

VILLAGE HEALTH

A Handbook for Village Health Workers in Southeast Asia



BOOK 4

UNIT 10 - SIGNS INDEX

UNIT 11 - LIST OF SICKNESSES

UNIT 12 - DIARRHEA, DEHYDRATION AND VOMITING

UNIT 13 - SKIN PROBLEMS

UNIT 14 - EYE PROBLEMS

UNIT 15 - TEETH, GUMS AND MOUTH

Editors:

J. H. Richardus MD PhD DTM

M. Wannemacher MA

Illustrations:

G. Sharmars

Produced by the Community Medical and Development Text Translation Project (CMDTTP), in cooperation with the Payap University Research and Development Institute and the Summer Institute of Linguistics, Chiang Mai, Thailand.

1993, Revised 2001

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The "Village Health" English version consists of 6 books:

Book 1: Introduction and Translation Manual

Book 2: Unit 1 - The Village Health Worker

Unit 2 - How to Prevent Many Health Problems

Unit 3 - Nutrition

Unit 4 - How to Take Care of Sick People

Unit 5 - First Aid

Book 3: Unit 6 - The Body and How the Body Works

Unit 7 - Introduction to Sickness

Unit 8 - How to Examine a Sick Person

Unit 9 - How to Use Medicines

Book 4: Unit 10 - Signs Index

Unit 11 - List of Sicknesses

Unit 12 - Dehydration, Diarrhea and Vomiting

Unit 13 - Skin Problems

Unit 14 - Eye Problems

Unit 15 - Teeth, Gums and Mouth

Book 5: Unit 16 - Family Planning

Unit 17 - Women's Health, Pregnancy and Childbirth

Unit 18 - Health and Sickness of Children

Unit 19 - How to Prevent Disabilities

Unit 20 - Health and Sickness of Old People

Unit 21 - Addiction

Book 6: Unit 22 - Family and Village Projects

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If you are interested in translating this book, please contact the editors at the address below:

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This book series has currently been translated into Thai, Jinghpaw, Rawang, Burmese, Sgaw Karen, and Lisu.

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TABLE OF CONTENTS - BOOK 4:

Unit 10 - Signs Index	1
Unit 11 - List of Sicknesses	16
AIDS	16
Allergies	19
Ameba	20
Anemia	21
Arthritis	22
Asthma	23
Back Pain	25
Bell's Palsy	27
Bronchitis	27
Cancer	28
Chicken Pox	29
Cholera	30
Colds and Flu	31
Constipation	33
Convulsions	33
Cough	34
Dengue (Hemorrhagic) Fever	36
Diabetes	37
Diphtheria	37
Ear Infection	38
Encephalitis	39
Epilepsy	40
Filariasis	41
Fluke	42
Gallbladder Sickness	43
Goiter	44
Gonorrhea	44
Headaches and Migraine Headaches	46
Heart Problems	47
Hemorrhoids	48
Hepatitis A	48
Hepatitis B	49
Hernia	50
Herpes	52
High Blood Pressure	53
Kidney or Bladder Blockage	53
Leprosy	54
Malaria	56
Malnutrition	58
Measles	60
Meningitis	61
Mumps	62
Phimosis	63
Pneumonia	63

Polio	65
Postpartum Sepsis	66
Prostate Problems	67
Rabies	69
Rubella	70
Septicemia	71
Sinus Infection	72
Sore Throat	72
Syphilis	73
Tetanus	75
Thalassemia	77
Thyroid Problems	77
Trichinosis	78
Tubal Pregnancy	79
Tuberculosis	79
Typhoid Fever	81
Typhus	83
Ulcers in the Stomach/Lower Chest Pain	84
Urinary Tract Infection	85
Vaginal Infections	86
Varicose Veins	88
Whooping Cough	89
Worms	90
Unit 12 - Dehydration, Diarrhea and Vomiting	95
Dehydration	95
Diarrhea and Dysentery	97
Vomiting	103
Unit 13 - Skin Problems	105
How to Treat Most Skin Problems	105
How to Use Hot Compresses	106
Abscess	107
Corns	107
Eczema	108
Erysipelas	108
Fungus Infections	109
Gangrene	110
Impetigo	111
Itchy Skin from Plants, Bugs and Objects	111
Lice	112
Mask of Pregnancy	112
Molluscum Contagiosum	113
Pellagra	113
Pimples	114
Psoriasis	114
Rash that Itches	115
Scabies	116
Shingles	117

Skin Ulcers from Poor Blood Circulation	117
Sores with Pus	118
Ticks	119
Tuberculosis of the Skin	119
Warts	120
White Spots or Patches on the Face or Body	120
Diaper Rash	121
Cradle Cap	122
Unit 14 - Eye Problems	123
Danger Signs	123
How to Put Antibiotic Eye Ointment into the Eye	123
Eye Injuries	123
How to Remove Dirt from the Eye	124
Red Eye	124
Red Eye in Newborn Babies	125
Glaucoma	126
Tear Sac Infection	127
A Person Cannot See Clearly	128
Eyes that Do Not Look Straight	128
Infected Eyelid	128
A Thick Covering that Grows on Part of the Eye	128
A Sore on the Eye	129
Bleeding in the White Part of the Eye	129
Bleeding in the Brown Part of the Eye	129
Pus Behind the Brown Part of the Eye	129
Cataracts	130
Night Blindness	130
Seeing Spots	131
Double Vision	131
Unit 15 - Teeth, Gums and Mouth	133
Care of the Teeth and Gums	133
How to Make a Toothbrush	133
How to Make Powder to Clean Your Teeth	134
Toothholes and Toothaches	134
Gum Sickness	134
Sores or Cracks at the Corner of the Mouth	135
White Patches or Spots in the Mouth	135
Procedure List	137
Review of Vital Signs	138
Weight and Volume	139
Medicine Dose	140
Where to Find Health Problems in This Book	141

UNIT 10

SIGNS INDEX

The signs in this list can help you decide what sickness a person has. Examine the person. Then look at the major signs first. Look for other signs that go along with the major sign. You might identify one or many possible sicknesses after you check the signs. Read about the sicknesses in Units 11, 12, 13, 14 and 15. Then try to decide what sickness the person has. If you are not sure what sickness the person has, then send the person to visit a professional health worker.

GENERAL

<u>Major Signs</u>	<u>Other Signs</u>	<u>Possible Sickness</u>
High fever (Over 39 C, 102 F)		malaria septicemia diphtheria dengue fever abscess
	red, warm bump or patch on skin	
	stiff neck	meningitis encephalitis
	delivered baby	postpartum sepsis
	newborn baby	septicemia (newborn)
	diarrhea	typhoid fever dysentery
	face pain	sinus infection
	sore throat	throat infection
	ear pain	ear infection
	cough	TB pneumonia whooping cough
	fast breathing	pneumonia
	yellow mucus	bronchitis
	urinary/back pain	urinary tract infection, kidney or bladder blockage
	abdominal/pelvic pain	urinary tract infection
	rash	typhus measles rubella chicken pox
	yellow eyes	hepatitis
	leg weakness	polio
	ate uncooked pork	trichinosis

<u>Major Signs</u>	<u>Other Signs</u>	<u>Possible Sickness</u>
Low fever (less than 39 C, 102 F)		cold or flu malaria AIDS dehydration
	cough	TB measles ear infection cold pneumonia
	fast breathing	pneumonia TB
	yellow eyes	hepatitis fluke
	stiff neck, very sick, bulging soft spot	malaria meningitis
	blister rash	chicken pox
(See "high fever" if none of these apply.)		
Chills (usually with high fever)		malaria cold or flu typhoid fever septicemia dengue fever
	delivered baby	postpartum sepsis
	cough, fast breathing	pneumonia
Fast or irregular pulse (Adult, faster than 80 each minute) (Child, faster than 100 each minute) (Baby, faster than 140 each minute)		fever (normal) dehydration heart problem shock anemia taking drugs
Slow pulse (Adult, slower than 60 each minute) (Child, slower than 80 each minute) (Baby, slower than 100 each minute)		typhoid fever dengue fever stroke thyroid problem hepatitis
High blood pressure (second number is more than 100)		diabetes high blood pressure
	7-9 months pregnant	toxemia

<u>Major Signs</u>	<u>Other Signs</u>	<u>Possible Sickness</u>
Fast breathing (Adult, faster than 20 each minute) (Child, faster than 30 each minute) (Baby, faster than 40 each minute)	wheezing pale under eyelids dry mouth stuffy nose high fever cough	diabetes severe allergic reaction taking drugs asthma anemia dehydration cold pneumonia TB
Slow or difficult breathing (Adult, slower than 12 each minute) (Child, slower than 20 each minute) (Baby, slower than 30 each minute)		taking drugs tetanus stroke asthma heart problem severe allergic reaction
Cough	dry or white mucus green or yellow mucus bloody mucus	whooping cough cold or flu smoker's cough asthma bronchitis worms measles pneumonia TB pneumonia TB bronchitis TB whooping cough pneumonia
Wheezing		allergy asthma diphtheria severe allergic reaction
Diarrhea	fever mucus and blood	See Unit 12 worms typhoid fever malaria ear infection dysentery urinary tract infection ameba

<u>Major Signs</u>	<u>Other Signs</u>	<u>Possible Sickness</u>
Diarrhea (continued)	yellow with bubbles long term severe, rice water fever and rash newborn baby	giardia malnutrition ameba cholera measles septicemia
Constipation	fever	ameba dengue fever typhoid fever
Nausea and vomiting	whoop after cough fever blood in vomit blood and shock all who ate together severe pain, vomit smells like feces pain in mid-right abdomen newborn baby	dehydration pregnancy cold or flu fluke worms migraine headache throat infection whooping cough abdominal emergency malaria hepatitis ear infection measles diarrhea encephalitis meningitis urinary tract infection nose or mouth wound stomach ulcer malaria typhoid fever encephalitis abdominal emergency food poisoning abdominal emergency gallbladder problem septicemia
Very thirsty		dehydration diabetes
Pain in joints or muscles		sprain dislocation arthritis

<u>Major Signs</u>	<u>Other Signs</u>	<u>Possible Sickness</u>
Loss of feeling, numbness, tingling		wound leprosy migraine headache tetanus alcoholism diabetes
	after animal bite	rabies
Paralysis (severe weakness, inability to move a body part)		leprosy migraine headache wound polio encephalitis stroke Bell's palsy
	high fever 1 side of face droop	
Weakness or weight loss		diarrhea malnutrition AIDS diabetes
	pale skin	anemia shock
	cough	TB
Fainting, unconscious or lethargic (more than 5 minutes)		diabetes poisoning convulsions head injury stroke severe allergic reaction
	high fever	malaria meningitis septicemia
	dry mouth pale inside eyelids child does not play much	dehydration anemia malnutrition TB
	7-9 months pregnant pale and cold	toxemia shock
Loss of appetite		malnutrition alcoholism

<u>Major Signs</u>	<u>Other Signs</u>	<u>Possible Sickness</u>
Convulsions	high fever 7-9 months pregnant	head injury dehydration spastic child epilepsy malaria meningitis septicemia tetanus toxemia
Profuse sweating	after fever at night	malaria dengue fever TB
Dizziness	pale inside eyelids dry mouth ear pain 7-9 months pregnant	shock stood up too fast menstruation high fever malnutrition anemia dehydration ear infection toxemia
Pale skin	newborn baby	anemia shock septicemia
Bluish skin	newborn baby	heart problem choking asthma septicemia
Strange behavior	7-9 months pregnant	mental sickness high fever epilepsy taking drugs menopause toxemia
Baby cannot suck		tetanus septicemia thallasemia
Large lymph nodes in many places		AIDS TB

<u>Major Signs</u>	<u>Other Signs</u>	<u>Possible Sickness</u>
Large lymph nodes near a wound		infected wound
HEAD, EYES AND NECK		
Severe headaches		wound on head high blood pressure migraine headache alcoholism
	fever	sinus infection malaria dengue fever meningitis
	7-9 months pregnant	toxemia
Sunken soft spot on a baby's head		dehydration
Bulging soft spot on a baby's head (when baby is not crying)		meningitis encephalitis
Swollen lymph nodes behind ear		head infection rubella lice
Swollen lymph nodes in front of ears		mumps
Swollen lymph nodes on neck		infected throat infected tooth erysipelas TB of the skin
Swollen lymph nodes on collar bone		TB of the skin
Throat pain		cold or flu infected throat
	white spots	
Bumpy face		leprosy TB of the skin pimples
Swollen face		sinus infection allergy anemia
	red and hot 7-9 months pregnant	erysipelas toxemia
Reddish hair		malnutrition

<u>Major Signs</u>	<u>Other Signs</u>	<u>Possible Sickness</u>
Face droops on one side		stroke Bell's palsy
Pain above the eyes		sinus infection
Eye problems	red, one eye	eye wound object in eye glaucoma iritis
	red, both eyes	red eye allergy alcoholism
	crust or pus on eyes	red eye
	white or grey spot on eye	eye ulcer eye growth
	cloudy pupil	cataracts
	problem seeing at night	night blindness
	small, white spots	malnutrition
	pain in eye/fever	dengue fever typhoid fever measles TB sinusitis
	lump on eyelid	sty
	yellow eyes	hepatitis malaria
	itchy eyes	allergy red eye
	pupils unequal	head injury iritis glaucoma
	eyes far apart	thalassemia
	eyes bulge out	thyroid problem goiter
	dry eyes	malnutrition
	blurred vision	migraine headaches glaucoma toxemia diabetes needs glasses
Runny nose		cold allergy measles
	yellow-green mucus	sinus infection

<u>Major Signs</u>	<u>Other Signs</u>	<u>Possible Sickness</u>
Sores on lips or in mouth		malnutrition herpes fungus infection syphilis measles
Cannot open mouth		tetanus
Dry mouth		dehydration
Neck pain/stiff neck		TB sprain tetanus
	fever	malaria meningitis encephalitis
Swollen neck		goiter mumps
CHEST, ABDOMEN AND BACK		
Chest pain		chest wound broken rib heart problem
	cough	TB pneumonia bronchitis
Swollen lymph nodes in armpit		breast cancer arm, head or breast infection
Abdominal pain		diarrhea flu worms pneumonia malaria dengue fever typhoid fever
	right side	ameba hepatitis fluke gallbladder sickness

<u>Major Signs</u>	<u>Other Signs</u>	<u>Possible Sickness</u>
Abdominal pain (continued)	upper abdomen	aspirin upset toxemia stomach ulcer ameba tapeworm
	right or left lower abdomen	tubal pregnancy worms
	sides of abdomen	shingles kidney or bladder blockage muscle strain
	low middle abdomen	postpartum sepsis vaginal infection urinary tract infection menstrual cramps herpes gonorrhea kidney or bladder blockage
	groin area	strain dengue fever hernia abscess filariasis erysipelas
	extreme pain when you press and release abdomen, shock	abdominal emergency
Abdominal swelling		malnutrition pregnancy fluke worms
	severe pain upper left or right navel newborn baby	abdominal emergency malaria navel hernia septicemia
Abdomen very hard		abdominal emergency tetanus
Infected umbilical cord (check for)		tetanus septicemia

<u>Major Signs</u>	<u>Other Signs</u>	<u>Possible Sickness</u>
Back pain	old people upper right lower	dengue fever malnutrition arthritis gallbladder problem menstrual cramps sprain postpartum sepsis slipped disc
	lower sides	kidney or bladder blockage urinary tract infection
	waist upper	malaria pneumonia TB
	lump	TB

GROIN, GENITALS AND RECTUM

Rectal pain		hemorrhoids abscess
Rectal itch		threadworm fungus pinworms
Black, sticky feces		hookworm stomach ulcer
Red blood in feces		hemorrhoids
Pain when urinating		herpes urinary tract infection kidney or bladder blockage
Frequent urination		diabetes urinary tract infection pregnancy
Infrequent urination or cannot urinate		dehydration prostate problems kidney or bladder blockage
Sore on genitals		syphilis herpes

<u>Major Signs</u>	<u>Other Signs</u>	<u>Possible Sickness</u>
Irregular menstrual periods		anemia malnutrition stress
Abnormal vaginal fluid	blood in fluid	vaginal infection womb cancer postpartum sepsis tubal pregnancy
Vaginal itch		vaginal infection
Milky urine		filariasis
Blood in urine		dengue fever urinary tract infection kidney or bladder blockage prostate problem
Pus comes out of the genitals		gonorrhea
Swollen scrotum		filariasis hernia hydrocele mumps
Swollen lymph nodes in groin		leg, foot, or genital infection syphilis
LEGS AND FEET		
Swollen legs or feet		varicose veins hookworm filariasis malnutrition
	pale skin 7-9 months pregnant	anemia toxemia
Legs crossed like scissors		spastic child

<u>Major Signs</u>	<u>Other Signs</u>	<u>Possible Sickness</u>
SKIN PROBLEMS		
Painful, warm area with swelling and redness		arthritis erysipelas filariasis infected wound
	bump	abscess
Rash	fever/small rash	dengue fever meningitis
	fever/medium rash	measles rubella syphilis dengue fever typhoid fever
	fever/blister rash	chicken pox herpes
	fever/blue rash	dengue fever typhus
	no fever	itchy skin from plants, bugs and objects fungus infection scabies allergy
	rash on sole of feet	hookworm syphilis
	itchy patches between baby's legs	allergic reaction diaper rash
Blisters	itchy, oozing	itchy skin from plants, bugs and objects
	on whole body in small groups/fever	chickenpox shingles herpes
	black, bad smelling	gangrene
Small bumps or sores		pimples molluscum contagiosum
	itchy	scabies eczema
	with pus or crust	infected sore impetigo cradle cap
	on genitals	syphilis gonorrhea fungus infection

<u>Major Signs</u>	<u>Other Signs</u>	<u>Possible Sickness</u>
Large, open sores	no feeling painless	skin ulcer varicose veins diabetes bed sores leprosy TB of the skin
Large bumps under the skin	warm, painful on breast in groin in navel	skin cancer swollen lymph nodes abscess breast cancer hernia navel hernia
Itchy skin		allergy hepatitis eczema lice fungus infection scabies diabetes
Hard, thick skin		corns
Rough, scaly skin		fungus infection impetigo
Rings or spots with raised edges		fungus infection leprosy skin cancer advanced syphilis
Skin color change	white or light	leprosy vitiligo fungus infection
	yellow	hepatitis malaria
	black and blue dark	dengue fever mask of pregnancy pellagra malnutrition filariasis
	reddish	eczema erysipelas fungus infection
	red or gray	psoriasis

Major SignsOther SignsPossible Sickness

Broken or peeling skin sores

fungus infection
leprosy
TB
impetigo
gangrene
malnutrition
pellagra

Bugs in skin

lice
scabies
ticks

Warts or tumors

warts
TB of the skin

UNIT 11

LIST OF SICKNESSES

[The sicknesses are listed in alphabetical order. The best order for each language group will need to be determined by the translation team.]

This chapter tells about each sickness and how to treat the sickness. Each sickness description includes:

- Name of the sickness
- Cause of the sickness
- Signs of the sickness
- How to treat the sickness
- How to prevent the sickness

The medicine doses listed in this unit are usually for adults. Instructions to reduce the medicine doses for children are included at the end of this book and in unit 9. All sicknesses that germs cause are infectious and can be spread from one person to another person. All of the other sicknesses that germs do not cause cannot spread from one person to another person.

AIDS (ACQUIRED IMMUNODEFICIENCY SYNDROME)

[Investigate the cultural beliefs, treatments and stigmas that affect this sickness.]

Cause of AIDS:

Germs (HIV virus) cause AIDS. The AIDS germ lives in body fluids such as blood and sperm. A person with AIDS can pass AIDS to other people by:

- * Sexual relationships.
- * Exposure to blood through transfusions and sharing syringes or other unsterilized medical equipment.
- * A pregnant woman with AIDS can give AIDS to her unborn child.

Sometimes men who go to the city to work visit prostitutes and get AIDS. Or women who go to the city to be prostitutes get AIDS. These people bring AIDS back to the village and give AIDS to their wives or husbands. Many times the people who return from the city do not know they have AIDS. They get married and give AIDS to their spouse without knowing it. People with more than one sexual partner are more likely to get AIDS. People whose sexual partner has other sexual partners are more likely to get AIDS.

People **cannot** get AIDS from:

- * Mosquitos.
- * Bathing in the same water.
- * Hugging.
- * Using the same latrine.
- * Eating together.

Signs of AIDS:

The AIDS germ destroys the cells in the body that fight sickness. Therefore a person who has AIDS can show signs of many different sicknesses. However, in the beginning, there are very few signs of AIDS. In fact, most people do not know they have AIDS in the first few years. Usually after 5 to 7 years the person with AIDS will show signs. These signs can include:

- * Long term weight loss, diarrhea, or fever.
- * Many different kinds of skin and mouth infections.
- * Frequent swollen lymph nodes in many places.
- * The person forgets easily and has difficulty thinking.
- * The person gets many sicknesses such as TB, ear infections and pneumonia.
- * Children with AIDS might develop slower or grow slower than other children their same age. Children with AIDS often have many sicknesses in the lungs and ears.

How to treat AIDS:

Currently there is no medicine that will completely kill the AIDS germ. Most people with AIDS will not live more than two years after signs of AIDS start. There are medicines that slow down the damage AIDS does to the body, but these medicines are very expensive and hard to obtain. Even if a person is able to obtain these medicines that kill viruses, then they will probably live longer than two years.

People with AIDS get other sicknesses easily. You can treat the other sicknesses but you might have to treat the sicknesses longer than normal or treat the sickness many times. You should treat the other sicknesses to slow down damage to the body and to prevent the other sicknesses from spreading.

Treat people with AIDS the same as other sick people. There is no reason the person should have to leave the village or live alone. Teach people who have AIDS how to prevent spreading AIDS germs to other people.

How to prevent AIDS:

[What are the sexual habits in the community? Is premarital sex common? Is more than one sexual partner common? Is visiting prostitutes common? Do people use intravenous drugs? Do people get tattoos? Do people prefer injections over pills?]

There is no cure for AIDS. The only way to stop AIDS is to prevent AIDS.

