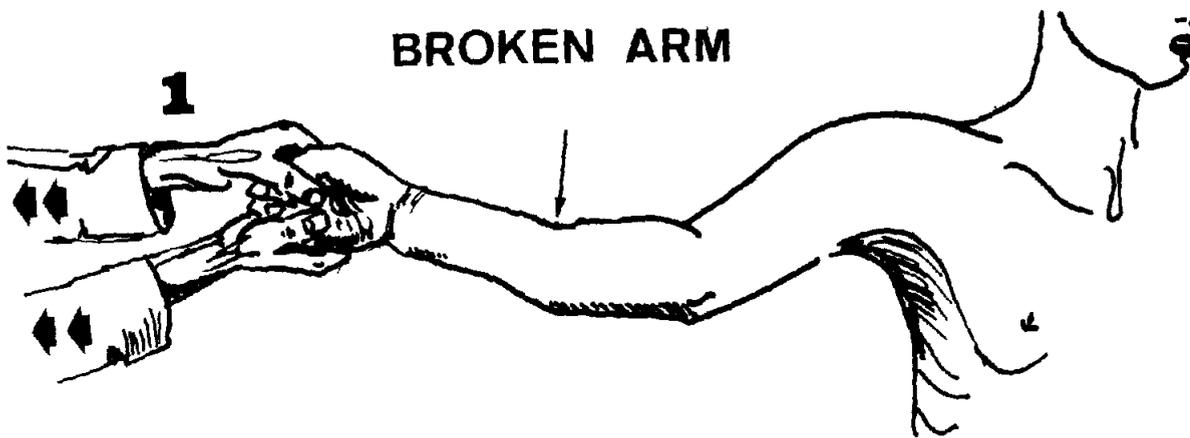
##### 1 1 A bone is broken if

- the patient is unable to move the limb OR if it hurts the patient very much to try and move the limb
- the limb is out of shape (see drawing) OR if it hurts the patient very much when you press your hand against the place which has been injured

**NORMAL ARM**



**BROKEN ARM**



1.1.1 If there is a wound on the broken limb

- clean the wound with warm salt water and remove any dirt
- paint the wound with iodine and put on a dressing
- give a single injection of PENICILLIN  
child 500 000 units, adult 1 000 000 units  
if you have no Penicillin, give SULFADIAZINE tablets for 5 days  
child under 3 years 1 tablet morning, noon and evening  
child over 3 years 2 tablets morning and evening  
adult 2 tablets morning, noon and evening
- in addition, give ASPIRIN tablets to ease the pain  
child half a tablet morning, noon and evening  
adult 1 tablet morning, noon and evening
- treat as described in 1.1.2
- then send the patient to the hospital or health centre.

1.1.2 If there is no wound on the broken limb

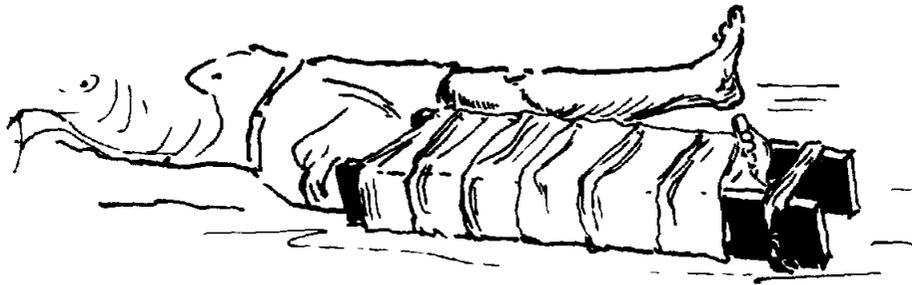
- gently put the limb back in its proper position if it is out of shape
- raise the limb with both hands and place it on a flat length of wood (splint)
- put a bandage, not too tightly, round the splint and the broken limb (see drawing)

1.2 If you think the bone is not broken

1.2.1 If there is a wound, treat it. See PROBLEM 4.2 "Torn skin"

1.2.2 To ease the pain, give ASPIRIN

child half a tablet morning, noon and evening for 3 days  
adult 1 tablet morning, noon and evening for 3 days



- \* LOWER LEG: Leave 2 months
- \* THIGH: Evacuate

2 WHICH BONE IS BROKEN?

2 1 The thigh is broken

After treating as described in 1 1.1 or 1.1.2

2 1.1 Get the patient to drink plenty of water

2 1.2 Send him to the hospital or health centre.

2.2 The upper arm, or the fore-arm, or the fingers or the lower leg is broken

2.2.1 Treat as described in 1.1.1 or 1.1 2

2 2.2 Tell the patient to rest at home and not to use the broken limb

2 2.3 Tell him to come back to see you in 2 months time so that you can take off the splint

- if the patient comes back before that because he is feverish or the end of his limb is painful, send him to the hospital or health centre

2 2.4 Make the limb move about after you have taken off the splint

- if, after a week, the patient is using his limb normally he is cured,  
- if not, send him to the hospital or health centre.

2 3 Another part of the body is hurt

chest, back, hips, head

2 3.1 Treat any wound. See PROBLEM 4.2 "Torn skin".

2 3.2 If you think a bone is broken or if the patient is very tired and weak, send him to the hospital or health centre.

To recognize the signs of extreme weakness, see PROBLEM 6.7

"Someone feels weak or tired" paragraph 2 2.

**SOMEONE HAS BEEN BITTEN**

OUTLINE OF THE PROBLEM

Someone has been bitten

By a dog

By a snake

- wash the place
- disinfect
- dress

- put on a tourniquet
- cut the place
- suck
- dress

the dog is known

the dog is not known

- keep an eye on the dog for 10 days

- evacuate the patient

the behaviour of the dog changes

the dog remains as usual

- have the dog killed

everything will be all right

refer

refer

#### EDUCATIONAL OBJECTIVES

At the end of his training period, the student should be able to

- 1 Treat the wound caused by a dog bite,
- 2 Find out whether the dog which has bitten is known or not,
- 3 Decide whether the behaviour of the dog which has bitten has changed
- 4 Decide when a person bitten by a dog should be sent to the hospital or health centre,
- 5 Treat a person who has been bitten by a snake

#### TEACHING METHOD

To reach all of these educational objectives, the following methods are suggested

- 1 Show, on a classmate's leg, how to treat a dog bite
- 2 Ask the people living locally whether the dog belongs to any of them
- 3 Ask the owner of the dog which has bitten whether the dog continues to eat, drink and walk around normally,
- 4 Describe and discuss the 2 cases in which a person bitten by a dog must be sent to the hospital or health centre,
- 5 Show, on a classmate's leg, the 3 actions that must be taken when someone is being treated for snake bite

SOMEONE HAS BEEN

BITTEN

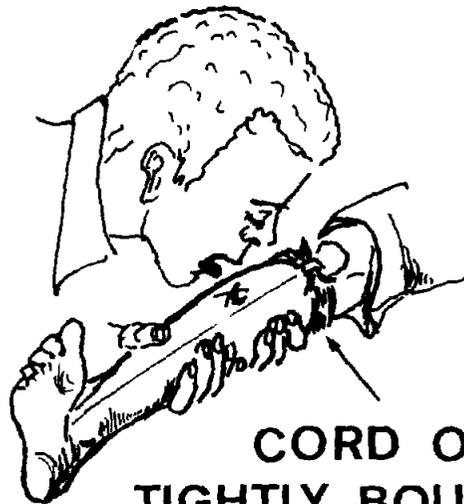
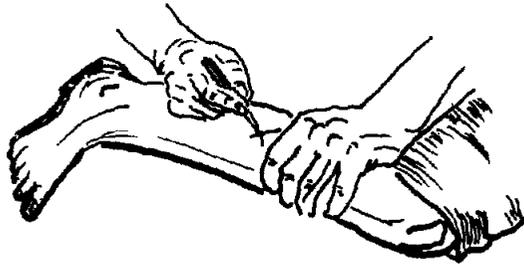
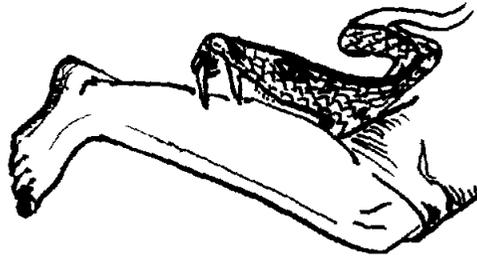
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EITHER

- |   |
|---|
| <ol style="list-style-type: none"><li>1. The patient has been bitten by a dog</li><li>2. The patient has been bitten by a snake</li></ol> |
|---|

1. THE PATIENT HAS BEEN BITTEN BY A DOG
---

- 1.1. First look after the person who has been bitten
  - 1.1.1. Clean the wound with soap and water.
  - 1.1.2. Then put iodine on the wound.
  - 1.1.3. Put on a dressing.
  - 1.1.4. Never close the wound with clips or sticking plaster.
- 1.2. Ask whether anyone knows the dog which has bitten
  - 1.2.1. The dog is known it belongs to the family or to a neighbour.  
Ask for the dog to be watched carefully for 10 days.
    - . If the dog no longer eats
    - or if he no longer barks in his usual way,
    - or if he shivers, becomes vicious or barks without stopping,
    - or if he has convulsions and saliva runs from his mouth,
    - then have the dog killed and send the person who has been bitten to the hospital or health centre at once.
    - . If the dog keeps in good health, do no more.



**CORD OR  
TIGHTLY BOUND CLOTH**

- 1.2.1. The dog which has bitten is not known it is a dog which does not belong to the village.

In this case, send the person who has been bitten to the hospital or health centre.

2. THE PATIENT HAS BEEN BITTEN BY A SNAKE

- 2.1. Tie a cord around the limb just above the bite (see drawing) and tighten it, but not too much.
- 2.2. With a razor blade, or the point of a knife or a scalpel, make a cut in the form of a cross, 1 cm deep, and suck out the liquid which comes out of the wound. Spit out the liquid you have sucked up.
- 2.3. After you have sucked out liquid for ten minutes, dress the wound and send the patient to the nearest hospital or health centre.

# **HOW TO HAVE CLEAN WATER**

OUTLINE OF THE PROBLEM

The villagers have asked you how they can get clean water or  
Your supervisor has asked you what you have done about this problem  
since his last visit

What kind of water is being used?

1 from a pond

there is no other source

- have the water boiled
- advise against bathing
- see village chief about other sources

there is another source

- forbid people to use the pond
- let live-stock drink there
- see 2, 3 and 4

2 from a river

there is no other source

- have the water boiled
- let people bathe there after asking supervisor's advice

there is a spring or a well

- see 3 or 4

3 from a spring

the spring is PROPERLY protected

- encourage to go on using it

the spring is BADLY protected

- give technical advice on how to protect the spring properly

4 from a well

the well is PROPERLY protected

- encourage to go on using it

the well is BADLY protected

- give technical advice on how to protect the well properly or how to build a new well

follow-up

follow-up

supply of clean water for drinking and washing

fewer cases of some infectious and parasitic diseases

#### EDUCATIONAL OBJECTIVES

At the end of his training period, the student should be able to

- 1 Find the place where the villagers go to get water for drinking and for washing themselves,
- 2 Tell in what cases water from a pond or river can be good for drinking,
- 3 Recognize whether water from a spring or a well is good for drinking,
- 4 Explain to the village chief that diseases are caused by dirty water and tell him how the villagers can get clean water,
- 5 Explain to the village chief how his people can get clean water from a spring or a well,
- 6 Explain to the villagers what places in the river should be used for drawing drinking water, for bathing and for watering livestock

#### TEACHING METHOD

To reach all these educational objectives the following methods are suggested

- 1 Have a group discussion among the students (or their friends) on the sort of places village people generally get their drinking water from and where they go to wash themselves,  
Walk around the village and note these places,
- 2 Discuss the danger from drinking boiled water and from drinking unboiled water,
- 3 Show a drawing of a spring where the water is not good for drinking and a drawing of a spring where water is good for drinking,  
Show a drawing of a well where water is not good for drinking and a drawing of a well where water is good for drinking,  
Ask the students to point out the differences between the two drawings,  
(In the case of the spring and the well, see the drawings in the Manual)  
If possible, go into the village itself to look at the springs and wells,
- 4 Get each student to say whether in his village there exists a source of clean water for all the village people,
- 5 Act out a conversation between the village chief and yourself in which you explain what work is needed to protect a spring or a well,
- 6 Show (on the spot or in a drawing) the 3 different places in the river where people should
  - a draw water for drinking
  - b bathe
  - c water livestock

## HOW TO HAVE CLEAN WATER

---

The villagers have asked you how they can get clean water or your supervisor has asked you what you have done about this problem since his last visit.

### WHAT DO YOU DO?

Note where the people living in the village get the water they are using and decide what action to take.

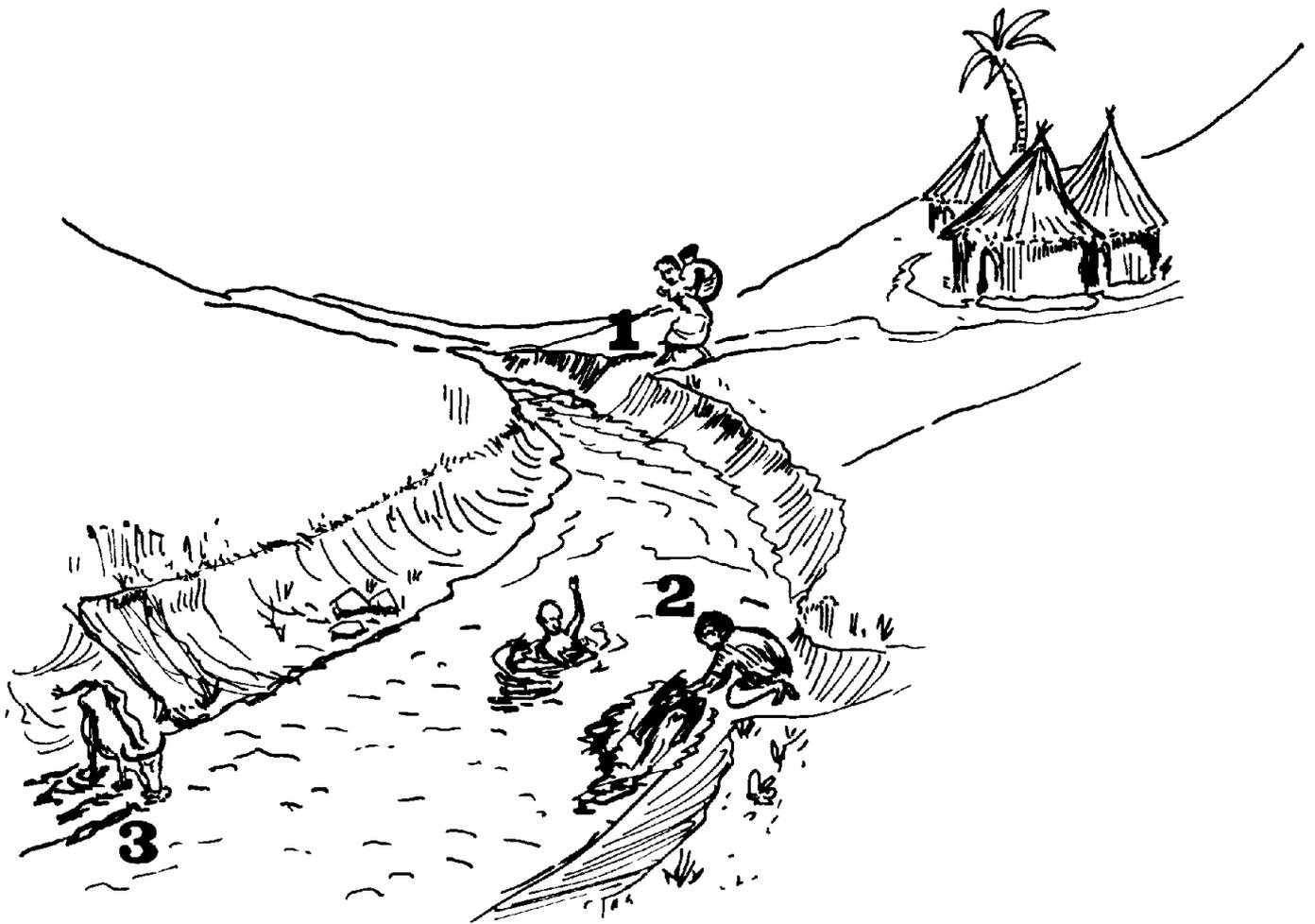
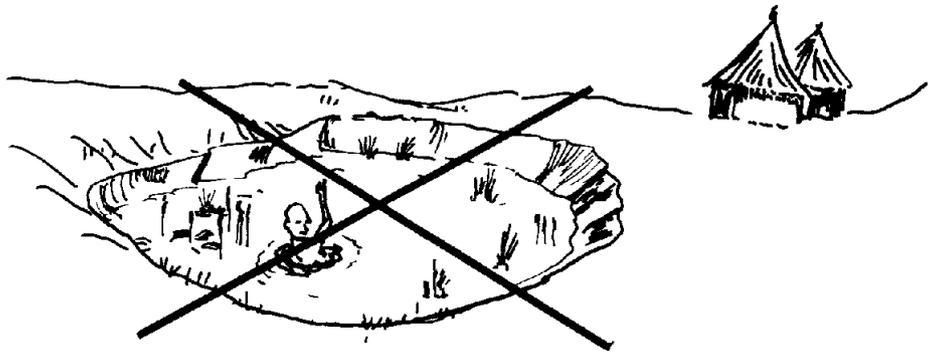
### WHAT KIND OF WATER IS BEING USED?

1. Water from a pond
2. Water from a river
3. Water from a spring
4. Water from a well

#### 1. WATER FROM A POND

##### 1.1. This is the only source of water

- 1.1.1. Get people to boil the water before using it for drinking
- 1.1.2. Advise people not to bathe in this water
- 1.1.3. See the village chief to find out if another source of water can be found (see 3 and 4)



1.2. There is another source of water (river, spring or well)

Forbid the people to use water from the pond if the other source of water is not too far away, and leave the pond for livestock.

2. WATER FROM A RIVER

2.1. This is the only source of water

- 2.1.1. Draw water from the river at a place before it reaches the village. See drawing, point No. 1. Get people to boil the water before drinking it.
- 2.1.2. Let people bathe in the river at a place after it has left the village and let livestock drink from a place even further downstream. See drawing, point Nos. 2 and 3.
- 2.1.3. Don't forbid bathing in the river unless your supervisor advises you to do so.

2.2. There is a spring or a well

See 3 or 4.

3. WATER FROM A SPRING

3.1. The spring is properly protected if

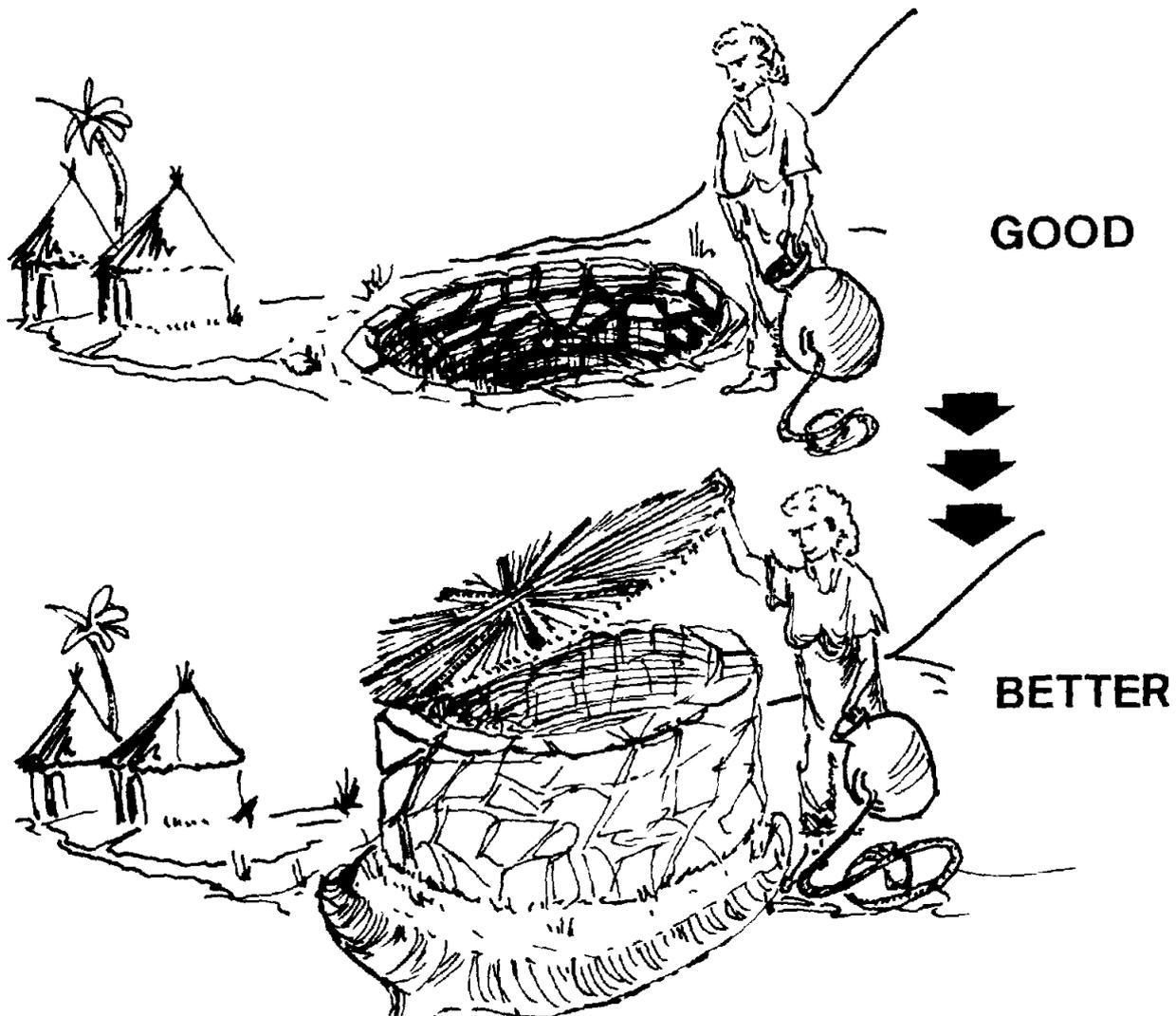
- 3.1.1. there is a fence all round it, about 20 metres away from the spring itself,
- 3.1.2. there is a channel around the spring to carry away rainwater,
- 3.1.3. there is a cemented stone wall round it, 50 centimetres from the spring itself,
- 3.1.4. there is a pipe coming out of this wall and the water is collected from the pipe.

3.2. If the spring is not properly protected or if no spring has been made into a water supply,

- 3.2.1. go and see the village chief and help the village to have a properly protected spring,
- 3.2.2. see your supervisor if you cannot manage to arrange a water supply from a spring or protect it properly.

3.3. If the villagers want to pipe water from a spring into the village

see your supervisor and also see PROBLEM 5.2.



4. WATER FROM A WELL

4.1. A well is properly protected if

- 4.1.1. it is at least 20 metres away from a latrine or a refuse heap,
- 4.1.2. it is at least 3 metres deep,
- 4.1.3. it is lined inside with stones bound with mortar,
- 4.1.4. it is surrounded by a wall 50 centimetres high,
- 4.1.5. there is a trench to carry away rainwater,
- 4.1.6. nobody throws rubbish into it or washes in it.

4.2. If the well is not protected

- 4.2.1. go and see the village chief about having the well protected,
- 4.2.2. see your supervisor about choosing a site for another well.

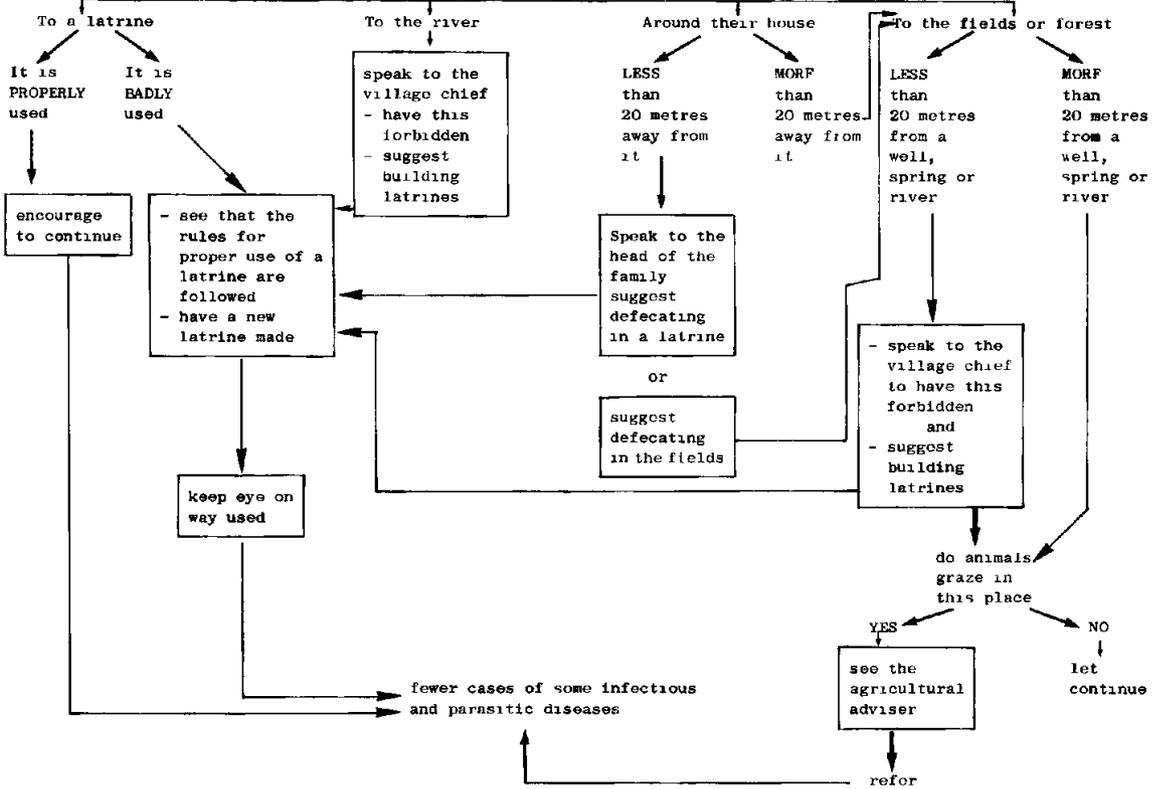
4.3. If the villagers want to improve their well (putting in a sweep or a pump),  
see your supervisor, and also see PROBLEM 5.2.

**HOW TO DEFECATE IN A  
CLEAN WAY**

OUTLINE OF THE PROBLEM

The villagers have asked you about having a good place for defecating or your supervisor has asked you what you have done about this problem since his last visit

Where do people go to defecate?



#### EDUCATIONAL OBJECTIVES

At the end of his training period, the student should be able to

- 1 Find out the places where the village people go to pass their stools,
- 2 Explain that it is dangerous to defecate just anywhere and that there is a better answer to the problem,
- 3 Give advice on how to build a latrine,
- 4 Decide whether or not a latrine is being properly used,
- 5 Get in touch with his supervisor and ask him to come and give advice to help the villagers

#### TEACHING METHOD

To reach all these educational objectives, the following methods are suggested

- 1 Have a group discussion among the students (or their friends) on the kind of places people from their villages generally go to pass stools,
- 2 On a drawing made for the purpose, in which people are seen defecating wherever they happen to be, point out each case that is dangerous and explain why (see drawing in the Manual)  
On the same drawing point out the places people ought to go to defecate,\*
- 3 Point out, on a drawing showing a properly built latrine, the various features it must have (depth, distance from houses or springs or wells, lid ),
- 4 Point out the signs that help you to decide whether or not a latrine is being properly used (either on an actual latrine or otherwise)  
Indicate how to correct dirty use of a latrine,
- 5 Have a discussion with friends on the need to have help and advice from your supervisor on ways to solve the problem of people who defecate just anywhere in the village

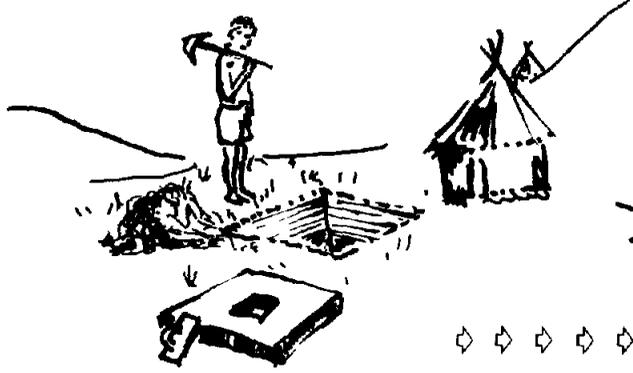
\* Play the part of villagers who do not follow the advice they are given promptly and give examples of careless behaviour

**GOOD**



**VERY GOOD**

**1**



**2**



HOW TO DEFECATE IN A  
CLEAN WAY

---

The villagers have asked you about having a good place for defecating or your superior has asked you what you have done to improve the situation since his last visit.