TO PREVENT AIDS BOTH SEX PARTNERS MUST ONLY HAVE SEX WITH EACH OTHER AND NO ONE ELSE. ONLY HAVE SEX WITH YOUR HUSBAND OR WIFE. DO NOT HAVE SEX WITH OTHER MEN OR WOMEN BEFORE YOU ARE MARRIED.



- * Do not have sexual contact with more than one person and do not visit prostitutes.
- * Using condoms can help protect a person from getting AIDS and reduce spreading AIDS. Therefore, use a condom if you have sex with more than one person or with a person who has AIDS.
- * Do not inject drugs such as heroin.
- * Do not use needles or syringes that other people use and do not use syringes that are not cleaned properly.
- * Rinse used needles and syringes with clean water and boil them in water for 20 minutes.
- * Do not have unnecessary blood transfusions. Only trained medical workers who understand AIDS should give blood transfusions.
- * Do not get tattoos.
- * Women who have AIDS should use birth control to prevent having a child with AIDS.
- * Do not allow unqualified people or people who use unclean syringes to give injections.
- * If two people want to get married or have children, and either person injected drugs or had sex with other people, then they should go to a health center and get a blood test for AIDS. A person with AIDS should be careful not to give AIDS to other people.

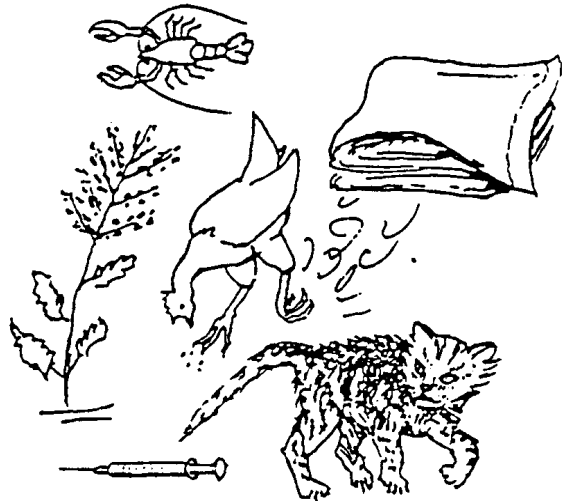
ALLERGIES

Causes of allergies:

An allergy occurs when a substance irritates a part of the body. Only certain people are allergic to certain substances. An allergic person will get an allergy when he breathes, eats, injects or touches things he is sensitive to. Germs do not cause allergies. You cannot pass an allergy from one person to another person. However, allergic parents tend to have allergic children. Generally, allergic people suffer more in certain seasons or whenever they contact the substance that bothers them.

Substances that commonly cause allergies are:

- * Pollen of certain flowers and grasses.
- * Chicken feathers.
- * Dust.
- * Kapok or feather pillows.
- * Moldy blankets or clothes.
- * Certain medicines, especially injections of penicillin.
- * Hair from cats and other animals.
- * Specific foods, especially fish, seafood, beer and milk.



Signs of allergies:

Allergic reactions can be mild or very dangerous. Some signs of allergies are:

- * Itchy rashes or hives.
- * Runny nose and itchy, burning eyes.
- * Irritation in the throat, difficult breathing, or asthma.
- * Diarrhea from an allergy to milk.

Some medicines, especially **penicillin**, can cause an allergic reaction after you inject it. After you give an injection of penicillin, always stay with the person for **30 minutes** to watch for the following signs of serious allergic reaction:

- * Cool, moist, pale or gray skin.
- * Weak, rapid pulse or heartbeat.
- * Difficult breathing.
- * Loss of consciousness.

How to treat allergies:

If the reaction is not serious:

* Give *chlorpheniramine*:

dose: adult, 1 or 2 tablets of 4 mg, 3 or 4 times each day. Continue as long as necessary.

or

* give *dimenhydrate (Dramamine)*:

dose: adult, 1 or 2 tablets of 50 mg, 4 times each day.

If the reaction is from injecting medicine or the person has the signs of a serious allergic reaction, then immediately inject ***Adrenaline*** into the upper arm:

dose: Adult, 1/2 ml. Children, 1/4 ml. Do not give *adrenaline* to babies. You can inject *adrenaline* again after 10 minutes if necessary.

After you inject the *adrenaline*, inject 2 times the normal dose of *diphenhydramine*:

dose: adult, 1, 10 mg ampule. Inject again after 2 to 4 hours if the allergic reaction continues.

How to prevent allergies:

* Find out what causes the allergy. For example dust, chicken feathers, pollen, mold, or seafood may cause the allergy. Then try to avoid the substance that causes of the allergy.

* Keep the house clean.

* Do not inject *penicillin* or other medicines unless absolutely necessary.

AMEBA

[Do people use animal or human feces as fertilizer?]

Cause of ameba:

Amebas are **parasites**. The feces of people who have amebas contain millions of ameba parasites. Defecating on the ground and not using latrines causes amebas to get into the drinking water or onto food that grows on the ground. People who drink the dirty water or eat the food get amebas.

Signs of ameba:

Many healthy people have amebas and do not feel sick. However, amebas can cause severe diarrhea or diarrhea with blood, especially in people who are weak from other sicknesses or in people who have poor nutrition. Amebas can also cause painful, dangerous sores in the liver.

Signs of ameba are:

- * Diarrhea that comes and goes, or alternates with constipation.
- * The person has cramps in the abdomen and needs to defecate frequently. Sometimes little or no feces comes out, or just mucus comes out.
- * Feces are not solid, have a lot of mucus and sometimes there is blood in the feces.
- * In severe ameba there is a lot of blood in the feces and the person might be weak.
- * Usually there is no fever.

Ameba and bacteria can both cause diarrhea with blood. However, bacteria causes sudden diarrhea that is watery, and there is a fever. A general rule is:

**BACTERIA CAUSES DIARRHEA WITH BLOOD AND FEVER.
AMEBA CAUSES DIARRHEA WITH BLOOD AND NO FEVER.**

How to treat ameba:

- * Give *metronidazole*:
dose: adult, 3 tablets of 250 mg, 3 times each day for 7 days.

or

- * give *tinidazole*:
dose: adult, 3 tablets of 250 mg, 3 times each day for 3 days.

How to prevent ameba:

- * See Unit 2 "How to Prevent Many Health Problems" pages 10-15.

ANEMIA

Cause of anemia:

A lack of blood or a lack of iron in the blood causes anemia. Iron makes the blood strong. A person can get anemia if he does not eat enough food that contains iron such as green leafy vegetables and meat. Malaria, hookworm, long term diarrhea and loss of blood from wounds, ulcers, miscarriage, abortion or a woman's menstrual period can also cause anemia. Pregnant women with anemia have more miscarriages and more bleeding during childbirth.

Signs of anemia:

- * Pale skin.
- * Pale inside of the eyelids.
- * Pale gums.
- * White fingernails.



- * Weakness or tiredness.
- * Some people with anemia like to eat dirt.
- * In severe anemia, the face and feet might swell, the heart might beat rapidly and the person might have difficulty breathing.

How to treat and prevent anemia:

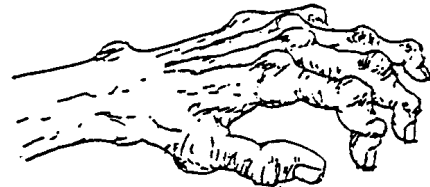
[What foods with iron are available?]

- * Eat foods with a lot of iron such as meat, eggs, beans, nuts, and dark green leafy vegetables. This is especially important for pregnant women.
- * If the woman has severe anemia or cannot get food with iron, then she should take iron pills (*ferrous sulfate*):
 dose: adult, 1 tablet, 3 times each day for at least 30 days.
 Do not inject iron because it is dangerous. It is very important to give iron pills to pregnant women who have anemia.
- * Treat the cause of anemia. Wear shoes outside to prevent hookworm.
- * If anemia is severe, get medical help. This is especially important for pregnant women.
- * Women should wait two or three years between pregnancies to help the body make strong blood.

ARTHRITIS (PAINFUL, SWOLLEN JOINTS)

Cause of arthritis:

When a person's joints wear out, he has arthritis.



Signs of arthritis:

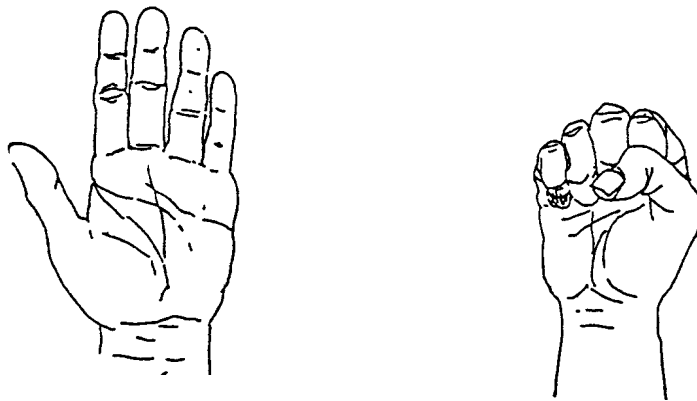
- * Joints are swollen and painful.
- * Sometimes joints are warm.
- * Painful joints in young people and children can be a sign of other serious sicknesses, such as tuberculosis.
- * Some people get severe arthritis in the big toe. This arthritis is very painful.

How to treat arthritis:

You cannot cure most long term joint pain, or arthritis, in older people. However, you can help reduce the pain.

- * Rest. Avoid hard or heavy work that bothers the painful joints. If the arthritis causes a fever, it helps to rest during the day.
- * Put a cloth soaked in hot water on the painful joints.

- * Aspirin helps reduce pain. The dose for arthritis is higher than the dose for other pain. Give *aspirin*:
 - dose: adult, 3 tablets, 4 to 6 times each day.
 - If you hear ringing in your ears, take less aspirin. Sometimes *aspirin* causes stomach pain. To prevent stomach pain, take *aspirin* after you eat food, milk or a lot of water.
- * For severe arthritis in the big toe do not give *aspirin*. Visit a doctor to get special medicine.
- * It is important to do simple exercises that move the stiff parts as far as they will move without a lot of pain.



- * If only one joint is swollen and feels hot, then it is probably infected, especially if the person has a fever. Give *penicillin*:
 - dose: adult, 2 capsules of 250 mg, 4 times each day, until 2 days after the signs are gone. If possible see a health worker.

ASTHMA

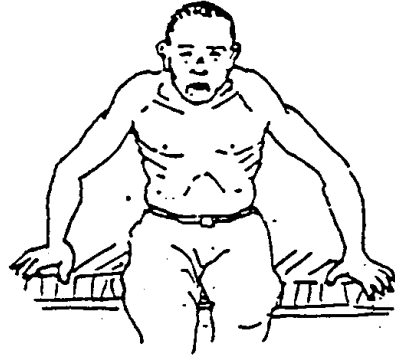
Causes of asthma:

Asthma is a sickness that makes it difficult to breathe. Things that make a person allergic can cause asthma. A cold can cause asthma in children. Nervousness or worry can cause asthma to start in some people. People cannot spread asthma. Asthma is more common in children with relatives who have asthma.

Signs of asthma:

- * A person with asthma sometimes has difficulty breathing. Listen for a wheezing sound, especially when the person breathes out.

- * When the person breathes in, the skin behind his collar bones and between his ribs might suck in.
- * If the person cannot get enough air, his fingernails and lips will turn blue, and the bloodvessels in his neck will swell.
- * Usually there is no fever.



Asthma often begins when the person is a child. Asthma is generally worse during the cold season or at night.

How to treat asthma:

- * If asthma gets worse inside the house, the person should go outside to a place with clean air. Keep the person calm. Reassure him that he will be fine.
- * Give lots of liquids. This loosens mucus and makes it easier to breath. Breathing steam can also help. See "Cough" page 34.

- * For mild asthma give *ephedrine*:

dose: adult, 1 to 2 tablets of 30 mg, 3 times each day until the person breathes normally.

or

give *theophylline*:

dose: adult, 2 tablets of 100 mg, 4 times each day until the person breathes normally.

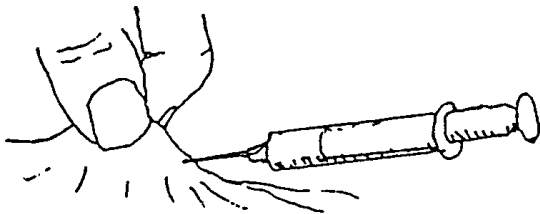
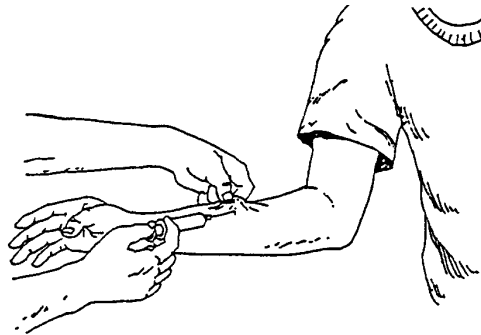
- * If the person cannot get enough air, inject *adrenaline* under the skin:

dose: adult, 1/2 ampule

children, 1/4 ampule

Do not use *adrenaline* for babies.

Repeat the dose of *adrenaline* every 1/2 hour, until the person breathes normally. But do not give the person more than 3 doses.



* If the patient has fever, or the asthma lasts more than 3 days, then give *tetracycline* (do not give to children under 8 or pregnant or nursing women):

dose: adult, 1 capsule of 250 mg, 4 times each day for at least 1 week

or

give *erythromycin*:

dose: adult, 2 capsules of 250 mg, 4 times each day for at least 1 week.

* Sometimes, roundworms cause asthma. If you think a person with asthma has roundworms, give *piperazine*:

dose: adult, 8 tablets of 500 mg in one dose

or

give *mebendazole*:

dose: adult, 1 tablet of 100 mg, 2 times each day for 3 days.

*** If the person does not get better, get medical help!**

How to prevent asthma:

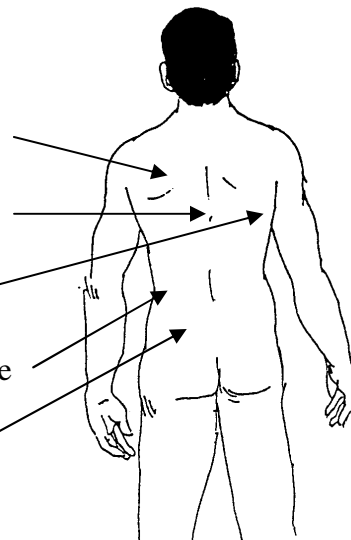
- * A person with asthma should not eat food or breathe things that start asthma.
- * Keep the house or work place clean. Do not let chickens or other animals come inside the house.
- * Put bed linen outside in the sunshine one day each week to kill mold. Sunshine kills mold.
- * Sometimes it helps to sleep outside away from mold or smoke in the house. People with asthma might get better if they move to a different place where the air is cleaner.

IF YOU HAVE ASTHMA, DO NOT SMOKE. SMOKING DAMAGES YOUR LUNGS EVEN MORE.

BACK PAIN

Causes of back pain:

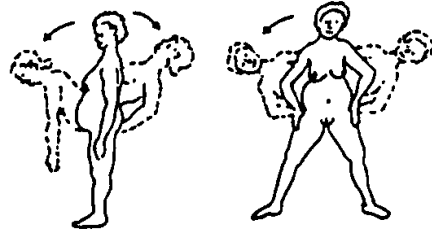
- * Tuberculosis in the lungs can cause long term, upper back pain with cough and weight loss.
- * Tuberculosis of the backbone can cause middle back pain, especially if the backbone has a bump.
- * A gallbladder problem can cause pain in the upper right back.
- * A urinary problem can cause severe or long term pain in the sides.
- * A sprain can cause lower back pain that is worse the day after you lift something heavy or hurt your back.



- * Sitting or standing with the shoulders drooped, can cause backpain.
- * Arthritis often causes long term back pain in older people.
- * A slipped disc can cause severe low back pain that starts suddenly after you lift or twist. Especially if one leg or foot becomes painful, numb or weak.
- * Menstrual periods or pregnancy can cause low back pain in women.
- * Problems in the uterus, ovaries or rectum can cause very low back pain.

How to treat and prevent back pain:

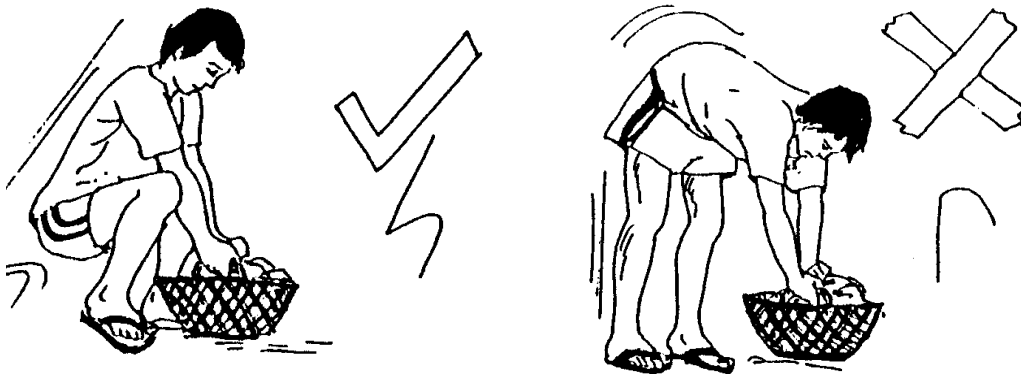
- * If a sickness such as tuberculosis, a urinary infection, or gallbladder sickness causes back pain, then treat the sickness. Seek medical help if you suspect a serious sickness.
- * People can prevent or cure simple backpain, including backpain in pregnant women, if they:
 - Always stand straight.
 - Sleep on a firm, flat surface.
 - Do exercises that bend the back such as touching the toes with the knees straight.



- * To reduce pain, put a cloth soaked in hot water on the back and take *aspirin*:
dose: adult, 1-2 tablets, 3-4 times each day.
- * The back problem is serious if:
 - the backpain is sudden and severe and comes after the person lifts or twists and painful when he bends over,
 - or the pain goes into the legs,
 - or the foot becomes numb or weak.

These signs mean that the backbones might be pinching a nerve. It is best to rest flat on your back for a few days. Reduce pain as shown above. If the pain does not begin to get better in a few days, seek medical advice.

- * When you lift a heavy object, lift with your knees, not with your back.



BELL'S PALSY

Cause of Bell's palsy:

A problem with a nerve in the face causes Bell's Palsy.

Signs of Bell's palsy:

One side of the face droops, is numb or cannot move. This includes the forehead on that side.



How to treat Bell's palsy:

Bell's palsy usually goes away after a few weeks or months. You do not need to treat Bell's palsy. You can put towels soaked in hot water on the face to help. If one eye will not completely close, cover the eye with a bandage to prevent a dry eye and to prevent dust from getting in the eye.

BRONCHITIS

Germ (virus) in the tubes that carry air from the mouth to the lungs cause bronchitis. Bronchitis causes a noisy cough with mucus.

Signs of bronchitis:



- * A cough that might stay for months or years and produces mucus. Sometimes the cough gets worse, and there might be a fever. A person who has this kind of cough, but does not have another long term sickness such as tuberculosis or asthma, probably has long term bronchitis.
- * Older people who have smoked a lot commonly get long term bronchitis.
- * Long term bronchitis can cause emphysema, a very serious sickness of the lungs that you cannot cure. A person with emphysema has difficulty breathing, especially when he works hard. His chest becomes big and round.



How to treat bronchitis:

A virus usually causes bronchitis, therefore antibiotics do not help. Use antibiotics only if the bronchitis lasts more than 1 week and does not get better, or if the person shows signs of pneumonia, or if he already has a long term lung problem.

* STOP SMOKING.

* If the person has asthma, treat for asthma.

* For people with long term bronchitis give *amoxicillin*:

dose: adult, 1 capsule of 500 mg, 3 times each day until the signs are gone for 2 days.

or

give *tetracycline* (Do not give to pregnant or nursing women or children under 8):

dose: adult, 1 tablet of 250 mg, 4 times each day until the signs are gone for 2 days.

* If the person cannot cough up the sticky mucus, he should breathe steam. Then help him drain the mucus from his lungs. See "Cough, How to Drain Mucus from the Lungs" page 35.

IF YOU HAVE A LONG TERM COUGH OR WANT TO PREVENT A LONG TERM COUGH, THEN DO NOT SMOKE!

CANCER

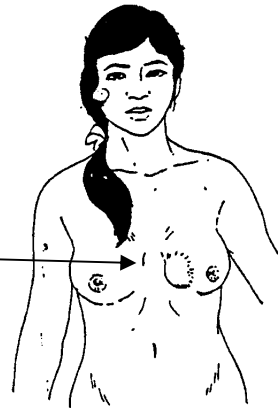
Cancer can occur in any body part including the internal organs, lungs, brain and skin.

BREAST CANCER

Breast cancer is common in women and very dangerous. A doctor can treat breast cancer if the woman finds the cancer early. Women should examine their breasts every month. See Unit 17 "How to Examine the Breasts" page 29.

Signs of breast cancer:

- * The breast might have tiny dents like an orange.
- * The woman might notice a lump on the breast, often here. _____
- * Often the lymph nodes in the armpits are large but not painful.
- * The lump grows slowly.
- * At first the lump usually does not hurt. Later the lump might hurt.



WOMB CANCER

Cancer of the womb is common in women over 40 years old and in young women who start sex early and who have sex with many different men. There is a test (Pap smear) for womb cancer. If possible, all women over 25 should go to a health center to test for womb cancer.

Signs of womb cancer:

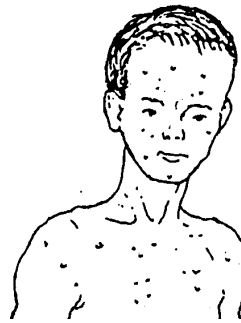
- * Anemia.
- * Abnormal bleeding from the vagina.
- * An uncomfortable or painful lump in the abdomen.

How to treat any kind of cancer:

- * It is often difficult to treat cancer, but it is not impossible. Early treatment is very important. It is difficult for a village health worker to know if a person has cancer. If you think a person has cancer, then get medical help immediately. Many lumps are not cancer, but it is important to check early. Traditional medicines usually do not help cure cancer. Do not delay going to the hospital.

CHICKEN POX**Cause of chicken pox:**

Germ (virus) cause chicken pox.

**Signs of chicken pox:**

A child can get chicken pox 2 or 3 weeks after he plays with another child who has chicken pox.

- * The child gets many small, red, itchy spots. The spots begin on the body and later spread to the face, arms and legs.
- * Next, the spots become blisters that pop and make scabs.
- * Fever is usually low (less than 39 C, 102 F).

**How to treat chicken pox:**

- * Do not give antibiotics or strong medicine. The sickness will go away in 1 week.
- * Bathe the child with soap and warm water every day.
- * To help reduce itching, soak a cloth in cold water and baking soda and put the cloth on the itchy areas.
- * Cut the child's fingernails short so he does not scratch the blisters open and cause infection.
- * If sores are infected, put antibiotic cream on the sores.
- * To reduce itching give *chlorpheniramine*:
dose: adult, 1 or 2 tablets of 4 mg, 3 or 4 times each day.

CHOLERA

Cause of cholera:

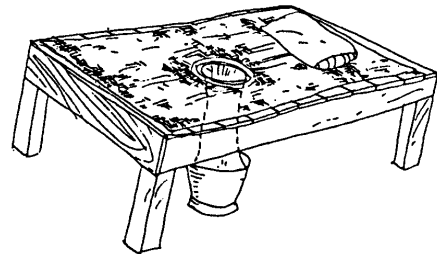
Germ (bacteria) in the intestines cause cholera. Cholera often infects many people at one time. People get cholera when they drink water that has feces in it. The person loses large amounts of water from vomiting and diarrhea. If the person does not drink water to replace the water he lost, then he will die.

Signs of cholera:

- * Cholera starts suddenly.
- * The sick person has severe diarrhea that looks like rice water.
- * He also vomits.
- * Within 1/2 hour or more, the patient becomes weak, goes into shock and has muscle cramps in the arms and legs.
- * Without treatment the patient will become dehydrated and die.

How to treat cholera:

- * Give liquids, especially rehydration drink, to treat dehydration. Give liquid as often as the patient can drink. Continually give small amounts of liquid.
- * Make a bed with a hole if possible. Put the hole where the person's buttocks is. Put a bucket under the hole to catch the diarrhea.
- * Collect the diarrhea in a large container and estimate the amount of the diarrhea. You should give the person rehydration drink equal to the amount of diarrhea. Add a lot of disinfectant to the container to kill the germs. Be careful not to touch the diarrhea.
- * Give *tetracycline*: (Do not give to pregnant women or children under 8 unless there are no other medicines available.)
dose: adult, 2 capsules of 250 mg, 4 times each day, until 2 days after diarrhea stops.
- or
give *chloramphenicol*:
dose: adult, 3 capsules of 250 mg, 4 times each day, until 2 days after diarrhea stops.
- * Get medical help.



How to prevent cholera:

- * Do not allow the patient's feces to enter the water supply. Everyone in the village should boil their drinking water. Bury the diarrhea far from any water source. Follow the guidelines in Unit 2 "How to Prevent Many Health Problems".
- * Report cholera to the health authorities.

COLDS AND FLU

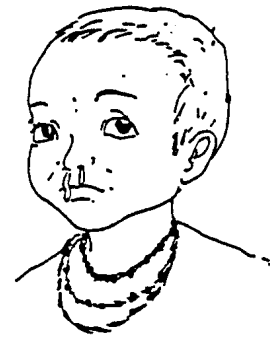
[What are perceived causes locally?]

Cause of colds and flu:

Germs (virus) cause colds and flu. People do not get colds from getting cold or wet. A person with a cold or flu spreads the germs when he coughs or sneezes. Colds and flu are very common.

Signs of cold and flu:

- * Mucus comes out of nose (runny nose).
- * Cough, sore throat and sometimes fever or pain in the joints.
- * There might be mild diarrhea, especially in young children.
- * If a person has a cold or flu more than 1 week, or has a fever, or coughs up a lot of mucus, or has shallow breathing or chest pain, then check for bronchitis or pneumonia. Small or weak children, old people and people with lung problems easily get pneumonia.
- * A person with a cold often has a sore throat. If the sore throat begins suddenly, with a high fever, check "Sore Throat" page 72 or "Ear Infection" page 38.

**How to treat colds and flu:**

A person with a cold or flu rarely needs medicine. **Do not use penicillin, tetracycline or other antibiotics.** Antibiotics will not cure a cold or flu. See Unit 9 "How to Use Medicines" pages 29-31.

- * Drink plenty of liquids and get enough rest. Fruit juice is very helpful.
- * *Aspirin* or *paracetamol* help lower the fever and reduce pain. Don't waste your money on more expensive 'cold medicine'. Give *aspirin* or *paracetamol*:
dose: adult, 1 or 2 tablets, 4 times each day.
- * If the person also has a sore throat, he should put 1 teaspoon of salt into 1 cup of warm water and gargle with it 4 times each day.

- * To clear a stuffy nose in little children, carefully suck the mucus out of the nose with a suction bulb or syringe without a needle.



- * Older children and adults can put a little salt water into their hand and sniff it into the nose. This helps to loosen the mucus.



- * A person can breathe steam to help clear a stuffy nose. See "Cough" page 34.
- * Wipe a runny nose, but **do not blow a runny nose**. When you blow your nose, you blow mucus into the sinuses and ears. The mucus can cause an ear infection or sinus infection.

How to prevent colds and flus:

- * Get enough sleep and eat nutritious food. Eat papayas, tomatoes and other fruit.
- * The sick person should eat and sleep separately. He should cover his nose and mouth or turn away from people when he coughs or sneezes. Be especially careful to keep babies away from people with coughs and colds.
- * To prevent an ear infection, **do not blow your nose, only wipe your nose**. Teach children to wipe their noses.



- * People who get ear infections or sinus problems after a cold can help prevent these problems if they use nose drops that contain *phenylephrine*:
dose: adult, sniff a little salt water then put 2 or 3 drops in each nostril 3 times each day for 3 days only.
- * You can also give children with a cold a decongestant syrup with *phenylephrine* or *chlorpheniramine* to help prevent ear infections and sinus infections.

YOU CAN PREVENT EAR INFECTIONS AND SINUS INFECTIONS IF YOU WIPE YOUR NOSE BUT DO NOT BLOW YOUR NOSE.

CONSTIPATION

Causes of constipation:

Not enough exercise, not drinking enough water, and not eating enough fruits and vegetables can cause constipation.

Signs of constipation:

- * Hard feces.
- * The person has not defecated in 2 or more days.

How to treat and prevent constipation:

- * A constipated person should drink more water and eat more fruit and vegetables.
- * Old people might need to walk or exercise more to make them defecate regularly.
- * If a person has not defecated for 3 days and he does not have sharp pain in the stomach, then he can take a laxative. But do not give laxatives often.

IF THE ABDOMEN HURTS, DO NOT USE LAXATIVES.

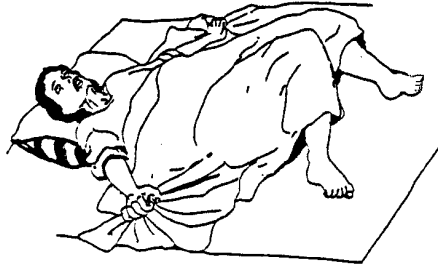
CONVULSIONS

Causes of convulsions:

A problem in the brain causes convulsions. A high fever, severe dehydration, meningitis, malaria, poisoning or epilepsy can cause convulsions. Convulsions are usually a sign of another sickness.

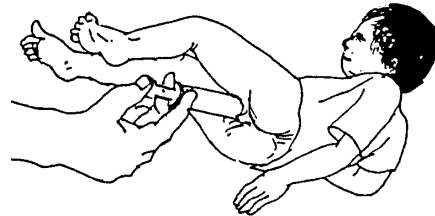
Signs of convulsions:

- * The person loses consciousness.
- * The person makes strange, jerky movements.

**How to treat convulsions:**

- * Try to find out the sickness that causes the convulsions and treat the sickness.
- * If a child has a high fever, rub the body with cool, wet clothes.

- * If the child is dehydrated and unconscious, use a large syringe without a needle to squirt rehydration drink into the anus. Send for medical help. Give nothing by mouth during convulsions because the person might choke. If the person is conscious, give rehydration drink.



- * If there are signs of meningitis, treat for meningitis immediately (see "Meningitis" page 61) and seek medical help.
- * If you think the person has malaria in the brain, see "Malaria" page 56.
- * See "How to Treat Epilepsy" page 40.

COUGH**Causes of coughs:**

A cough is not a sickness. A cough is a sign of many different sicknesses in the throat, lungs or airway. See Unit 10 "List of Signs" page 3, for the sicknesses that cause a cough.

How to treat a cough:

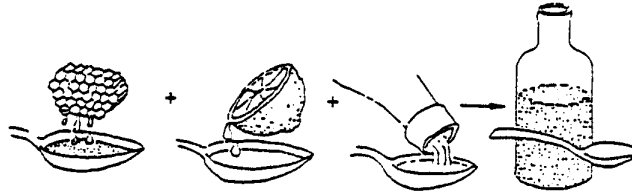
A cough helps to clean the lungs and get rid of mucus and germs in the airway or lungs. When a cough produces mucus, do not take medicine to stop the cough. Instead, do something to help loosen the mucus and cough up the mucus.

- * Drink a lot of water to loosen mucus. This works better than any medicine.
- * Breathe steam. Sit on a chair with a bucket of very hot water between your feet. Place a sheet over your head and over the bucket to catch the steam. Breathe the steam deeply for 15 minutes. Do this 4 times each day.



* **For all kinds of cough**, especially a dry cough, give the following cough medicine:

Mix: 1 part honey
1 part lime juice
1 part whiskey



Take one teaspoon every 2 or 3 hours. For little children and people who have difficulty breathing, do not use the whiskey.

* For a severe dry cough that does not let you sleep, you can take a cough medicine with *codeine*, or a medicine with *chloral hydrate* or *dextromethorfan*. *Aspirin* with *codeine* or even *aspirin* alone also helps relieve the cough. If there is a lot of mucus or wheezing, do not use *codeine*.

* For a cough with wheezing see the sections on asthma, bronchitis and heart trouble.

* Try to find out what sickness is causing the cough and treat that sickness. The person should go to a health worker if:

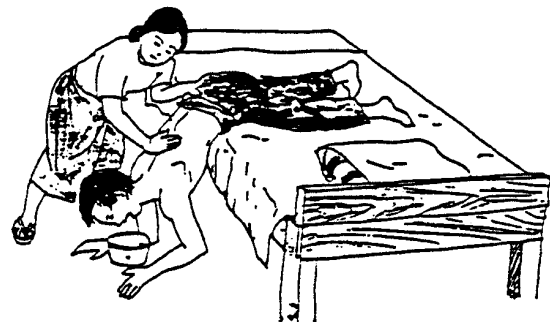
- The cough lasts a long time.
- The person coughs up blood, pus or bad smelling mucus.
- The person continues to lose weight.
- The person has difficulty breathing for a long time.

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

HOW TO DRAIN MUCUS FROM THE LUNGS

Sometimes an old or weak person with a cough cannot cough up mucus. Give the person a lot of water to drink. Also help the person do the following:

- 1) First, the person breathes steam to loosen the mucus.
- 2) Then he lies on a bed, with his head and chest hanging over the edge. Pound him lightly on the back. This will help to bring out the mucus.



**TO PREVENT A COUGH, DO NOT SMOKE.
TO CURE A COUGH, TREAT THE SICKNESS THAT CAUSES THE COUGH
AND DO NOT SMOKE.
TO CALM A COUGH, AND LOOSEN MUCUS, DRINK A LOT OF WATER
AND DO NOT SMOKE.**

DEHYDRATION: See Unit 12 "Dehydration, Diarrhea and Vomiting".

DENGUE (HEMORRHAGIC) FEVER

Cause of dengue fever:

Germs (virus) in the blood cause dengue fever. A mosquito spreads the germ when it bites people. The mosquito that causes dengue fever usually bites in the daytime.

Signs of dengue fever:

- * A sudden fever.
- * Pain all over, especially in the head, back and eyes.
- * Chills, loss of appetite, constipation, very tired, stiff, might have abdominal pain and sometimes there is a strange taste in the mouth.
- * The fever might go away after a few days and come again after 2 more days. During this second fever, the skin sometimes gets a red, itchy rash.
- * Usually dengue fever lasts 1 or 2 weeks and disappears. But full recovery sometimes takes a long time.
- * If a child has dengue hemorrhagic fever, he might bleed from all parts of the body including the nose and gums, in the urine and from the stomach and intestines. There will be black and blue marks on the skin from bleeding under the skin.

How to treat dengue fever:

- * Give the patient a lot of liquids and let him rest.
- * Antibiotics are not useful. To reduce pain give *paracetamol*:
dose: adult, 1 or 2 tablets of 500 mg, 3 or 4 times each day.

DO NOT USE ASPIRIN. ASPIRIN WILL MAKE THE SICK PERSON BLEED MORE.

- * If the person begins to bleed, or have black and blue spots on the skin, or begins to act strangely, then send him to a hospital immediately.

How to prevent dengue fever:

- * Prevent mosquito bites. See "How to Prevent Malaria" page 58.

DIABETES

Cause of diabetes:

A problem in the pancreas causes diabetes. People with diabetes have too much sugar in their blood. Diabetes can make a person dizzy, damage blood vessels and cause problems in many body parts.

Signs of diabetes:

- * The person is always thirsty.
- * The person urinates often and urinates a lot.
- * The person is very tired.
- * The skin itches and long term skin infections are common.

If diabetes is severe:

- * The person loses weight.
- * The hands and feet are numb or painful.
- * The person gets sores on the feet that do not heal.
- * The person might lose consciousness.

Other sicknesses can also cause these signs. Check for sugar in the urine to be sure the person has diabetes. Put some of the person's urine on a stone near some ants. If the person has diabetes, the urine will be sweet and the ants will drink the urine. You can also check for sugar in the urine with special paper strips (Uristix).

How to treat diabetes:

- * A person who gets diabetes after he is 40 usually only needs to eat special foods. He must not eat any sugar or sweets. He should eat many body building foods such as eggs, fish, beans, dark green leafy vegetables, nuts, and meat. He should eat only a little energy food such as rice, and potatoes. See Unit 3, "Nutrition" for a more complete list of foods.
- * If the person is fat, he must lose weight until he is normal size.
- * Some people with diabetes, especially young people, need special medicine. They should go to a health center.

DIARRHEA: SEE UNIT 12 "Dehydration, Diarrhea and Vomiting".

DIPHTHERIA

Cause of diphtheria:

Germ (bacteria) cause diphtheria. Coughing and sneezing spreads diphtheria.



Signs of diphtheria:

- * Diphtheria begins like a cold with a fever, headache and sore throat.
- * The person might have a yellow or gray covering in the back of his throat and sometimes in his nose and on his lips. The person's breath smells bad.
- * The lymph nodes on the person's neck might swell.

How to treat diphtheria:

- * Get medical help. A doctor can give special medicine.
- * The sick child should stay in bed in a room separate from other people.
- * Give *penicillin*:
dose: child 8-13, 1 tablet of 250 mg, 3 times each day.
- * Gargle with warm salt water.
- * The sick child should breath steam often. See "How to Treat a Cough" page 34.
- * If the child begins to choke or his skin turns blue, then try to remove the mucus in the throat with a cloth around your finger.

How to prevent diphtheria:

- * Be sure your children receive the diphtheria vaccine.
- * Keep children away from other children who have diphtheria.

EAR INFECTION**Cause of ear infections:**

Germ (bacteria or virus) in the ear can cause ear infections. Coughing and sneezing spread the germs.

Signs of ear infections:

- * Ear infections are common in small children.
- * Ear infections usually start when a child has a cold or a runny nose.
- * Fever.
- * Ear pain. The child usually rubs his ear.
- * Sometimes you can see pus in the child's ear.
- * Sometimes an ear infection causes diarrhea in small children. Therefore, when a child has diarrhea and fever, be sure to check his ears.
- * Gently pull on the child's ear. If this causes pain, the ear canal is infected.

How to treat an ear infection:

- It is important to treat ear infections early.
- * Give *penicillin*:
dose: adult, 2 tablets of 250 mg, 4 times each day for at least 5 days.
 - or
for children under 3, give *amoxicillin* syrup:
dose: child dose, 1 teaspoon of 125 mg, 3 times each day for at least 5 days.
 - * To reduce pain, give *paracetamol*:
dose: adult, 1 or 2 tablets of 500 mg, 3 or 4 times each day.
 - * Carefully clean the pus out of the ear with cotton or clean cloth. Do not plug the ear with cotton, leaves or anything else.
 - * Children with pus in the ear should bathe every day, but should not put their heads under water until they are well for 2 weeks.
 - * If the ear canal is infected, mix 1 spoon of vinegar with 1 spoon of boiled water and put 2 drops in the ear 4 times each day. Also follow the treatment above.

How to prevent ear infections:

- * Teach children to wipe their nose, not blow their nose.
- * Do not feed babies with a bottle. If you must feed with a bottle, do not let the baby drink lying on his back. The milk can go up his nose and into the tube that connects the nose to the ear. This can cause an ear infection.
- * When a child's nose is plugged, mix 1 teaspoon salt with 1 cup boiled water and put a few drops in each nostril. Suck the mucus out of the nose with a bulb syringe or a syringe without the needle.

ENCEPHALITIS**Cause of encephalitis:**

Germ (virus) cause encephalitis. Mosquitos carry the germs and give the germs to people when they bite people. Encephalitis is most common in areas with pigs because the mosquitos get the germs from pigs.

Signs of encephalitis:

- * Fever, headache, nausea and vomiting. The person is very sick.
- * Stiff neck and back.
- * He is weak. He might not be able to move and might have slurred speech.
- * He might have tight muscles and convulsions. He might become unconscious.

How to treat encephalitis:

- * Send the person to a hospital. Encephalitis is very dangerous.
- * Be sure the person drinks a lot of liquids.
- * Treat the person for convulsions if necessary.

How to prevent encephalitis:

- * See "How to Prevent Malaria" page 58.
- * Be sure the person sleeps under a mosquito net so that mosquitos will not get encephalitis germs and spread the germs to other people.

EPILEPSY

[What are cultural beliefs about epilepsy and convulsions?]

Cause of epilepsy:

Brain damage, high fever in a baby or tapeworms in the brain can cause epilepsy. Epilepsy causes convulsions in people who seem healthy. Epilepsy is more common in some families. A person with epilepsy cannot spread epilepsy to other people.

Signs of epilepsy:

- * Some people will lose consciousness and have jerky movements or convulsions.
- * The eyes often roll back.
- * In mild epilepsy the person might suddenly stare ahead, make strange movements, or behave strangely.
- * Convulsions might come hours, days, weeks or months apart. Epilepsy often starts when a person is a teenager. Epilepsy often lasts all of a person's life. Sometimes babies only have epilepsy for a short time.

How to treat epilepsy:

Medicines do not cure epilepsy. Medicines only help to prevent convulsions. Often a person must take the medicine all of his life.

- * To prevent convulsions, give *phenobarbital*:
 dose: adult, 1 to 2 tablets of 30 mg, 3 times each day The amount you give depends on how much is necessary to prevent convulsions.
- * If phenobarbital does not work, send the person to a hospital.

When a person has a convulsion:

- * Try to prevent the person from hurting himself. Move away all hard or sharp objects. If necessary, put a cloth or padded piece of wood between his teeth to prevent him from biting his tongue.



- * After the convulsion the person might be weak and sleepy. Let him sleep.
 - * If the convulsions last a long time, inject *diazepam (Valium)*:
dose: adult, 5 to 10 mg, into the buttocks. Repeat in 2 hours if necessary.
- or
- inject *phenobarbital*:
dose: adult, 1 ampule of 200 mg into the buttocks. If the convulsion does not stop, give 1 more dose after 15 minutes. Do not give any more.

How to prevent accidents from epilepsy:

A person with epilepsy should:

- * Never ride on top of a bus or hang onto the back of a truck. The person might fall off.
- * Never go in a river alone. The person could drown.
- * Never be near a fire alone. The person might fall into the fire.
- * Never climb trees. The person might fall out.

FILARIASIS

[This is regional and can be excluded if not relevant to target area.]

Cause of filariasis:

Germs (parasites) in the body cause filariasis. Mosquitos spread the germs when they bite people.

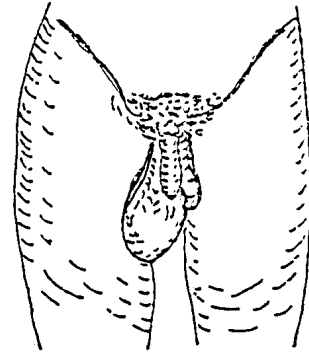
Signs of filariasis:

The person might have a few or many of the following signs:

- * An arm, leg or breast is painful, red, swollen and stiff. There might be red lines coming from an area.
- * Lymph nodes are swollen and tender. Sometimes the lymph nodes are painful.
- * Sometimes the patient has a fever.
- * The man's scrotum is painful and swollen.

* The person might have milky or pink urine. Generally the person has back pain or or abdominal pain before the urine becomes milky. If the urine is milky, tell the person to urinate in a jar. If the person has filariasis, the urine will separate into 3 layers. The top layer will be thick and white, the middle layer will be milky, and the bottom layer will be a red, muddy color.

* If the person has filariasis for a long time, there might be dark, thick areas of skin. An arm, leg, breast or scrotum might be swollen to a large size.



How to treat filariasis:

* Give *diethylcarbamazine* (do not give to a pregnant woman):

dose: adult, 100-150 mg, 3 times each day for 21 days.

* Patients with milky urine should stay in bed with the bottom of the bed raised. This will keep the legs up and reduce swelling.