WHAT DO YOU DO?

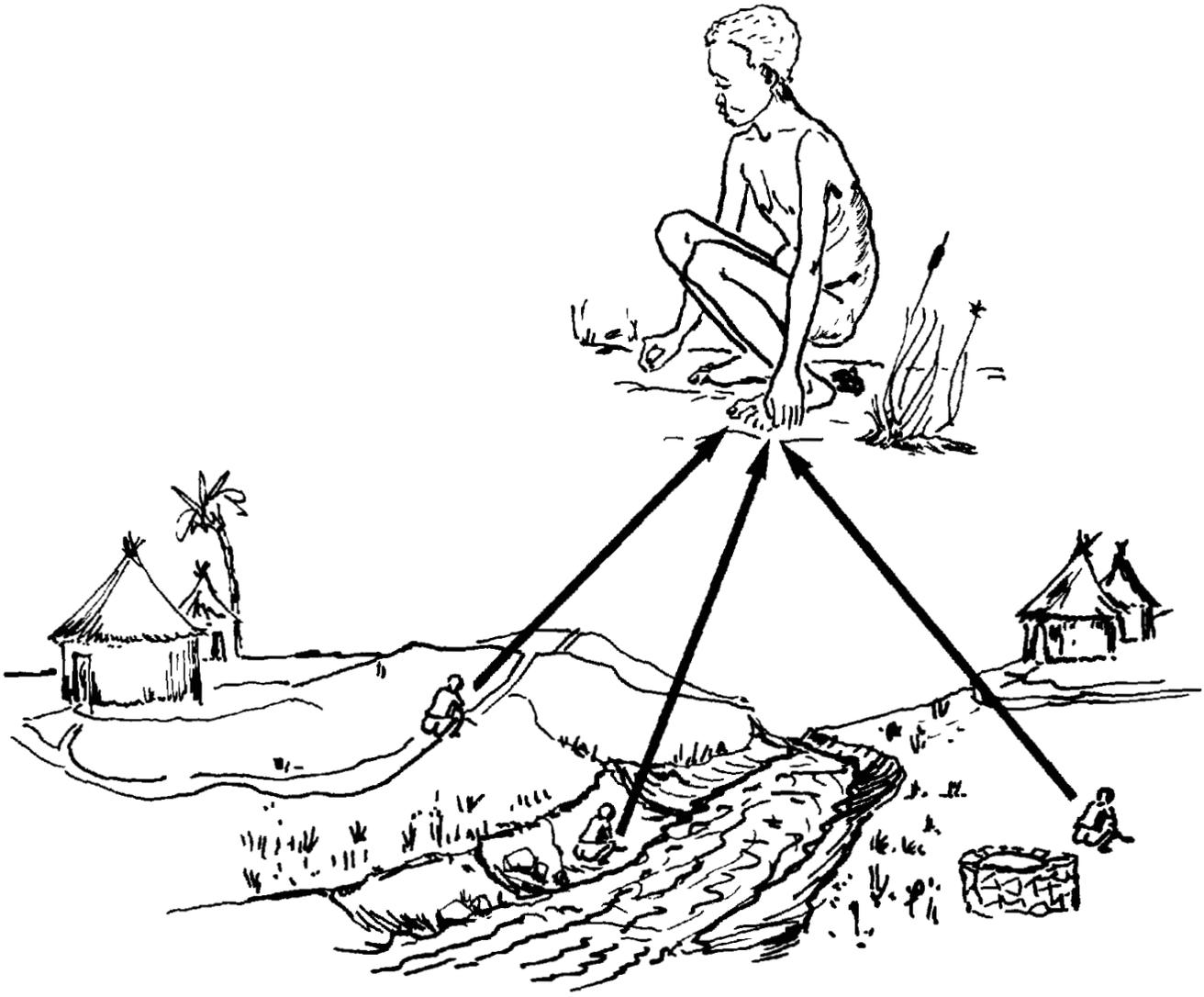
Note where the village people go to defecate and decide what action to take.

1. People use a latrine
2. People defecate around their houses
3. People defecate in the river
4. People defecate in the fields or the forest

1. PEOPLE USE A LATRINE

1.1. A latrine is being properly used if

- 1.1.1. it has been put up about 20 metres away from a house, a river, a well or a spring,
- 1.1.2. the hole is at least 1 metre deep,
- 1.1.3. the hole is covered by a slab (of wood or concrete) which has a hole in the middle,
- 1.1.4. the hole in the middle of the slab is covered with a lid,
- 1.1.5. the latrine has a roof over it and a wall made of branches around it.



**3 DANGERS**

1.2. If the latrine is not being properly used

- 1.2.1. give advice to the head of the family.
- 1.2.2. See whether any stools are lying on the slab. If so, have the slab cleaned with water.
- 1.2.3. Go and have a look from time to time to see if your advice is being followed.

2. PEOPLE DEFECATE AROUND THEIR HOUSES

- 2.1. There is a danger that illnesses may be caused by the stools when people defecate less than 20 metres away from their houses or on the paths leading to their houses.
  - 2.1.1. Advise the head of the family
    - either to have his family defecate in the fields (see 4),
    - or to have them defecate in a latrine (see 1).
  - 2.1.2. See the village chief and ask him to speak to the villagers. If he wants to have latrines built, see your supervisor and later on make sure that the latrines are being properly used (see 1.1).
- 2.2. There is no danger if people defecate more than 20 metres away from their houses. See the advice to be given when people defecate in the fields (see 4).

3. PEOPLE DEFECATE IN THE RIVER

Whenever people defecate in the river or less than 20 metres away from the river or on a path leading to the river it is dangerous.

In this case, go and see the village chief and

- 3.1. ask him to speak to the villagers
- 3.2. suggest to him that latrines should be built (see 1.1.).

4. PEOPLE DEFECATE IN THE FIELDS OR IN THE FOREST

- 4.1. There is no danger of disease when people defecate in the fields or in the forest as long as they do so
  - 4.1.1. at least 20 metres away from a house, a spring, a river or a well,
  - 4.1.2. away enough from a path or track.

4.2. If animals generally graze in the field in which people go to defecate, see your supervisor.

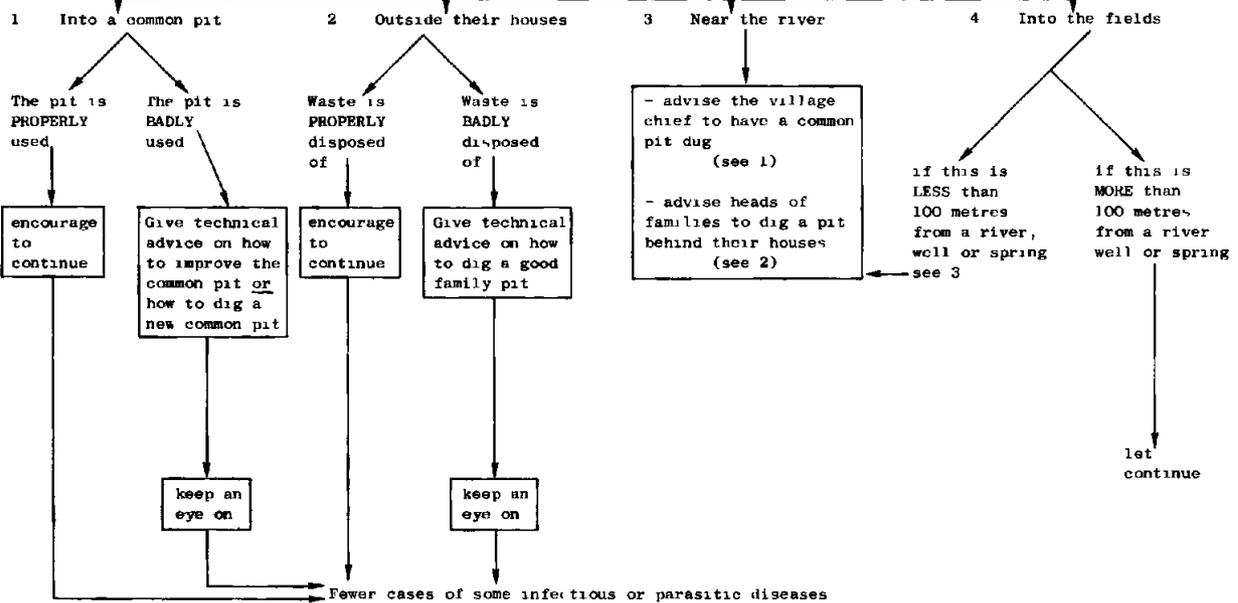
In any case, advise people to defecate into a shallow trench and to cover their stools with a little earth.

# **HOW TO GET RID OF WASTE**

OUTLINE OF THE PROBLEM

The villagers have asked you about having a good place in which to throw their waste or your supervisor has asked you what you have done about this problem since his last visit

Where do people throw their waste



#### EDUCATIONAL OBJECTIVES

At the end of his training period, the student should be able to

- 1 Find out the places where the village people generally go to throw their waste
- 2 Decide whether the village pit is being properly used or not
- 3 Explain to the village chief how the village pit should be used
- 4 Decide whether or not waste is being properly disposed of outside houses
- 5 Explain to the head of a family how to dispose of waste properly outside a house
- 6 Decide whether or not it is dangerous to dispose of waste in the fields (or in the forest)
- 7 Get in touch with his supervisor and ask him to come and help the villagers with his advice

#### TEACHING METHOD

To reach all of these educational objectives, the following methods are suggested

- 1 Have a group discussion among the students or their friends on the places people in their villages generally throw their waste, go for a walk around the village and note these places.
- 2 On a drawing made for the purpose and showing a pit that is being properly used and a pit that is being badly used, point out the differences between the 2 pits
- 3 Act out a conversation between the village chief and yourself in which you explain the need for a common pit and how to dig one
- 4 Point out, on a drawing made for the purpose and showing waste properly disposed of outside a house and waste badly disposed of outside a house what the difference is between the two situations,
- 5 Act out a conversation between the head of a family and yourself in which you explain the need to dispose of waste properly outside a house and how to do so
- 6 Show either in the village itself or on a drawing cases where waste is thrown too near a river, a spring or a well
- 7 Have a discussion with friends on the need for getting help and advice from a supervisor in order to solve the problem of waste in the village



## HOW TO GET RID OF WASTE

---

The villagers have asked you about having a good place in which to throw their waste OR your immediate superior asks you what you have done since his last visit to ensure that the village people have a good place in which to throw their waste.

### WHAT DO YOU DO?

Note the place people go to throw their waste and  
Decide what action to take.

1. People throw their waste into a common pit
2. People throw their waste outside their houses
3. People throw their waste near the river
4. People throw their waste into the fields

#### 1. PEOPLE THROW THEIR WASTE INTO A COMMON PIT

##### 1.1. The pit is being properly used when

- 1.1.1. it is outside the village and about 100 metres away from any house,
- 1.1.2. it is down in a hollow and not up on a hill,
- 1.1.3. it is at least 100 metres away from a river, a well or a spring,
- 1.1.4. waste is piled into a hole and not scattered about,
- 1.1.5. waste is covered with a layer of earth 2 to 3 centimetres deep,
- 1.1.6. the pit is surrounded by a fence made of branches.

##### 1.2. If the pit is not being properly used



- 2.2.1. explain to the village chief how to have a good common pit (see 1.1.),
- 2.2.2. visit it from time to time to see whether your advice is being properly followed.

## 2. PEOPLE THROW THEIR WASTE OUTSIDE THEIR HOUSES

### 2.1. Waste is being properly disposed of when

- 2.1.1. it is piled up into a hole and not scattered about,
- 2.1.2. it is put at least 20 metres away from the house, a river, a spring or a well,
- 2.1.3. it is covered with a layer of earth to prevent animals and flies from eating it.

### 2.2. If waste is not being properly disposed of

- 2.2.1. explain to the head of the family how to dispose of waste properly outside his house (see drawing),
- 2.2.2. advise the village chief to have a common pit dug,
- 2.2.3. ask your supervisor to come and help in the digging of the pit,
- 2.2.4. see whether the new pit is being properly used (see 1.1.).

## 3. PEOPLE THROW THEIR WASTE NEAR THE RIVER

- 3.1. Go and see the village chief (2.2.2.).
- 3.2. Go and see the head of the family (2.2.1.).

## 4. PEOPLE THROW THEIR WASTE INTO THE FIELDS

- 4.1. This is not dangerous as long as no pile of waste is less than 100 metres away from any house, river, well or spring.
- 4.2. Otherwise, see 3.1. and 3.2.

HOW TO GET RID OF WASTE  
(second version)

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EITHER

1. Waste is burnt
2. Waste is buried

1. WASTE IS BURNT

- 1.1. Make a small heap 30 metres away from the house.
- 1.2. Burn the heap twice a week.

2. WASTE IS BURIED

Dig a hole in the ground

2.1. Either, water appears when you have dug down 1 metre

In this case you cannot bury waste but must burn it (see 1)

2.2. Or, no water appears when you have dug down 1 metre

- 2.2.1. Dig a pit 5 paces long, one pace wide, and 1 metre deep.
- 2.2.2. Throw any waste into the pit daily and cover it with earth, sand or leaves.
- 2.2.3. Stir up the contents of the pit once a week.
- 2.2.4. Keep adding waste to the pit until the heap reaches the level of the ground.
- 2.2.5. Leave this pit alone for 2 months and dig another pit.
- 2.2.6. After 2 months, dig out the first pit again and use the earth to spread over land on which you are growing crops.  
It makes very good fertilizer.

TAKE CARE! Tell the people living in your village

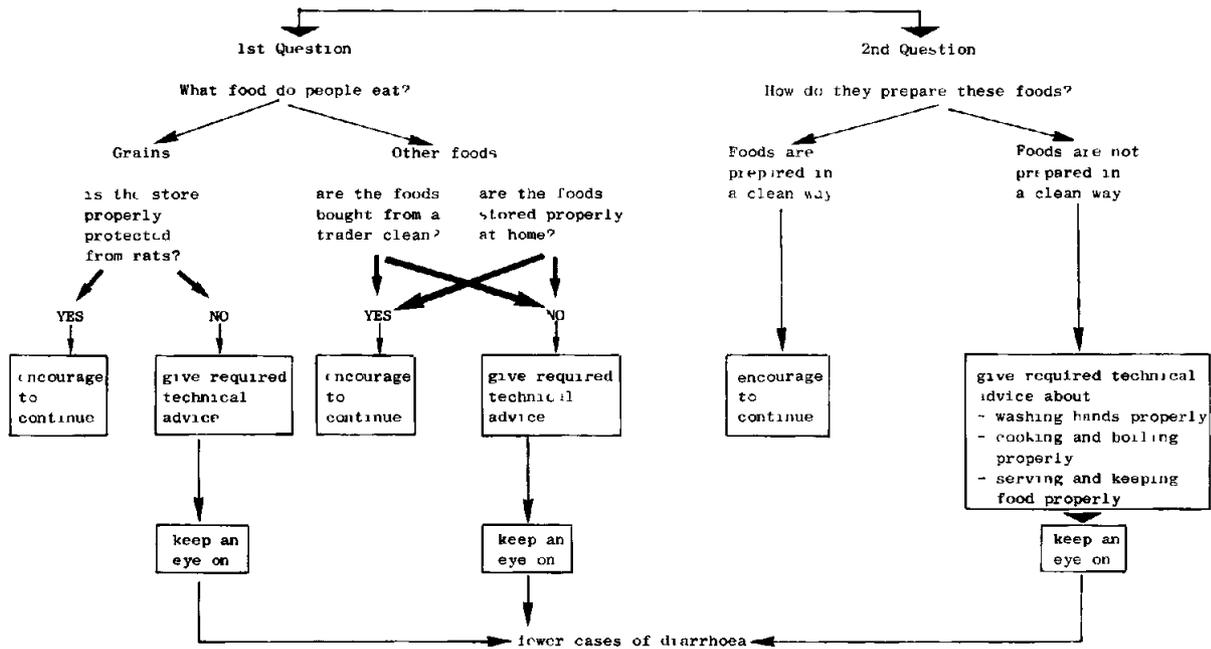
1. never to leave waste lying about on the ground because this attracts flies, wasps, rats, mice and snakes,
2. never to throw waste into a river because it will make the water dirty and smell bad.

Show them how you burn or bury your waste.

# **HOW TO PROTECT FOOD**

OUTLINE OF THE PROBLEM

There are at least 5 new patients with diarrhoea in any one week or your supervisor asks you what you have done since his last visit about protecting food kept in the village



#### EDUCATIONAL OBJECTIVES

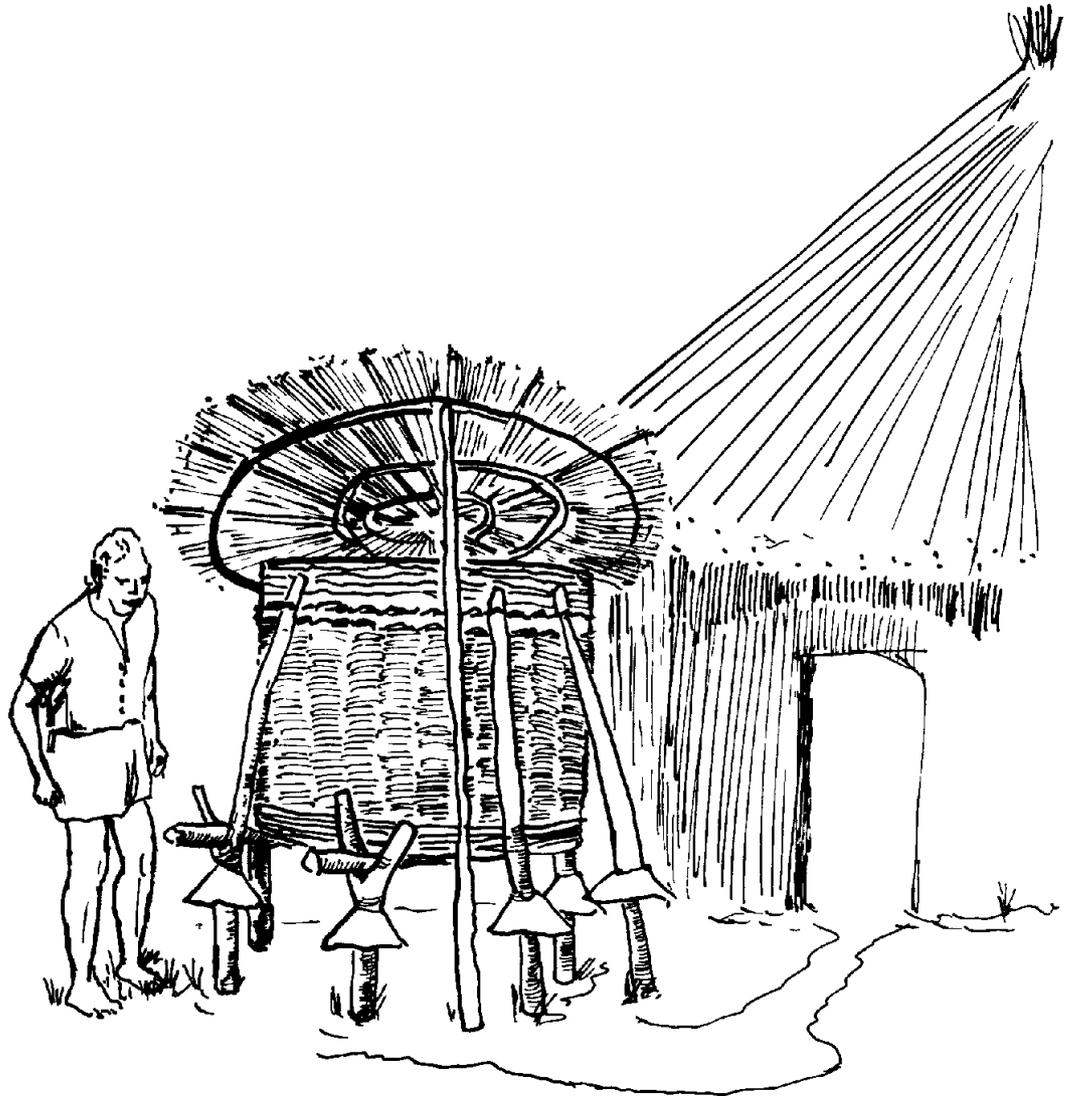
At the end of his training period, the student should be able to

- 1 Find out what kinds of food the village people generally eat
- 2 Decide whether or not the grain store is properly protected from rats
- 3 Advise traders to sell clean food,
- 4 Advise the housewife to store food properly at home
- 5 Show how hands should be washed
- 6 Show how to cook or boil food
- 7 Show how to put food on a clean plate

#### TEACHING METHOD

To reach all these educational objectives the following methods are suggested

- 1 Have a group discussion among the students on what the village people and they themselves generally eat
- 2 Point out on a drawing (see drawing in the Manual) why the grain store must be properly protected
- 3 Discuss or have a discussion on the reasons why food traders (butchers, market gardeners, grocers ) in the village do not sell clean food
- 4 -7 Show, either in a house or on a drawing, two containers (plates or pots) one of which does not protect the food in it and the other which does Describe the difference between the two



## HOW TO PROTECT FOOD

---

There are at least 5 new patients with diarrhoea in any one week or your supervisor asks you what you have done since his last visit about protecting food kept in the village.

### WHAT DO YOU DO?

Note what foods people eat and how they prepare them, and decide what action to take.

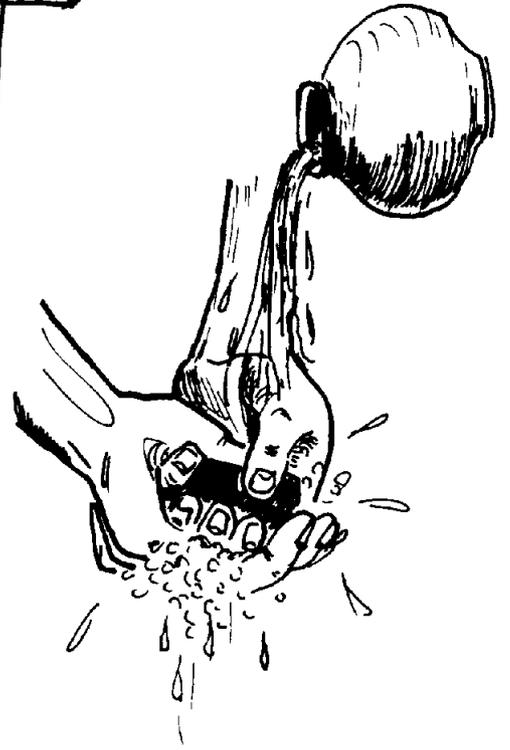
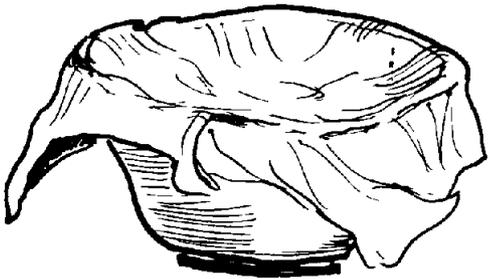
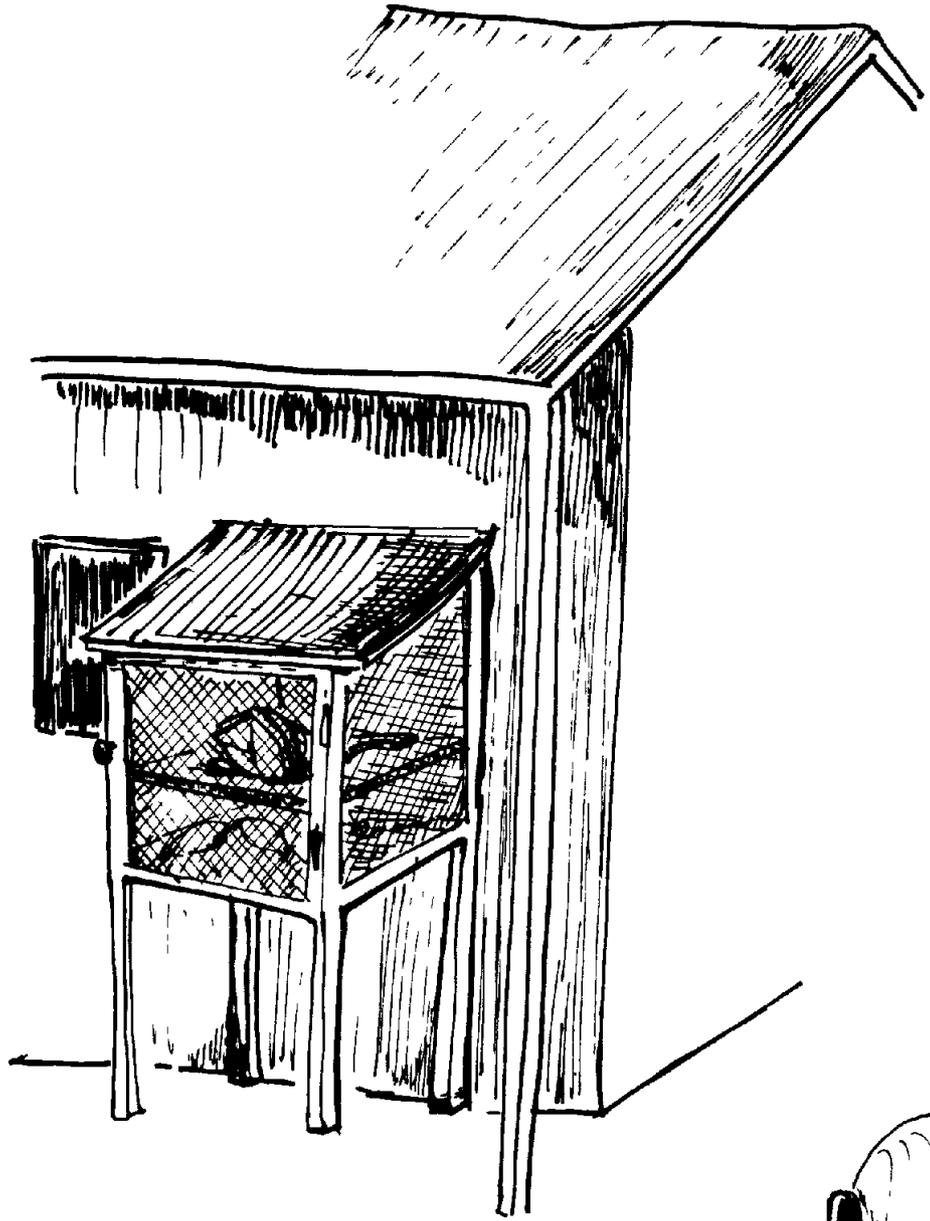
1. What foods do people eat?
  - 1.1. grains
  - 1.2. other foods
2. How do they prepare their food?

### 1. WHAT FOODS DO PEOPLE EAT?

#### 1.1. Grains

##### 1.1.1. The grain store is properly protected from rats if

1. the grain is stored in a place that is closed in on all sides,
2. the store is raised at least 30 centimetres above the ground (see drawing),
3. no grain or other food is left lying about near the store or in the house,
4. the store has a firmly fitting lid (see drawing).



- 1.1.2. If the grain store is not properly protected from rats
1. give advice to the head of the family
  2. if rats are still there one month later (rats or signs of rats have been seen), see your supervisor.

1.2. Other foods (meat, bread, milk, eggs...)

1.2.1. Food bought from a trader is clean if

1. it is sheltered from the sun
2. it is covered with a cloth or protected from flies
3. the trader has clean hands and a clean house.

Otherwise, give advice to the trader and visit him from time to time to see if he is following your advice.

1.2.2. Food is being stored properly at home if

1. it is in a container covered with a cloth
2. it has been put high above the ground in a cool part of the house.

Otherwise, give advice to the housewife.

2. HOW DO PEOPLE PREPARE THEIR FOOD?

In order to prepare food properly

- 2.1. their hands must be washed before the food is touched,
- 2.2. food must be cooked or boiled,
- 2.3. food must be served and stored in a clean way once it has been prepared.

2.1. To wash your hands properly you must rub your hands with soap and clean water.

- 2.1.1. tell women who are preparing food at home to do this.
- 2.1.2. tell people working in a restaurant to do this.
- 2.1.3. go and see the village chief and get him to ask the village people to wash their hands, particularly after they have been to the toilet and before touching food.



**BOILING = HOT FIRE..  $\frac{1}{4}$  HOUR**

2.2. To cook or boil food

2.2.1. food must be put in a clean container

2.2.2. food must be left on a hot fire for 1/4 hour, particularly  
in the case of pond water, river water, milk and meat.