* If the legs are swollen, wrap the feet and legs with an elastic bandage. Start wrapping from the feet. Do not wrap too tight.

* Get medical help.

How to prevent filariasis:

Treat people with filariasis immediately so that filariasis does not spread. Prevent mosquito bites. See "How to Prevent Malaria" page 58.

FLUKE (liver fluke, intestinal fluke):

[This is regional and can be excluded if not relevant to target area.]

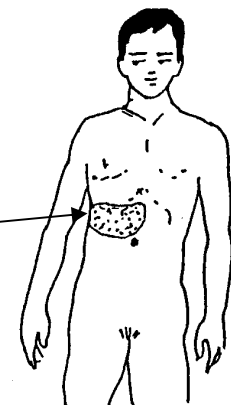
Liver Fluke

Cause of liver fluke:

A germ (parasite) gets into the liver after a person eats raw or poorly cooked fish, shrimp or crabs.

Signs of liver fluke:

- * The person has a swollen, painful liver.
- * The person is tired and has a low fever.
- * The person might get severe pain in the upper abdomen going around to the back. This can cause vomiting.



- * The person later becomes weak and loses his appetite.
- * Later the eyes might turn yellow.
- * The person might get diarrhea, dizziness and depression.

Intestinal Fluke

Cause of intestinal fluke:

Germ (parasite) that live in water plants get into a person's body when he eats uncooked water plants.

Signs of intestinal fluke:

- * The patient has diarrhea alternating with constipation.
- * The abdomen hurts when the person is hungry and feels better after he eats.
- * Severe intestinal fluke causes loss of appetite, nausea, vomiting and the face and body swell. The person might have a lot of water in the abdomen and look pregnant.

How to treat all kinds of fluke:

- * Give *praziquantel*:
dose: adult, 25 mg for each kg the person weighs, 3 times each day for 2 days.
For example, give a 50 kg adult 1250 mg of *praziquantel*.

How to prevent all kinds of fluke:

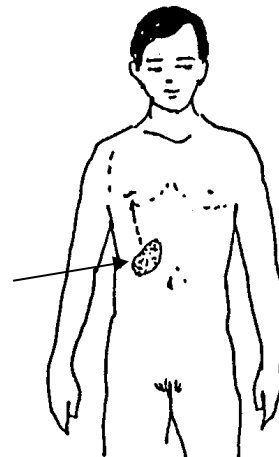
- * Cook fish, seafood and water plants well before you eat them. Do not eat raw or pickled seafood.
- * Danger - Untreated fluke can cause other long term health problems.

GALLBLADDER SICKNESS

The gallbladder is a small sack on the liver.
The gallbladder holds bile that helps digest fatty foods.

Signs of gallbladder sickness:

- * Sharp pain in the right side of the abdomen at the bottom of the ribs. The pain goes to the right side of the upper back.
- * The pain might come about 1 hour after the person eats fatty foods.
- * Severe pain might cause vomiting.
- * Sometimes there is a fever or the eyes are yellow.



How to treat gallbladder sickness:

- * Give *Baralgan* or *Buscopan*:
dose: adult, 1 or 2 tablets when the pain starts.
- * If the pain is severe, give *paracetamol* or *aspirin*:
dose: adult, 2 tablets of 500 mg, 4 times each day.
- * Do not eat fatty food. Fat people should eat small meals and lose weight.
- * If the pain is severe and long term, then go to a health center.

GOITER

[Check for and evaluate folk cures.]

Cause of goiter:

People need to eat food that contains iodine. If people do not eat enough food with iodine, the thyroid gland will swell and make a lump on the front of the neck. Pregnant women who do not eat food with iodine might have children who are retarded or deaf.

Signs of goiter:

The person has a lump on the front of the neck. A person with a severe lack of iodine will tremble, be nervous and his eyes bulge out. A person with severe goiter should go to a hospital.

**How to treat and prevent goiter:**

Everyone should use iodized salt. Iodized salt prevents goiters. If you cannot buy iodized salt, then each day put 1 drop of tincture of iodine in a glass of water and drink the water. Be sure to only use one drop of tincture of iodine because too much iodine is poisonous. Iodized salt is safer. Some foods that have iodine are fish and green, leafy vegetables.

GONORRHEA**Cause of gonorrhea:**

Germ (bacteria) cause gonorrhea. People spread gonorrhea germs when a person has sexual contact with someone who has gonorrhea. The person with gonorrhea might not have any signs of gonorrhea. A mother can spread gonorrhea germs to a child when the child is born.

Signs of gonorrhoea:

About 2 weeks after a man gets gonorrhoea he might urinate frequently. Urination might be painful. Pus might come out of the penis when he finishes urinating. Women with gonorrhoea might have yellowish pus come out of the vagina.

There can be complications for a female such as:

- * The gonorrhoea can spread to the ovaries and cause the woman to never become pregnant again.
- * The gonorrhoea can spread to the abdomen and cause fever and pain.
- * The gonorrhoea can cause an abscess in the vagina.
- * The gonorrhoea can spread to the joints and cause pain.

During childbirth the baby can get gonorrhoea in the eyes. The gonorrhoea causes an eye infection with pus. Any baby younger than 3 weeks old who has tears in the eyes has gonorrhoea.

How to treat gonorrhoea:

- * To treat simple gonorrhoea give *ampicillin*:
dose: adult, 7 tablets of 500 mg (3.5 grams total) one time.
and
give *probenecid*:
dose: adult, 1 gram, one time.
- * If you do not have *probenecid*, give *tetracycline* instead (do not give to children under 8 or pregnant or nursing women):
dose: 2 tablets of 250 mg, 4 times each day for 7 days.
- * If the person still has pain when urinating or pus coming out of the genitals a few days after treatment, then the person might need intravenous antibiotics. Take him to a health center. You should drain any abscesses.
- * If a baby has gonorrhoea, take him to a health center to receive intravenous antibiotics.
- * Treat the sex partner of the person with gonorrhoea for gonorrhoea also.
- * Check all people with gonorrhoea for syphilis.

How to prevent gonorrhoea:

TO PREVENT GONORRHEA, BOTH SEX PARTNERS MUST ONLY HAVE SEX WITH EACH OTHER AND NO ONE ELSE. ONLY HAVE SEX WITH YOUR HUSBAND OR WIFE. DO NOT HAVE SEX WITH OTHER MEN OR WOMEN BEFORE YOU ARE MARRIED.



- * Do not have sex with more than one person and do not visit prostitutes.
- * Condoms can reduce the spread of gonorrhoea. Therefore, use a condom if you have sex with more than one person.

HEADACHES AND MIGRAINE HEADACHES

Causes of headaches and migraine headaches:

Many things cause headaches. Fevers, poor nutrition, long term sicknesses, a head injury, a sinus infection and stress can cause headaches.

Signs of headaches and migraine headaches:

- * Headaches are very common. A sinus headache causes pain over the eyes. A person with a fever will often have a headache. Poor nutrition and long term sicknesses can also cause headaches.
- * If the headache is severe, check for meningitis.
- * A **migraine** headache is a severe headache that makes the head throb, usually on one side of the head only. Migraine headaches can occur often, or months or years apart.
- * A migraine headache begins with blurred vision, seeing spots of light, or a numb hand or foot. A severe headache follows these signs. The migraine headache can last hours or days. The person often vomits.
- * Migraine headaches are very painful, but not dangerous.

How to treat a headache or migraine headache:

- * A person with a normal headache should rest and take *aspirin* or *paracetamol*:
dose: adult, 1 or 2 tablets of 500 mg, 4 times each day.
- * It often helps to put a cloth soaked in hot water on the back of the neck and to rub the neck and shoulders.
- * Be sure to drink a lot of water. Dehydration makes headaches worse.
- * Headaches that come back might be a sign of long term sickness or poor nutrition. It is important to eat well and get enough sleep. If the headaches do not go away, seek medical help.

To treat a migraine headache, do the following at the first sign:

- * Take 2 aspirins with a cup of strong coffee or strong black tea.
- * Lie down in a dark, quiet place. Try to relax. Try not to think about your problems.
- * For very bad migraine headaches, take *ergotamine* pills with *caffeine* (*Cafergot*):
dose: adult, 2 tablets at first and 1 tablet every 30 minutes until the pain goes away. Do not take more than 6 tablets in 1 day.

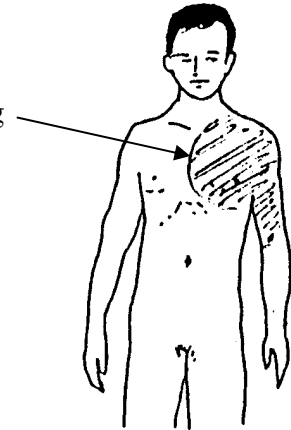
HEART PROBLEMS

Causes of heart problems:

Fatty food, smoking, laziness, high blood pressure and old age can cause heart problems. Heart problems cannot be transferred between people. People who are old or fat or smoke or who have high blood pressure commonly have heart problems.

Signs of heart problems:

- * Sudden pain in the chest, left shoulder or left arm after working a lot. The pain usually goes away after a few minutes.
- * Severe pain in the chest that does not go away when a person rests. If the pain feels like the chest is being crushed, it is a heart attack.
- * A fast, weak or irregular pulse.
- * Swollen feet, especially in the afternoon.
- * Difficulty breathing after a person works a lot. Breathing is more difficult after the person lays down.



How to treat heart problems:

- * Get medical help. Medicines can help many heart problems, but a doctor needs to decide what medicines the person needs.
- * People with heart problems should do easy work but not work that makes the chest hurt or makes breathing difficult.
- * People with heart problems should not eat fatty food. Fat people should lose weight.
- * If a person has difficult breathing or swollen feet, then the person should not eat salt or salty food.
- * If a person has chest pain, he should lean against something and rest until the pain goes away.
- * If chest pain is severe and does not go away or if the person has a fast, weak pulse and is pale, then the heart is probably badly damaged. The person should stay in bed for a week or longer if he still has pain. After this he can sit up and move slowly, but he should not work for 1 month.

How to prevent heart problems:

- * Eat nutritious foods. Do not eat fatty foods. Lose weight if you are fat.
- * Do not smoke.
- * Work hard or exercise if you sit a lot.
- * Get enough sleep and rest.
- * Ask the health worker to check your blood pressure.
- * If you have high blood pressure, then visit the doctor and do not eat salt.

HEMORRHOIDS

Hemorrhoids are varicose veins on the anus or rectum. Hemorrhoids feel like little lumps. Hemorrhoids can be painful, but are not dangerous. Pregnant women often get hemorrhoids that sometimes go away after the baby is born.

How to treat hemorrhoids:

- * You can give special creams or suppositories which help shrink the hemorrhoids. Rub the cream on the hemorrhoid or put the suppository in the anus (*Anusol, Preparation H*).
- * Constipation can cause hemorrhoids. You can prevent constipation if you eat a lot of fruits, vegetables, and coconut and drink a lot of liquids.
- * A person with very large hemorrhoids might need an operation. He should visit a doctor.

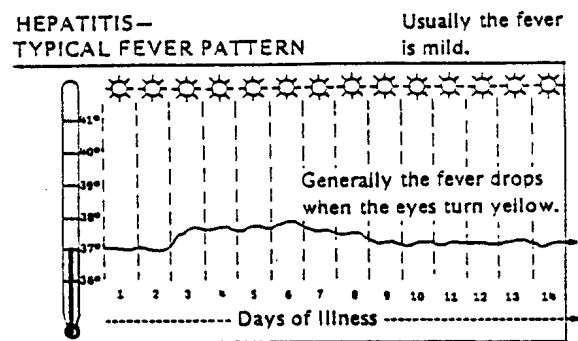
HEPATITIS A

Cause of hepatitis A:

Germ (virus) in the liver cause hepatitis A. People get hepatitis A when they drink water or eat food that is dirty with feces.

Signs of hepatitis A:

- * Hepatitis A sometimes starts with a cough and painful muscles.
- * The person has nausea, vomiting, pain in the abdomen, loss of appetite, fever, chills and abnormal taste and smell. These signs can last several days to several weeks.



- * After that, the skin will turn an orange-yellow color, the urine will become dark and the feces will become a light color. When this happens most people start to feel better, but some people feel very itchy.
- * Sometimes the liver swells and causes pain in the right side of the abdomen.
- * The patient's skin is usually orange-yellow for 1 or 2 weeks. After that he will recover.

How to treat Hepatitis A:

- * Antibiotics do **not** work against hepatitis. Some medicines will damage the sick liver.
Do not use medicines!

- * The sick person should rest and drink a lot of liquids. If he refuses to eat, give him fruit juice and soup with chicken. Give him vitamins if possible.
- * When the sick person can eat, give him good food to eat such as fish, meat, chicken, beans and boiled eggs. Avoid foods that have a lot of fat. **Do not drink alcohol.**

How to Prevent Hepatitis A: See Unit 2 "How to Prevent Many Health Problems".

HEPATITIS B

Causes of hepatitis B:

Germ (virus) in the liver cause hepatitis B. Hepatitis B is spread when:

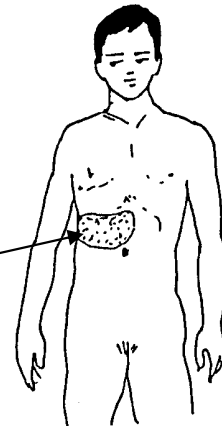
- * A person has sexual contact with another person who has hepatitis B.
- * Blood from a person with hepatitis B enters the body through dirty needles, blood transfusions or tattoo needles.
- * A pregnant woman can give hepatitis B to her child during birth.
- * Contact with saliva might also spread hepatitis B.

10% of patients will not recover and have long term problems. Some people will continue to spread hepatitis B even when they do not have signs of hepatitis B. Other people will have long term liver damage, cancer or die.

Signs of hepatitis B:

People who have hepatitis B show signs 2-3 months after the germs enter the body.

- * The patient has a low fever, nausea, is weak, vomits and does not want to eat.
- * The skin and eyes might be orange-yellow and the urine might become dark.
- * The liver might get larger.



How to treat hepatitis B:

If the person rests, he will usually recover completely within 2 or 3 months. There is no medicine to treat hepatitis B. Good nutrition will help the sick person to recover. See Unit 4 "How to Take Care of Sick People" pages 33-34 and Unit 3 "Nutrition" pages 23-26.

How to prevent hepatitis B:

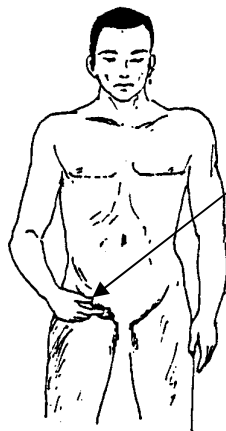
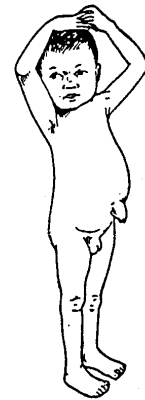
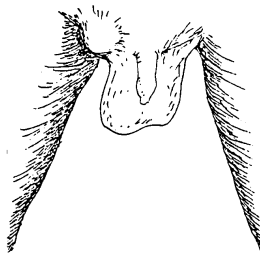
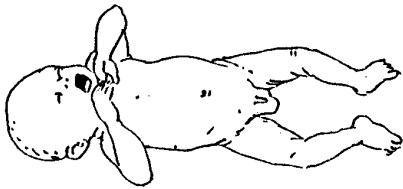
- * In areas where hepatitis B is common, all people should receive the hepatitis B vaccine if possible.
- * Sex partners should use a condom if one person has hepatitis B.
- * The sick person should not share his utensils with other people or eat out of a common food bowl.

HERNIA

A hernia is an opening in the muscles that cover the abdomen. The opening allows a piece of intestine to push through and form a lump under the skin. Hernias usually come when a person lifts something heavy, or strains. Some babies are born with a hernia. In men, hernias are common in the groin.

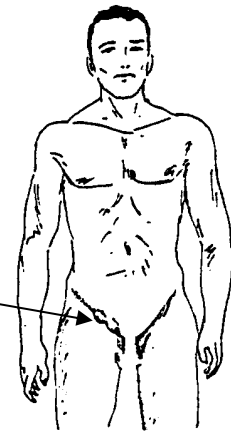
Signs of a hernia:

A hernia will cause a lump in the groin or the navel. Swollen lymph nodes may also cause lumps in the groin.



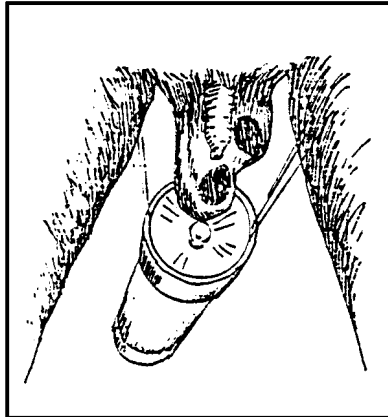
However, a hernia is usually here, and you can feel it with a finger, like this. A hernia gets bigger when you cough or lift something.

Lymph nodes are usually here and do not get bigger when you cough.

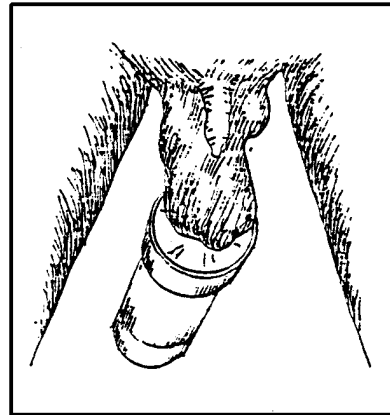


A hernia or a hydrocele (a bag filled with liquid) can cause a swollen scrotum. A hernia needs surgery. A hydrocele usually goes away without treatment. To know if the swelling is a hernia or hydrocele, shine a light behind the scrotum:

If the light shines through, it is probably a hydrocele.



If the light does not shine through, it is a hernia.



How to treat a hernia:

- * If a hernia becomes large and painful, try to make the hernia go back in. Lie with your feet higher than your head and press gently on the lump.
- * If the hernia will not go back in, seek medical help.
- * **If the hernia becomes very painful and causes vomiting, and the person cannot defecate, this can be very dangerous. Surgery will be necessary. Seek medical help immediately!**
- * Hernias in the navel often go away without treatment. If a child still has a hernia in his navel after he is 5 years old, then take him to a health center.

How to prevent hernias:

- * Do not lift heavy things by yourself. If you must lift heavy things, keep your back straight and lift with your legs.



HERPES (SIMPLEX)

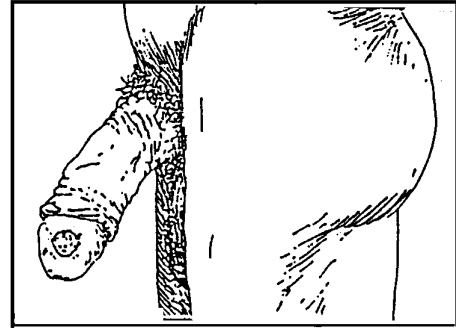
Cause of herpes:

Germ (virus) cause herpes. Herpes is spread when:

- * A person has sexual contact with someone who has herpes.
- * A mother with herpes gives birth to a child and passes the herpes germs to the child.
- * Germs from a person's herpes sore touch another person's mouth, eyes, a wound or genitals.

Signs of herpes:

- * After a person gets herpes, he will have painful blisters on the genitals. The area around the sores is red.
- * The first time someone gets herpes, he might have a headache, fever and swollen lymph nodes in the groin.



- * After a few weeks, the sores will heal completely. However, the sores will come back in most people. The sores that come back are not as painful, smaller in size, heal faster and can occur 3-4 times each year. Stress, menstruation, and trauma can cause the sores to come back.
- * A child who is born with herpes might be premature, have bleeding, eye infections, difficulty breathing or brain damage.

How to treat herpes:

There is no medicine that can cure herpes.

How to prevent herpes:

TO PREVENT HERPES, BOTH SEX PARTNERS MUST ONLY HAVE SEX WITH EACH OTHER AND NO ONE ELSE. ONLY HAVE SEX WITH YOUR HUSBAND OR WIFE. DO NOT HAVE SEX WITH OTHER MEN OR WOMEN BEFORE YOU ARE MARRIED.



- * Do not have sex with more than one person and do not visit prostitutes.
- * Condoms can reduce the spread of herpes. Therefore, use a condom if you have sex with more than one person.
- * Do not have sex when there is a sore on your genitals.
- * If you touch a sore on the genitals, wash your hands.

HIGH BLOOD PRESSURE

Cause of high blood pressure:

Sickness in the bloodvessels, heart or kidneys causes high blood pressure. Being fat, working too hard, drinking alcohol and smoking can also cause high blood pressure. High blood pressure can later cause heart problems, kidney problems and stroke.

Signs of high blood pressure:

- * Often there are no signs.
- * The person might have frequent headaches.
- * The heart beats hard and the person breathes fast after only a little work.
- * The person might be weak and dizzy.
- * Sometimes there is pain in the left shoulder and chest.

Other sicknesses can also cause these signs. If you think a person has high blood pressure, then send him to a health worker who can check blood pressure.

How to treat and prevent high blood pressure:

- * Adults should have their blood pressure checked every year.
- * Fat people should lose weight. They should eat less food, less fatty food and less sweet food.
- * Cook with vegetable oil instead of fat.
- * Use little or no salt.
- * Stop smoking and stop drinking alcohol.

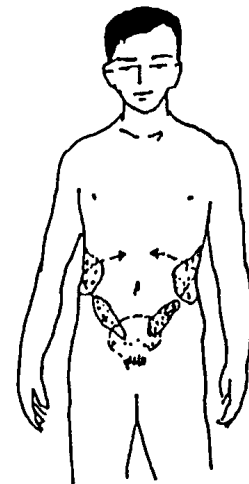
KIDNEY OR BLADDER BLOCKAGE

Cause of kidney or bladder blockage:

Minerals from foods can form a stone in the kidney, urinary tubes or bladder and block the urine flow.