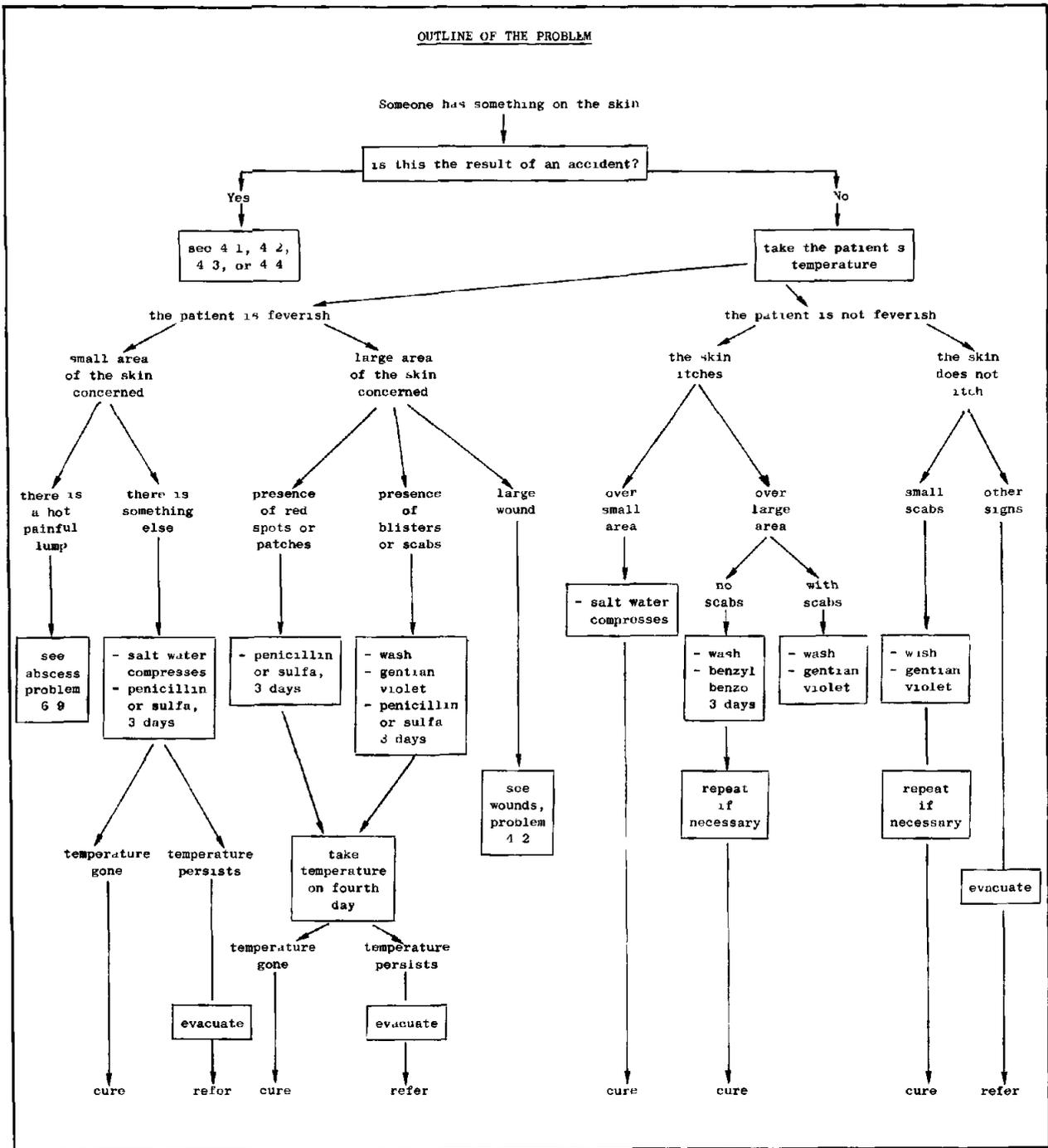
2.3. To serve and keep food in a clean way once it has been prepared

2.3.1. food must be put in a clean container (that is, one that has  
been rinsed out with water)

2.3.2. food must be stored properly in the house (see 1.2.2.)

**THERE IS SOMETHING ON  
THE SKIN**

OUTLINE OF THE PROBLEM



#### EDUCATIONAL OBJECTIVES

At the end of his training period the student should be able to

- 1 Find out whether an accident has been the cause of the skin problem,
- 2 Decide whether the skin condition covers a small or large area
- 3 Recognize when there is a lump (or a swelling) underneath the skin
- 4 Tell when the skin is covered with red spots or red patches, or blisters or scabs
- 5 Treat a patient who is feverish and has red spots covering a large area of skin,
- 6 Treat a patient who is feverish and has blisters and scabs over a large area of skin
- 7 Tell whether a patient has been scratching his skin, either by asking the patient or by looking at his skin,
- 8 Treat a patient who scratches his skin, when a large area of the skin is not covered by scabs
- 9 Treat a patient who scratches his skin, when a large area of the skin is covered by scabs
- 10 Treat a patient who scratches a small area of his skin
- 11 Treat a patient who is not scratching and whose skin is covered with small scabs that have fluid coming out from underneath them
- 12 Decide when a patient with a skin problem should be evacuated

#### TEACHING METHOD

To reach all these educational objectives the following methods are suggested

- 1 Have a description given of what the skin looks like after a heavy blow,
- 2 Show the student's skin which is diseased over a small and over a large area using a hand to decide what area of skin is concerned
- 3 Make the student feel what a swelling under the skin is like and compare it with the skin of the limb on the other side say what the difference is between the two
- 4 Recognize on drawings a skin covered with red spots, with blisters or with scabs and then have the same things recognized on a patient
- 5 Have the student say what medicine and how much of this medicine should be given to an adult and to a child
- 6 Show on the arm of a patient (or of a friend) how to treat diseased skin that is covered with blisters or scabs
- 7 Ask a student to scratch the skin of his forearm with his nails and make the student discuss the marks thus left on the skin
- 8-9 Show on the skin of a patient (or of a friend) how to treat skin which itches over a wide area,
- 10 Show either on a patient or on a friend how to treat skin which itches over a small area
- 11 Show, either on a patient or on a friend, how to treat skin which does not itch
- 12 Describe what cases of skin disease must be sent to the hospital or health centre

THERE IS SOMETHING ON THE SKIN

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EITHER

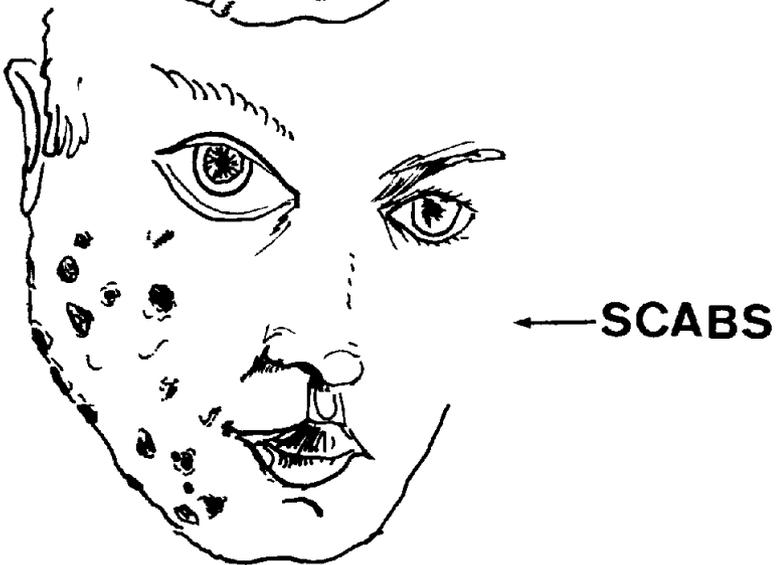
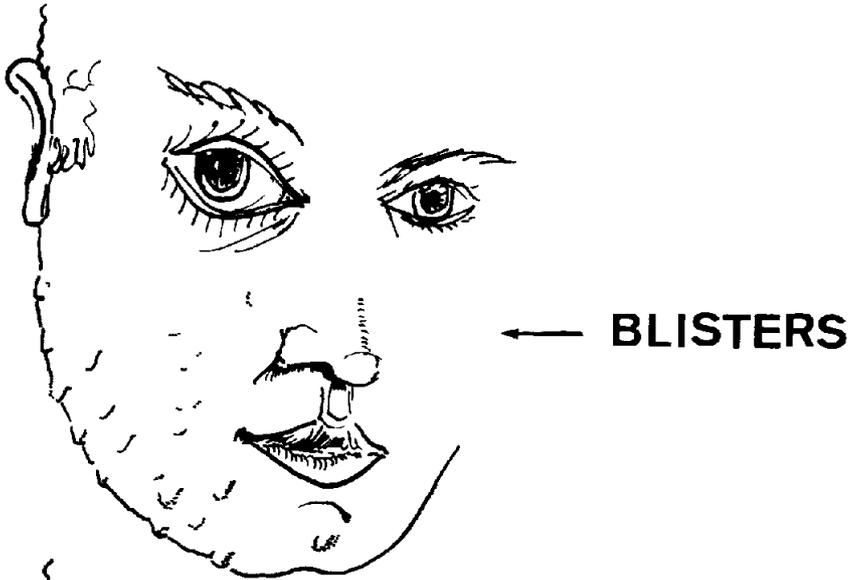
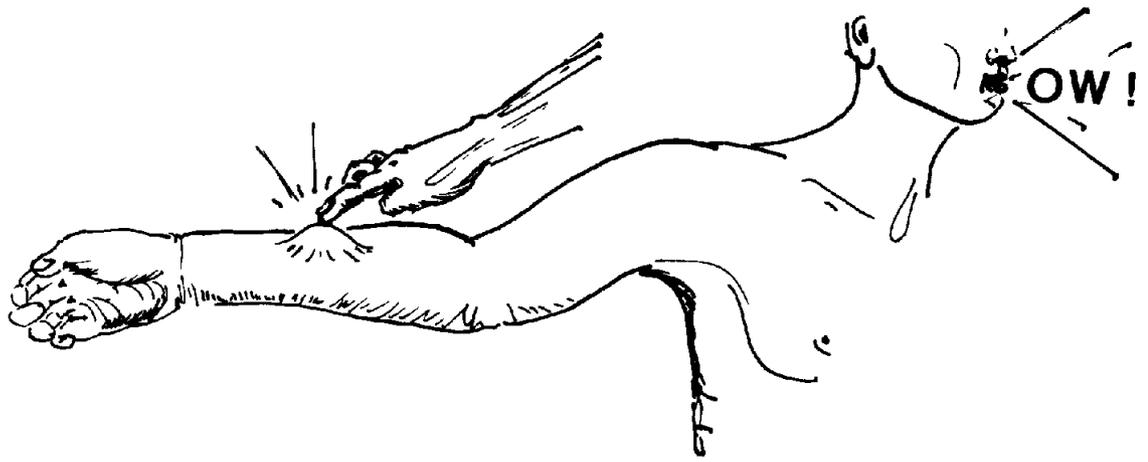
1. It is the result of an accident
2. It is not the result of an accident
  - 2.1. the patient is feverish
    - 2.1.1. a small area of the skin is concerned
    - 2.1.2. a large area of the skin is concerned
  - 2.2. the patient is not feverish
    - 2.2.1. his skin itches
    - 2.2.2. his skin does not itch

1. IT IS THE RESULT OF AN ACCIDENT

- See PROBLEMS 4.1. "Someone has been burnt".
- 4.2. "Torn Skin".
  - 4.3. "Broken Bone".

2. IT IS NOT THE RESULT OF AN ACCIDENT

Take the patient's temperature (see Techniques).  
Either, the patient is feverish,  
or, the patient is not feverish.



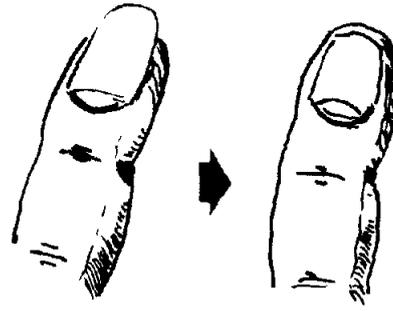
2.1. The patient is feverish

2.1.1. A small area of the skin is concerned (less than the area of a hand)

1. If there is a hot lump which hurts when it is pressed with a finger, see PROBLEM 6.9. "One or more lumps under the skin".
2. If something else is the matter, put on salt water compresses 3 times a day. Use 1 tablespoon of salt to 1 litre of water, and give SULFADIAZINE tablets for 3 days  
child under 3 years 1 tablet morning, noon and evening,  
child over 3 years 2 tablets morning and evening,  
adult 2 tablets morning, noon and evening.

2.1.1. a large area of the skin is concerned (more than the area of a hand)

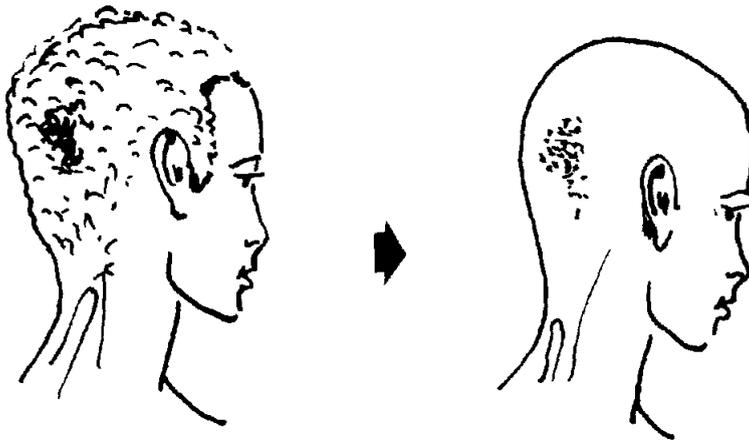
1. There are red spots or patches on the skin
  - give a daily injection of PENICILLIN for 3 days  
child 500 000 units, adult 1 000 000 units
  - If you have no PENICILLIN, give SULFADIAZINE tablets  
child under 3 years 1 tablet morning, noon and evening,  
child over 3 years 2 tablets morning and evening,  
adult 2 tablets morning, noon and evening.
  - And always get the patient to drink plenty of water with Sulfadiazine.
  - see the patient again on the 4th day
    - if he is no longer feverish he is cured
    - if he is still feverish send him to the hospital or health centre.
2. There are blisters or scabs on the skin (see drawing).
  - wash the skin with soap and water
  - then paint the skin with GENTIAN VIOLET
  - give Penicillin or Sulfadiazine as described in 2.1.2.1.
  - see the patient again on the 4th day
    - he is still feverish send him to the hospital or health centre.
    - he is no longer feverish he is cured.
3. There is a large wound. See PROBLEM 4.2. "Torn Skin".



**HE IS SCRATCHING ... CUT HIS NAILS**



**TREAT THE FAMILY**



2.2. The patient is not feverish

2.2.1. His skin itches

1. A small area of the skin is concerned (less than the area of a hand). Put on salt water compresses 3 times daily.  
Use one tablespoon of salt to 1 litre of water. Don't wipe, and leave the skin uncovered. Continue the treatment until the itching has stopped.
2. A large area of the skin is concerned (more than the area of a hand).
  1. There are no scabs, but the skin has been damaged by the patient's nails (see drawing)
    - wash with soap and water and cut the patient's nails
    - let dry, then put on BENZYL BENZOATE with the help of a clean cloth,
    - repeat the treatment with Benzyl Benzoate on the 2nd and 3rd days,
    - wash the patient's clothes in hot water,
    - ask if any other members of the family are scratching and if so treat them.
  2. There are scabs (see drawing on previous page)
    - wash with soap and water and gently try to remove the scabs,
    - let dry and then put on GENTIAN VIOLET,
    - repeat the treatment on the 3rd and 4th days,
    - when the scabs have completely gone, treat as in the case when there are no scabs (1).

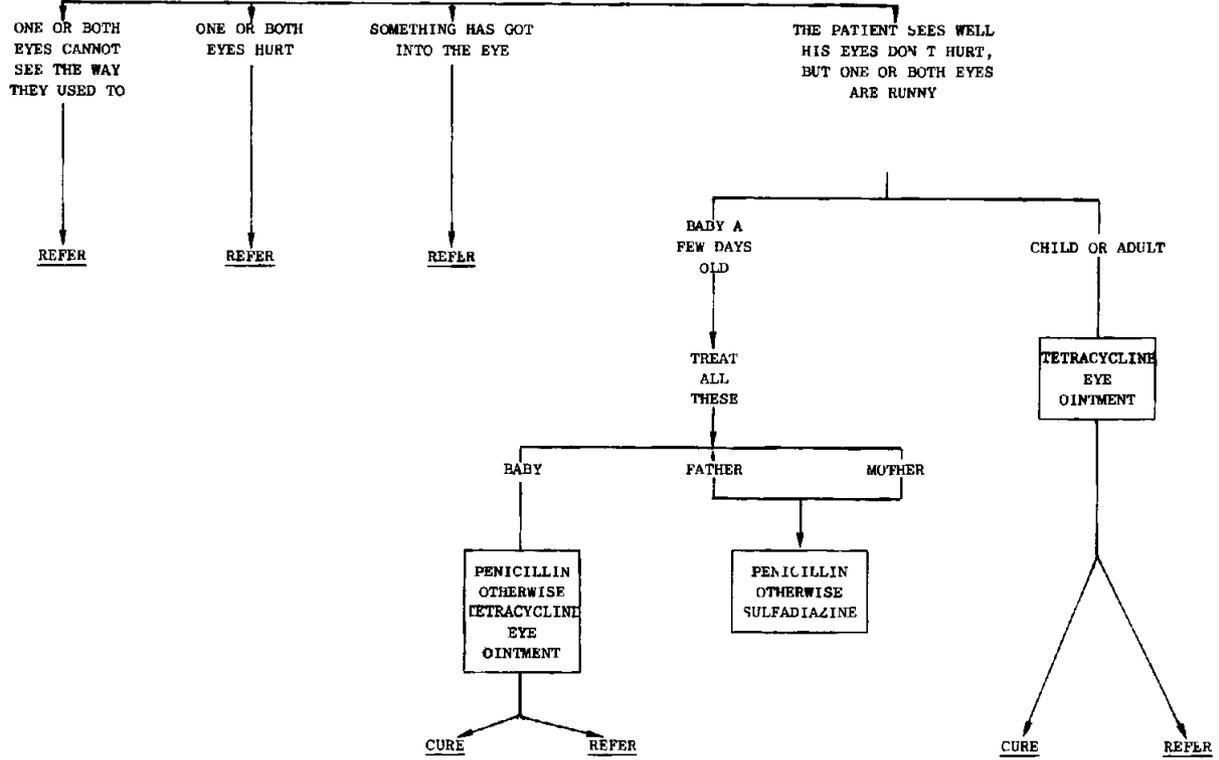
2.2.2. His skin does not itch

1. The skin is covered with small scabs and a yellow fluid comes out from underneath the scabs when they are pressed on.
  - wash the scabs with soap and water,
  - then put on GENTIAN VIOLET,
  - repeat this treatment daily until there are no scabs left.Take care! if the scabs are on the head, shave away the hair first before washing and putting on Gentian Violet (see drawing).
2. If there is anything else wrong with the skin, send the patient to the hospital or health centre.

**SOMEONE COMES ABOUT  
HIS EYES**

OUTLINE OF THE PROBLEM

SOMEONE COMES ABOUT HIS EYES



EDUCATIONAL OBJECTIVES

At the end of his training period, the student should be able to

- 1 Treat a baby a few days old who has runny eyes and treat his father and mother at the same time,
- 2 Treat a child or an adult who has one or both eyes runny
- 3 Send to the hospital or health centre any patient who
  - can no longer see out of one or both eyes
  - has pain in one or both eyes
  - who has got something in his eye
  - who has one or both eyes which go on running in spite of treatment

### 3 CASES TO BE EVACUATED



I SEE WELL



I SEE BADLY

2



HIS EYE HURTS

3



A STONE HAS HIT THE EYE

SOMEONE COMES ABOUT  
HIS EYES

---

EITHER

1. One or both eyes cannot see the way they used to
2. One or both eyes hurt
3. Something has got into an eye
4. One or both eyes are runny, but the patient sees well and his eyes don't hurt.

1. ONE OR BOTH EYES CANNOT SEE THE WAY THEY USED TO

This could be serious.

Send the patient to the hospital or health centre.

2. ONE OR BOTH EYES HURT

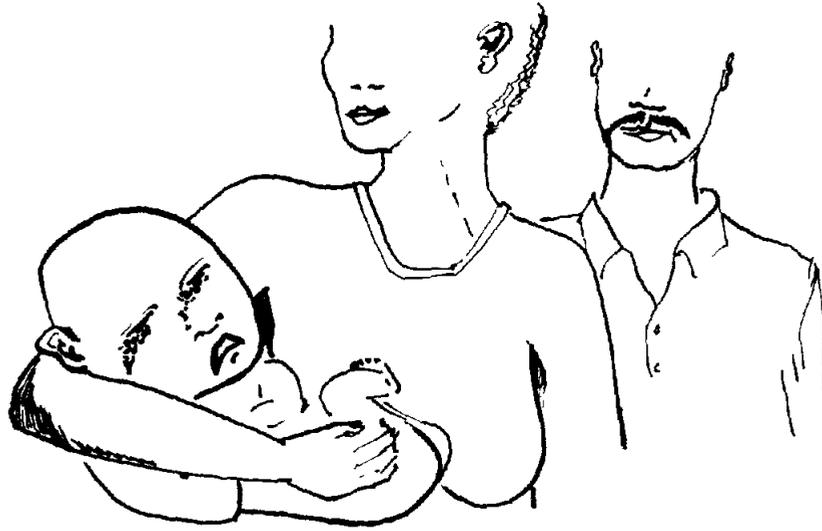
This could be serious.

Send the patient to the hospital or health centre.

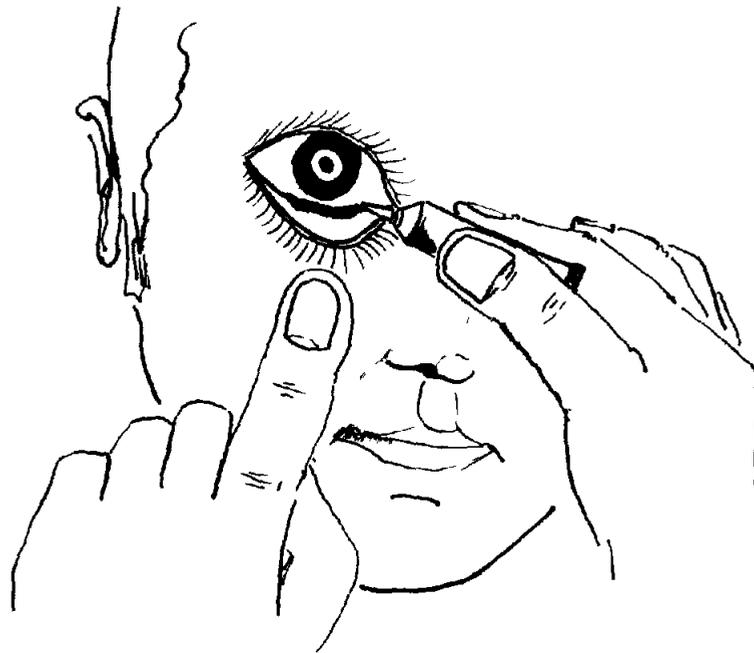
3. SOMETHING HAS GOT INTO AN EYE

Such as a piece of wood, iron ...

Send the patient to the hospital or health centre.



**PUS RUNS FROM BABY'S EYES  
HE IS SICK....MOTHER AND FATHER TOO**



**OINTMENT IN THE EYE**

4. ONE OR BOTH EYES ARE RUNNY, BUT THE PATIENT SEES WELL AND HIS EYES DON'T HURT

Either, the patient is a baby a few days old  
or, the patient is a child or an adult.

4.1. The patient is a baby a few days old

A large amount of pus is running from both eyes

Take care! This is a disease which the baby caught as he was being born because his father and mother were sick. Both the baby and his parents must therefore be treated!

For the baby, give an injection of 250 000 units of PENICILLIN in the buttocks each day for 2 days (see Techniques)

If you have no Penicillin, ask the parent to put tetracycline eye ointment on the baby's eyes three times daily for 5 days.

If you have no eye ointment, send the baby to the hospital or health centre at once.

For the father and mother - Give each of them a single injection of 3 000 000 units of PENICILLIN in the buttocks

If you have no Penicillin, give each of them 2 tablets of SULFADIAZINE 4 times daily for 5 days and tell them to drink plenty of water.

If you have no Sulfadiazine, send both of them to the hospital or health centre.

See the baby and his parents again when they have finished the course of treatment

Either, everything is all right they are cured

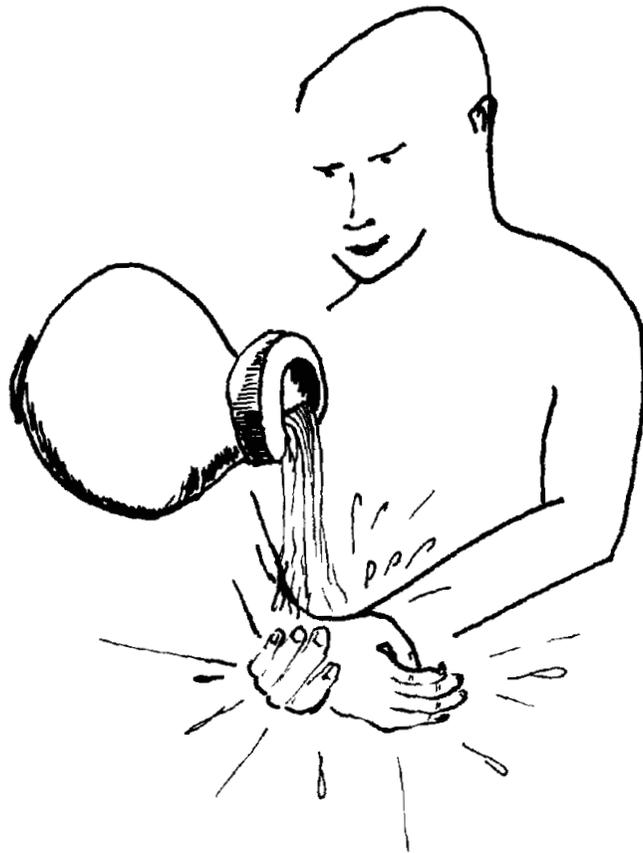
Or, there is no improvement then send them to the hospital or health centre.

4.2. The patient is a child or an adult

A fluid like water or like milk is running from one or both eyes.



**ONE EYE IS RUNNING**



**HE WASHES HIS HANDS**

Tell the patient to put tetracycline eye ointment in both eyes, morning  
and evening, for 5 days

tell him to wash his hands well with soap and water several times a day.

See the patient again on the sixth day

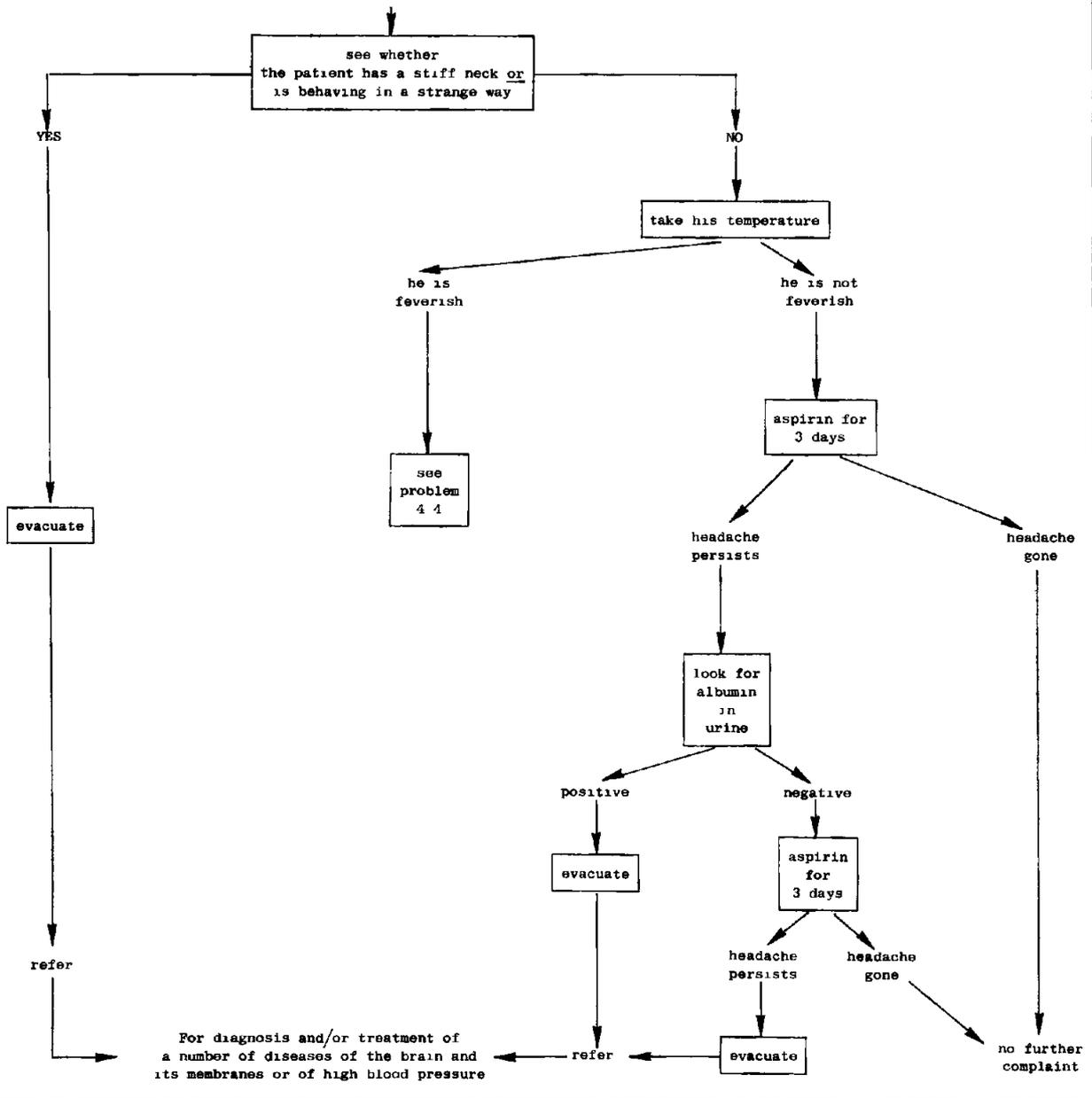
the eye or eyes are no longer running the patient is cured

the eye or eyes are still running send the patient to the hospital  
or health centre.