Signs of kidney or bladder blockage:

- * Severe pain below the ribs in the back, sides or lower abdomen. Men might have pain at the base of the penis.
- * If the urinary tube is blocked, the person cannot urinate or can only urinate a little. Drops of blood might come out when the person tries to urinate.
- * The person might also have a urinary infection.



How to treat kidney and bladder blockage:

- * Drink a lot of water. But if the person cannot urinate or his hands and face swell he should not drink a lot of water.
- * If the person has a fever, give *trimethoprim/sulfamethoxazole (TMP/SMZ)*:
dose: adult, 2 tablets of 500 gm, 2 times each day for 3 days.
- or
give *amoxicillin*:
dose: adult, 2 tablets of 250 mg, 3 times each day for 7 days.
- or
give *tetracycline* (do not give to children under 8 or to nursing or pregnant women):
dose: adult, 1 tablet of 250 mg, 4 times each day for 3 days.
- * To reduce pain, give *aspirin* or *paracetamol*:
dose: adult, 1 or 2 tablets of 500 mg, 4 times each day.
- or
give *Buscopan* or *Baralgan*:
dose: 1 or 2 tablets.
- * Try to urinate lying down. Sometimes the urinary tube will open when a person lies down.
- * If the problem is severe, or if the fever continues longer than 3 days, or if the fever returns, then get medical help. The person might need surgery.

LEPROSY

[What are cultural beliefs about leprosy?]

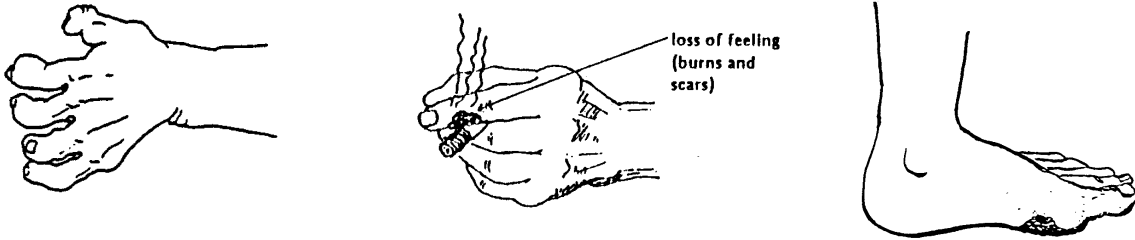
Cause of leprosy:

Germ (bacteria) in the body cause leprosy. Leprosy is a sickness of the skin and nerves. Leprosy is a long term sickness. Leprosy is not easy to spread. Only 5% of people will develop leprosy when they get the germ. Coughing and sneezing spread leprosy.

Signs of leprosy:

- * The first sign of leprosy is usually 1 or more skin patches that do not itch and do not have feeling. Some people with leprosy only have 1 or 2 skin patches. Other people have leprosy on the whole body and in the nerves.
- * The hands and feet might be numb and sometimes the fingers are weak.
- * A person might not be able to completely close an eye or lift a foot.

Leprosy damages nerves that help people feel. Some people with leprosy lose feeling in their hands and feet. When they pick up something hot or cut themselves, they do not feel the burn or cut. When they step on thorns or rocks they do not feel the thorns or rocks. These burns and cuts can become long term ulcers if the person does not treat them properly. People with leprosy lose fingers and toes because they do not take good care of the ulcers. Common disabilities are claw hands and ulcers on the bottom of the feet.



How to treat leprosy:

**IT IS IMPORTANT TO TREAT LEPROSY EARLY IN ORDER TO CURE
LEPROSY AND PREVENT DISABILITIES.**

**YOU DO NOT NEED TO ISOLATE A PATIENT OR SEND A PATIENT AWAY
FROM HIS FAMILY OR VILLAGE.**

- * Seek medical help as soon as possible.
- * Usually, you use a combination of 3 medicines. The patient takes the medicine for **2 years**. Give *rifampicin*:
 dose: adult, 2 capsules of 300 mg one day each month
 and
 give *dapsone (DDS)*:
 dose: adult, 1 tablet of 100 mg one time every day
 and
 give *clofazimine (Lamprene)*:
 dose: adult, 1 capsule of 50 mg one time every day.
- * If the person has only 1 or 2 skin patches and has not lost any feeling, then you can give the medicine for a shorter time. A doctor should decide about this.
- * If you cannot get this combination of medicines, then give *dapsone (DDS)*:
 dose: 1 tablet of 100 mg every day for at least 5 years.
 Start the combination therapy whenever it is available.
- * Send the patient to a doctor when there are signs of nerve damage such as:
 - Pain in the elbows or ankles.
 - Loss of strength in the eyelids, fingers and feet.
 - Increasing numbness or tingling in the hands or feet.

* You can treat nerve damage which has started over the past few months as follows:

Give *prednisone*:

- dose: 6 tablets of 5 mg each day for 2 weeks, next
- 5 tablets of 5 mg each day for 4 weeks, next
- 4 tablets of 5 mg each day for 4 weeks, next
- 3 tablets of 5 mg each day for 4 weeks, next
- 2 tablets of 5 mg each day for 4 weeks, next
- 1 tablet of 5 mg each day for 2 weeks.

The patient should take all the tablets together each morning after the morning meal.

How to prevent leprosy:

YOU CAN PREVENT LEPROSY DISABILITIES.

- * Treat all leprosy patients and check their family members and friends for signs of leprosy.
- * If a person has nerve damage longer than 6 months, the nerves will not recover. However, the patient can prevent more damage and disability if he:



- Cares for his hands and feet every day.
- Cleans and bandages all wounds and rests until the wound heals.
- Wears shoes that will prevent foot wounds.



- * Send leprosy patients with eye problems to a doctor for treatment, or the patient might become blind.

MALARIA

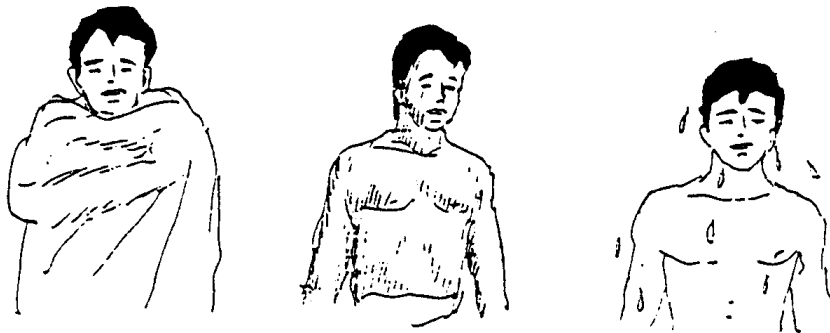
Cause of malaria:

A germ (parasite) in the blood causes malaria. Mosquitos spread the malaria germ. The mosquito sucks up the germ from the blood of a person with malaria. The germ lives in the mosquito for about two weeks and then the mosquito injects the germ into the person it bites.

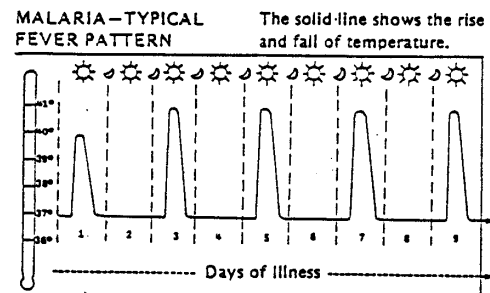
Signs of malaria:

Malaria causes chills and high fever. Normally the chills and fever happen every 2 or 3 days and last several hours. Malaria has 3 stages:

- 1) Malaria begins with chills and headache. The person shivers for between 15 minutes to one hour.
- 2) A fever (40 C, 103 F or more) follows the chills. The person is weak, his skin gets red, and he might become delirious. The fever lasts several hours.
- 3) Finally the person begins to sweat and his temperature goes down. After the chills, fever and sweating, the person feels weak, but better.



Sometimes malaria causes fever every 2 or 3 days. This depends on the kind of malaria. But, in the beginning, malaria can cause fever every day. Also, in small children and people who had malaria before, the fever pattern might not be normal. Therefore, anyone who has unexplained fevers should go to have a blood test for malaria.



Long term malaria often causes a large spleen and anemia.

How to treat malaria:

In many areas of South East Asia the malaria parasite is resistant to the common malaria medicines. Therefore malaria is difficult to treat.

The following is presently the most effective treatment:

* Give *quinine*:

dose: adults, 2 tablets of 300 mg (600 mg total), 3 times each day for 7 days
and also

give *doxycycline* (do not give to children younger than 8 or pregnant or nursing women):

dose: adult, 1 capsule of 100 mg, 1 time each day for 7 days.

or

children under 8 years old and pregnant women should take *amoxicillin* instead of *doxycycline*:

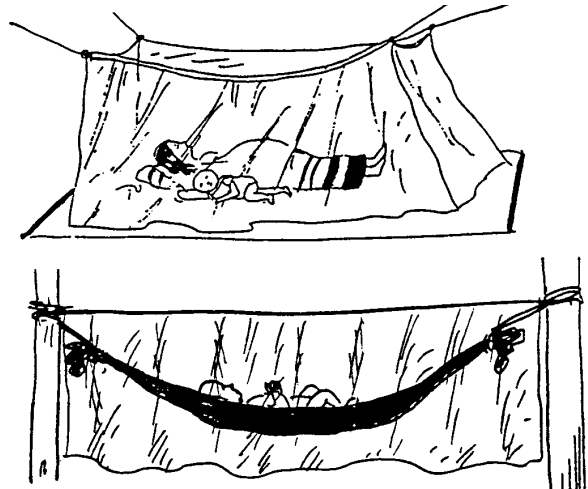
dose: adult, 2 tablets of 250 mg, 3 times each day for 7 days.

* An alternative treatment is *artesanate* (if available):

dose: adults, 2 tablets, 2 times the first day, then 1 tablet, 2 times each day for the next 4 days.

How to prevent malaria:

* Avoid mosquitos. Malaria mosquitos bite between sun down and sun up. Wear long sleeve shirts and long pants in the evening. Use mosquito nets and put screens on windows and doors if possible. It is especially important for small children and pregnant women to use mosquito nets. Cover a baby's cradle with a mosquito net or thin cloth. Sleep under a sheet.



* Destroy mosquitos and their babies. Mosquitos breed in water. Bury old cans, broken pots and trash that holds water. Drain or put a little oil on pools, pits or marshes where mosquitos breed. Fill tops of bamboo fence poles with sand. Cover all water containers.

MALNUTRITION

Causes of malnutrition:

Many children are malnourished because they do not have enough food to eat. Some children are malnourished because they eat a lot of rice, but not enough body building foods such as meat, fish, beans, nuts, eggs, and chicken and not enough protective foods such as fruits and vegetables.

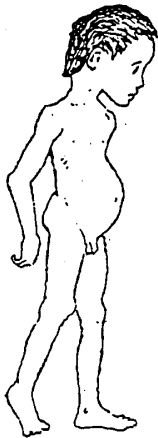
Signs of malnutrition:

up to 40 centimeters ↑

These 2 children are malnourished:

Serious Malnutrition:

- * small for his age
- * underweight
- * swollen abdomen
- * thin arms and legs
- * loss of appetite
- * weak and tired
- * pale (anemia)
- * wants to eat dirt
- * sores in the corner of the mouth
- * frequently sick
- * cannot see well at night



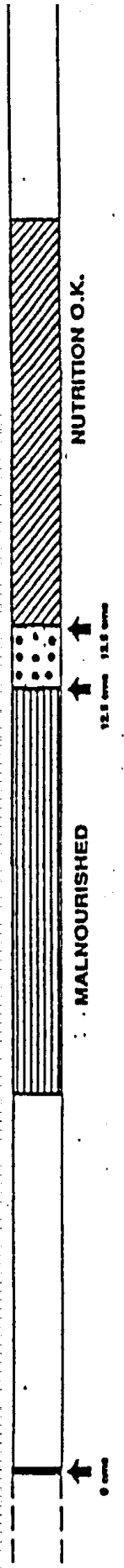
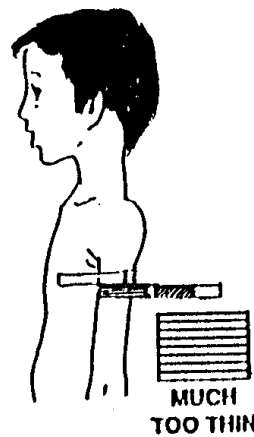
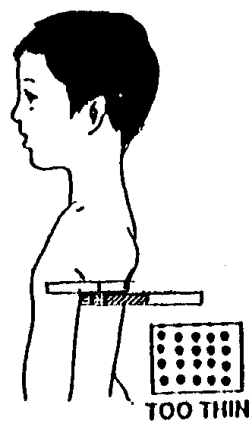
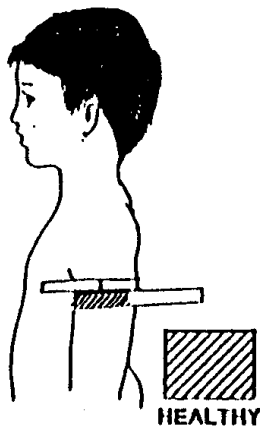
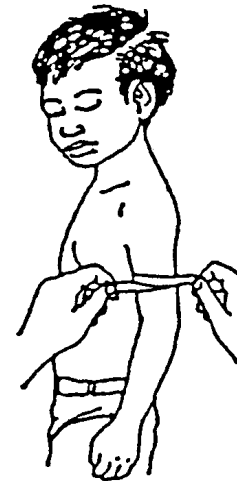
Very Serious Malnutrition:

- * sad
- * underweight
- * dark spots, peeling skin or sores on body
- * swollen feet
- * thin hair or losses hair
- * does not want to laugh or play
- * sores inside mouth
- * below normal intelligence
- * dry eyes
- * blindness



You can often see signs of malnutrition after the child has a severe sickness such as diarrhea or measles.

To check for malnutrition you can measure a child's upper arm. After a child is 1 year old, his upper arm should measure more than 13 centimeters around. If his upper arm is less than 13 centimeters around, then he is malnourished. If his upper arm is less than 12 centimeters around, then he is severely malnourished. See Unit 3, "Nutrition" pages 22-23 for more details.



A healthy child gains weight every month. If a child does not gain weight every month, then he might be sick or malnourished. See Unit 18 "Health and Sickness in Children" page 36-41.

How to treat and prevent malnutrition:

All children need to eat a lot of nutritious foods to prevent malnutrition. A child who is sick or a child who had a serious sickness especially needs to eat nutritious foods. See Unit 3 "Nutrition" pages 23-25, for a list of nutritious foods a child should eat.

- * Be sure children eat enough food.
- * Be sure children eat a lot of body building foods such as meat, eggs, chicken, fish, beans, nuts, and milk.
- * Be sure children eat a lot of protective foods such as fruits and vegetables.
- * Give vitamin pills to severely malnourished people.

If a child is severely malnourished, mix 2 tablespoons powdered milk with a little sugar in a cup of boiled water. Feed this to the child every day.

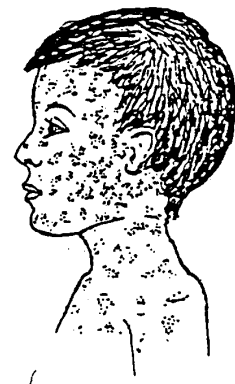
MEASLES

Cause of measles:

Germ (virus) in the body cause measles. Coughs and sneezes spread measles. Measles is very dangerous for children with tuberculosis or malnutrition.

Signs of measles:

- * Signs of measles begin about 10 days after the person was near someone with measles.
- * Measles begins like a cold with a fever, runny nose, red eyes, sore eyes, and a cough.
- * The child becomes more sick each day.
- * The mouth might be sore.
- * The child might have diarrhea.
- * After 2 or 3 days small white spots appear in the mouth.
- * After 3 or 4 days a rash appears. The rash starts on the neck and spreads to the face and body and finally spreads to the arms and legs. The rash stays for about 5 days. The fever usually goes away when the rash begins.



How to treat measles:

- * The person should stay in bed, drink a lot of liquids and eat nutritious food.
- * To reduce fever and pain, give *paracetamol*:
dose: adult, 1 or 2 tablets of 500 mg, 4 times each day.
- * If the person gets an earache, follow the treatment for "Ear Infection" page 38.

- * Watch for pneumonia, meningitis or severe pain in the abdomen or ears. If the person has any of these problems, get medical help. If the fever does not go down after 4 days, get medical help.

How to prevent measles:

TO PREVENT MEASLES FROM KILLING CHILDREN, BE SURE CHILDREN EAT NUTRITIOUS FOODS. BE SURE CHILDREN RECEIVE THE MEASLES VACCINE BETWEEN 9 AND 12 MONTHS AFTER BIRTH.

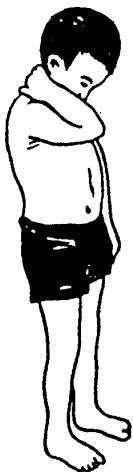
- * Children with measles should stay in a room away from other children. Be especially careful to keep malnourished children and children with tuberculosis away from children with measles. Children from other families should not go into a house that has children with measles.
- * Children from the family that has measles should not go into crowded places such as schools, churches, or markets for 10 days.

MENINGITIS

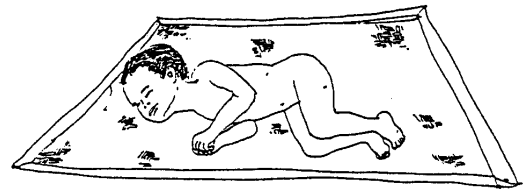
Cause of meningitis:

Germ (usually bacteria) that go into the body and get into the brain cause meningitis. Children get meningitis more than adults. Meningitis can start when another sickness such as measles, mumps, whooping cough or ear infection makes a person weak. Children of mothers who have tuberculosis sometimes get meningitis in the first few months of life.

Signs of meningitis:



- * The patient has a fever, severe headache and a stiff neck.
- * He looks very sick and lies with his head and neck bent backwards. You cannot put the head between the knees because the back is very stiff.



- * In babies under one year old, the soft spot on top of the head bulges up. The child usually vomits and is very sleepy. Sometimes the child has convulsions and strange movements. The child often gets worse and becomes unconscious.

- * Meningitis from TB develops slowly over days or weeks. Other kinds of meningitis start quickly, in hours or days.

How to treat meningitis:

THE PERSON WITH MENINGITIS NEEDS MEDICAL HELP FAST! TAKE HIM TO A HEALTH CENTER AS SOON AS POSSIBLE.

* Inject *ampicillin*:

dose: adult, 500 mg every 4 hours until signs are gone for 2 days.

or

inject *crystalline penicillin*:

dose: adult, 2,000,000 units every 4 hours until signs are gone for 2 days.

* If there is a high fever (more than 40 C, 103 F), then rub cool, wet cloths on the body and give *aspirin* or *paracetamol*:

dose: adult, 1-2 tablets, 4-6 times each day.

How to prevent meningitis:

* See Unit 2 "How to Prevent Many Health Problems" pages 10-18.

* To prevent meningitis from TB, all newborn babies should receive the TB vaccine (*BCG*) at birth or in the first month after birth. This is especially important for children whose mothers have TB.

MUMPS**Cause of mumps:**

Germ (virus) cause mumps. Coughing and sneezing spread germs that cause mumps.

Signs of mumps:

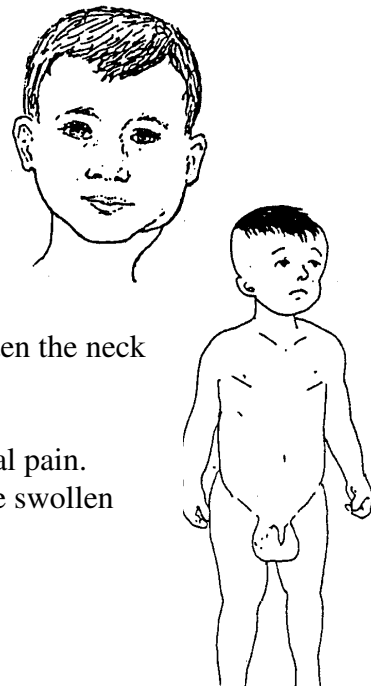
The first signs of mumps begin 2 or 3 weeks after the person was near someone with mumps.

* Starts with fever and pain when the person opens his mouth or eats.

* After 2 days, the neck below the ears begins to swell. Often the neck swells on one side and then the other side.

* Adults or children over 11 years old might have abdominal pain. Men might have a swollen testicle and women might have swollen breasts.

* Watch for signs of meningitis.



How to treat mumps:

- The swelling should go down in about 10 days.
- * To reduce pain and fever, give *paracetamol*:
dose: adult, 1 or 2 tablets of 500 mg, 4 times each day.
 - * Feed the child soft, nutritious food.
 - * Keep the child's mouth clean.
 - * People with swollen testicles or breasts should rest quietly and put cold, wet cloths on the swollen parts to reduce swelling and pain.

How to prevent mumps:

The mumps vaccine prevents mumps. All children should receive the mumps vaccine.

PHIMOSIS**Cause of phimosis:**

When a man does not keep his penis clean he can get phimosis.

Signs of phimosis:

The foreskin is stuck to the pink part at the end of the penis. The penis is usually painful and swollen.

How to treat phimosis:

Soak the penis in warm water, and gently try to pull the foreskin back. Wash the area well with soap and water.

How to prevent phimosis:

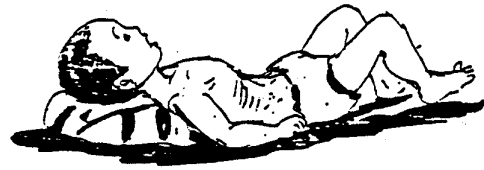
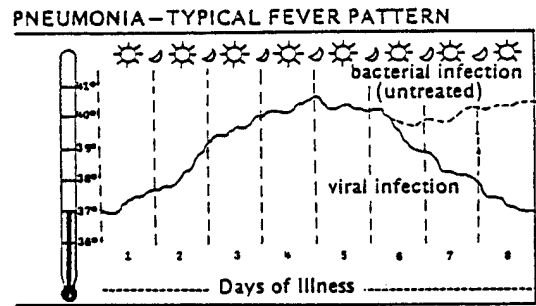
Be sure to wash the penis regularly.