**SOMEONE HAS A HEADACHE**

OUTLINE OF THE PROBLEM

Someone has a headache



#### EDUCATIONAL OBJECTIVES

At the end of his training period the student should be able to;

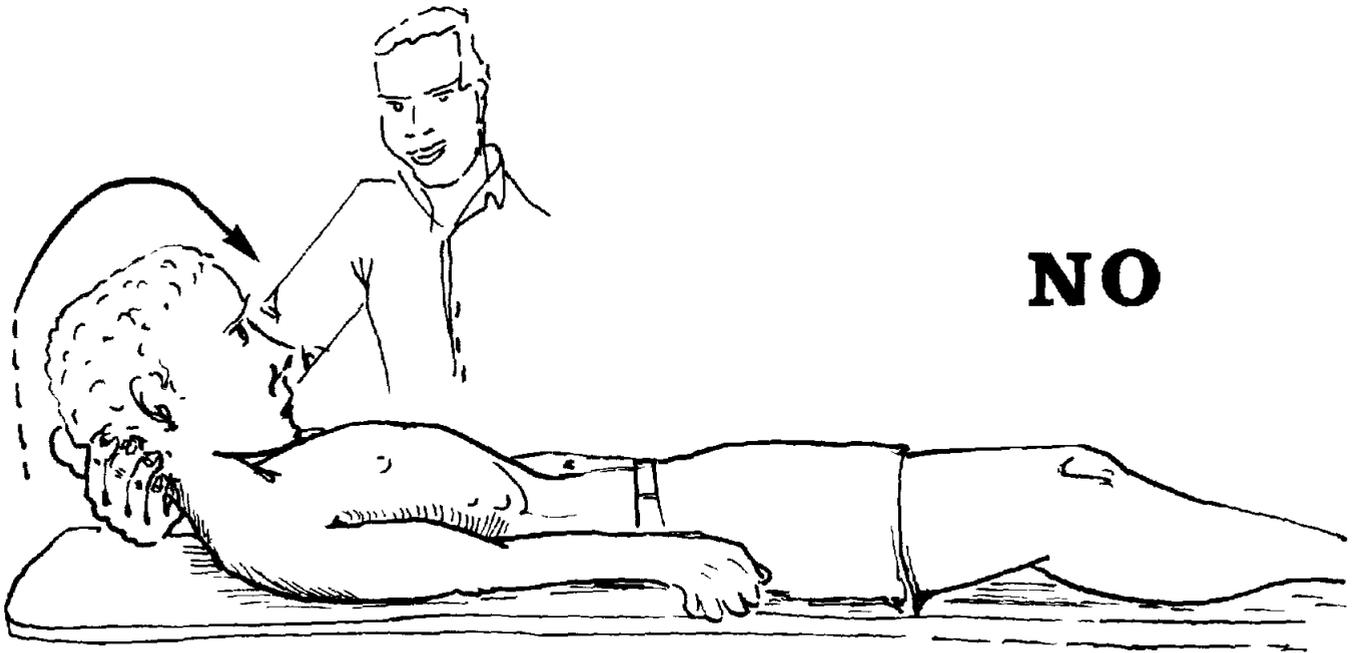
- 1 find out whether or not the patient had an accident a few days before,
- 2 decide whether or not the patient is feverish
- 3 decide whether or not the patient has a stiff neck
- 4 decide whether or not the patient is behaving in a strange way
- 5 decide when a patient with a headache must be sent to the hospital or health centre,
- 6 decide whether or not the patient's urine changes the colour of a special piece of paper

#### TEACHING METHOD

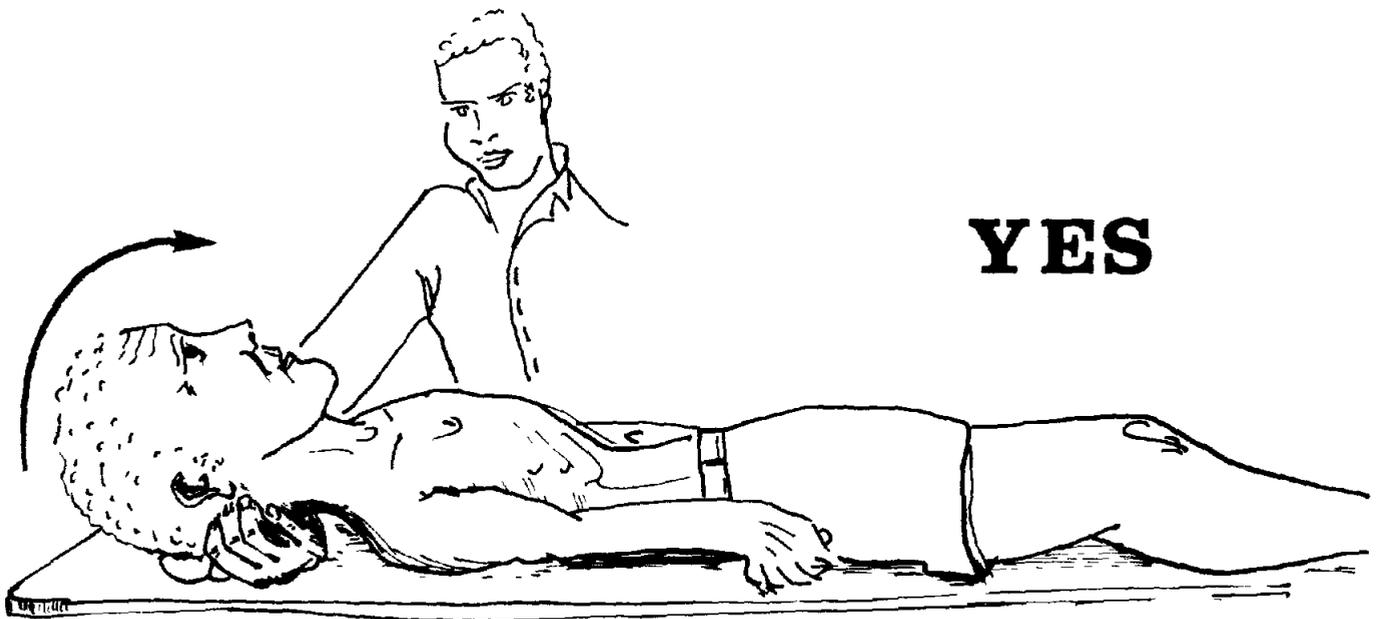
To reach all of these educational objectives the following methods are suggested

- 1 say how a headache can arise after a blow
- 2 look at a thermometer which has been put in the armpit of a patient or a friend for 5 minutes and decide whether the temperature is normal or not,
- 3 take the head of a friend who is lying down and move it in such a way that his chin touches his chest
- 4 show a group of students what a patient who is behaving in a strange way will be like
- 5 describe what headache cases should be sent to the hospital or health centre,
- 6 dip a piece of special paper into a jar full of urine and show a piece of paper which has changed colour and a piece that has not changed colour

STIFF NECK ?



**NO**



**YES**

SOMEONE HAS A HEADACHE

---

EITHER

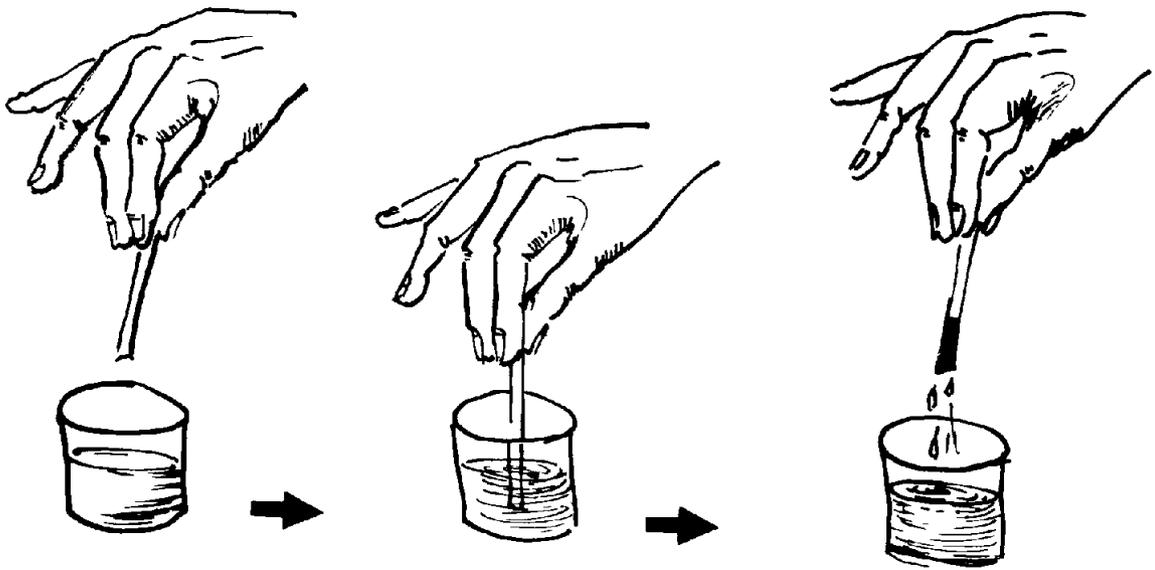
1. The patient has a stiff neck or is behaving in a strange way
2. The patient does not have a stiff neck and his behaviour is normal
  - 2.1. he is feverish
  - 2.2. he is not feverish.

1. THE PATIENT HAS A STIFF NECK OR IS BEHAVING IN A STRANGE WAY

A patient has a stiff neck if, when he is standing up or lying down with his legs stretched out, he cannot touch his chest with his chin unaided (see drawing) or if it is difficult for someone else to make the patient's head make this movement (see drawing).

A patient is behaving in a strange way when he appears dazed and does not know where he is any more, or when he does not answer questions put to him or when he tells stories that are not true or when he talks and walks like someone who has drunk too much alcohol.

This is serious send the patient to the hospital or health centre.



2. THE PATIENT DOES NOT HAVE A STIFF NECK AND HIS BEHAVIOUR IS NORMAL

Take his temperature (see Techniques)

2.1. He is feverish

See PROBLEM 1.4. "Someone is feverish".

2.2. He is not feverish

Give him ASPIRIN tablets for 3 days

child 1/2 tablet morning, noon and evening

adult 1 tablet morning, noon and evening

See the patient again on the fourth day

his headache has gone the patient is cured

his headache persists

1. ask the patient to urinate into a carefully cleaned jar
2. dip a piece of special paper into the urine (see drawing)
3. take the paper out after 5 seconds and see whether it  
has changed colour  
if it has send the patient to the hospital or health centre  
if not give him ASPIRIN again for 3 days (see 2.2.)

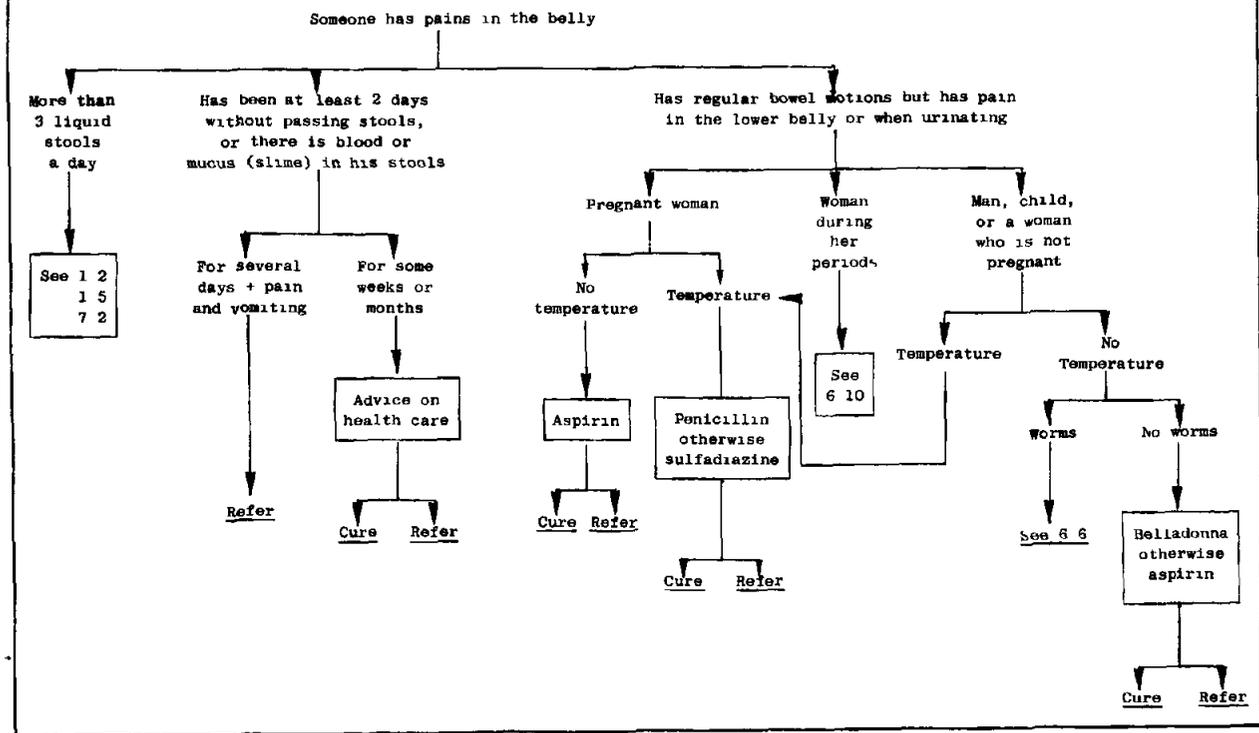
See the patient again on the fourth day

his headache has gone the patient is cured

his headache persists send him to the hospital or health centre.

**SOMEONE HAS PAINS IN  
THE BELLY**

OUTLINE OF THE PROBLEM



EDUCATIONAL OBJECTIVES

At the end of his training period, the student should be able to

- 1 decide whether or not a patient has diarrhoea,
- 2 show a patient how to make and apply hot compresses,
- 3 decide whether a patient is constipated or not,
- 4 decide whether or not a patient has blood or mucus in his stools
- 5 treat a patient suffering from diarrhoea or constipation
- 6 decide whether or not a woman is pregnant,
- 7 decide whether or not a patient is feverish,
- 8 treat a pregnant woman who is complaining of pains in the belly and is, or is not feverish,
- 9 treat a man or a woman who is not pregnant, who is complaining of pains in the belly and is, or is not feverish
- 10 send to hospital or health centre any patient
  - whose diarrhoea or constipation does not respond to treatment
  - who has had severe pain in the belly for several days with vomiting,
  - whose abdominal pains do not respond to treatment



SOMEONE HAS PAINS IN THE BELLY

---

EITHER

1. The patient has several watery stools a day
2. The patient goes for at least 2 days without any bowel movement or there is blood or mucus in his stools
  - 2.1. this is new it only began a few days ago
  - 2.2. this is not new it has been going on for some time
3. The patient has regular bowel movements but has pains in the lower belly or when he urinates
  - 3.1. the patient is a pregnant woman
  - 3.2. the patient is a woman who has pain when she has her periods
  - 3.3. the patient is a man or is a woman who is neither pregnant nor has pains when she has her period

1. THE PATIENT HAS SEVERAL LIQUID BOWEL MOVEMENTS A DAY

See PROBLEM 1.2. "More than 3 liquid stools per day".

Advise the patient to put hot water compresses on his belly 3 or 4 times a day





**PAIN IN THE LOWER BELLY**

2. THE PATIENT GOES FOR AT LEAST 2 DAYS WITHOUT ANY BOWEL MOVEMENT OR THERE IS BLOOD OR MUCUS IN HIS STOOLS

2.1. This is new it began only a few days ago, but with severe pain and vomiting.

It could be serious. Send the patient to the hospital or health centre at once.

2.2. This is not new it has been going on for several weeks or several months  
Tell the patient

1. to eat fruit in the morning with his breakfast,

2. to go to the toilet every morning after eating even if he does not feel the need for it,

3. to drink a large glass of water in the morning when he gets up and another in the evening when he goes to bed.

See the patient again after 2 weeks

There is an improvement tell the patient to keep following the advice you have given him,

There is no improvement send the patient to the hospital or health centre.

3. THE PATIENT HAS REGULAR BOWEL MOVEMENTS, BUT HAS PAINS IN THE LOWER BELLY OR WHEN HE URINATES

3.1. The patient is a pregnant woman

Take her temperature (see Techniques)

3.1.1. She is not feverish

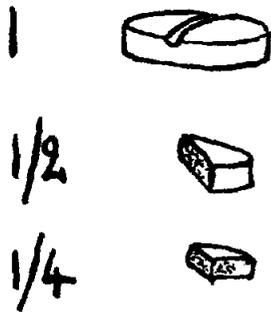
Tell her to rest and to take 3 ASPIRIN tablets daily for 3 days.

See her again on the 4th day

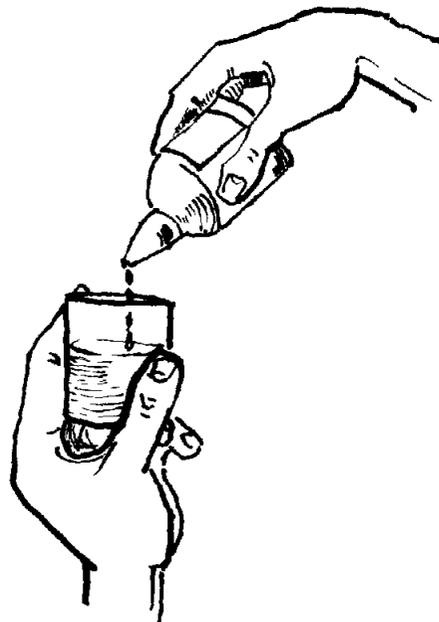
there is an improvement tell her not to overtire herself

there is no improvement send her to the hospital or health centre.

## TABLET



## DROPS



3.1.2. She is feverish

Give her an injection of 1 000 000 units of PENICILLIN in the buttocks every day for 5 days (see Techniques).

If you have no Penicillin, give SULFADIAZINE 2 tablets 4 times a day for 5 days and tell the patient to drink plenty of water.

If you have no Sulfadiazine, send the patient to the hospital or health centre.

See the patient again at the end of the treatment (that is, on the 6th day)

everything is all right the patient is cured. Tell her to drink plenty of fluids every day,  
there is no improvement send her to the hospital or health centre.

3.2. The patient is a woman who has pain when she has her periods

See PROBLEM 6.10. "Conditions that only females have".

3.3. The patient is a man or is a woman who is neither pregnant nor has pains when she has her periods

Take the patient's temperature (see Techniques)

3.3.1. The patient is feverish

Treat as described above in 3.1.2. "She is feverish".

3.3.2. The patient is not feverish

1. Either, the patient has worms in his stools or he vomits worms.

See PROBLEM 6.6. "There are worms in the stools".

2. Or, the patient has no worms in his stools or does not vomit worms. Give him BELLADONNA TINCTURE or TABLETS 5 drops or a 1/2 or 1/4 tablet before meals. If you have no Belladonna, give him 3 or 4 ASPIRIN tablets a day for 5 days.

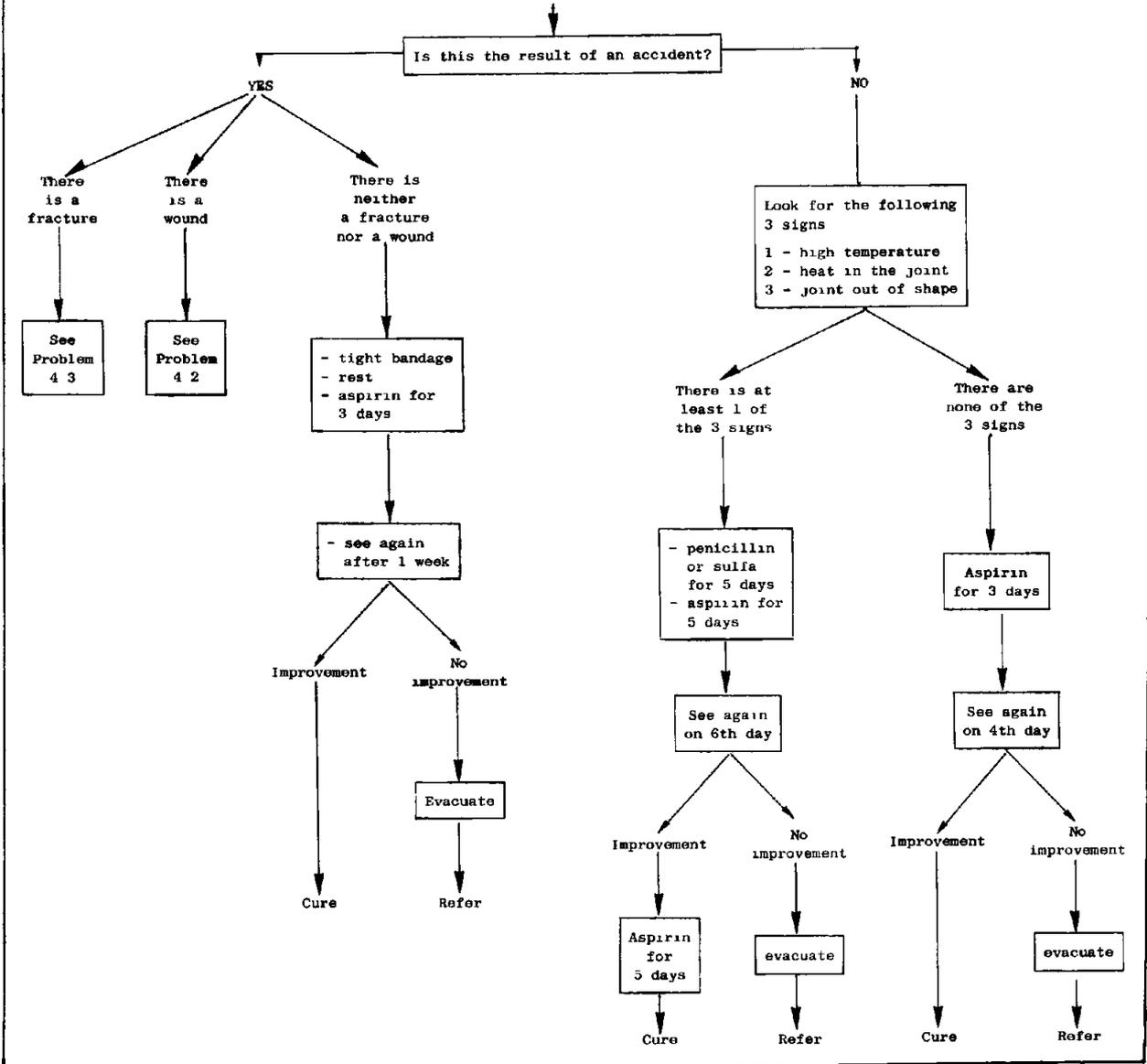
See him again at the end of the treatment

everything is all right the patient is cured, but tell him to drink plenty of water every day  
there is no improvement send him to the hospital or health centre.

**PAIN IN ONE OR MORE  
JOINTS**

OUTLINE OF THE PROBLEM

Someone has pain in a joint



#### EDUCATIONAL OBJECTIVES

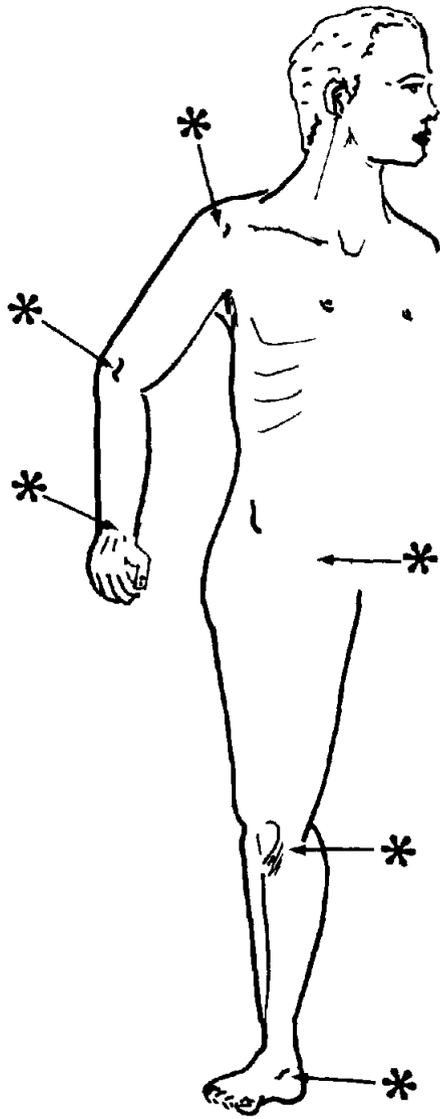
At the end of his training period, the student should be able to

- 1 Tell whether pain in a joint is due to a fracture or to a wound
- 2 Put a tight bandage round a painful joint
- 3 Explain to a patient how he should rest after pain caused by an accident,
- 4 Tell whether or not the patient is feverish
- 5 Decide whether or not there is heat in a joint
- 6 Decide whether or not a joint has changed shape
- 7 Treat a patient who is feverish and has pain in a joint
- 8 Decide when a patient with a painful joint should be sent to the hospital or health centre

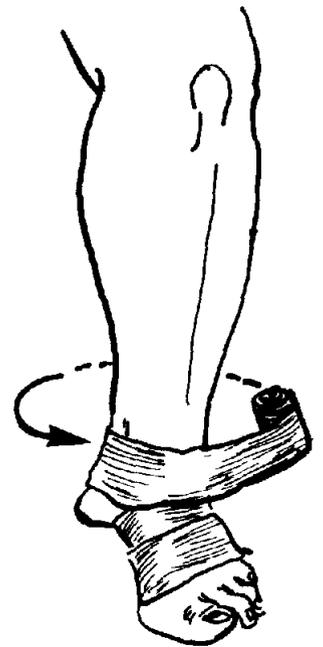
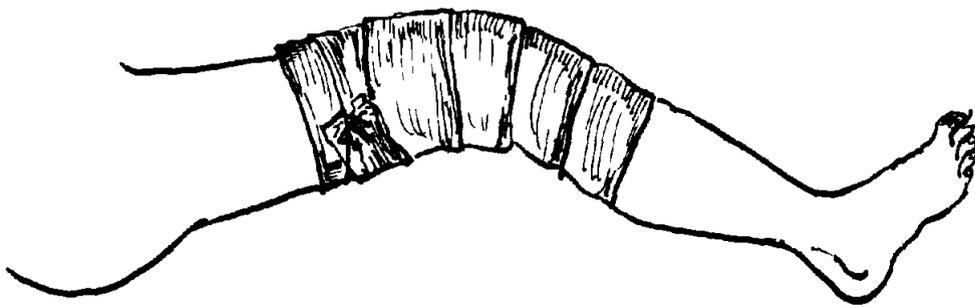
#### TEACHING METHOD

To reach all of these educational objectives the following methods are suggested

- 1 Ask to have pointed out, on a drawing of the human body where the joints are and what they are called
- 2 Wrap a cloth bandage round a painful joint on a patient or round a joint on a friend, in such a way that the joint can no longer move
- 3 Say what advice should be given to someone who has pain in a joint
- 4 Take someone's temperature with a thermometer,
- 5-6 Feel a friend's (or a patient's) knee or elbow with the flat of the hand and then feel the knee or elbow on his other side. Say whether one is hotter than the other. Say whether one is more out of shape than the other
- 7 Describe the medicines and the advice to be given to a patient who is feverish and has pain in a joint
- 8 Describe which cases of painful joints should be sent to the hospital or health centre



**\*THERE IS A JOINT HERE**



PAIN IN ONE OR MORE JOINTS

IS THIS THE RESULT OF AN ACCIDENT?

1. YES
  - 1.1. There is a fracture
  - 1.2. There is a wound
  - 1.3. There is neither a wound nor a fracture
2. NO
  - 2.1. There are signs of infection  
There are no signs of infection

1. THE PAIN IS THE RESULT OF AN ACCIDENT

1.1. There is a fracture

See PROBLEM 4.3. "Broken Bone".

1.2. There is a wound

See PROBLEM 4.2. "Torn Skin"

1.3. There is neither a wound nor a fracture

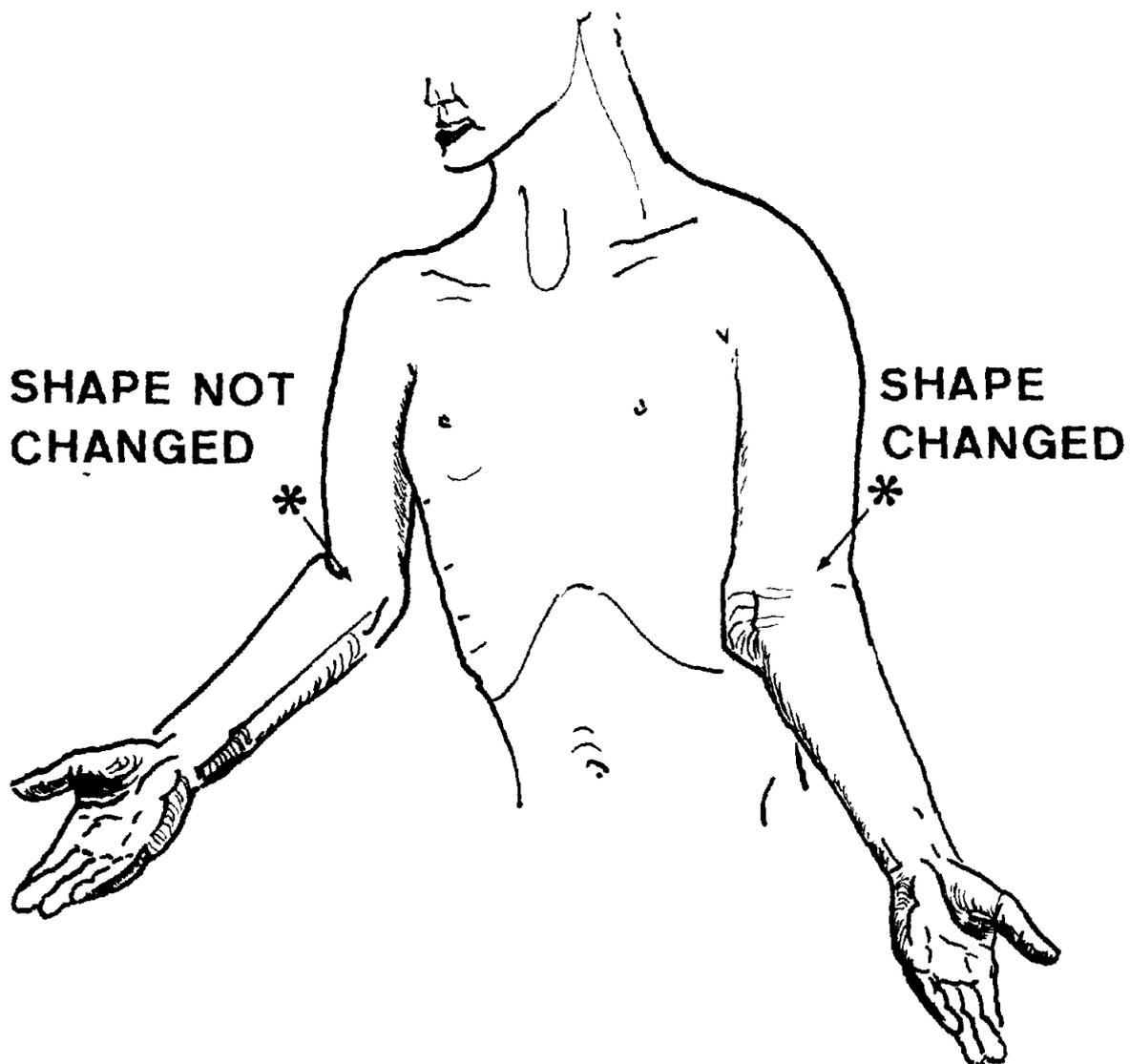
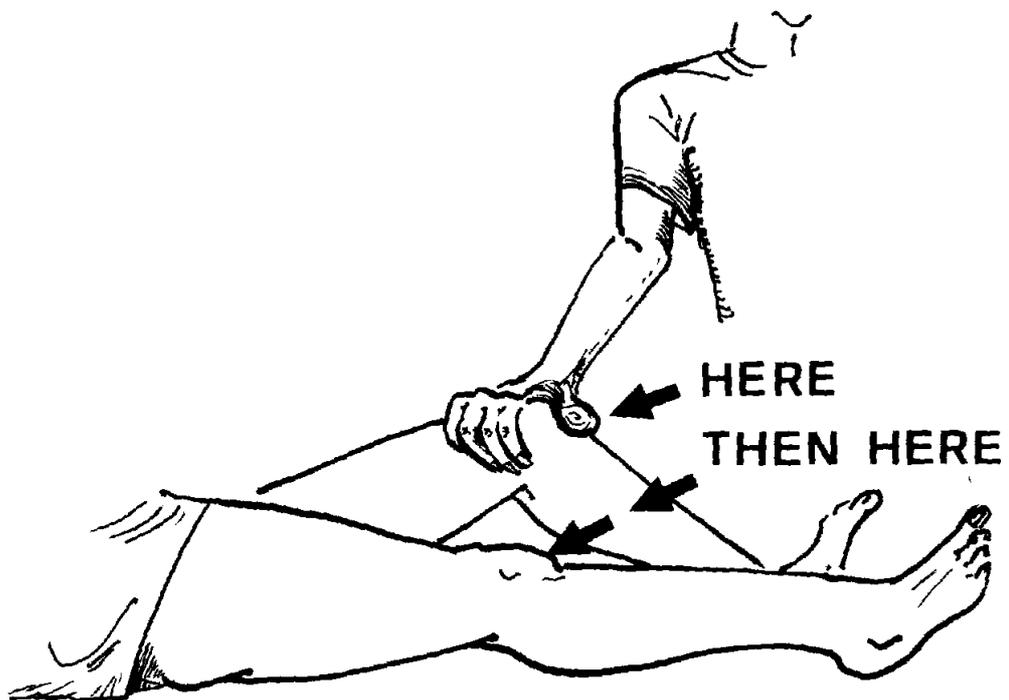
1.3.1 Put a tight bandage round the joint (see drawing)

1.3.2. Tell the patient to rest at home for a week

1.3.3. Give aspirin for 3 days

child 1/2 tablet morning, noon and evening

adult 1 tablet morning, noon and evening.



See the patient again after 1 week  
everything is all right the patient is cured  
there is no improvement send the patient to the hospital or  
health centre.

2. THE PAIN IS NOT THE RESULT OF AN ACCIDENT

Look for the 3 signs of infection in a joint

1. The patient is feverish (see Techniques)
2. The joint is hot. To find out, put the flat of your hand on the painful joint and then on the same joint on the other side of the patient (see drawing).
3. The painful joint no longer has the same shape as the joint on the other side it is fatter, thinner, stiffer.

2.1. There is at least one of these 3 signs

- 2.1.1. Give an injection of PENICILLIN in the buttocks every day for 5 days  
for a child 500 000 units  
for an adult 1 000 000 units

If you have no Penicillin, give SULFADIAZINE tablets

for a child 1 tablet morning, noon and evening for 5 days  
for an adult 2 tablets 4 times daily for 5 days

- 2.1.2. Give ASPIRIN for 5 days

for a child 1/2 tablet morning, noon and evening  
for an adult 1 tablet morning, noon and evening

- 2.1.3. See the patient again after the 5 days of treatment

there is no more pain the patient is cured

there is an improvement continue with aspirin for 5 days

there is no improvement send the patient to the hospital or  
health centre.

2.2. There are none of these 3 signs

Give aspirin tablets for 3 days

See the patient again after 4 days

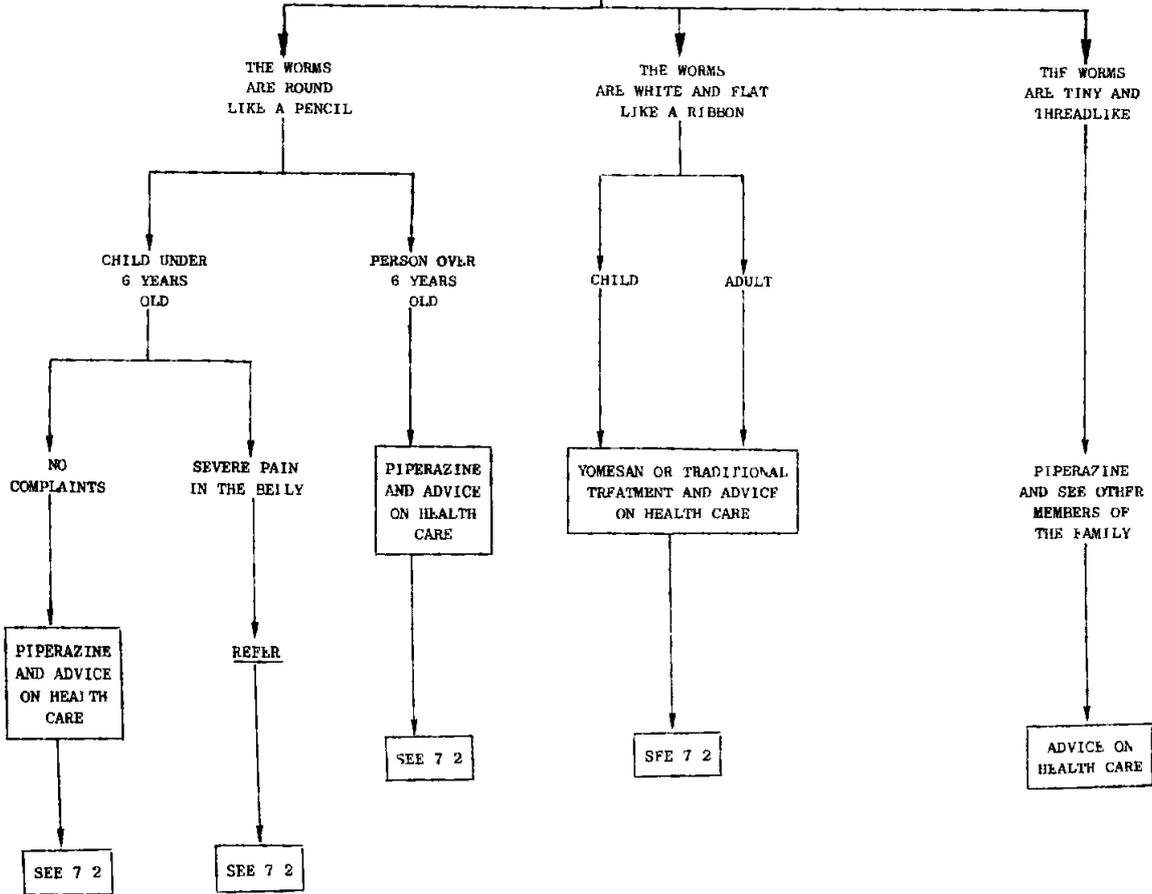
everything is all right the patient is cured

there is no improvement send the patient to the hospital or health centre.

**THERE ARE WORMS IN  
THE STOOLS**

OUTLINE OF THE PROBLEM

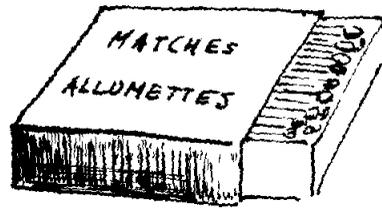
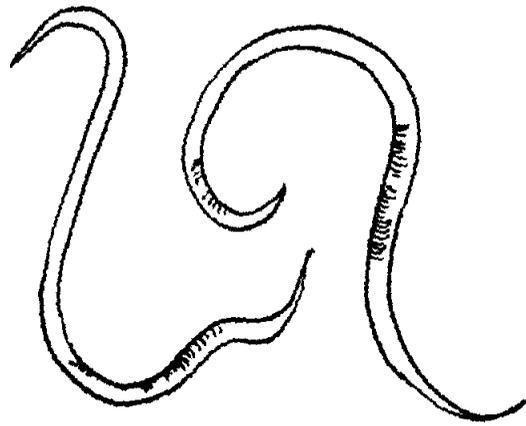
SOMEONE HAS BEEN PASSING OR VOMITING WORMS



EDUCATIONAL OBJECTIVES

At the end of his training period the student should be able to

- 1 Recognize the 3 main types of intestinal parasites
- 2 Treat any patient who is passing or vomiting round or flat worms
- 3 Treat any patient who complains of itching round the anus in the evening
- 4 Treat the other members of the patient's family if necessary,
- 5 Give advice on the treatment and prevention of intestinal parasites
- 6 Send to the hospital or health centre any child who at the same time as vomiting or passing worms has severe pain in the belly accompanied by vomiting



**ROUND WORM**

THERE ARE WORMS IN THE STOOLS

EITHER

1. The worms are round, like a pencil
2. The worms are white and flat, like a ribbon
3. The worms are tiny and threadlike

1. THE WORMS ARE ROUND, LIKE A PENCIL

1.1. The patient is a child under 6 years old

1.1.1. the child has no complaints or has sometimes a slight pain around the navel

Give the child PIPERAZINE tablets

He will take 4 tablets all at once and that is all.

The best plan is to make him take them in front of you, to be quite sure.

Ask the parents if they have any other children with worms, and if so treat them as well.

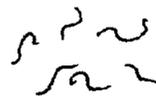
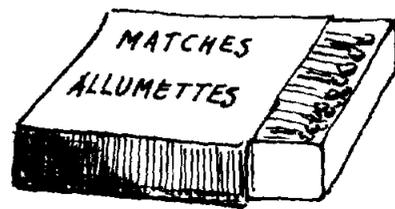
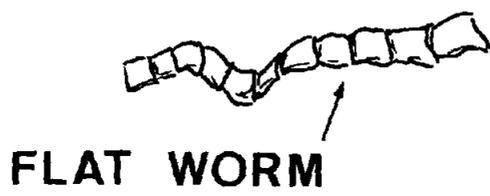
Then advise the family

1. to use latrines where possible,
2. to wash their hands properly before eating and after having had a bowel motion

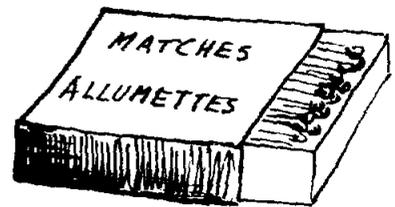
1.1.2. the child vomits frequently or has severe pains in his belly

Send him to the hospital or health centre.

If there are other children with worms, don't forget to treat them as well and to tell them about washing their hands and using the latrines.



**THREADLIKE WORM**



**HE SCRATCHES HIS ANUS**

1.2. The patient is over 6 years old

Give him PIPERAZINE tablets

He should take 6 tablets all at once and that is all. The best plan is to make him take them in front of you to be quite sure.

Ask the patient whether any other members of his family have worms and if they have, treat them as well.

Then advise the patient

1. to use latrines where possible,
2. to wash his hands properly before eating and after having had a bowel motion

**2. THE WORMS ARE WHITE AND FLAT, LIKE A RIBBON**

2.1. The patient is a child

Before eating in the morning he should take 2 tablets of YOMESAN and that is all. If you have no Yomesan, advise him to follow whatever treatment is in use locally, such as 50 grams of crushed gourd seeds followed one hour afterwards by any purgative available on the local market (such as sodium sulfate - 1 teaspoon in a glass of warm water)

Advise the family to eat only meat that has been thoroughly cooked.

2.2. The patient is an adult

Before eating in the morning he should take 2 tablets of YOMESAN and half an hour later 2 more Yomesan tablets. One hour after taking the last two tablets he should take a purgative (such as 1 tablespoon of sodium sulfate in a glass of warm water).

If you have no Yomesan, advise whatever treatment is in use locally, such as 100 grams of crushed gourd seeds.

Advise the family only to eat meat that has been thoroughly cooked.

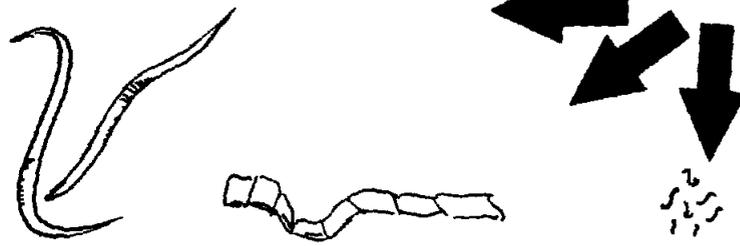
**3. THE WORMS ARE TINY AND THREADLIKE**

There is itching round the anus every evening

Give PIPERAZINE tablets, but the patient must take them in the morning before eating every day for a week

if the patient is less than 3 years old, he will take 1/2 tablet every morning for 7 days

SO AS NOT TO HAVE THIS



DO THIS :



if the patient is between 3 and 6 years old, he will take 1 tablet every morning  
for 7 days

if the patient is between 7 and 12 years old, he will take 2 tablets every morning  
for 7 days

if the patient is over 12 years old, he will take 3 tablets every morning  
for 7 days

Take care! ask whether any other members of the family scratch their anus in the evening. If so, treat them. And tell the whole family to boil all their clothes and sheets once to kill any worms remaining in them.

NEVER FORGET that the most important thing

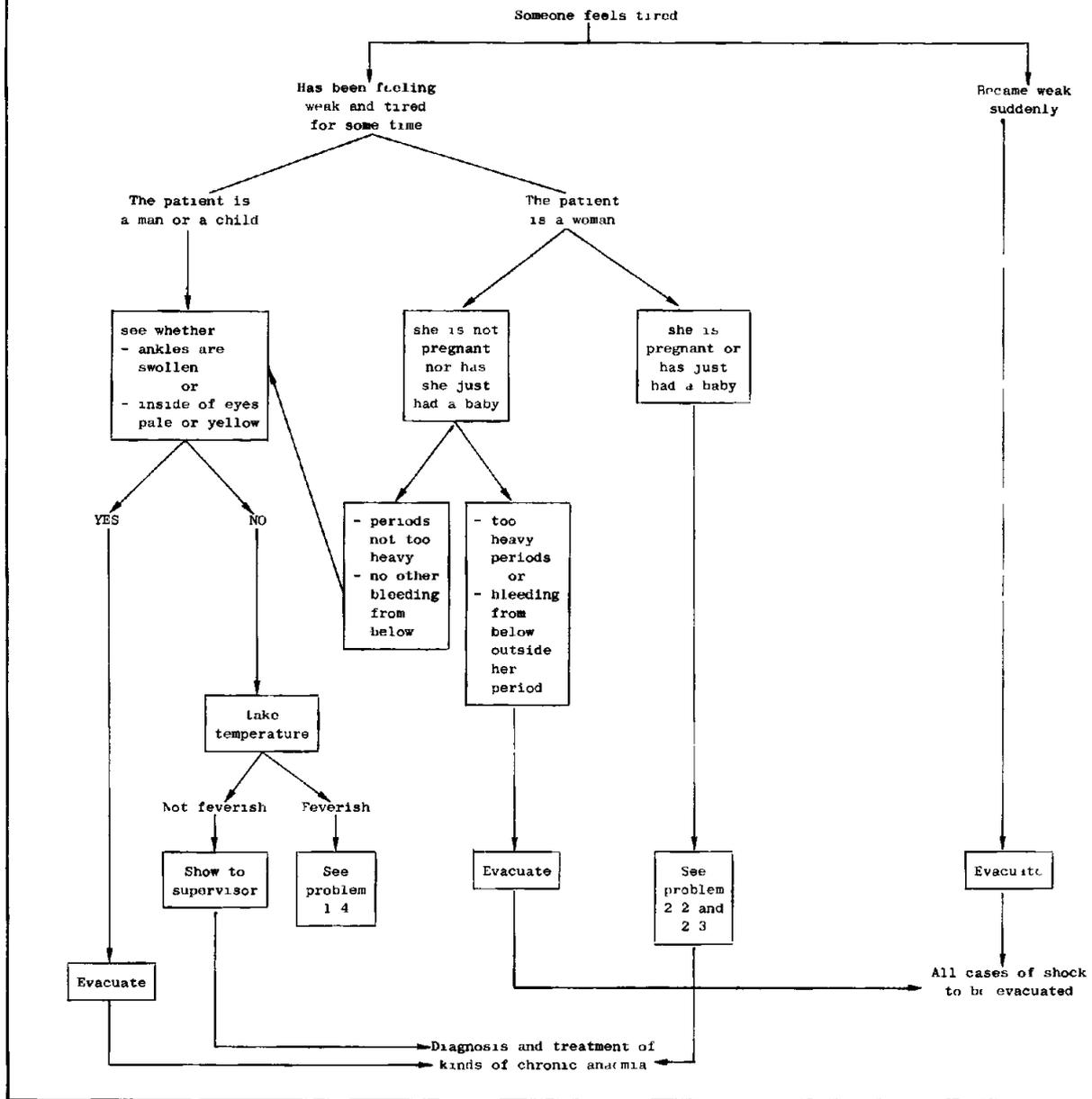
is not just to treat people when they have worms  
but to stop them from getting worms

SO AS NOT TO GET WORMS

1. keep hands clean
2. eat meat that has been thoroughly cooked
3. use latrines where possible

**SOMEONE FEELS WEAK  
OR TIRED**

OUTLINE OF THE PROBLEM



### EDUCATIONAL OBJECTIVES

At the end of his training period, the student should be able to

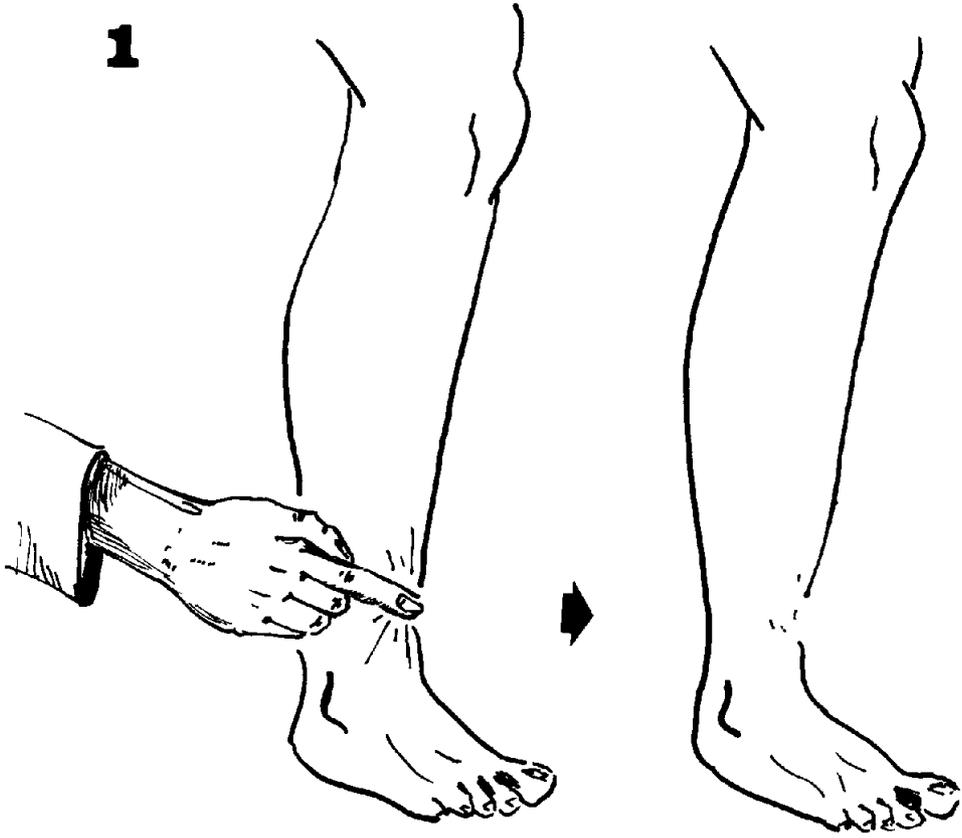
1. recognize when a person is always weak and tired,
2. recognize when a person suddenly becomes very weak,
3. decide whether or not the ankles are swollen,
4. recognize when the inside of the eye is yellow, red, pink or pale (white),
5. decide whether or not a patient is feverish,
6. decide whether or not a woman is pregnant,
7. decide whether a woman is losing an abnormally large amount of blood from her genitals,
8. decide when someone who feels tired and weak should be sent to the hospital or health centre.

### TEACHING METHOD

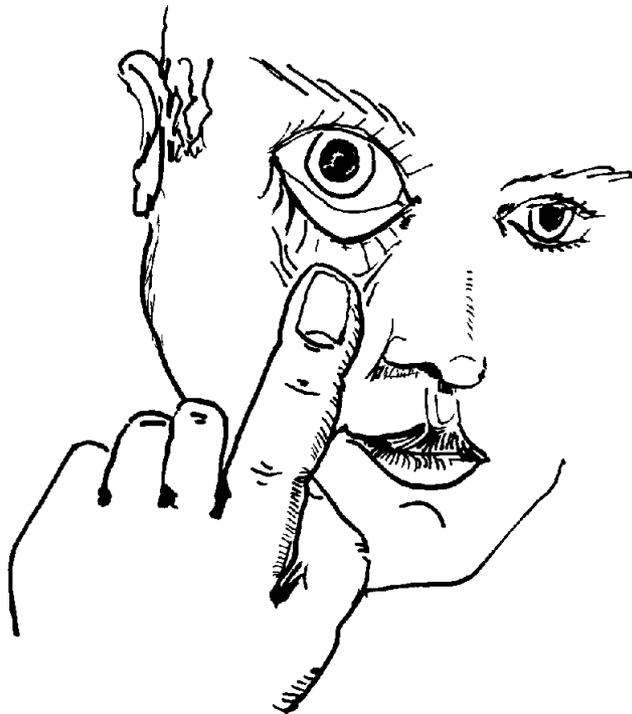
To reach all of these educational objectives, the following methods are suggested

1. act out to a group of classmates what a patient who always feels tired looks like,
2. have a student describe to the group what a patient suffering from extreme weakness looks like,
3. - with the first finger, press into a peeled banana and note the mark left,  
- do the same on a patient's ankle and on a classmate's ankle,
4. - make the students look at the inside of the eye of patients and of their classmates,  
- make the students look at the insides of their own eyes in a mirror and note what it looks like,  
- point out, on a drawing showing 4 eyes, which eye is yellow, red, pink or pale (white),
5. read a thermometer which has been put in a patient's or classmate's armpit for 5 minutes and decide whether or not the temperature is normal,
6. act out a conversation with a woman to find out whether or not she is pregnant,
7. act out a conversation carried out with a woman to find out whether or not she is losing an abnormal amount of blood from her genitals,
8. describe all the cases of tired patients that must be sent to the health centre or hospital.

**1**



**2**



A PERSON FEELS WEAK OR TIRED

---

EITHER

1. The patient has been feeling weak and tired for some time
2. The patient has suddenly become weak

1. THE PATIENT HAS BEEN FEELING WEAK AND TIRED FOR SOME TIME

1.1. The patient is a man or a child

1.1.1. If there are one of the following two signs, send the patient to the hospital or health centre.

1. the ankles are swollen. To find out,
  - push your finger into the ankle or the foot for 2 to 3 seconds
  - take away your finger and see if it has left a little hollow there (see drawing). If so, the ankle is swollen
2. the inside of the eye is pale or yellow. To find out,
  - pull the lower eyelid down and look at the inside of the eye (see drawing)
  - normally, the inside of the eye is pink
  - look to see whether the inside of the eye is pale or yellow.

1.1.2. If neither of these 2 signs is there (see 1.1.1.), then take the patient's temperature

1. the patient is feverish. See PROBLEM 1.4. "Someone is feverish"

2. the patient is not feverish
  - tell the patient to rest and to eat well, including if possible meat and fruit,
  - send the patient to the hospital or health centre.

1.2. The patient is a woman

- 1.2.1. The woman is pregnant or has just had a baby See PROBLEMS 2.2. and 2.3.
- 1.2.2. The woman is not pregnant
  1. She loses blood from below when she has not got her periods or she loses too much blood when she has her periods.  
Send her to the hospital or health centre.
  2. She is not losing blood from below  
Therefore see 1.1. as for men and children.