PNEUMONIA**Cause of pneumonia:**

Germ in the lungs cause pneumonia. Pneumonia can be sudden and severe. People often get pneumonia after other lung sicknesses, such as measles, whooping cough, flu, bronchitis, asthma or a very serious sickness.

Signs of pneumonia:

- * Sudden chills and high fever. Sometimes old people, very weak people or newborn babies will not have a fever.
- * Rapid, shallow breathing, with little grunts or sometimes wheezing. A child's nostrils might spread with each breath.
- * The chest sucks in when the person breathes.
- * Cough, often with yellow, green, rust colored, or slightly bloody mucus.
- * Chest pain, especially when breathing.
- * The person looks very sick.
- * Cold sores often appear on the face and lips.
- * A very sick baby who takes more than 50 shallow breaths each minute probably has pneumonia. An adult or child with pneumonia will breath about 40 times or more each minute.



How to treat pneumonia:

- * If a person has pneumonia, you can save his life with antibiotics. Give *penicillin G* or *penicillin V*:
 dose: adult, 2 tablets of 250 mg, 4 times each day. Continue for at least 2 days after fever and other signs of pneumonia are gone.
- * If the person has severe pneumonia with a high fever and fast breathing, inject *procaine penicillin*:
 dose: adult, 400,000 units (250 mg) 2 or 3 times each day until 2 days after the signs are gone.
- or
 give *amoxicillin*:
 dose: adult, 500 mg, 3 times each day until signs are gone 2 days.
- * To lower the temperature and decrease the pain, give *aspirin* or *paracetamol*:
 dose: adult, 1 to 2 tablets, 4-6 times each day.
- * Give a lot of liquids. If the person will not eat, then give him mashed foods or rehydration drink. See Unit 4 "How to Take Care of Sick People" pages 34-37.

- * Give the person a lot of water. He should breathe steam to loosen the mucus. Help him drain mucus from the lungs if necessary. See "Cough, How to Drain Mucus from the Lungs" page 35.
- * If the person wheezes, give medicine with *theophylline* or *ephedrine*. See "How to Treat Asthma" page 24.

How to prevent pneumonia:

See Unit 2 "How to Prevent Many Sicknesses".

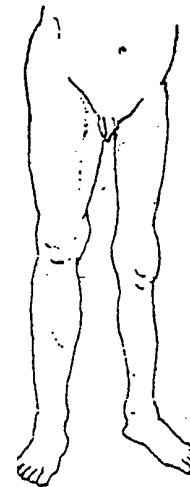
POLIO

Cause of polio:

Germ (virus) in the body cause polio. The germ enters the body when a person drinks dirty water.

Signs of polio:

- * Polio is most common in children under 2 years old.
- * Polio begins like a cold with fever, vomiting and sore muscles.
- * Sometimes a body part becomes weak or cannot move. Usually one or both legs become weak. After a while, the weak leg becomes thin and grows slower than the other leg.



How to treat polio:

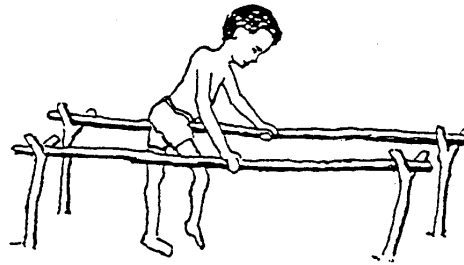
- * There are no medicines to treat polio. To reduce pain, put cloths soaked in hot water on sore muscles and give *paracetamol*:
dose: adult, 1 or 2 tablets of 500 mg, 4 times each day.

How to prevent polio:

- * The sick child should stay in a separate room away from other children.
- * The mother should wash her hands after each time she touches the sick child.
- * The best protection against polio is the polio vaccine.

CHILDREN SHOULD RECEIVE THE POLIO VACCINE AT 2, 4 AND 6 MONTHS AFTER THEY ARE BORN.

* If polio cripples a child, the child should eat nutritious food and do exercises to strengthen his leg muscles. The muscles might get stronger during the first year after the sickness. Help the child to walk between 2 poles and make him crutches. See Unit 19 "How to Prevent Disabilities" page 51.

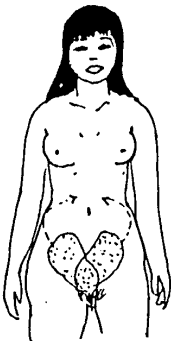


POSTPARTUM SEPSIS (CHILDBIRTH FEVER)

Causes of postpartum sepsis:

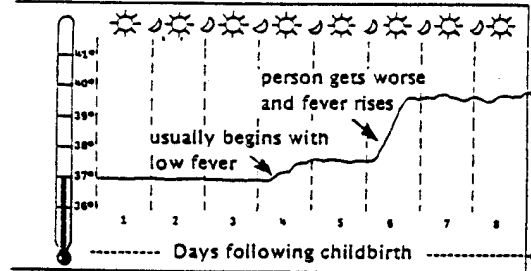
Germ (bacteria) that enter the birth canal cause postpartum sepsis. The germs enter the birth canal when a woman gives birth in a dirty place, or when a person puts her hands inside the birth opening while delivering a baby.

Signs of postpartum sepsis:



- * The woman recently had a baby.
- * Fever or chills.
- * Headache.
- * Lower back pain.
- * Sometimes there is pain in the lower abdomen.
- * A bad smelling, bloody liquid comes out of the vagina.

CHILDBIRTH FEVER – TYPICAL FEVER PATTERN



How to treat postpartum sepsis:

- * Give *penicillin V*:
dose: adult, 2 tablets of 250 mg, 4 times each day for at least 7 days.
- * Postpartum sepsis can be very dangerous. If the mother does not get well after 2 days of treatment, get medical help.

How to prevent postpartum sepsis:

- * Prepare a clean area for childbirth and keep it clean.
- * Be sure anyone who helps with childbirth washes their hands well before touching the pregnant woman or anything she will use.
- * No one should put their hands inside the birth opening unless absolutely necessary.

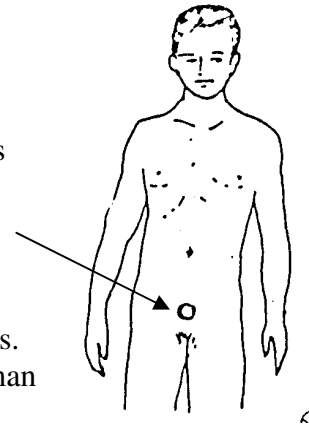
PROSTATE PROBLEMS

Cause of prostate problems:

Only men have a prostate gland. The prostate gland makes the liquid that sperm lives in. The prostate gland can become larger when a person gets old and sometimes cancer might develop.

Signs of prostate problems:

- * Prostate problems usually happen to older men.
- * The person has difficulty urinating because the prostate swells and presses on the urine tube. Sometimes the person has difficulty defecating.
- * The urine might just drip or not come out at all.
- * The person might have a fever from an infection.
- * Gonorrhea and prostate problems have many of the same signs. If the man is old, he probably has a prostate problem. If the man is young, he probably has gonorrhea.

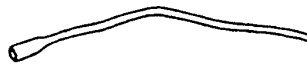


How to treat prostate problems:

- * Get medical help.
- * If you cannot get medical help quickly and the patient has some or all of the following signs, then put in a catheter:
 - No urine at all will come out.
 - The bladder is very full and painful.
 - His breath smells like urine.
 - The feet and face swell.
 - The patient vomits and is confused.
- * If you put a catheter in, you must get the person to a health center within 1 day.

DO NOT PUT IN A CATHETER UNLESS ABSOLUTELY NECESSARY. DO NOT PUT IN A CATHETER UNLESS YOU ARE TRAINED TO DO IT.

HOW TO USE A CATHETER:



1. Boil the catheter in water for 15 minutes.

2. Wash the penis and the area around the penis with soap and warm water.

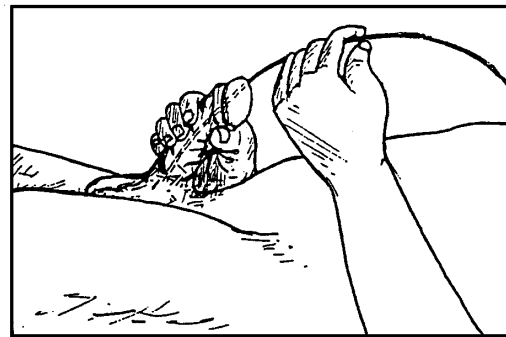
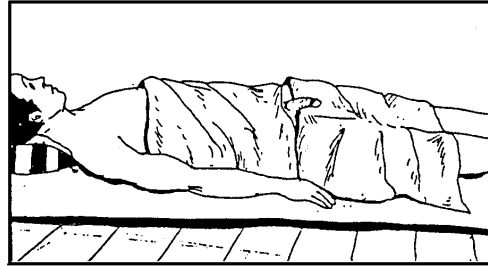
3. Wash your hands with boiled water and soap.

4. Cover the area around the penis with a very clean cloth. Iron the cloth or boil and dry the cloth before you use it.

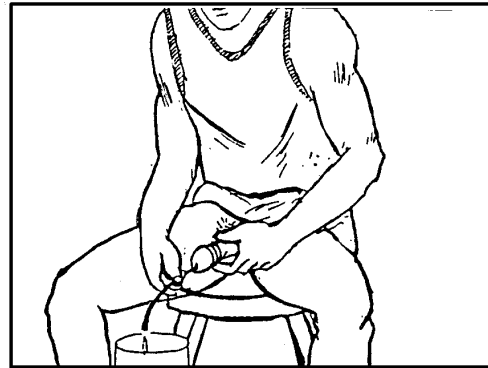
5. Wash your hands with alcohol.

6. Put antibiotic ointment or KY jelly on the catheter to make it slide easier.

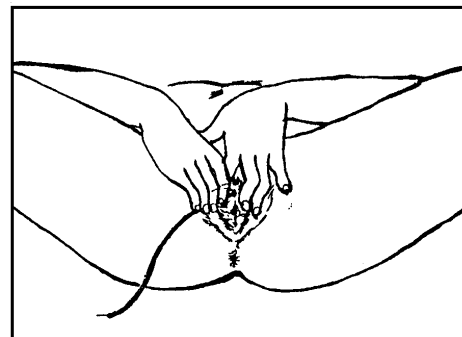
7. Insert the catheter into the penis hole very carefully. Do not let the catheter touch anything except the penis hole and your clean hands. Hold the penis straight. If the catheter does not go in easily, roll the catheter gently between your fingers and move the penis. But never push hard on the catheter. It is very easy to hurt the urinary tube. When urine starts to come out, do not push the catheter any more.



If the person's face and hands are swollen or he vomited, then do not let all the urine come out at one time. Let the urine come out slowly, a little bit every few minutes for 2 hours. You can pinch the catheter closed for a while then let the urine flow for a while.



* Sometimes women cannot urinate after they give birth. Insert a catheter in the same way as described above. The urinary tube in a woman is much shorter than the urinary tube in a man.



RABIES

Cause of rabies:

Germ (virus) in the nerves and brain cause rabies. Rabies germs are in the saliva of animals that have rabies. If a sick animal bites or licks a person, then the person can get rabies. Dogs, bats, cats, rats, monkeys and other animals can spread rabies. A person with rabies can spread the sickness through his saliva or feces.

Signs of rabies:

A dog or other animal bites the person. The signs of rabies in an animal are:

- * The animal acts strange, sometimes sad, restless and irritable.
- * The animal has foam around the mouth and cannot eat or drink.
- * Sometimes the animal goes crazy and will bite anyone or anything nearby.
- * The animal dies after 5 to 7 days.



Signs of rabies in people usually start 10 to 70 days after the sick animal bites a person:

- * First, the bite area is painful and tingles.
- * Next, the person will have pain and difficulty when he swallows and have thick, sticky saliva.
- * He will be afraid to drink water.
- * Then he will become angry and as he begins to die, he will have severe convulsions and paralysis.

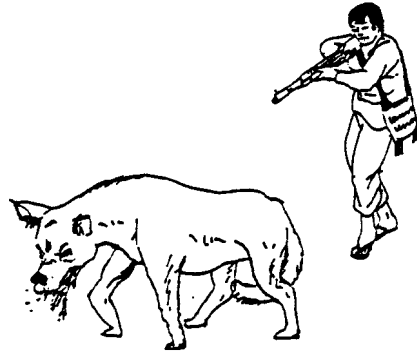
How to treat animal bites and rabies:

- * Clean the bite well with soap, water and *hydrogen peroxide* or another antiseptic. Do not close the wound, leave it open.
- * Tie or cage the animal that bit a person for 1 week.
- * If the animal dies before the week is over or if it was killed or you cannot catch it, then take the person to a health center immediately where a doctor can give a rabies vaccination. If the animal bit the person for no reason, take the person to get the rabies vaccination immediately.

How to prevent rabies:

A PERSON WITH RABIES ALMOST ALWAYS DIES! THEREFORE IT IS VERY IMPORTANT TO PREVENT RABIES.

- * There is a rabies vaccine, but it is expensive.
- * Kill and bury (or cage for 1 week) any animal that you think has rabies.
- * Cooperate with programs to vaccinate dogs.
- * Keep children far away from any animal that looks sick or acts strange.



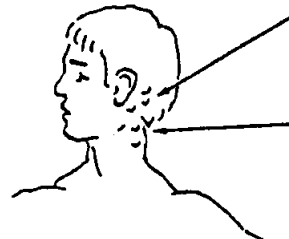
BE VERY CAREFUL WHEN YOU SEE AN ANIMAL THAT SEEMS SICK OR ACTS STRANGE. EVEN IF THE ANIMAL DOES NOT BITE ANYONE, THE ANIMAL'S SALIVA CAN CAUSE RABIES IF IT GETS INTO A CUT OR SCRATCH.

RUBELLA (GERMAN MEASLES)**Cause of rubella:**

Germ (virus) in the body causes rubella. Coughing and sneezing spread rubella. Women who get rubella in the first 12 weeks of pregnancy might give birth to a deformed child.

Signs of rubella:

- * Rubella begins like a cold with a runny nose, sore eyes and a cough. Usually there is a fever.
- * Rubella is similar to measles, but only lasts 3 or 4 days.
- * Often the lymph nodes on the back of the head and neck swell and are painful.

**How to treat rubella:**

Stay in bed and take *paracetamol*:

dose: adult, 1 or 2 tablets of 500 mg, 4 times each day.

How to prevent rubella:

The best protection against rubella is the rubella vaccine. All children, especially girls should receive the rubella vaccine. All young women should receive the rubella vaccine before they are pregnant. Pregnant women should stay away from children who have rubella.

SEPTICEMIA (blood infection)**Causes of septicemia:**

Germ (bacteria) that get into the blood cause septicemia.

Signs of septicemia:

Signs of septicemia in a newborn baby are different from the signs in older people. In a newborn baby, septicemia can cause many different signs:

- * The baby does not suck well.
- * The baby seems very sleepy.
- * The baby has pale, blue or yellow skin.
- * The baby vomits and has diarrhea.
- * The baby has fever or a low temperature (less than 35 C, 97 F).
- * The baby might have a swollen belly.
- * The baby might have convulsions.

Other sicknesses can cause these signs, but if the baby has several of the signs, then he probably has septicemia.

How to treat septicemia:

For a newborn baby:

- * Inject *ampicillin*:

dose: baby, 125 mg, two times each day for at least 5 days.

or

- * inject *crystalline penicillin*:

dose: baby, 250,000 units, 2 times each day for at least 5 days.

and

inject *streptomycin*:

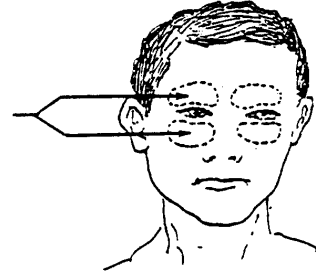
dose: baby, 20 mg for each kilogram the baby weighs (for example, a 3 kilogram baby gets 60 mg), one time each day for at least 5 days.

- * Be sure the baby drinks enough liquid. Spoon feed the baby breastmilk and rehydration drink if necessary.
- * Get medical help.

SINUS INFECTION

Causes of sinus infection:


The sinuses are spaces in the head that connect to the nose. Germs that get into the sinuses cause infection, swelling, pain and sinus problems. Colds and allergies can cause sinus infection.



Signs of sinus infection:

- * Pain in the face above and below the eyes. It hurts more when you lightly tap the bones above the eyes or when the person bends over.
- * Thick yellow-green mucus in the nose. The mucus might smell bad. The nose is often stuffy.
- * Fever sometimes.

How to treat sinus infection:

- * Sniff a little salt water into the nose. (1 teaspoon of salt in one cup warm water)
 - * Put a cloth with hot water on the face.
- 
- * Use decongestant nose drops like *phenylephrine*:
dose: adult, 2 or 3 drops in each nostril 3 times each day for not more than 3 days.
First, sniff a little salt water, then put the drops in the nose.
 - * Give penicillin V:
dose: adult, 2 tablets of 250 mg, 4 times each day for 10 days.
 - * If the person does not get better, seek medical help.

How to prevent sinus infections:

When you get a cold or stuffy nose, try to keep your nose clear. See "How to Prevent Colds and Flus", page 32.

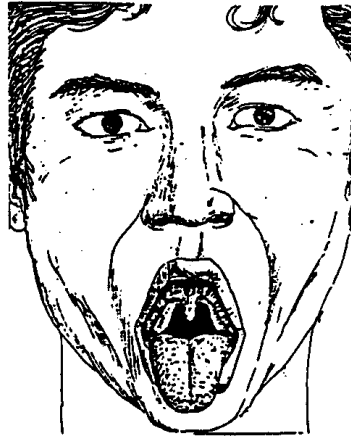
SORE THROAT

Cause of a sore throat:

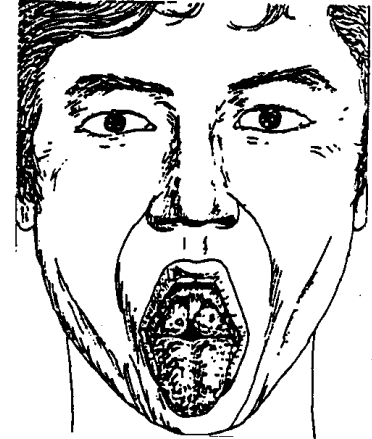
Cold germs often cause a sore throat. Coughing and sneezing spread germs that cause sore throats.

Signs of a sore throat:

- * Sore throats often begin with a cold.
- * Throat pain, especially during swallowing.
- * Red throat.
- * The tonsils might be large and painful with white spots.
- * There might be a fever.
- * The lymph nodes under the jaw might swell and be painful.



Normal tonsils



Swollen tonsils

How to treat sore throats:

If the throat is red and has some pain:

- * Add one teaspoon of salt to a cup of water and gargle with the salt water 3 times each day.
- * To reduce pain, give *paracetamol*:
dose: adults, 1 or 2 tablets of 500 mg, 4 times each day.

If the tonsils are large and painful and the person has a fever:

- * Give *penicillin V*:
dose: adult, 2 tablets of 250 mg, 4 times each day for 7 days.

How to prevent sore throats:

- * See "How to Prevent Colds and Flu" page 32.
- * If a person has a fever and swollen tonsils, then he should stay in a separate room.

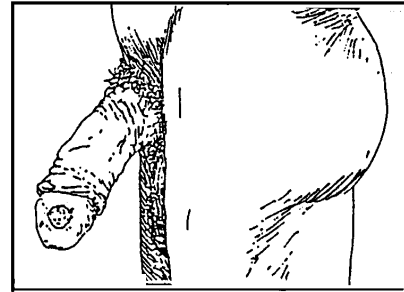
SYPHILIS**Cause of syphilis:**

Germ (bacteria) cause syphilis. People spread syphilis when:

- * They have sexual contact with someone who has syphilis.
- * A pregnant woman gives syphilis to her unborn child.
- * They receive a blood transfusion using blood with the syphilis germ.

Signs of syphilis:

- * 3 weeks after sexual relations, the patient gets a painless sore on the penis or vagina.
- * One week after this the lymph nodes in the groin swell.



- * These signs disappear and after several weeks a small red rash might appear on the body. The rash can be flat, raised or with pus. The rash is spread evenly on all body parts and is often on the face, palm of the hands and soles of the feet.
- * The person might also have fever, lose weight, not want to eat and have headaches.

Syphilis can damage the brain, blood vessels, and joints if the person does not receive treatment. An unborn child with syphilis might die, be born premature or have damaged bones, heart, or eyes.

How to treat syphilis:

- * For early syphilis, inject *benzathine penicillin G*:
dose: adult, 2,400,000 units, one time
- or
- if you do not have *benzathine penicillin G*, give *penicillin V*:
dose: adult, 2 tablets of 250 mg, 4 times each day for 10 days.
- * Treat babies and people who have had syphilis for a long time with *penicillin V* for 4 weeks. It is best to send these patients to a health center.
- * Treat the patient's sex partner the same time you treat the patient.
- * All pregnant women should have a blood test to check for syphilis.

How to prevent syphilis:

TO PREVENT SYPHILIS BOTH SEX PARTNERS MUST ONLY HAVE SEX WITH EACH OTHER AND NO ONE ELSE. ONLY HAVE SEX WITH YOUR HUSBAND OR WIFE. DO NOT HAVE SEX WITH OTHER MEN OR WOMEN BEFORE YOU ARE MARRIED.



- * Do not have sex with more than one person and do not visit prostitutes.
- * Condoms can reduce the spread of syphilis. Therefore, use a condom if you have sex with more than one person.

TETANUS

Causes of tetanus:

Germ (bacteria) in dirt and feces that get into wounds cause tetanus. These germs get into the body when a dirty object punctures or cuts a person's skin.



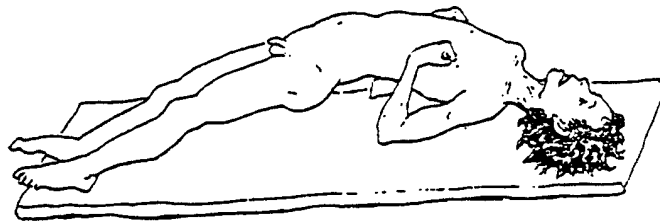
The germs can also get into the body when dirt or feces touch a wound, cut or sore. The tetanus germs grow in the wound and poison the body.