2. THE PATIENT HAS SUDDENLY BECOME WEAK
---

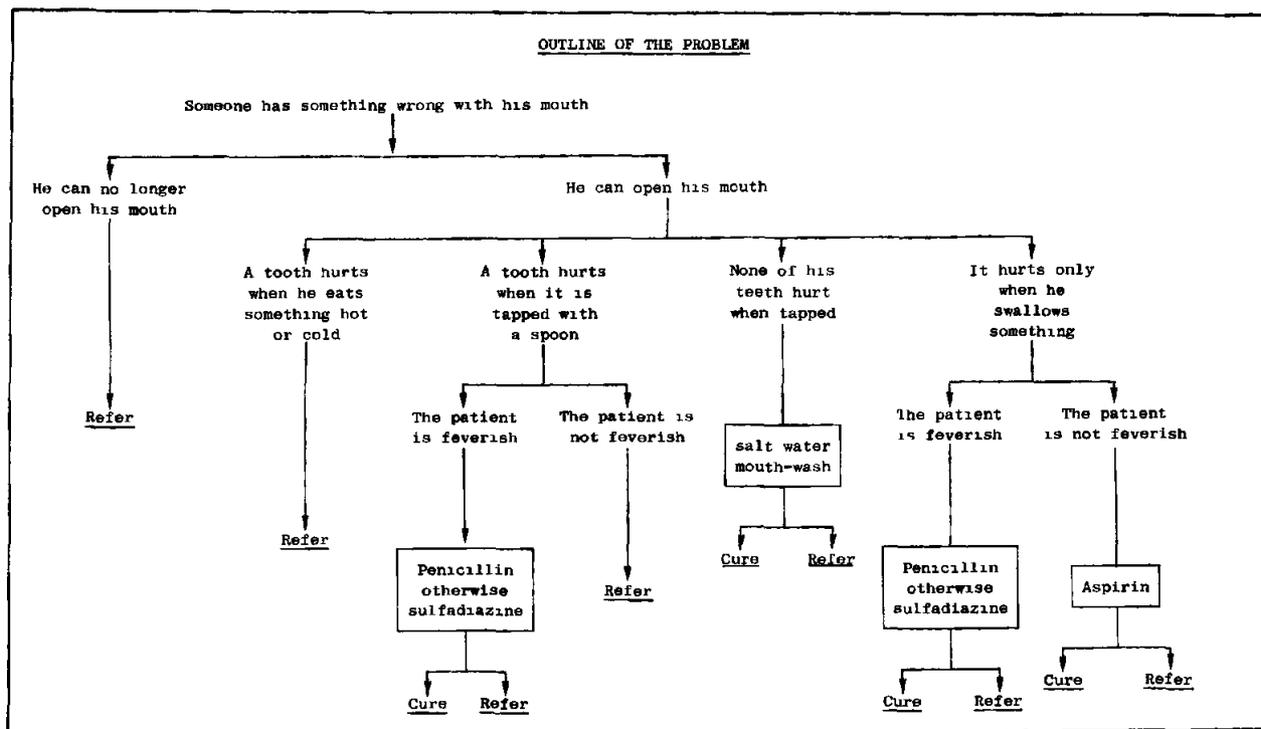
In this case send him immediately to the hospital or health centre.

To find out

- 2.1. ask the patient or his family what happened did the patient lose a lot of blood or does he feel as if he has been knocked about,
- 2.2. look for the signs of extreme weakness, that is
  - 2.2.1. the inside of the eye is pale or yellow
  - 2.2.2. the fingers are colder than is usual
  - 2.2.3. the patient no longer answers your questions

**SOMEONE'S MOUTH OR  
THROAT HURTS**

OUTLINE OF THE PROBLEM



#### EDUCATIONAL OBJECTIVES

At the end of his training period, the student should be able to

1. determine whether or not a patient can open his mouth,
2. decide whether or not a patient is feverish,
3. determine whether a tooth hurts when it is tapped,
4. treat a patient who is feverish and has a tooth that hurts when it is tapped,
5. show a patient how to use a mouthwash and how to prepare salt water,
6. treat a patient whose mouth hurts every time he swallows something,
  - when the patient is feverish
  - when the patient is not feverish

SOMEONE'S MOUTH OR THROAT HURTS

---

EITHER

1. The patient can no longer open his mouth
2. The patient can open his mouth
  - 2.1. A tooth hurts whenever he eats something hot or cold.
  - 2.2. A tooth hurts when it is tapped with a spoon.
  - 2.3. None of his teeth hurt when tapped.
  - 2.4. It hurts only when he swallows something.

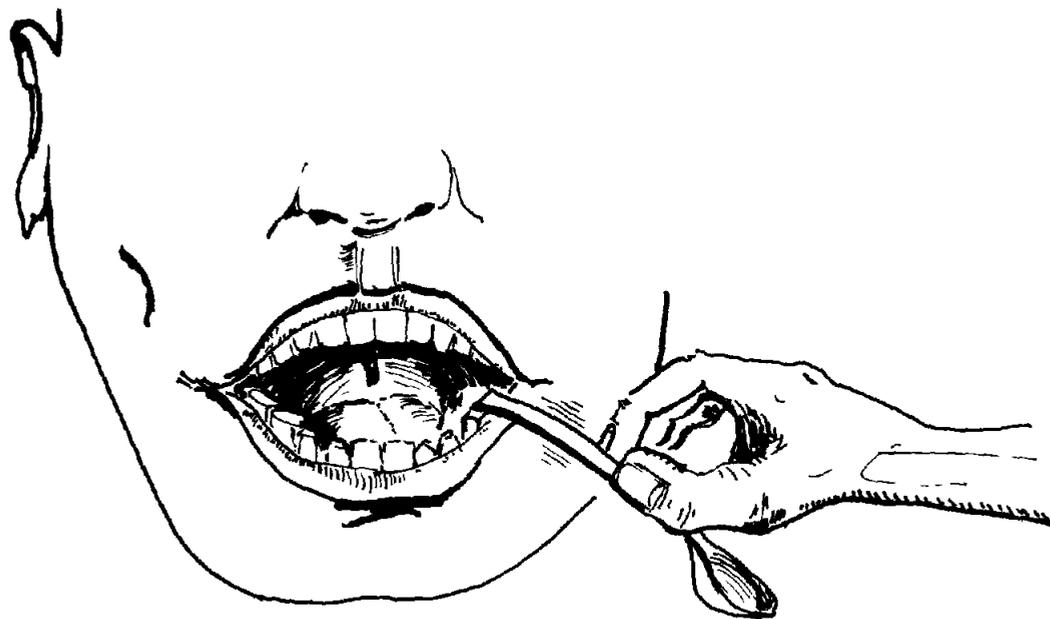
1. THE PATIENT CAN NO LONGER OPEN HIS MOUTH

This is always serious.

Send the patient to the hospital or health centre at once.

2. A TOOTH HURTS WHENEVER THE PATIENT EATS SOMETHING HOT OR COLD

Send the patient to a dentist to have the tooth treated.



3. ONE TOOTH HURTS WHEN IT IS TAPPED WITH A SPOON (See drawing)

Take the patient's temperature (see Techniques).

3.1. The patient is feverish

Give the patient an injection of PENICILLIN every day for 3 days

child 500 000 units                      adult 1 000 000 units

If you have no Penicillin, give SULFADIAZINE tablets for 3 days

child under 3 years 1 tablet morning, noon and evening

child over 3 years 2 tablets morning and evening

adult 2 tablets 4 times a day

And don't forget to tell the patient to drink plenty of water

See the patient again on the 4th day

everything is all right the patient is cured, but send him to the dentist to have the tooth taken out.

there is no improvement send the patient to the hospital or health centre.

3.2. The patient is not feverish

Send the patient to the dentist to have the tooth treated.

4. NONE OF THE PATIENT'S TEETH HURT WHEN TAPPED

Tell the patient to wash his mouth out with salt water 4 times a day for one week. Add one teaspoon of salt to a cup of water. Hold the salt water in the mouth for a little while but without swallowing any and then spit it out. See the patient again after a week

everything is all right the patient is cured.

there is no improvement send the patient to the hospital or health centre.

5. IT HURTS ONLY WHEN THE PATIENT SWALLOWS SOMETHING

Take the patient's temperature (see Techniques).

5.1. The patient is feverish

Give him an injection of PENICILLIN every day for 3 days

child 500 00 units                      adult 1 000 000 units

See the patient again on the 4th day

everything is all right    the patient is cured

there is no improvement    send the patient to the hospital or health  
centre.

If you have no Penicillin, give SULFADIAZINE tablets for 3 days

child under 3 years    1 tablet morning, noon and evening

child over 3 years    2 tablets morning and evening

adult    2 tablets 4 times a day.

And don't forget to tell the patient to drink plenty of water.

5.2. The patient is not feverish

Give him ASPIRIN tablets for 3 days,

child    1/2 tablet morning, noon and evening

adult    1 tablet morning, noon and evening

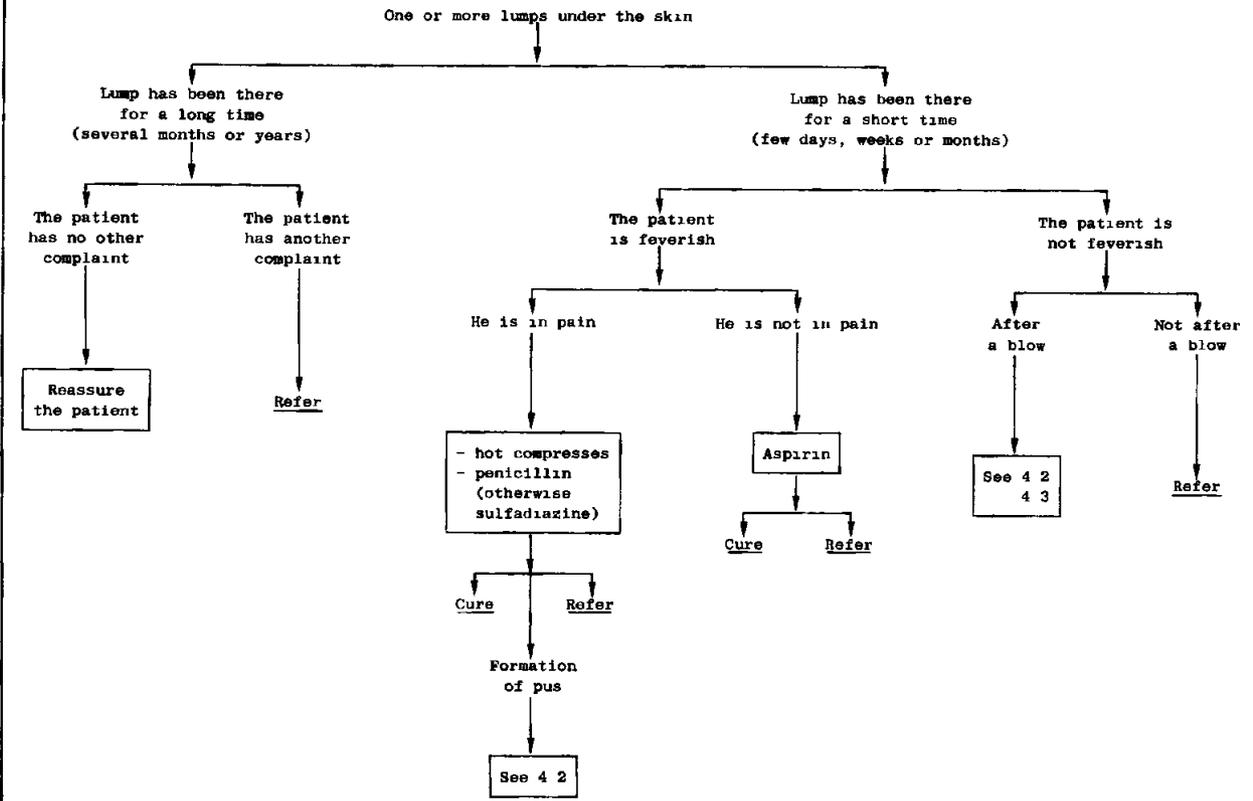
See the patient again on the 4th day

everything is all right    the patient is cured

there is no improvement    send the patient to the hospital or health  
centre.

**ONE OR MORE LUMPS  
UNDER THE SKIN**

OUTLINE OF THE PROBLEM



#### EDUCATIONAL OBJECTIVES

At the end of his training period, the student should be able to

1. determine, either by questioning the patient or by examining the lump or lumps,
  - how long the lump or lumps have been there,
  - whether or not the patient is feverish
  - whether or not the lump is painful
  - whether or not the lump or lumps appeared after an accident
2. show the patient how to make and put on hot compresses.
3. treat a patient who is feverish and has one or more lumps under his skin.

ONE OR MORE LUMPS UNDER THE SKIN

---

EITHER

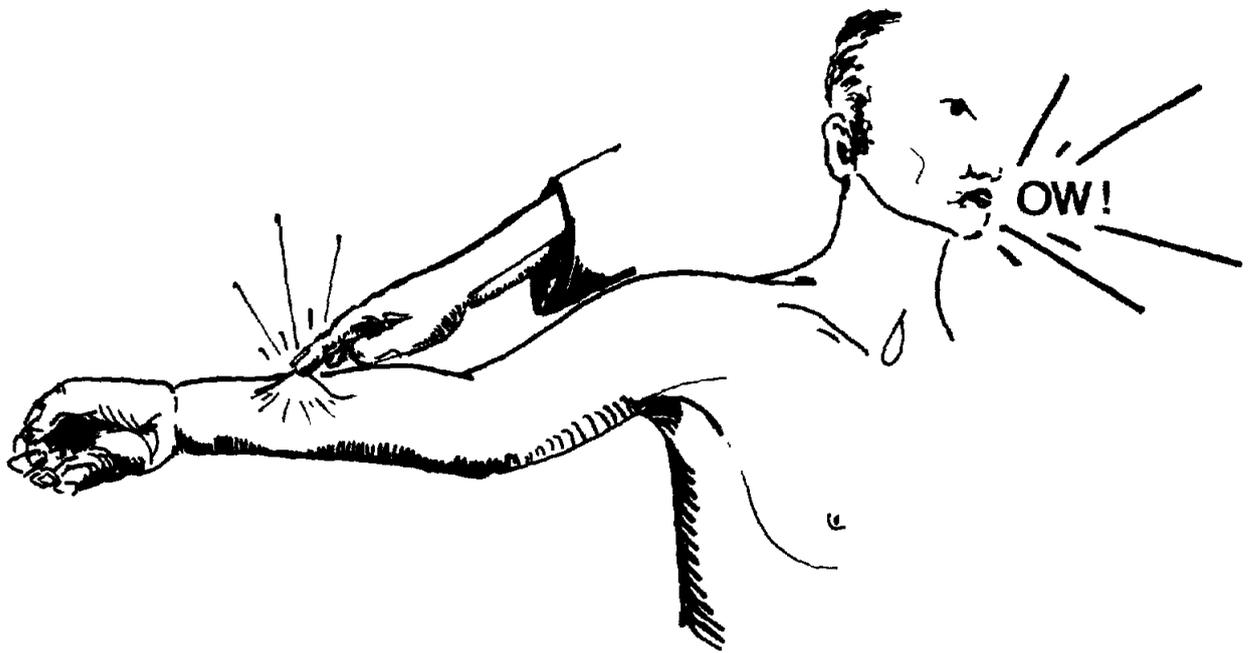
1. The lump or lumps have been there for a long time
  - 1.1. The patient has no other complaint
  - 1.2. The patient has another complaint
2. The lump or lumps have been there for a short time
  - 2.1. the patient is feverish
    - 2.1.1. he is in pain
    - 2.1.2. he is not in pain
  - 2.2. the patient is not feverish
    - 2.2.1. the lump appeared after a blow
    - 2.2.2. the lump did not appear after a blow

1. THE LUMP OR LUMPS HAVE BEEN THERE FOR A LONG TIME (several months or years)

1.1. The patient has no other complaint

Tell the patient that it is not serious.

Tell him to come back and see you if he notices anything else, such as extreme fatigue. In that case see the next paragraph (1.2.).



1.2. The patient has another complaint

Sometimes the lump gets in the patient's way it may make it difficult for him to swallow, to breathe, to have a bowel motion, to work, to walk.  
In any of these cases, send the patient to the hospital or health centre.

2. THE LUMP OR LUMPS HAVE BEEN THERE FOR A SHORT TIME

(few days, weeks or months)

2.1. The patient is feverish

2.1.1. The patient is feverish and the lump hurts

Give the patient an injection of PENICILLIN every day for 3 days  
child 500 000 units adult 1 000 000 units

If you have no Penicillin, give SULFADIAZINE tablets for 3 days

child under 3 years 1 tablet morning, noon and evening

child over 3 years 2 tablets morning and evening

adult 2 tablets 4 times a day

And tell the patient to drink plenty of water.

In addition, tell the patient to put hot compresses on the painful lump. See under Hot Compresses in PROBLEM 6.4. "Someone has pains in the belly".

See the patient again on the 4th day

either, there is an improvement continue with the hot compresses until the lump has gone

or, the lump has burst and pus is coming out of it. See PROBLEM 4.2. "Torn Skin".

or, the patient still has a high temperature and the lump is very painful send the patient to the hospital or health centre.

2.1.2. The patient is feverish but the lump does not hurt

Give ASPIRIN tablets for 3 days

child 1/2 tablet morning, noon and evening

adult 1 tablet morning, noon and evening

If there is no improvement after 4 days, send the patient to the hospital or health centre.

2.2. The patient is not feverish

2.2.1. The lump has appeared after a blow

See PROBLEMS 4.2. "Torn Skin"

4.3. "Broken Bone"

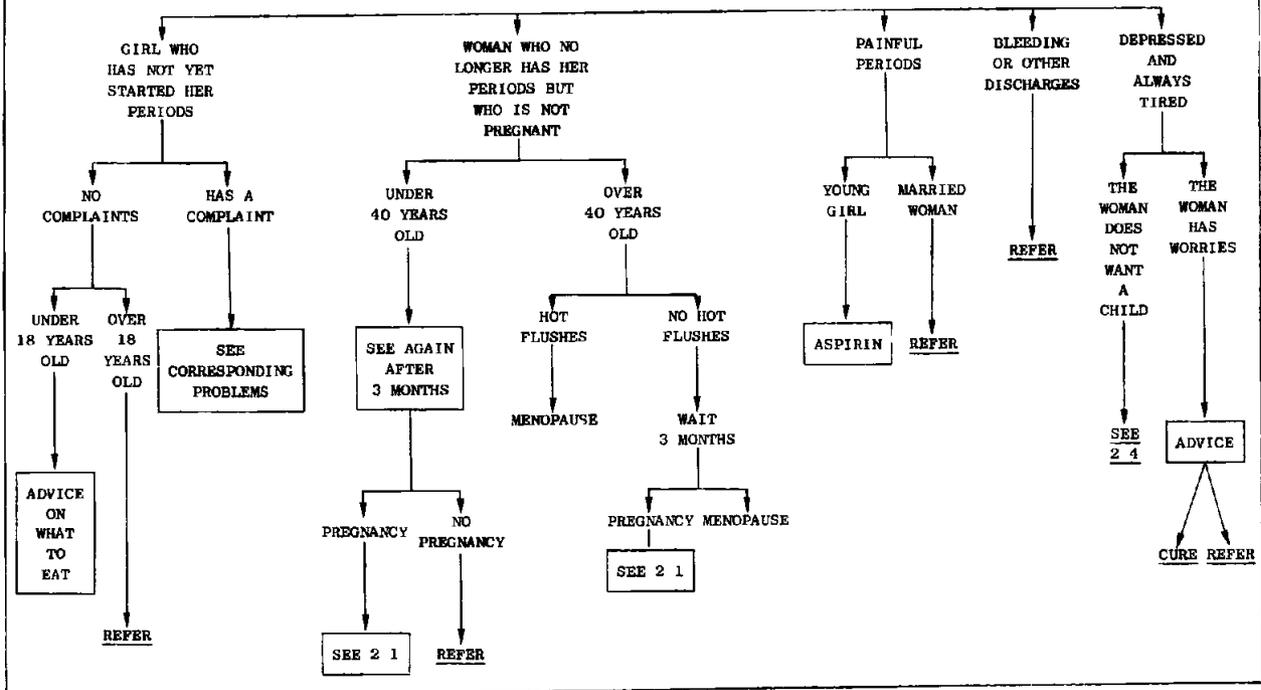
2.2.2. The lump did not appear after a blow

Send the patient to the hospital or health centre

**CONDITIONS THAT ONLY  
FEMALES HAVE**

OUTLINE OF THE PROBLEM

AN ILLNESS THAT ONLY WOMEN HAVE



#### EDUCATIONAL OBJECTIVES

At the end of his training period, the student should be able to

1. give advice to any girl who has not yet started her periods
2. treat any girl who has painful periods
3. tell whether or not a woman is pregnant
4. tell whether or not a woman has got to an age when she can no longer have children
5. give advice to a woman who is depressed, sleeps badly and complains that she hurts all over
6. send to the hospital or health centre
  - any girl who has not started her periods by the age of 18 years
  - any woman aged less than 40 years who no longer has her periods but who is not pregnant
  - any woman who is losing blood from below or who has discharges that stain her underpants
  - any married woman who has painful periods
  - any woman who remains depressed in spite of treatment

CONDITIONS THAT ONLY FEMALES HAVE

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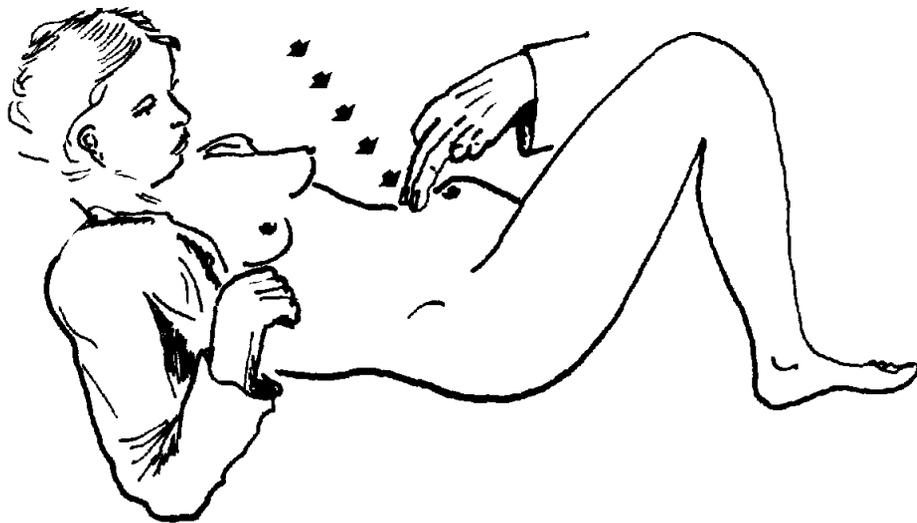
WHO IS IT?

1. A girl who is too young to have children, she has therefore not yet started her periods
2. A woman who could have children but who has a period every month
3. A woman who is too old to have children, she has not had a period for months but shows no signs of pregnancy

WHAT IS HER COMPLAINT?

1. The patient is a girl who has not yet started her periods
2. The patient is a woman who no longer has her periods but who is not pregnant
3. The patient is a girl or a woman who has painful periods
4. The patient is a woman who is losing blood from below (vagina)
5. The patient is a woman who has discharges (other than blood) which stain her underpants
6. The patient is a woman who is tired and depressed

**SHE IS PREGNANT: I CAN FEEL A SWELLING**



1. THE PATIENT IS A GIRL WHO HAS NOT YET STARTED HER PERIODS

1.1. She has no complaints

either, the girl is not yet 18 years old do nothing and advise waiting until the girl is 18. Tell her family to feed her well and, where possible, to give her meat, fish, vegetables and fresh fruit.  
or, the girl is 18 years old or more in this case send her to the hospital or health centre.

1.2. She has a complaint

For example, she has a cough, she is feverish, she feels tired, she has a pain in her belly... In this case, see the corresponding PROBLEMS.

2. THE PATIENT IS A WOMAN WHO NO LONGER HAS HER PERIODS BUT WHO IS NOT PREGNANT

2.1. The woman is less than 40 years old

Don't give her anything and ask her to come back and see you in 3 months time. After these three months  
either, she shows signs of pregnancy (top of womb near the navel) see drawing. She used to have a period every month and has not had a period for over 2 months. See PROBLEM 2 1  
Or, she shows no signs of pregnancy send her to the hospital or health centre.

2.2. The woman is over 40 years old

Either, she sometimes has hot flushes which rise up the body towards the head. explain to the woman that she has reached an age at which she can no longer have children. Advise her to continue working but if she is too fat tell her to eat less, especially of foods that are greasy or sweet (fried food, fat meat, pastries...).

Or, she does not have hot flushes  
Don't give her anything and ask her to come back to see you in 3 months time.  
either, after 3 months she shows signs of pregnancy. See PROBLEM 2.1. "A woman is expecting a baby".

Or, after 3 months she shows no signs of pregnancy  
Explain to the woman that she has reached an age  
at which she can no longer have children. Advise her  
to go on working, but, if she is too fat, tell her to  
eat less, especially of foods that are greasy or sweet  
(fried foods, fat meat, pastries...).

If any other signs appear, see the corresponding PROBLEMS

3. THE PATIENT IS A GIRL OR A WOMAN WHO HAS PAINFUL PERIODS

3.1. The patient is a girl or a woman who has not yet had a child

Advise her to take 4 ASPIRIN tablets a day during the first 2 days of  
her period.

See the patient again after 3 months

everything is all right tell her to go on taking aspirin the days she  
has pain

there is no improvement send her to the hospital or health centre

3.2. The patient is a woman who has already had children

Send this patient to the hospital or health centre.

4. THE PATIENT IS A WOMAN WHO IS LOSING BLOOD FROM BELOW

The woman loses blood either when she does not have her period

or in too large an amount when she has her period.

Send this patient to the hospital or health centre. In the meantime, tell her to  
drink plenty of liquids (water, vegetable broth...).

5. THE PATIENT IS A WOMAN WHO HAS DISCHARGES (OTHER THAN BLOOD)  
WHICH STAIN HER UNDERPANTS

The discharges may look like water, milk, or pus (yellow or green)

They may or may not smell bad

Send the patient to the hospital or health centre.

6. THE PATIENT IS A WOMAN WHO IS TIRED AND DEPRESSED

The woman is depressed and cries a lot, she often finds it difficult to sleep and when she gets up in the morning she already feels tired. She will tell you that she sometimes feels her heart beating too fast in her chest and that she has pains in her head, her arms and her legs. She no longer feels well and hurts all over. Talk to this woman who feels so unhappy and try to find out what is making her depressed.

Either, it is because she does not want to have any more children

because she already has too many, or because she has not enough money to feed them or bring them up...

See PROBLEM 2.4. "A woman does not want to have a child for the time being".

Or, because she is experiencing difficulties with her husband, her work, her family, her women friends...

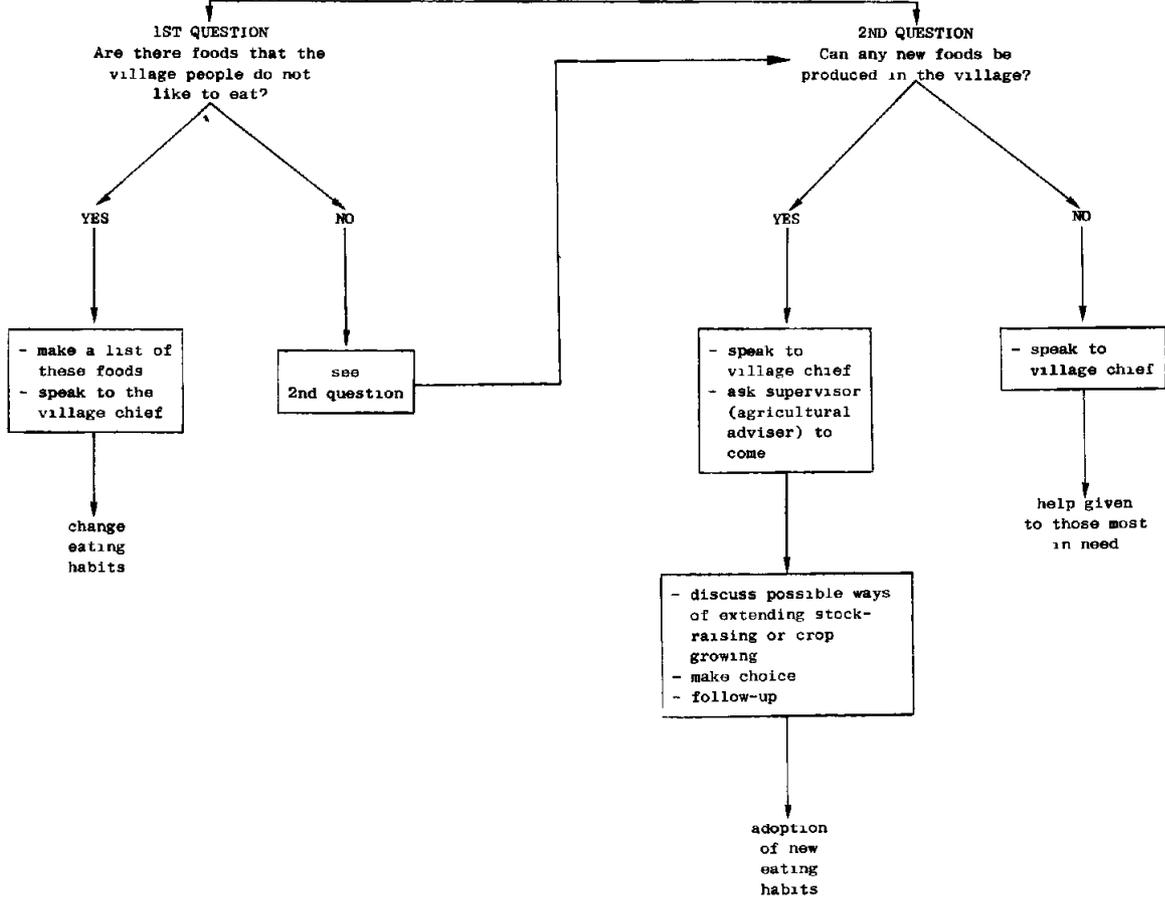
Try to help her to solve her problem talk to her husband about it for instance.

See the patient again after two weeks.

**HOW TO FIND NEW  
KINDS OF FOOD**

OUTLINE OF THE PROBLEM

Children are not growing as others do or  
the villagers complain that there is no food or  
your supervisor asks you what you have done about this problem



### EDUCATIONAL OBJECTIVES

At the end of his training period, the student should be able to

1. find out whether there are any animals or plants that the village people do not like to eat,
2. decide whether it is possible to raise new kinds of animals in the village,
3. decide whether it is possible to grow new kinds of plants in the village,
4. advise the village chief to help those villagers who do not have enough to eat,
5. ask your supervisor to come to advise the villagers on the way to raise new kinds of animals or grow new kinds of plants,
6. try to get the village to decide to raise new kinds of animals or grow new kinds of plants and try to see that good results are obtained.

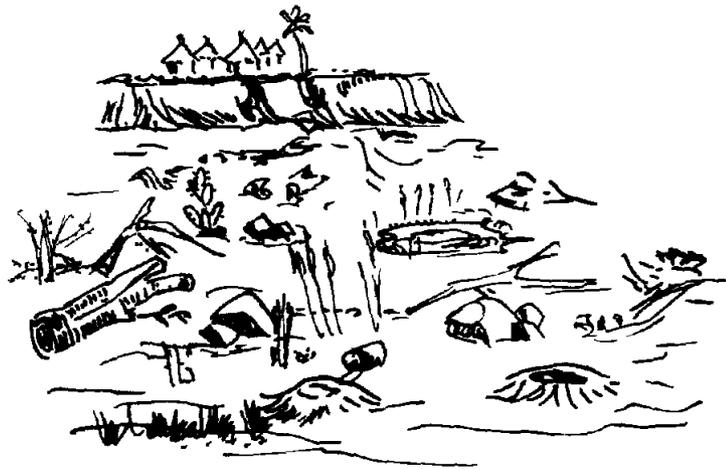
### TEACHING METHOD

To reach all of these educational objectives, the following methods are suggested

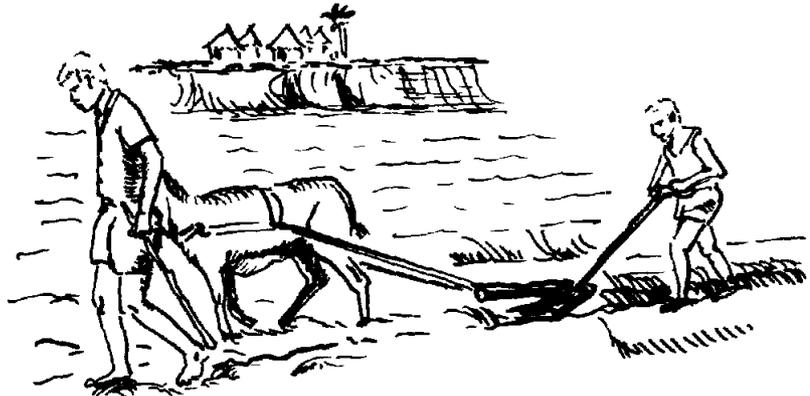
1. have a group discussion among the students to find out what kinds of food people living locally do not usually eat,
- 2.3. discuss what the conditions are in the students' village for growing plants or raising stock and say whether there is any way to improve the situation,
4. say what kind of people are short of food in the village and say why, discuss what the village could do for such people,
5. act out a conversation with the supervisor (agricultural technician) asking him for help in growing a plant (such as spinach) or in raising an animal (such as chickens),
6. have a discussion on the difficulties there would be in the students own villages in starting to grow a new kind of plant or raise a new kind of animal,  
List what has to be done to make sure the project gives good results, (equipment to buy, people to be set to work, advice to seek, supervision needed... ),  
walk around the village and point out and discuss what you think has been a successful attempt to grow a plant or raise an animal.

# THE FIELD

WILL GIVE  
NOTHING →



WILL GIVE →



## HOW TO FIND NEW KINDS OF FOOD

Children are not growing as others do or the villagers complain that there is no food or your supervisor asks you what you have done about this problem.

### WHAT DO YOU DO?

1. Are there any kinds of food that people do not like to eat?
2. Could new kinds of food be produced in the village?
3. Arrange a meeting with the village council.

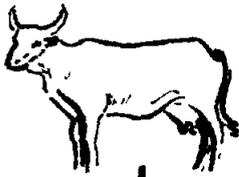
#### 1. ARE THERE ANY KINDS OF FOOD THAT THE VILLAGE PEOPLE DO NOT LIKE TO EAT?

- 1.1. YES. In the village it has always been said that certain foods are not good or that it is forbidden to touch them.
  - 1.1.1. Make a list of these foods,
  - 1.1.2. Tell the village chief what foods the villagers should eat, these are foods recommended by the supervisor (see 3)
- 1.2. NO. Then see 2.

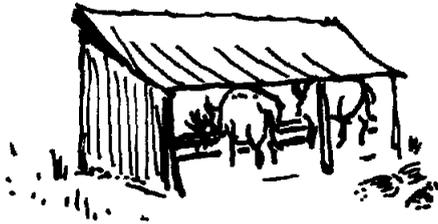
#### 2. COULD NEW KINDS OF FOOD BE PRODUCED IN THE VILLAGE?

- 2.1. YES. because it is possible to
  - 2.1.1. work the land to make it ready for planting,

TO HAVE THIS



DO THIS



- 2.1.2. find water to water the land and to give animals to drink,
- 2.1.3. buy new seed,
- 2.1.4. get food for animals,
- 2.1.5. find people in the village to work the land and look after the animals.

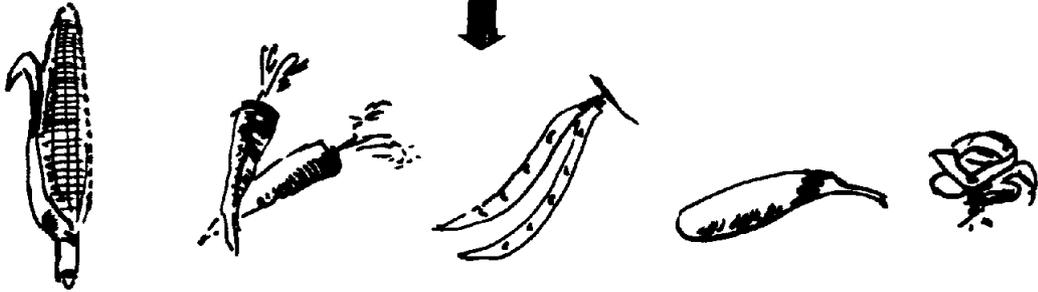
In this case, tell the village chief that people are suffering from not getting enough to eat and that this could be changed by producing new kinds of food in the village. Ask the chief to call a meeting of the leading members of the village.

- 2.2. NO. Tell the village chief that
  - 2.2.1. in spite of all the kinds of food in the village, some of the people are suffering from hunger (children, sick people, handicapped people, people out of work, orphans, widows...)
  - 2.2.2. these people must be helped by giving them some of the food that there already is in the village

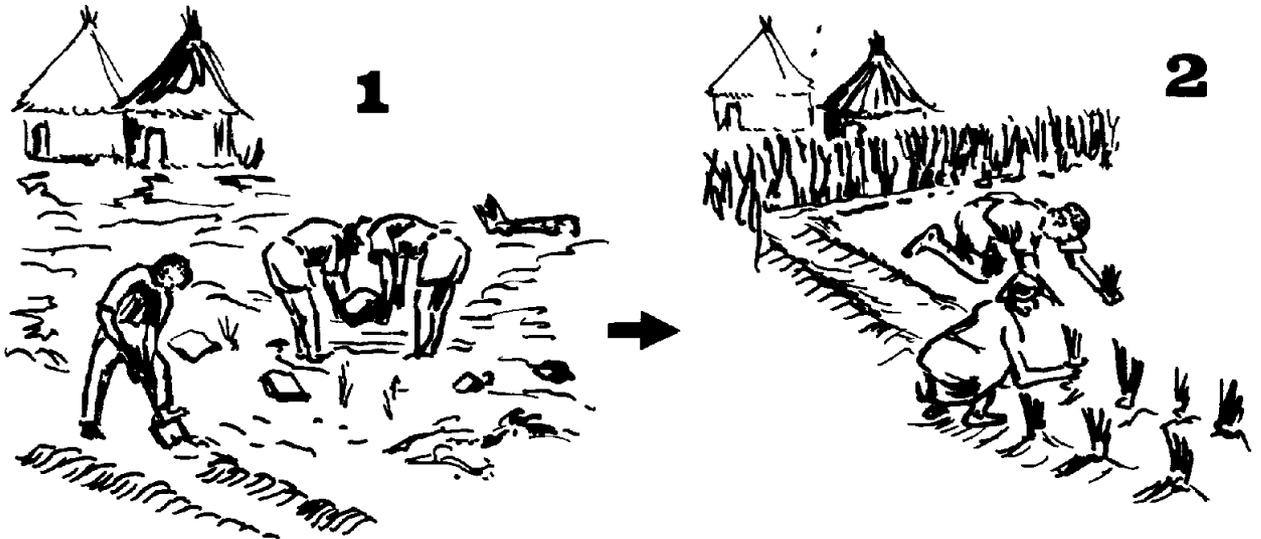
<p>3. ARRANGE A MEETING WITH THE VILLAGE COUNCIL</p>
--

- 3.1. Ask your supervisor's opinion on points 1.2. and 2.1.
- 3.2. Invite your supervisor to come to the meeting of the village council and ask him to propose possible ways of extending the growing of plants or the raising of animals in the village.
- 3.3. Listen to what your supervisor says so as to be able to repeat it, and make sure that his advice is followed.
  - 3.3.1. Possible ways of extending the growing of plants. For instance
    - fruit plant trees on open ground...
    - vegetables sow on ground that is well irrigated...
    - cereals plough large areas...
    - animal fodder sow in the fields after harvest...
  - 3.3.2. Possible ways of extending the raising of animals. For example
    - sheep and pigs find fodder, watch over flocks...
    - poultry build an enclosure, keep an eye on reproduction...
- 3.4. Have the village council discuss, in the presence of your supervisor, the advantages and requirements of each plant that could be grown or each animal that could be raised.

TO HAVE THIS



DO THIS



3.5. Let a choice of one or more plant growing or animal raising projects be made (example growing spinach).

Tell the council what the project will require from the villagers for example, to grow spinach they will need to

- choose a piece of ground and prepare it by removing any stones, by ploughing and by putting on animal fertilizer,
- get seedlings and plant them out at intervals (see drawing 2),
- find water with which to water the spinach at regular intervals,
- build a fence to stop animals from destroying the plants,

Tell them that the supervisor will be able to help them in this work.

3.6. Ask the council to choose a man from the village to supervise the plant growing or animal raising project. This man will keep in contact with you and with your supervisor.

**HOW TO TRAVEL QUICKLY  
FROM ONE PLACE TO  
ANOTHER**

OUTLINE OF THE PROBLEM

Some patients have no means of transport to get them to the hospital or health centre or very few people from the town or neighbouring villages ever come to visit your village

1st Question What can be done to get to town more quickly?

2nd Question What can be done to get to your village more easily?

1 1 Choose a means of transport  
- stretcher or  
- animal or  
- cart or  
- bus

1 2 Choose a person from the village to be responsible for transport

1 3 Choose a route

- invite people to visit the village  
- make a road to make it easier to get to the village (see 1 3)

give technical advice about getting one of these means of transport

describe his duties

old path

new path

give technical advice about making or looking after a path

Better access to town  
(\*trading links set up  
\*evacuation of the sick)

increased interest in the village  
(\*visits from supervisors  
\*encouragement for villagers)

#### EDUCATIONAL OBJECTIVES

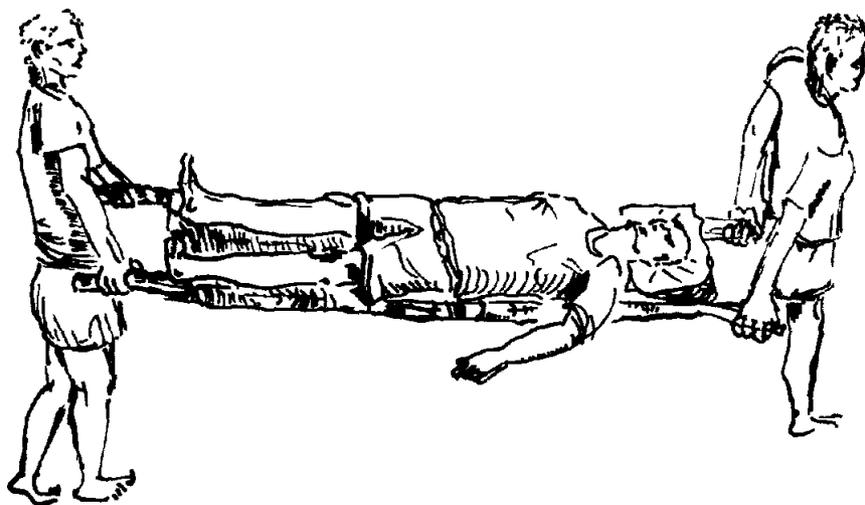
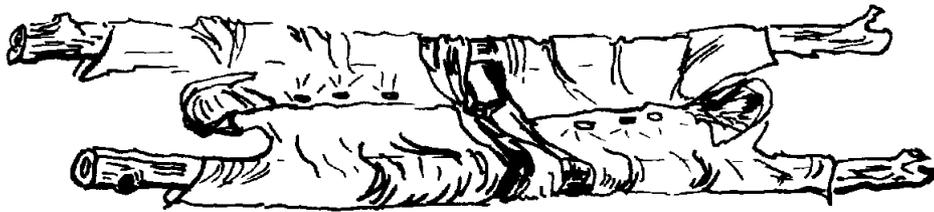
At the end of his training period, the student should be able to

1. recommend a means of transport to enable the villagers to get to town quickly  
mule, donkey, horse, cart or bus,
2. make a stretcher,
3. explain the advantages of being able to get to town in a cart pulled by a donkey,  
a mule, or a horse,
4. explain that, to get to town quickly, 3 things are needed
  - a. have a means of transport
  - b. have someone to go along as well
  - c. have good paths
5. ask his colleague in the next village for advice and show him what has been done,
6. ask important people from the town to come to the village to show them what has  
been done in the village and to ask their advice.

#### TEACHING METHOD

To reach all of these educational objectives, the following methods are suggested

1. have a group of students or friends discuss what means the villagers can use for  
getting to town quickly,
2. take two stout branches 2 metres long and 2 shirts (or some cloth or creepers) and  
make a stretcher,  
lie down on the stretcher and get 2 people to carry you in it for a few minutes to  
see whether it is comfortable and strong,
3. say everything that a cart could carry on going to town and on coming back to the  
village,
4. discuss the way to get hold of a donkey, a mule, a horse or a cart in the village,  
discuss who should be responsible for the cart and the animal,  
show, in the village, which path could be improved.  
Show on the drawing (see Manual) which path is good, which is bad and explain why.
5. discuss how a colleague in a neighbouring village could help to solve problems by  
encouraging the people in your village,
6. discuss what could be expected from an important person from the town when he comes  
to visit your village,  
act out a conversation with an important person from the town to persuade him to  
visit your village.



## HOW TO MOVE QUICKLY FROM ONE PLACE TO ANOTHER

---

Some patients have no means of transport to get them to the hospital or health centre or very few people from the town or neighbouring villages ever come to visit your village.

### WHAT DO YOU DO?

1. To get to town more quickly
2. To get to your village more easily.

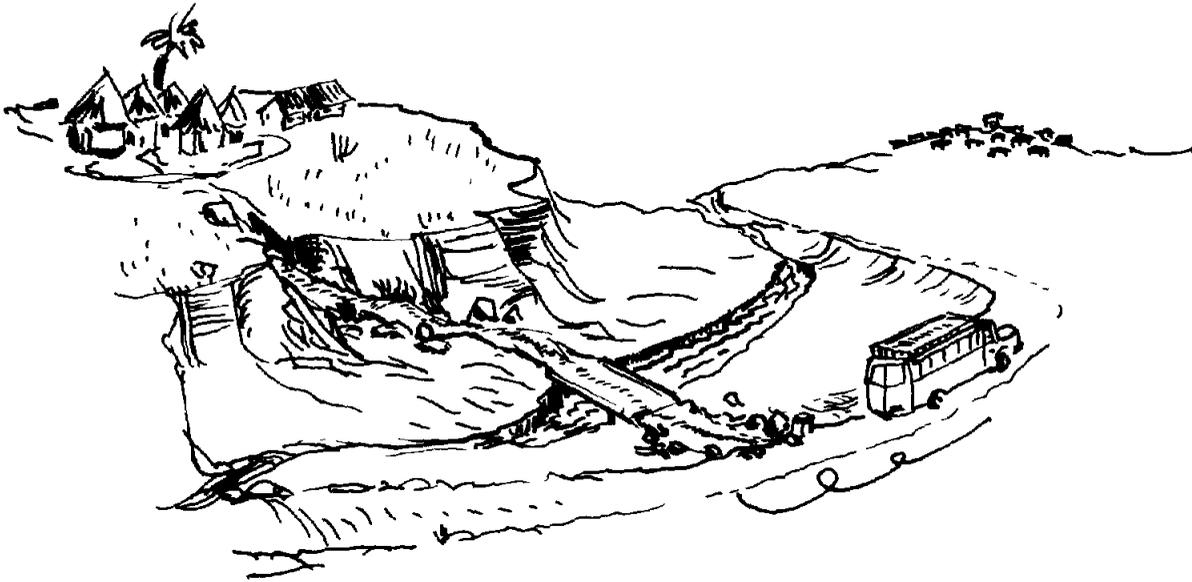
### 1. TO GET TO TOWN MORE QUICKLY

#### 1.1. What means do you want to use?

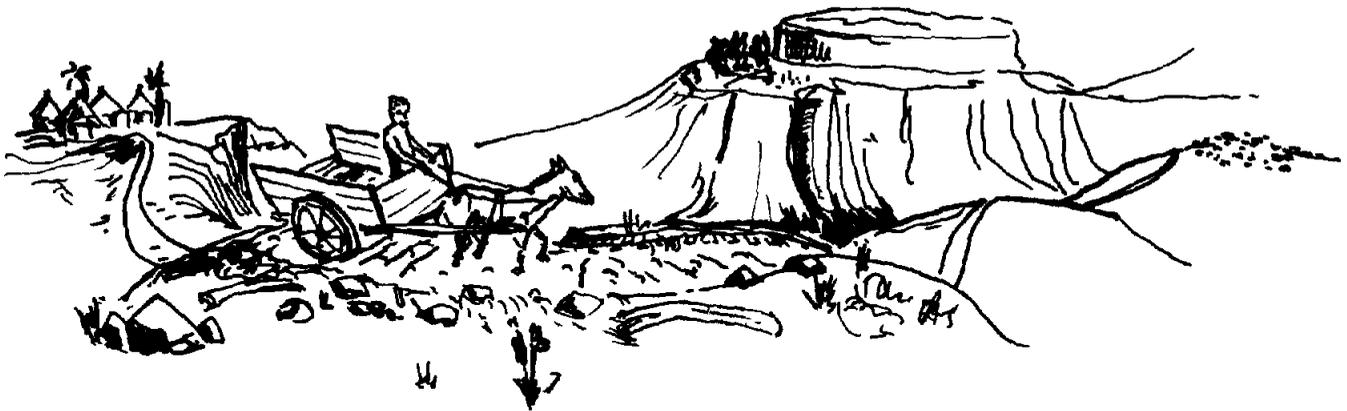
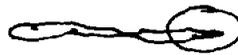
- 1.1.1. A stretcher for moving sick people. To make a stretcher
  - cut two stout sticks 2 metres long,
  - push the sticks through two shirts or sling creepers between the sticks (see drawing)
- 1.1.2. A mule, a donkey or a horse
  - ask the village chief to assign to you an animal that will always be kept ready for moving a sick person or pulling a cart
  - or ask the chief to get the village council to buy an animal for this purpose.
- 1.1.3. A cart
  - ask the village council to pick out a person who is able to make a cart,
  - find an animal to pull the cart (see 1.1.2.)

## 2 PATHS FOR QUICK TRAVEL

1



2



- 1.1.4. Bus if the bus route is not too far away from the village
- make a path from the village to the main road,
  - ask the bus to stop at that point

1.2. Which people in the village will be appointed to various duties?

- 1.2.1. For the stretcher ask the chief to appoint 3 people to carry the sick person on the stretcher to the hospital or health centre.
- 1.2.2. Ask the chief to appoint a driver who will look after the animal or the cart and who will drive it to town.

1.3. Which way will you go?

- 1.3.1. By the old path
- ask for the path to be widened enough to take a cart,
  - cut grass, spread stones, fill in holes,
  - ask the village to appoint someone to keep the path in good condition.
- 1.3.2. By a new path
- make the path follow a route with as few hills and hollows as possible,
  - make the path reach the main road as quickly as possible,
  - and do as described in 1.3.1.

NOTE CAREFULLY! If people can get to town more easily, not only will sick people arrive safely at the hospital but also the village people will be able to get to market more easily and townspeople will be able to come and visit you more often.

2. TO GET TO YOUR VILLAGE MORE QUICKLY
--

2.1. Who will you invite to come from town?

Your supervisor, the agricultural adviser, the senior educational officer, the government representative, etc...

- For this
- 2.1.1. there must be good paths going to the village (see 1.3.)
  - 2.1.2. they must be asked to advise on how to improve the village,
  - 2.1.3. they must be asked to come and see what you have done,
  - 2.1.4. they must be met in town and accompanied to the village.

2.2. Who will you invite to come from other villages?

The chief or any other influential person from a neighbouring village  
(a teacher, a priest... )

- For this
- 2.2.1. there must be good paths going to the other villages,
  - 2.2.2. they should be shown what you have done to improve  
the village and you should ask for their advice and  
ask to visit their villages when they have done  
something good.

CHAPTER 4

C O S T I N G

At this stage in the development of the programme it appears useful to provide some preliminary thoughts on the components that contribute to the cost of the programme. Hopefully, this will stimulate an exchange of views which can be taken into account in the final version to be prepared in 1975.

Normally programmes of this type are not costed before they are implemented. However, a number of recent efforts encourage attempts at preitemizing the resources necessary to deliver primary health care at the peripheral level. There is a project in Indonesia concerned with the specification of Primary Health Care Packages<sup>1</sup>; there are similar efforts in Iran, Malaysia and Tanzania.

In general, the difficulties encountered are of two types. First, it is not an easy task to prepare a minimum list of required drugs and equipment even after appropriate technical tasks have already been specified. Second, even with such a list prepared, it is difficult to estimate an "overall" cost, one which also takes into account the cost of logistics, e.g. supervision, supply and referral, the cost of the training and retraining of personnel, and the cost of the time required for services rendered by the village health worker.

In addition to the above problems, there is the difficulty of establishing an overall programme cost which satisfies two essential constraints. The first concerns the village or the community which can only contribute in a marginal manner to the financing of the programme. The second concerns the health authorities which can only contribute through subsidization to a reduced portion of the necessary costs<sup>2</sup>.

This leads to the selection of drugs and equipment which constitutes that minimum which is equally acceptable to the beneficiaries of the programme (village or community) as to the providers (national administration). This is why the factor of cost remains a constant concern during the selection of priority health problems, the definition of the village health worker's tasks and the definition of the responsibilities of the organized health services system. Thus, for certain health activities and for all community tasks (Chapter 3, section 7) as much use of "no-cost" resources must be made as possible, e.g. through the use of village help and equipment already available to the population

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<sup>1</sup> "The Child in the Health Centre", Book one: A Manual for Health Workers. A component of the Child Care Package. English Experimental Edition. Assisted by WHO Project IR 0559. The Lembaga Kesehatan Nasional. Jalan Inderapura - Surabaya, Indonesia, Draft document. 1973.

<sup>2</sup> These concerns imply taking into consideration different strategies that are compatible with national administration and community financial possibilities. These strategies would be developed during the process of adapting the programme to local conditions of the Member States (Chapter 6)

From the technical point of view, the estimation of cost poses at least two types of problems. First, even after having costed the solution of a problem when it occurs once, it is necessary to arrive at an "overall" cost for that problem which takes into account its likely incidence. This will be done in the final version of this Chapter by use of health demand statistics drawn from three or four countries in the world. Second, arriving at a unit cost for a given problem necessitates taking into account material which may be used for other problems and whose replacement frequency depends on how often it is used.

The preceding lead to two principles which will guide the development of this Chapter. The first is that methods will be applied for estimating cost of the solution of a problem as a unit cost (e.g. more than three liquid stools per day) and for a category of problems as an "overall" cost (e.g. communicable diseases). Secondly, different estimates will be calculated which illustrate the influence of certain epidemiological criteria (frequency, incidence) and of certain geo-demographic criteria (population, size and structure of the village).

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Once completed, the Chapter will contain, in addition to Annex II (list and estimated cost of required equipment, drugs and supplies) three sections:

1. Methods for estimating cost
2. Estimated cost of the solution to a problem
3. Numerical illustrations

1. Methods for estimating cost

1.1 Method based on unit cost of a problem solution

1.1.1 Determination of the three principal components of the cost: drugs, equipment and time required for service rendered

1.1.2 Establishment of the cost of a problem solution. matrix of a problem

1.2 Method based on the "overall" cost of solving a class of problems

1.2.1 Aggregation of unit costs

1.2.2 Matrix of problem classes.

- 2 Estimated cost of the solution to a problem
  - 2.1 Application of the method (1.1) based on unit cost approach to the thirty problems covered by the programme
    - 2 1.1 Table of estimates
    - 2 1.2 Comments Problems of the variety and magnitude of needs
  - 2.2 Application of the method (1.2) based on "overall" cost approach to the solution of one class of problems
    - 2.2.1 Table of estimates
    - 2.2.2 Comments. Problem of developing a matrix reflecting alternative overall costs of the programme (maximum - minimum)
  
- 3 Numerical illustrations
  - 3 1 Choice of examples
    - 3 1.1 Frequency of the problem
    - 3.1.2 Frequency of contacts/interventions by case
    - 3.1.3 Cost of drugs and equipment
  - 3 2 Illustration of cost estimation of logistics
    - 3 2.1 Storage and handling
    - 3 2.2 Transportation
    - 3.2.3 Supervision
    - 3.2.4 Referral - evacuation to a health centre or hospital
  - 3 3 Illustration of cost estimation for the health services resulting from village health worker activities
    - 3 3.1 Drugs and hospitalization for referred cases
    - 3.3.2 Transport for emergency cases
    - 3 3.3 Method of supervision
    - 3.3.4 Other costs incurred by the programme - training personnel
    - 3.3.5 General costs of administration and management
      - promotion and activities of the programme to the villages
      - costs of initiation and of promotion of community development activities

CHAPTER 5

LOGISTICS

The chapter on logistics includes:

1. Supply of drugs and equipment
2. Supervision
3. Referral of patients.

1. Supply of drugs and equipment

This subject is considered under six sub-titles:

- a) manufacturing
- b) purchasing
- c) storage and book-keeping
- d) packaging
- e) transportation
- f) supply management.

a) Regularly supplying the village posts may progressively increase the demand for basic drugs as the rural health programme expands. The composition of the basic supply list will be much determined by the local national manufacturing capacity, as it is anticipated that locally produced drugs will be reasonably preferred to other sources. The increasing demand would have a stimulating effect on local production.

b) Acquisition arrangements for supply will much depend on the network and coverage of existing pharmaceutical outlets in the country. The absence of such a service may favour the centralized solution with provision of large quantities at wholesale prices. The importation of supplies from foreign countries will pose the problem of finding hard currency and eventually some bilateral assistance or international agency intervention may be requested.

c) Storage and book-keeping procedures should be simplified and made uniform at all levels. It can be estimated that a central storehouse, with limited transport and maintenance, may supply as many as one thousand village posts. Nevertheless, a decentralized formula may also be adequate when the existing health facilities offer room and means for storing and distributing village supplies.

d) Packaging should be handled by the central warehouse staff when a centralized scheme has been opted for. A package should be of a standard format, the volume being dependent on (N) gross population estimated need over (t) months. These estimations should be reached after some months of controlled observation of the drug consumption in representative villages. The container should be patterned to roughly correspond to the consumption rate of different drugs, for example 50 vials of penicillin, 500 tablets of sulfamides, 1 250 aspirins, etc. Each standard box responding to the need of, for example, every 600 population over one year will be expected to cover 300 population need over two years and so on.

e) The transportation problem will not be an issue where the existing capillary of pharmacy outlets extends to rural areas thus enabling local purchases to be made by villagers. Another possibility is that rural health services be given the means to supply village posts located in their catchment area. This should not necessarily imply that rural dispensaries should be operating motorized vehicles, because the maintenance and repair of vehicles in rural areas are difficult and costly. The pooling of means of transport and repair facilities are easier to manage.

f) The management of this rural delivery service will much depend on local characteristics. One point seems however certain. An over-fragmented system such as supplying a considerable number of village posts, ought to be functional in rural conditions even when means of communication (i.e. telephone) are scarce or do not exist. A standardized scheme should be able to operate with estimated needs supplied on a "push" basis, prior communication or demands not being a required element.