Tetanus germs can enter a baby through the umbilical cord when:

- * A person cuts the umbilical cord with a knife that was not boiled or passed through a flame, or a knife that touched something else after it was cleaned.
- * A person cuts the cord far away from the baby's body. This makes the cord get dirty easily.
- * The cord is tightly covered or is not kept dry. This helps germs grow.
- * When the child is born in a dirty place or the helpers do not wash their hands.

Signs of tetanus:

- * When tetanus begins the patient's wound will tingle and he will have jerky movements.
- * Later, the jaw muscle will tighten. It will be difficult for the patient to open his mouth, chew and swallow.
- * Finally, the jaw and body will have painful convulsions.



Signs of tetanus in a newborn baby:

- * In the newborn baby, the first signs of tetanus generally appear 3 to 10 days after birth.
- * The child begins to cry continuously and is not able to suck the breast.
- * Often the umbilical area is dirty or infected.
- * After several hours or days, the jaw is stiff and the signs of tetanus shown above begin.

How to treat tetanus:

TETANUS CAN KILL A PERSON. SEEK PROFESSIONAL MEDICAL HELP WHEN YOU NOTICE THE FIRST SIGN OF TETANUS.

If you cannot get professional medical help right away, do the following things:

* Examine the whole body for infected wounds or sores. Often the wound will contain pus. Open the wound and wash it with soap and boiled water. Completely remove all dirt, pus, thorns, and splinters. Flood the wound with *hydrogen peroxide* or another antiseptic.

* Inject *procaine penicillin*:

dose: adult, 1,000,000 units. Repeat this every 12 hours until the patient is well.

or

if there is no *penicillin*, give another antibiotic such as *tetracycline* (do not give to children under 8 or to nursing or pregnant women):

dose: adult, 2 capsules of 250 mg, 4 times each day, until the patient is well.

* If possible, inject 40,000 to 50,000 units of *Tetanus Antitoxin* or 5,000 units of *Human Immune Globulin*.

* As long as the patient can swallow, give him small drinks of nutritious liquids often.

* To control convulsions, inject *phenobarbital*:

dose: adults, 1 ampule with 200 mg and repeat every 2 hours if necessary. Do not inject phenobarbital if the adult is breathing less than 10 times each minute or if the child is breathing less than 20 times each minute.

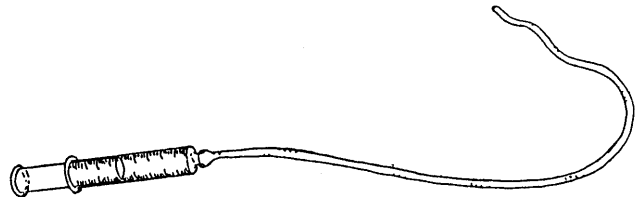
or

inject *diazepam* (*Valium*):

dose: adults, 10 to 20 mg every 2 hours as long as the person has convulsions.

* Touch and move the person as little as possible. Avoid noise and bright light.

* If the person chokes on his mucus, connect a rubber tube to a syringe and use it to suck the mucus from the nose and throat. This helps to clear the airway.

**How to prevent tetanus:**

* The tetanus vaccination is the best protection against tetanus.

VACCINATING PREGNANT WOMEN AGAINST TETANUS WILL PREVENT TETANUS IN NEWBORN BABIES.

- * When you have a wound, especially a dirty or deep wound, clean it and take care of it properly. See Unit 5 "First Aid" pages 44-46. If the wound is very big, deep or dirty, seek professional medical help.
 - * If the person has not received the tetanus vaccination and he has a very deep or dirty wound, then give *penicillin V*:
dose: adult, 2 tablets of 250 mg, 4 times each day for 5 days.
- and
- * Take the person to a hospital to get a shot of tetanus medicine and further treatment if necessary.

THALLAEMIA

Cause of thalassemia:

Some people are born with thalassemia. Germs do not cause thalassemia. A person cannot spread thalassemia.

Signs of thalassemia:

- * During the first year children might have fevers, diarrhea, grow slowly and have problems sucking the breast.
- * The forehead sticks out, the eyes are far apart and the bridge of the nose is flat.
- * The child might have anemia, be sick frequently, have tooth problems and his bones break easily.



How to treat thalassemia:

- * Get medical help. The person needs treatment at a hospital.
- * In the village give *folate* pills and *zinc* pills.

THYROID PROBLEMS

Cause of thyroid problems:

The thyroid gland is in the front of the neck. The thyroid releases chemicals that tell parts of the body what to do with food. Damage to the thyroid gland causes the gland to release the wrong amount of chemicals. When the thyroid gland releases too little chemicals it is called low thyroid. When the thyroid gland releases too many chemicals it is called high thyroid.

Signs of thyroid problems:

* The person might have a lump on the neck.



* The eyes might stay open very wide.



* A person with low thyroid is always tired, gains weight, has thin hair, a low pulse and constipation. He might also sleep a lot and be depressed.

* A person with high thyroid is nervous, cannot sleep, and loses weight. He might have a fever and a high pulse. He might complain about weakness in his hips and shoulder muscles.

How to treat thyroid problems:

* If the person has a lump on his neck, treat for goiter. See "How to Treat Goiter" page 44.

* If the person has signs of high thyroid get medical help and do not give him iodine treatment.

TRICHINOSIS**Cause of trichinosis:**

Trichinosis worms usually live in pig muscles. People get trichinosis worms when they eat pig meat or other meat that is not cooked well. Trichinosis worms dig through a person's intestines and get into his muscles.

Signs of trichinosis:

* The person ate raw or poorly cooked meat. Between a few hours and 5 days after the person ate the poorly cooked meat, the person might have diarrhea and nausea.

* In serious cases the person can have fever with chills, muscle pain, swelling around the eyes and sometimes the feet swell.

* Sometimes the skin will have small bruises and the whites part of the eyes will bleed.

* Severe trichinosis can last 3 to 4 weeks.

How to treat trichinosis:

- * Give *thiabendazole*:
dose: adult, 3 tablets of 500 mg, 2 times each day for 3 days. The patient should chew the tablet. This treatment helps some people.
- * Send the patient to a health center.

How to prevent trichinosis:

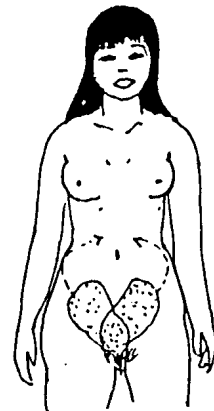
- * Only eat pork and other meat that is cooked well.
- * Do not feed pieces of meat or animal parts to pigs unless you cook it first.

TUBAL PREGNANCY (ectopic pregnancy)

A tubal pregnancy begins when a baby grows outside of the womb in one of the tubes that comes from the ovaries.

Signs of a tubal pregnancy:

- * The woman will have some signs of pregnancy such as missing a menstrual period.
- * She might have abnormal bleeding from the vagina.
- * Cramps in the lower abdomen.
- * A tender lump on one side of the lower abdomen. (rare)
- * A woman might faint because she is bleeding inside.

**How to treat a tubal pregnancy:**

A baby that begins to grow in the tube usually cannot live. The woman needs an operation. Send her to a hospital immediately.

TUBERCULOSIS (TB)

[What are their spitting and coughing habits?]

Cause of tuberculosis:

Germ (bacteria) in the lungs cause tuberculosis (TB). The germs get into the air when a person with TB coughs. People who breathe this air can get TB. The TB germ is also in the saliva and spit. Sick people can pass the germ when other people use the same cup or utensils.

TB is a long term sickness which spreads easily. Anyone can get TB, but usually people between 15 and 35 years old get TB. People who are weak, malnourished or live with someone who has TB can get TB easily. People with AIDS can get TB easily.

Signs of TB:

- * The most obvious sign of TB is a long term cough, especially if the person coughs just after they wake up. People who have TB a long time might cough up blood.
- * In the afternoon or evening the person might have a low fever and at night the person will sweat.
- * The person might have pain in the chest or upper back.
- * The person will slowly lose weight and become weak.
- * TB is usually only in the lungs, but it can affect any other part of the body, such as the bones, the skin, the kidneys and the brain.



How to treat TB:

YOU CAN CURE TB. IT IS VERY IMPORTANT TO TREAT TB EARLY IN ORDER TO CURE THE PATIENT AND TO PREVENT THE SPREAD OF TB.

- * Seek medical help as soon as possible. The person needs special medicine. Herbal medicines will not cure TB.
- * You should give a combination of different medicines. Follow the instructions below:
 - Give *rifampicin*:
dose: adult, 2 capsules of 300 mg one time each day for 9 months. Give *rifampicin* before meals.
 - and
give *isoniazid (INH)*:
dose: adult, 3 tablets of 100 mg, in the morning each day for 9 months.
 - and
give *ethambutol*:
dose: adult, 2 tablets of 400 mg in the morning each day for 2 months.
- * The patient must take the medicines for the time shown. The person must take the medicine the entire time, even if he feels better. The germs can still be in the body and make the person sick if he stops taking the medicine before the proper time.
- * Eat nutritious foods.
- * Rest and sleep is important. The person should not work until he begins to feel better. After that, he should not work so hard that breathing is difficult.

- * A person with tuberculosis of the backbone should go to a hospital for immediate treatment.



How to prevent TB:

TUBERCULOSIS SPREADS EASILY. PEOPLE WHO LIVE IN THE SAME HOUSE WITH SOMEONE WHO HAS TB CAN GET TB EASILY.

If someone in the house has TB:

- * Treat the whole family for TB if possible.
- * Be sure children receive the TB (*BCG*) vaccine.
- * Everyone, especially children, should eat a lot of nutritious food.
- * The person with TB should eat and sleep separately from the children, if possible in a different room, for as long as he has a cough.
- * The person with TB should keep his dishes separate. He should wash his dishes separately and pour boiling water on the dishes to kill the TB germs.
- * A person with TB should cover his mouth or turn away from people when he coughs. He should never spit on the floor or the ground.
- * Send a child to a health center if you think he has TB or if he has a cough more than 2 weeks.
- * Treat TB immediately. A person who is cured from TB will not spread TB!

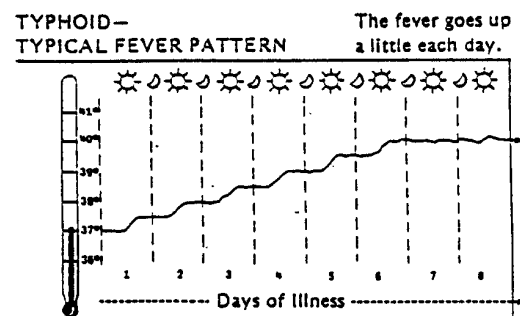
TYPHOID FEVER

Cause of typhoid fever:

Germs (bacteria) in the intestines causes typhoid fever. People get typhoid fever when they drink water or eat food that contains feces from a person who has typhoid fever. Sometimes a person can carry the typhoid germs in his intestines for many months or years. If this person does not wash her hands before she prepares food, then she will spread typhoid fever to the people who eat the food.

Signs of typhoid fever:

During the first week the typhoid fever germ attacks the intestines. The patient will have a low fever with headache, weakness, cough, sore throat or loss of appetite. The fever will increase each day.



During the second week the germs will pass through the intestines and enter the blood. Then the germs will spread through the whole body. The patient will have a high fever (40 C), nausea, vomiting, abdominal pain, diarrhea or constipation. He will be weak, exhausted and possibly confused.

During the third week the temperature will gradually decrease. Still, he might develop serious complications and the patient can die if the germs make the intestines bleed.

How to treat typhoid fever:

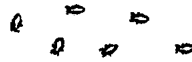
- * Seek professional medical help.
- * TAKE ONE OF THESE MEDICINES FOR AT LEAST 2 WEEKS.
 - Give *chloramphenicol*:
 - dose: adults, 2 capsules of 250 mg, 4 times each day
 - or
 - give *amoxicillin*:
 - dose: adults, 2 capsules of 250 mg 3 times each day
 - or
 - give *trimethoprim/sulfamethoxazole (TMP/SMZ)*:
 - dose: adults, 2 tablets of 500 mg 4 times each day for 5 days, then give 2 tablets of 500 mg 2 times each day for 5 days.
- * Rub the body with cool, wet cloths to lower the fever.
- * Give plenty of liquids to drink.
- * Give nutritious foods. Mash the foods or make soup if the person cannot eat solids.
- * The person should stay in bed until the fever is completely gone.
- * If the person has blood in the stool or has signs of abdominal emergency or pneumonia, then you should send him to a hospital immediately.
- * Do not give laxatives or an enema.

How to prevent typhoid fever:

- * To prevent typhoid fever, you must not allow feces to get into water and food. Follow the guidelines in Unit 2 "How to Prevent Many Health Problems" pages 10-15. Be sure latrines are a safe distance from where people get water to drink.
- * People often get typhoid fever after a flood or other disaster. People must try to keep themselves, their homes and their village clean. Be sure drinking water is clean. If there is typhoid fever in your village, you should boil all drinking water. Look for the cause of dirty water or food.

- * To avoid the spread of typhoid fever, a person who has typhoid fever should stay in a separate room so that he does not spread the sickness to other people. No one else should use the sick person's dishes. Wash his dishes separately from other dishes and rinse them with boiling water. The family should bury or burn his feces. People who take care of the sick person should wash their hands after they touch the sick person or things he uses.
- * A person who has typhoid fever can spread the sickness to other people even after he is well. Every person who had typhoid fever should be careful to always wash his hands after he defecates.

TYPHUS



Cause of typhus:

Germ (like bacteria) cause typhus. Ticks, lice and fleas that bite people spread the germs.

Signs of typhus:

- * Typhus starts like a bad cold with a runny nose, cough and sore throat. After a week the person gets a fever, chills, headache and pain in the muscles and joints. The fever goes up each day.
- * After the person has a fever a few days, a rash begins. The rash starts on the trunk and spreads to the arms and legs. The rash is not on the face. The rash looks like tiny bruises.
- * The person has a fever for 2 weeks or longer.
- * Typhus is usually mild in children and severe in adults.
- * Many times there is a large, painful sore where the tick bit the person. The lymph nodes near the bite might swell.

How to treat typhus:

- * Give *tetracycline* (do not give to children under 8 or to nursing or pregnant women):
dose: adults, 2 capsules of 250 mg, 4 times each day for 10 days.

How to prevent typhus:

- * Keep the house and village clean. Treat the family for lice if necessary.
- * Remove ticks from your dogs and do not let dogs in the house.
- * Kill rats and mice. Put rat poison in rat holes and rat nests.

ULCERS IN THE STOMACH AND LOWER CHEST PAIN

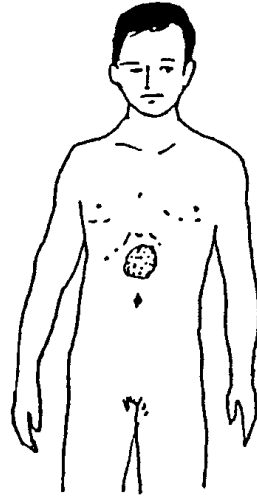
[What fatty foods are eaten?]

Cause of stomach ulcers and lower chest pain:

Too much fatty food, tobacco or alcohol can cause lower chest pain. These things make the stomach produce acid. Too much acid hurts the stomach and can cause a long term sore in the stomach (ulcer).

Signs of stomach ulcers and lower chest pain:

- * Long term pain in the stomach area.
- * The pain usually gets less when the person eats food or drinks milk.
- * The pain is worse 2 or 3 hours after the person eats, if he misses a meal, if he eats fatty or spicy food, or if he drinks alcohol.
- * The pain is often worse at night.
- * Severe ulcers can cause a person to vomit blood.
- * A person with an ulcer might have black, sticky feces because the blood goes into the intestines and comes out in the feces.



How to treat and prevent stomach ulcers:

- * Eat foods that heal ulcers instead of foods that cause ulcers. Milk and bananas help heal ulcers. Alcohol, coffee, cigarettes, peppers, soft drinks and fatty foods make ulcers worse.
- * If the ulcer is severe, drink a glass of milk every hour for a few days and eat only milk and bananas. After a few days you can eat rice, eggs, potatoes and squash. Drink some milk with every meal, when you wake up, in the afternoon and before bed for a few months.
- * If you have a stomach ulcer, take an antacid such as *aluminum hydroxide*:
dose: adult, 1 or 2 tablespoons after each meal.
- * A person who had an ulcer should never eat the foods that make an ulcer worse because they can make the ulcer come back. After the ulcer is cured, the person should still drink a glass of milk or take an antacid at bedtime.
- * Anger, stress and worry can make an ulcer worse. The person should try to relax and stay calm.

YOU CAN PREVENT ULCERS IF YOU EAT NUTRITIOUS FOODS, DO NOT DRINK ALCOHOL AND DO NOT SMOKE.

URINARY TRACT INFECTION

Cause of urinary tract infection:

Germ (bacteria) in the kidneys, bladder and urinary tubes cause urinary tract infection.

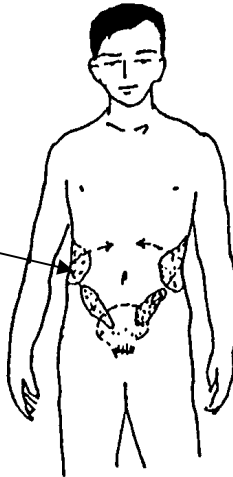
Signs of urinary tract infection:

* Sometimes fever, chills and headache.

* Sometimes there is pain in the side.

* The person has pain when he urinates and he needs to urinate often.

* The urine might be cloudy or red from blood in the urine.



* Sometimes there is pain under the ribs in the back.

* Sometimes the pain goes into the legs.

* If the infection is severe, the feet and face might swell.

Urinary infections are common in women. If the person has a fever and pain in the lower back that spreads to one side below the ribs, then the problem is severe.

How to treat urinary tract infection:

* Drink a lot of water. Water might be all the person needs to cure the infection. If the person cannot urinate or the hands and face are swollen, then do not give a lot of water.

* If the person does not get better quickly or has a fever, give *amoxicillin*:
dose: adult, 2 tablets of 250 mg, 3 times each day for 5 days.

or

give *trimethoprim/sulfamethoxazole (TMP/SMZ)*:

dose: adult, 2 tablets of 500 mg, 2 times each day for 5 days.

Be sure to drink a lot of water when you take these medicines.

* If the person does not get well quickly, get medical help.

* Anyone who has repeated urinary tract infections should get medical help.

VAGINAL INFECTION

Cause of vaginal infection:

Germ (parasites, fungus, bacteria) in the vagina cause vaginal infection.

Signs and treatment of vaginal infections:

There are four types of vaginal infections:

Type 1. (trichomonas parasite)

Signs:

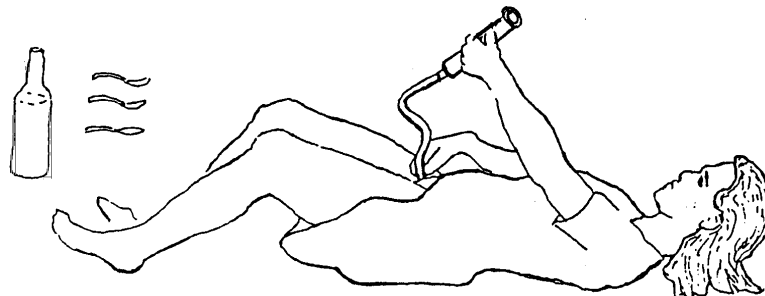
- * The vagina is itchy and burns when the woman urinates.
- * Sometimes the vagina hurts or swells.
- * A liquid comes out of the vagina that is:
 - thin
 - foamy
 - greenish-yellow or white
 - bad smelling

Treatment:

- * When a woman has these signs, she should clean the vagina often with soap and water. She can wash the vagina with warm water and distilled vinegar. Add 3 teaspoons of vinegar to 1 liter of boiled water.



Pour the cooled mixture into a large syringe body with a rubber tube on the end. Insert the tube into the vagina and let the mixture run into the vagina. The woman should wash the vagina with vinegar and water 2 times each day until she gets better. If there is no vinegar, use lime juice instead.



- * If the infection is severe, give *metronidazole* vaginal tablets:
dose: adult, 1 vaginal tablet, 2 times each day for 10-20 days.
- * If the infection is very severe, give *metronidazole*:
dose: adult, 8 tablets of 250 mg at one time (2 gm total). Do not give *metronidazole* vaginal pills.
- * If a woman has this infection, her husband probably also has this infection. He probably does not have any signs. If the woman gets the infection again after you treat her, then give both the husband and the wife *metronidazole* tablets as above.

Type 2. (fungus)

Signs:

- * A thick, chunky, white, bad smelling liquid comes out of the vagina.
- * The vagina itches a lot.
- * The lips of the vagina often become bright red and hurt.
- * The vagina burns when the woman urinates.
- * Women who are pregnant, sick, diabetic, took antibiotics or take birth control pill often get this infection.

Treatment:

- * Wash the vagina with vinegar and water as above. Or wash the vagina with a mixture of 2 teaspoons *gentian violet* in 1/2 liter boiled water. Or paint the vagina with 1% *gentian violet* on a cotton swab 1 time each day.
- * Give *nystatin* vaginal tablets:
dose: put 1 vaginal tablet in the vagina each night for 14 nights.
- * Never use antibiotics for this infection. Antibiotics make the infection worse.

Type 3. (hemophilus bacteria)

Signs:

- * A thick, bad smelling liquid that looks like milk comes out of the vagina.

Treatment:

- * Wash the vagina with vinegar and water as shown above.
- * Give *sulfathiazole* vaginal tablets:
dose: put 1 tablet deep in the vagina 2 times each day for 2 weeks.

Type 4.**Signs:**

- * A brown or gray, bad smelling, watery liquid comes out of the vagina. The liquid might have lines of blood in it.
- * This might be a sign of cancer or a very bad infection.