## 2. Supervision

The village supervisor's technical profile and his job in relation to the VHW is to be described elsewhere. What is defined here is the managerial nature of his supervisory role as he is the first and probably the only person to establish a link between the community operated village health post and the formal health service (hospital or rural health centre) closest to the village. The role of the supervisor extends to the health centre where he is stationed as he is the first to attend to the patients referred, and he can assist the village post by transmitting information and possibly transporting some supplies.

Organization of briefing cycles for VHWs on the epidemiological work and mass interventions; coordinating them into actions involving the catchment area, training new groups of VHWs, are all within his responsibility.

The frequency and intensity of the supervisory work in the villages should depend on the village and VHW characteristics and optimal solutions should be worked on after careful costing of alternatives.

## 3. Referral of patients

A prerequisite to the establishment of a village health post is the identification of its referral point, however distant this might be, for patients requiring more complex diagnostic and treatment interventions. It is therefore anticipated that the establishment of health posts will considerably increase the actual demand for services in the higher health units. The development of rural health

services should therefore be envisaged as a corollary to the establishment of village health posts as they will have to deal with another category of patients who are better selected and probably more deserving.

Referrals in a much broader sense should include all consultations necessary to obtain assistance, cooperation or advice. In addition to the medical field, the community's health conditions may require that any available know-how from other sectors, e.g. agriculture, veterinary, breeding and stock raising, fisheries, etc., be known to the VHW as possible problem referral foci for consultation and cooperation on the area's development every time health related work is involved.

CHAPTER 6

S U M M A R Y O F  
G U I D E L I N E S F O R A D A P T I N G  
T H E P R O P O S E D P R O J E C T  
T O N A T I O N A L S I T U A T I O N S

The materials presented in the previous sections illustrate the basic features of the approach being proposed for increasing the delivery of services at the peripheral level. They are not aimed at any one particular country; each country will need to adapt the proposal so that it fits well into the national strategy for extending the coverage of health services. This section, when completed, will constitute a set of guidelines advising a country as to how this process of adaptation might be organized.

National administrators responsible for developing a programme of action built around the suggested approach face three basic problems a) how to establish a national programme, b) how to design in detail the technical features of the programme, and c) how to implement the design.

Each of these problems corresponds to a different phase in the development of the programme. The first is basically administrative, the second is technical and the third is operational. The major steps involved in progressing through these phases are summarized in the following paragraphs.

#### 1. Phase I - ESTABLISHMENT OF A NATIONAL PROGRAMME

##### a) Distribution of responsibilities

- The types of decisions required for programme development and implementation will be identified.
- Many of these decisions should involve those most directly concerned, if their successful implementation is to be assured. This is especially the case for communities participating in the programme.
- A hypothetical distribution of decision-making responsibilities will be presented which emphasizes the active participation of communities as well as service providers.

##### b) Identification of programme objectives

- The need for well-defined objectives will be stressed - without them it is not possible to identify target populations with the highest priority nor is it possible to determine what the content of VHW training should be.
- The process for identifying priority health problems will be described.

##### c) Development of implementation strategy

- The implementation strategy must be concerned with:
  - the financial solvency of the programme, the technical soundness of the programme design and the relationship of the programme to the existing legal administrative machinery

- approximate capital and recurrent cost implications need to be established and appropriate funding mechanisms assured
- four design problems should be the subject of special task forces. These are the specification of desired community/programme relationship, the design of a training system for village health workers and their supervisors, the design of a logistics system and the design of a management system. The terms of reference of these task forces will be presented
- the importance of establishing a well-defined role for communities in supporting and managing village-level activities will be stressed
- the possibility that a testing period might be a desirable first step will be discussed
- a summary listing of the items to be included in an implementation strategy will be presented.

## 2. Phase II - DESIGN OF PROGRAMME

### a) Specification of desired community/programme relationship

- The desired roles of the community included in the implementation strategy need to be developed in detail during the design phase so that they can be tested and further developed as part of programme execution.
- Various types of community participating roles will be discussed and the need for each community to establish a relationship with the programme best suited to its need, will be stressed.

### b) Design of training system

- The process whereby materials such as those prepared by WHO in earlier sections of this report will be described briefly.
- The need for establishing a training system (organization, scheduled training sessions, course evaluation, retraining needs, etc.), will be stressed.
- The desired involvement of health services personnel along with educators and educational institutions will be described
- Desired characteristics of trainees and procedures for their selection will be outlined, for VHWs as well as for their supervisors.

### c) Design of logistics system

- The logistics system is seen to be concerned with supply, supervision and referral.
- The process of designing a logistics system which has the desired characteristics (see Chapter 5) will be described

d) Design of programme management system

- Different levels of system (ranging from community up to national programme managers) are concerned with different aspects of programme operations. These need to be identified before management system can be designed.
- Once the training, logistics and supervisory systems have been outlined, the necessary managerial resources can be identified to assure the proper continuous functioning of these systems
- The distribution of responsibilities for the programme is shared among the different levels identified. This distribution needs to be translated into job description terms of various key people in the programme. This will be illustrated.

3. Phase III - IMPLEMENTATION OF PROGRAMME

a) Scheduling of major programme events

- Major events starting from the establishment of the programme through actual execution need to be identified and logically structured and interrelated
- The process of identifying activities required for the completion of these events will be discussed so as to illustrate the methodology of network analysis.
- The significant resources required for major activities will be identified as well as the likely time required for their completion.

b) Adjustment of programme design

- During testing and early implementation of the programme, certain desired design features are likely not to be well realized. Those that are most likely include: the financial security of the programme, the pattern of resources consumed at the community level and the maintenance of a responsive management system at all levels.
- Ways of monitoring and adjusting system design will be briefly described. Given the likely scarcity of managerial resources these ways will have to be inexpensive and will have to focus on priority difficulties that the programme is facing.

c) Evaluation of programme impact

- "Impact" is a characteristic to be understood from the perspective of the consumer i.e. the villages and communities participating in the programme. Ways of assessing impact need to be defined; several will be briefly identified.

- The evaluation process requires the use of managerial resources. The nature of these resources will be described as well as the provision of a hypothetical schedule of evaluative activities.
- The kinds of knowledge that might usefully be gained from evaluation will be discussed.

A N N E X E S

EXAMPLE LIST  
OF COMMON PRIORITY HEALTH AND COMMUNITY  
PROBLEMS AND CONCERNS TO BE TACKLED  
BY VHWS

---

1. COMMUNICABLE DISEASES
  - 1.1 Vaccinations (reminder - to be considered in the context of national programmes)
  - 1.2 Diarrhoeas
  - 1.3 Respiratory infections
  - 1.4 Fevers
  - 1.5 Epidemics
2. MATERNAL CARE
  - 2.1 Prenatal care
  - 2.2 Delivery care
  - 2.3 Postnatal care
  - 2.4 Birth spacing
3. CHILD HEALTH
  - 3.1 Infant feeding
  - 3.2 Malnutrition
4. ACCIDENTS
  - 4.1 Burns
  - 4.2 Wounds
  - 4.3 Fractures
  - 4.4 Bites
5. VILLAGE AND HOME SANITATION
  - 5.1 Water supply
  - 5.2 Excreta disposal
  - 5.3 Waste disposal
  - 5.4 Food protection

6. OTHER COMMON DEMANDS

- 6.1 Skin diseases
- 6.2 Eye diseases
- 6.3 Headaches
- 6.4 Stomache aches
- 6.5 Painful joints
- 6.6 Intestinal parasites
- 6.7 Anaemia
- 6.8 Mouth and throat ailments
- 6.9 Tumefactions
- 6.10 Conditions that only females have

7. COMMUNITY DEVELOPMENT

- 7.1 Selection and production of foodstuffs
- 7.2 Transport and communication development

---

N.B. For selecting the above example list of problems and concerns the following criteria have been applied (except for item 7):

- frequency of disease
- demand from the public
- danger to the individual
- danger to the community
- technical feasibility of action for a VHW
- economic consequences of the "problem".

LIST AND ESTIMATED COST OF REQUIRED  
EQUIPMENT, DRUGS, AND SUPPLIES

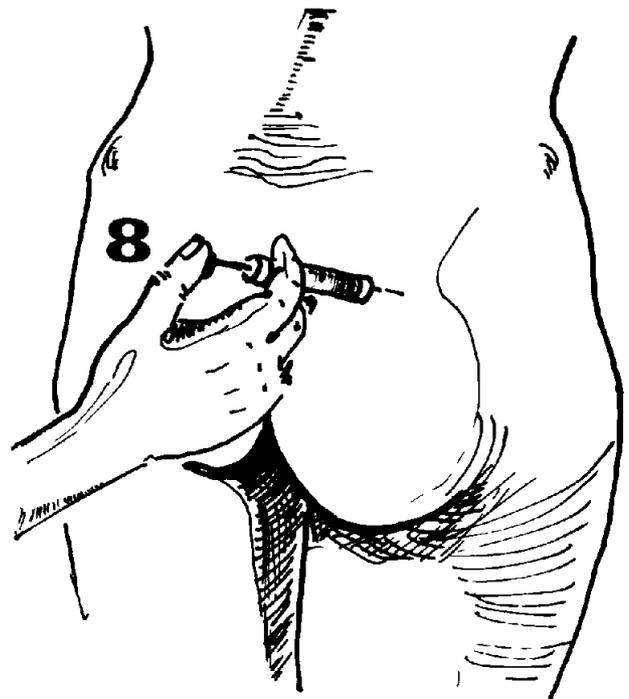
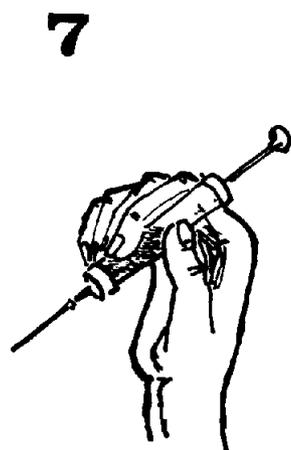
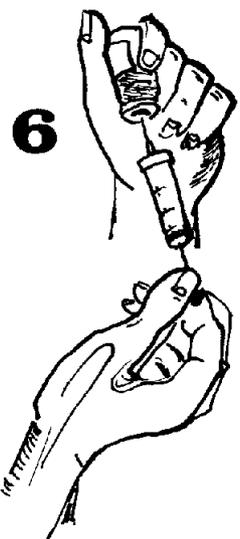
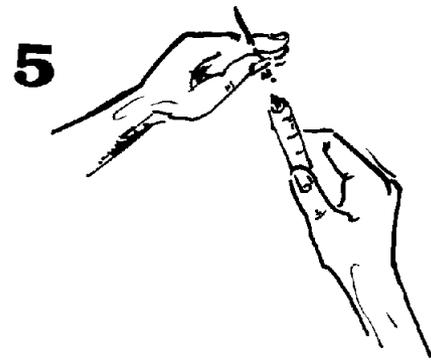
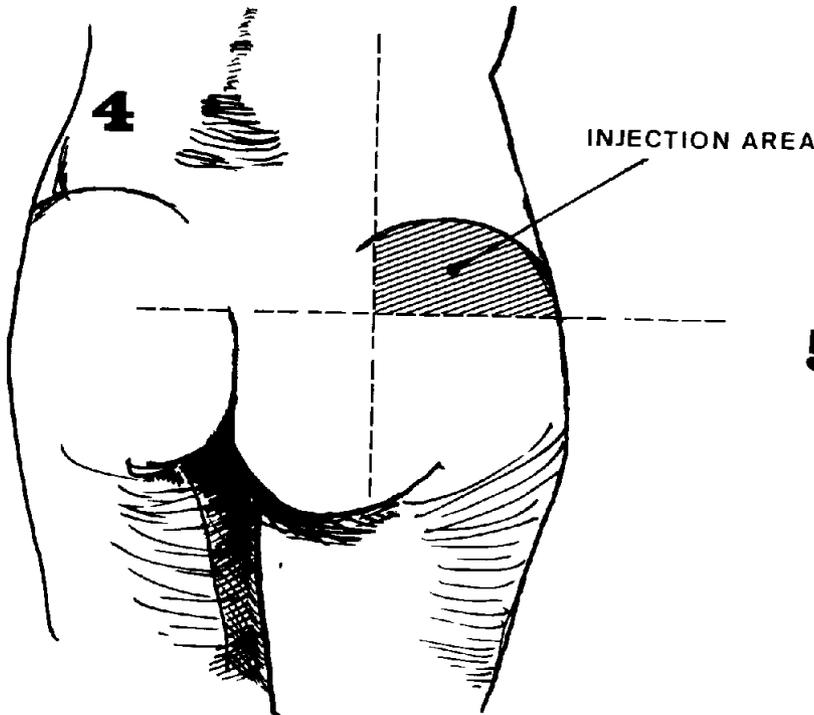
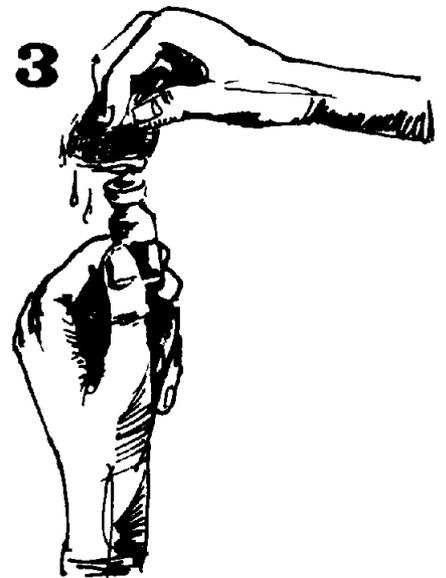
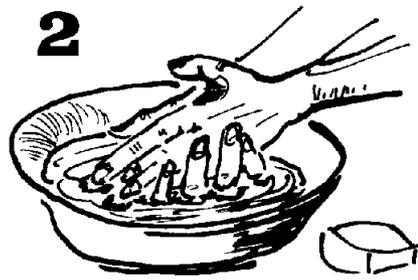
ITEMS	QUANTITY	PRICE*
1. Baby scales	1	11.00
2. Metal sterilizing container for instruments (including alcohol burner)	1	8.03
3. Basin, with lid, for instruments	1	3 18
4. Box containing 100 dipsticks for detection of albumin in urine	1	1.77
5. Clinical thermometer	1	0.27
6. Syringe, 2 or 5 cc.	1	0.30
7. Intramuscular needles	12	0.50
8. Scissors for dressings	1	0.53
9. Porous stone	1	0.50
10. Various equipment for community development activities (to be provided by the community)		to be noted
11. Powder to prepare oral rehydration fluid	1 kilo	1.15
12. Aspirin, 500 mg tablets	1000 tablets	0.75
13. Sulfadiazine, 500 mg tablets	1000 tablets	5.50
14. Chloroquine, 100 mg tablets	1000 tablets	4.20
15. Benzylpenicillin, 1 million units bottle	1 bottle	0.09
16. Iron sulphate, 300 mg tablets	1000 tablets	0.42
17. Gentian violet powder	1 kilo	40.00
18. Rolls of gauze, 5 cms x 5 m	10 rolls	3.00
19. Gauze dressings	Packet of 10	1.00
20. Iodine tincture, 100 cc	1 bottle	0.20
21. Benzyl benzoate	1 litre	1.74
22. Tetracycline ophthalmic ointment	1 tube	0.20
23. Belladonna tincture	1 bottle	0.50
24. Piperazin, 500 mg tablets	1000 tablets	3.00
25. Soap (80% oil), 360 gr bars	60 bars	16.00
26. Alcohol for alcohol burner	10 litres	5.00
27. Rolls of sticking plaster/tape, 5 cms x 5 m	1 roll	2.50

\* On the basis of UNICEF documents, 1974.  
Estimated in US dollars.

A FEW PRIMARY CARE

T E C H N I Q U E S

1. Intramuscular injection
2. Sub-cutaneous injection
- 3 Taking a temperature

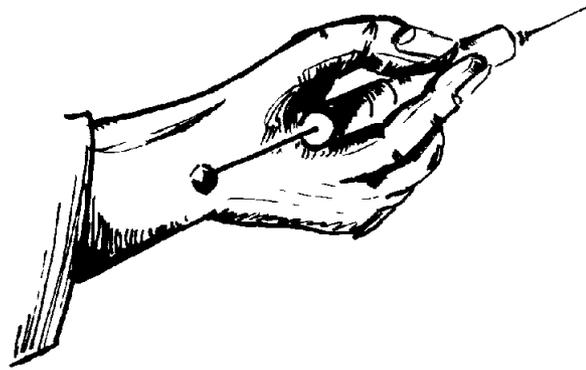


1. INTRAMUSCULAR INJECTION (in the buttocks)

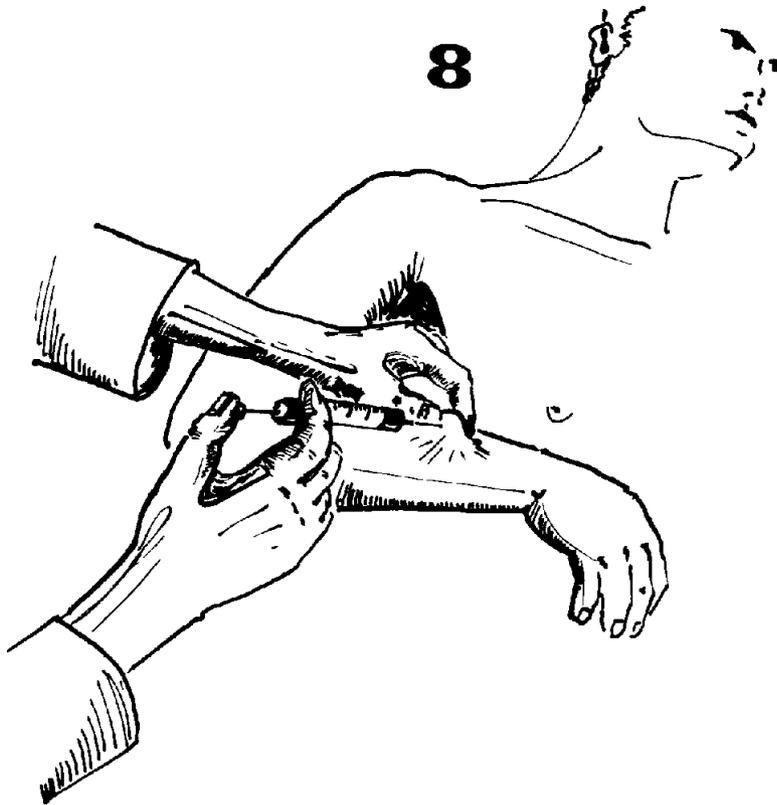
Follow the 8 steps illustrated by the drawings.

1. Put both parts of the syringe and the needle into a metal container (pan or metal box) Cover them with water and boil for  $\frac{1}{4}$  hour.
2. Wash your hands with soap and clean water. Rub your hands together. Rinse with clean water.
3. Clean the top of the small bottle containing the penicillin (or any other liquid to inject) with a clean cloth on which you have dropped a few drops of alcohol rub it two or three times.
4. With the same piece of cloth rub two or three times the place where you will give your injection: on the buttocks for intramuscular injections, on the forearm for sub-cutaneous injections. On the buttocks choose the place for your injection fairly high up and away from the middle of the back, as indicated on the drawing.
5. Put the two parts of the syringe together again and fix the needle into it. To do this hold the needle by its wider part.
6. Hold the small bottle upside down and place the needle into it. Push the needle in about one centimetre. Suck the required quantity of liquid into the syringe and take the syringe out of the bottle holding the needle again by its wider part.
7. Hold the syringe as indicated on the drawing and stand behind the patient.
8. Push the syringe and needle quickly two or three centimetres into the flesh where you have cleaned it. Push on the mobile part of the syringe until all the liquid has disappeared. As in paragraph 6, take out the syringe and needle, still holding the needle by its wide part.

7



8



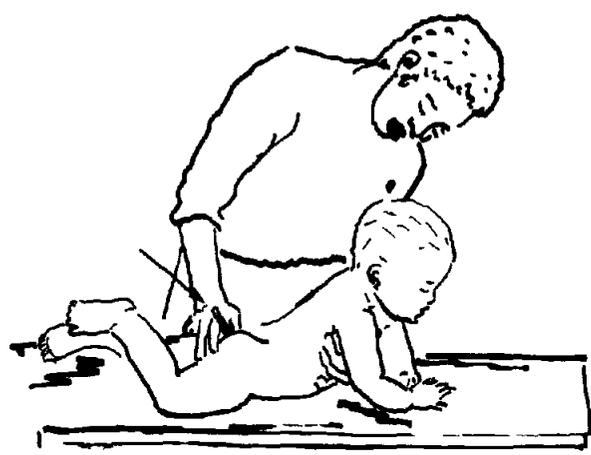
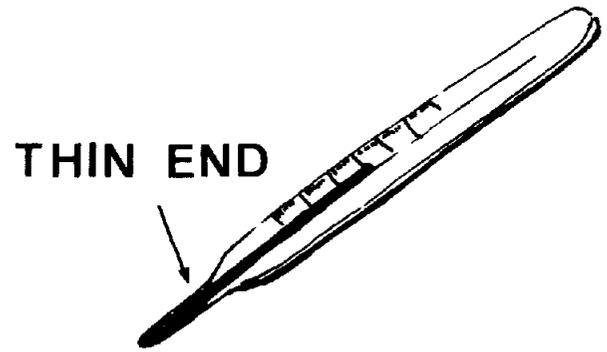
2. SUB-CUTANEOUS INJECTION (in the arm or fore-arm)

Follow the 8 steps illustrated by the drawings:

For steps 1, 2, 3, 4, 5, and 6 see "intramuscular injection".

7. Hold the syringe as indicated on the drawing.

8. Lift the flesh of the fore-arm (or arm) with your left hand. Put the needle about one centimetre under the skin, then let go of the skin and push on the mobile part of the syringe to introduce all the liquid. Take out the syringe and the needle



### 3. TAKING A TEMPERATURE

Follow the 4 steps listed below

1. Ask the patient to put the thin part (which is about 3 centimetres long) of the thermometer (see drawing) in his (or her) anus. In the case of a child, or a patient unable to do it himself introduce the thermometer into his (or her) anus yourself.
2. Leave the thermometer in this position for about two minutes. If the patient is an adult he should lie down on his side. If it is a child (especially a very young child), he should lie down on his belly and you must hold him properly (see drawing).
3. Take the thermometer out and read which mark the liquid inside the thermometer has reached. If the mark is higher than  $37^{\circ}5$  (i.e. half way between 37 and 38) the patient is feverish. The higher the mark the more feverish the patient will be.
4. Clean the part of the thermometer which has been in the patient's anus with a piece of clean cloth and soapy water. Store the thermometer properly to prevent it from falling and breaking.

EXPLANATION OF KEY WORDS  
(Dictionary)

## A

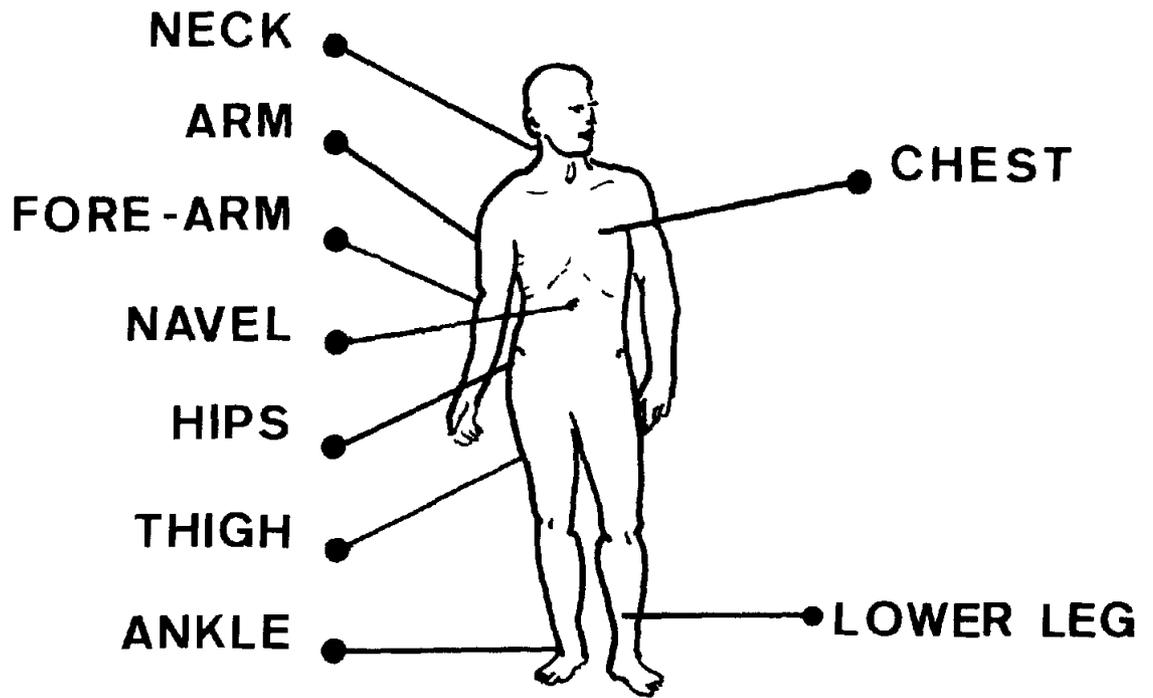
- Abcess· lump of pus  
 Abdominal: of the belly  
 Afterbirth (placenta). piece of flesh in the womb to which the cord is attached and which comes out of a woman  $\frac{1}{2}$  hour after she has had a baby  
 Albumin. chemical substance found in the urine of certain patients  
 Alternative. another solution, another possibility  
 Amenorrhoea. a woman is suffering from amenorrhoea if she does not have her periods  
 Anaemia: when the blood is too weak  
 Ankle see drawing of body  
 Anus· the hole in the bottom  
 Arm. see drawing of body  
 Aspirin medicine taken to ease pain  
 Asthenia tiredness  
 Aureomycin. medicine used against infections

## B

- Baby: child which is going to be born or which has just been born  
 Baby's bottle· bottle from which a baby drinks  
 Bandage· piece of clean cloth used to wrap round a limb that is hurt  
 Belladonna· medicine used to ease pains in the belly  
 Belly: abdomen  
 Blow: hard stroke  
 Boiled· said of anything which has been kept at 100° for  $\frac{1}{4}$  of an hour  
 Bowel movement: passing stools  
 Breech: when the baby's buttocks are the first part to appear at the beginning of delivery  
 Buttocks: the flesh on the bottom

## C

- Cereals. plant from which flour is made (wheat, maize, rice, millet, etc.)  
 Chest see drawing of body  
 Childbirth birth of a baby





## G

Genital: of the sex organs

Genitals sex organs

## H

Haemoptysis. the spitting of blood from the mouth

Handicapped person: a person who is not normal or who cannot use his hands  
or his legs in a normal way

Heel. back part of foot beneath the ankle

Height the size of a person measured in centimetres from the top of the  
head to the heel

Hips see drawing of body

## I

Incision - to make an incision: to cut, to open

Injection liquid put into the buttock by a needle and syringe

Injection - to give an injection: to put liquid into the buttocks using a  
needle and syringe

Instructor. the person who helps you to learn

## J

Joint: the part joining two bones, such as the knee or the ankle

## L

Latrine: hole into which stools are dropped

Leucorrhoea: see discharges

Lochia: vaginal discharge which takes place one or two weeks after the  
birth of a child

## M

Menopause: stopping of a woman's periods when she gets older (at about 47 years)

Menorrhagia periods that are too heavy

Metrorrhagia. blood which a woman loses from below (vagina) but which is not  
her periods

Mortar: mixture of sand, cement and water

Mucus: thick liquid, slime

## N

Nape: back of neck

Nasal of the nose

Navel see drawing of body



Stool: what the body passes out through the anus, feces  
Stretcher. bed carried by two people in order to evacuate a sick person  
(see evacuate)  
Stupor - state of stupor. when someone does not move and does not speak  
because he is very frightened or because he is  
very sick  
Sulfadiazine: medicine used against infections  
Supervisor: person who comes at regular intervals to give you advice and to  
whom you are responsible  
Swelling: enlargement of a limb or part of a limb. May also be a small bump or  
lump under the skin  
Syringe. instrument for giving injections

T

Tablet: flat piece of medicine  
Teaching method way of learning more easily  
Tetracycline. medicine used against infections  
Thigh. see drawing of body  
Toilet - go to the toilet: to pass stools (see stool), have a bowel movement  
Tourniquet. cord or piece of cloth tightly tied round a limb to prevent the  
normal flow of blood

U

Unemployed. said of a person out of work  
to Urinate: to pass water  
Uterus. see womb

V

Vagina: )  
Vulva. ) a female's genitals  
Vegetable oil. oil which comes from plants

W

Weekly report: information given every week  
Widow: her husband is dead  
Widower: his wife is dead  
Womb. pouch in which a baby grows inside his mother  
Wound. where the skin is torn or broken, the flesh may or may not be deeply  
cut

Y

Yomesan: medicine used against worms