Treatment:

- * If there is a fever, give *amoxicillin*:
dose: adult, 2 capsules of 250 mg, 3 times each day until the fever is gone for 2 days.
- * Get medical help immediately.

How to prevent vaginal infections:

[Do the people wipe the anus? What are their cleaning habits after sex?]

- * If liquid comes out of the vagina for many days or the problem does not get better when you treat it, then get medical help.
- * Clean the vaginal area with soap when you bathe.
- * Urinate after sexual contact. This helps to prevent infections in the urinary tube.
- * Clean the anus after you defecate. If you wipe the anus, wipe away from the vagina. If you wipe towards the vagina, germs from the anus can get into the vagina.

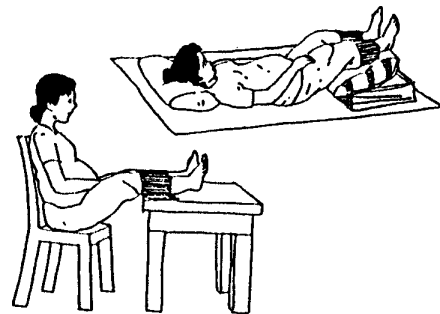
VARICOSE VEINS**Signs of varicose veins:**

Varicose veins are blood vessels that are swollen, twisted and painful. You might see varicose veins on the legs of older people and on women who are pregnant or women who have many children.

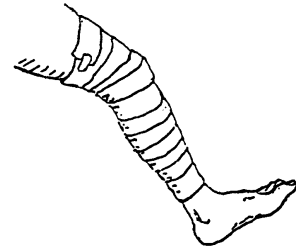
How to treat varicose veins:

There is no medicine for varicose veins, but the following will help reduce pain and prevent sores on the ankles.

- * Do not stand or sit with your feet down for a long time. If you must sit or stand for a long time, try to lie down with your feet up for a few moments every half hour. Also, sleep with your feet up.



- * Wear elastic stockings or wrap elastic bandages around the legs to help hold in the veins. Be sure to take them off at night.



VOMITING: SEE UNIT 12 "DEHYDRATION, DIARRHEA AND VOMITING".

WHOOPING COUGH (pertussis)

Cause of whooping cough:

Germ (bacteria) in the body cause whooping cough. Coughing and sneezing spreads whooping cough.

Signs of whooping cough:

- * A person can get whooping cough 1 or 2 weeks after he is near someone with whooping cough.
- * Whooping cough begins like a cold with a fever, runny nose and cough.
- * After 1 week, the person begins to "whoop". The child coughs rapidly many times without breathing until he coughs up a piece of mucus. Then the air goes back into the lungs and makes a whooping sound.
- * The person's lips and fingernails might turn blue when he coughs.
- * The person might vomit after he coughs.
- * Between coughing times, the person seems healthy.
- * A person usually has whooping cough for 3 months or more.
- * Small babies do not make the whooping sound when they have whooping cough. If the baby coughs a lot, has swollen eyes and there are other children with whooping cough in the area, then treat the baby for whooping cough.
- * Coughing sometimes causes a red blood spot in the eyes. This will get better by itself.
- * Watch for signs of pneumonia and meningitis.



How to treat whooping cough:

Medicine will not cure the patient, but medicine might help make the sickness shorter.

- * Give *erythromycin*:
dose: adult, 2 tablets of 250 mg, 3 times each day for 5-10 days.
- * If whooping cough is severe, get medical help.
- * Be sure to treat babies under 6 months old at the first sign of whooping cough. If the baby has a brother or sister with whooping cough, then treat the baby for whooping cough also.
- * The child should eat nutritious foods and eat soon after he vomits.

How to prevent whooping cough:

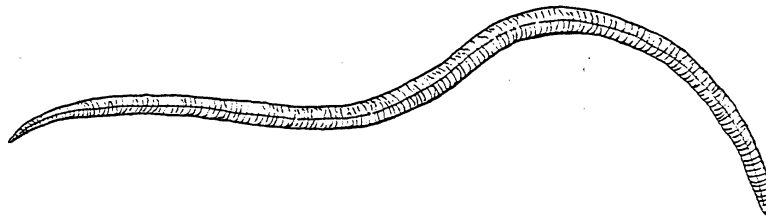
- * The best protection against whooping cough is the whooping cough (pertussis) vaccine. All babies should receive the whooping cough vaccine 2, 4 and 6 months after birth.

WORMS

Worms and worm eggs get into the body from dirty food, dirty water, dirty hands and bare feet. Worm eggs live in feces, water and soil. There are many types of worms that live in people's intestines and cause sickness.

1) ROUNDWORM (ascaris)

Causes of roundworm:



Roundworms are between 15 and 25 cm long. Roundworms spread when people do not have good personal cleanliness and do not use latrines. The roundworm eggs from feces get on hands, vegetables that are growing, on food and into water. These things go into a person's mouth and cause worms to grow in the intestines.

Signs of roundworm:

- * After a person eats dirty food, uncooked vegetables, or water that contains roundworm eggs, or eats with dirty hands, the young worms hatch in the intestines and enter the blood. This can cause the body to itch.
- * The young worms travel to the lungs, and can cause a dry cough. If there are a lot of worms and the person is weak, then the worms can cause pneumonia and the person will cough up blood. The person coughs up the young worms and swallows them.

- * The worms go into the intestines and grow to full size. Sometimes you can see the worms in the feces.
- * Many roundworms in the intestines can cause abdominal pain and weakness. Children with many roundworms often have very large, swollen abdomens.
- * Rarely, roundworms can cause asthma, convulsions, or block the intestines. When a child has a fever, the worms sometimes come out in the feces or crawl out through the nose or mouth. Occasionally the worms crawl into the airway and cause the person to choke.

How to treat roundworms:

- * Give *piperazine*:
dose: adult, 8 tablets of 500 mg (4000 mg total) in one single dose.
- or
give *mebendazole*:
dose: adult, 1 tablet of 100 mg, 2 times each day for 3 days. Children 2 years and older also take the adult dose.

How to prevent roundworms:

- * Use latrines, wash hands before eating or handling food, do not eat raw vegetables and protect food from flies. See Unit 2, "How to Prevent Many Health Problems" pages 10-16.

2) THREADWORM (enterobius)



Cause of threadworms:

Threadworms are white, 1 cm long, thin and look like threads. Threadworms lay thousands of eggs outside the anus. The worms and eggs cause itching, especially at night. When the child scratches, the eggs stick under the fingernails. Later the eggs come off the child's hands onto food and other objects. The eggs get into peoples' mouths when they eat the food or have eggs on their fingers. Then the people get threadworms. These worms are not dangerous, but the worms eat the child's food in the intestines and itching can disturb the child's sleep.

Signs of threadworm:

- * The child has an itchy anus and moves around a lot when he sits.
- * You can see the worms in the feces.
- * Check any child who eats a lot but stays thin.

How to treat threadworm:

* Give *piperazine*:

dose: adult, 1000 mg 2 times each day for 1 week.

or

give *mebendazole*:

dose: child and adult: 100 mg 2 times each day for 3 days. Give again after 2 weeks.

* Cut the child's fingernails very short so eggs cannot stay there.

* Wash a child's buttocks after he defecates. A child should always wash his hands after he defecates and before he eats.

* Change a child's cloths and bathe him often. Wash the buttocks and nails well.

* Put petroleum jelly (*Vaseline*) in and around his anus at bedtime to help stop itching.

* Change and wash the bed linen.

How to prevent threadworm:

* Use latrines, wash hands before eating or handling food and protect food from flies.

See Unit 2, "How to Prevent Many Health Problems" pages 10-16.

3. WHIPWORM (*trichuris*)**Cause of whipworm:**

Whipworm is a 3 to 5 cm long pink or gray worm. Whipworm eggs from feces pass to other people on hands, on food and in water.

Signs of whipworm:

Usually the worm does little harm, but it can cause diarrhea. In children, whipworm can sometimes cause part of the intestines to come out of the anus.

How to treat whipworm:

* Give *thiabendazole*:

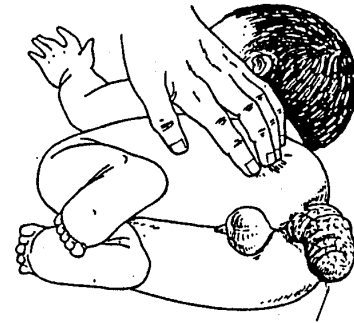
dose: adult, 1 tablet of 500 mg 2 times each day for 3 days

or

give *mebendazole*:

dose: adult, 1 tablet of 100 mg, 2 times each day for 3 days. Children 2 years and older also take the adult dose.

- * If part of the intestines come out of the anus, turn the child upside down and pour cool water on the intestine. This should make the intestines pull back in.



How to prevent whipworm:

- * Use latrines, wash hands before eating or handling food and protect food from flies. See Unit 2, "How to Prevent Many Health Problems" pages 10-16.

4. HOOKWORM



Cause of hookworm:

Hookworm is a 1 cm long, red worm. Hookworms live in feces and soil. You usually cannot see hookworm in the feces. If a person steps in feces or moist soil, then the hookworms can enter the person's bare feet.

Signs of hookworm:

- * When the hookworm enters the feet, the feet itch.
- * The worms get into the blood and go to the lungs. The worms can cause a dry cough, which occasionally produces blood.
- * The person coughs up the young worms and swallows them. The worms go into the stomach and might cause diarrhea or stomach pain.
- * The hookworms attach to the inside of the intestines and eat blood. Hookworms can cause weakness and severe anemia.
- * The hookworm eggs go out in the person's feces. The eggs hatch on moist soil.

Hookworms can harm people badly. Any person that is anemic, very pale or eats dirt might have hookworms. If possible, take the person to a health center to check his stools.

How to treat hookworm: same as whipworm.

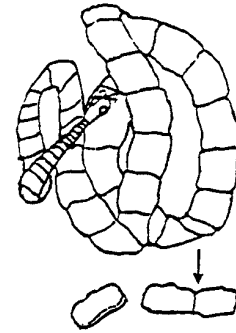
See "How to Treat Whipworm" page 92.

How to prevent hookworm:

**BUILD AND USE LATRINES. WEAR SHOES OUTSIDE,
ESPECIALLY CHILDREN!**

5. TAPEWORM

Tapeworms can grow several meters long in the intestines. But the small, flat, white pieces that you see in the feces are usually about 1 cm long. Occasionally a piece might crawl out of the anus and the person will find the piece in his clothing.

**Cause of tapeworm:**

Tapeworm eggs live in the bodies of cows, pigs and other animals. People get tapeworm when they eat pig meat, cow meat or other meat that is not cooked well.

Signs of tapeworm:

- * Tapeworms in the intestines sometimes cause mild stomach aches, but few other problems.
- * The greatest danger is when a person gets feces in his mouth from dirty food or hands. Small sacks that contain baby worms live in the feces and can get into a person's brain.

How to treat tapeworm:

- * Give *niclosamide*:

dose: adult, 4 tablets of 500 mg as a single dose in the early morning. Chew and swallow 1 dose only. Do not eat after the evening meal the night before you take the medicine and do not eat until 2 hours after you take the medicine

or

- give *praziquantel*:

dose: adult, 1 tablet of 600 mg one time.

How to prevent tapeworm:

- * Only eat meat that is cooked well, especially pig meat. Make sure that the center of the meat is not raw.

UNIT 12

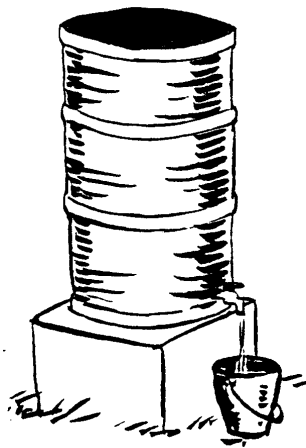
DEHYDRATION, DIARRHEA AND VOMITING.

DEHYDRATION:

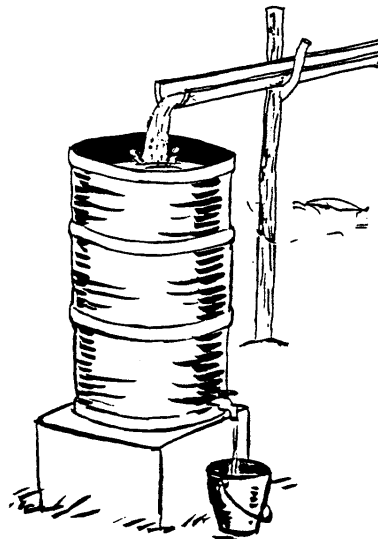
Causes of dehydration:

Most children who die from diarrhea die because they do not have enough water left in their bodies. When a child has diarrhea, much of the water drains out of the body. This lack of water is called dehydration.

When a person loses more water than he drinks, then he will become dehydrated. Diarrhea and vomit are mostly water. A person loses a lot of water when he has diarrhea, and when he vomits. A person can also become dehydrated when he is very sick and will not drink liquid. Anyone can become dehydrated, but small children become dehydrated more quickly.



A dehydrated person loses water and does not replace the water.



A person who loses water must replace the water.

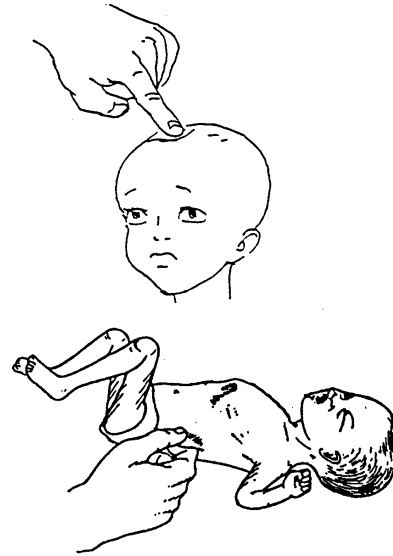
**A CHILD WITH WATERY DIARRHEA IS IN DANGER OF DEHYDRATION.
DEHYDRATION IS VERY DANGEROUS FOR SMALL CHILDREN!**

It is important that everyone knows the signs of dehydration and how to prevent and treat dehydration. It is especially important for mothers to know how to care for dehydrated children. Teach this information to families and anyone who takes care of children.

Signs of dehydration:

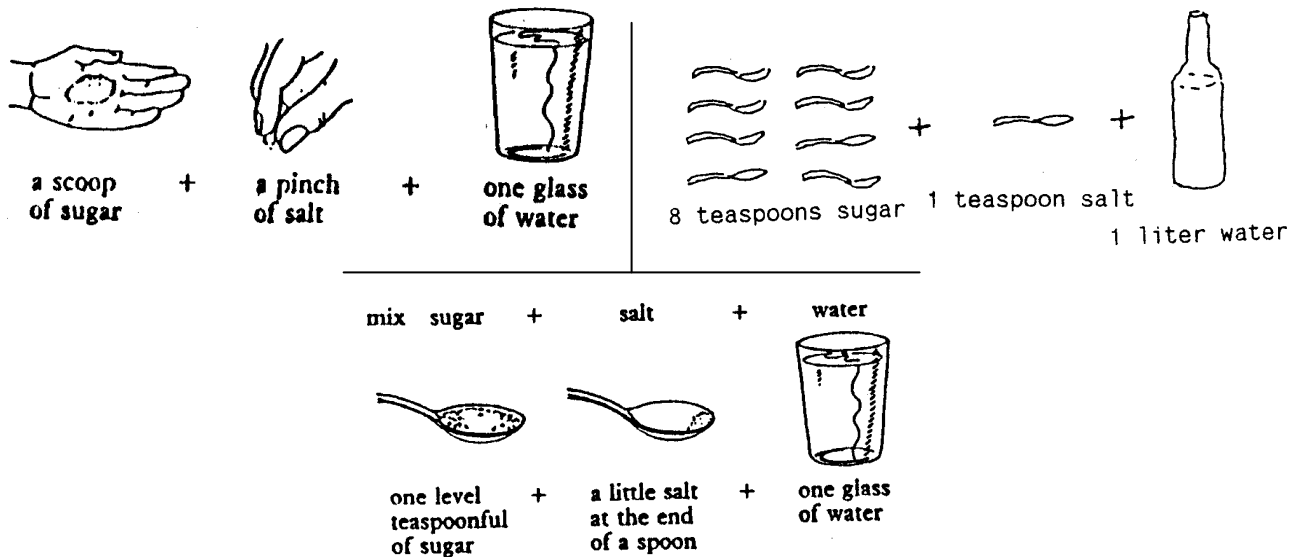
- * The person urinates very little or does not urinate. The urine is dark yellow.
- * A baby's soft spot is sunken.
- * The person loses weight very quickly.
- * The person's mouth is dry.
- * The person's eyes are sunken and there are no tears.
- * The skin does not return to its normal shape when you pinch it.

- * Very severe dehydration can cause:
 - A rapid and weak pulse.
 - Fast and deep breathing.
 - Fever.
 - Convulsions.

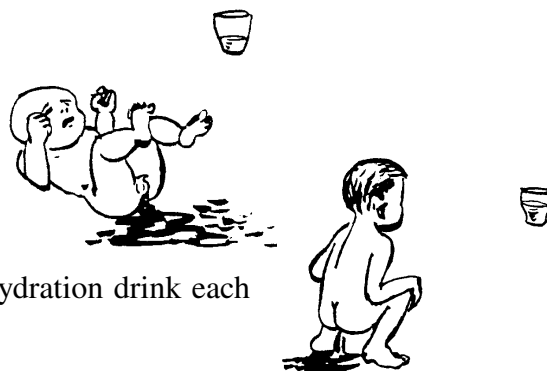


Prevention and treatment of dehydration:

- * A dehydrated person should begin to drink a lot of liquids immediately. Water, tea, soup and rehydration drink are good. You should encourage all sick people to drink a lot of liquid. Do not wait for dehydration to begin.
- * You can usually prevent dehydration if you give a lot of liquids or rehydration drink to a person with diarrhea when the diarrhea begins. This is especially important for small children with watery diarrhea.
- * Sick people lose water and salt when they have diarrhea and sweat. Taste your sweat. Sweat is salty. You can make rehydration drink to replace the water and salt lost in diarrhea and sweat. The rehydration drink also has sugar to give the sick person strength. Rehydration drink is very good for people who are sick, especially if they have diarrhea. To make rehydration drink, add 1 teaspoon of sugar and a pinch of salt (1/8 teaspoon) to 1 cup of water or tea. Or add 8 teaspoons of sugar and 1 teaspoon of salt to 1 liter of water. It is important to use the correct amounts of sugar, salt and water.



A child under 2 years old should drink 1/4 cup rehydration drink each time he has diarrhea.



A child 2-5 years old should drink 1/2 cup rehydration drink each time he has diarrhea.

A child 6-12 years old should drink 1 cup rehydration drink each time he has diarrhea.



A person over 12 years old should drink 1-2 cups rehydration drink each time he has diarrhea.

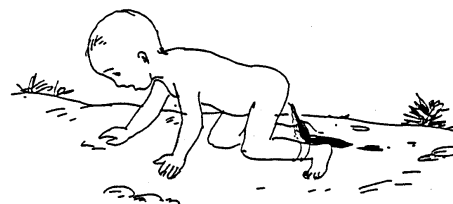
* Give the rehydration drink often in small sips. If the sick person vomits, wait 5 or 10 minutes and give him some more rehydration drink. Not all of the drink will come out when he vomits. If dehydration gets worse, or the person does not urinate within 4 to 6 hours, then find a health worker who can give an intravenous solution.

* Also give the sick person nutritious food. Be sure to give breastmilk to babies who drink breastmilk.



DIARRHEA AND DYSENTERY

When a person has loose or watery feces, he has **diarrhea**. If you can see mucus and blood in the feces, then he has **dysentery**. Diarrhea can be mild or severe. Diarrhea can last a short time or long time. Diarrhea can kill people because diarrhea causes a lot of water and salt to go out from the body (dehydration).



DIARRHEA IS MORE COMMON AND MORE DANGEROUS FOR YOUNG CHILDREN, ESPECIALLY CHILDREN WHO DO NOT EAT NUTRITIOUS FOODS.

Cause of diarrhea and dysentery:

Many things cause diarrhea. You can treat most diarrhea successfully at home, even if you are not sure what caused the diarrhea.

The main causes of diarrhea are:

- * Poor nutrition. Poor nutrition makes the child weak and makes diarrhea more frequent and worse.
- * Germs in the intestines. The diarrhea is usually mild.
- * Parasites (ameba or giardia) in the intestines.
- * Worms in the intestines.
- * Germs in other parts of the body. Ear infections, sore throat, measles and urinary infections can also cause diarrhea.
- * Malaria.
- * Spoiled food.
- * Sometimes the intestines are not able to digest milk. This happens mainly in severely malnourished children and certain adults.
- * New kinds of food that are difficult for babies to digest.
- * Allergies to certain foods such as seafood. Occasionally babies are allergic to cow's milk or other kinds of milk.
- * Some medicines cause diarrhea as a side effect. Ampicillin or tetracycline can cause diarrhea.
- * Laxatives, enemas, irritating or poisonous plants.
- * Eating a lot of unripe fruit or fatty food.

Many things cause diarrhea, but germs and poor nutrition cause most diarrhea. Good hygiene and good food can prevent most diarrhea. If you prevent and treat diarrhea well, then fewer children will die.

MALNUTRITION CAUSES DIARRHEA. DIARRHEA CAUSES MALNUTRITION.

When a person does not eat nutritious foods, he will get diarrhea more easily. When a person gets diarrhea, his body will only absorb a little nutritious food. A person needs to eat nutritious foods to recover from diarrhea. A person who does not eat nutritious foods gets worse and worse. Some people think eating will make diarrhea worse. This is not true.



A lack of food causes malnutrition. Malnutrition causes children to have diarrhea more often. **Children should eat a lot of nutritious foods and drink a lot of clean liquids to help cure diarrhea.**

How to treat diarrhea:

[How is diarrhea treated locally? Is water withheld?]

For most diarrhea you do not need to give medicine. If the diarrhea is severe, the biggest danger is dehydration. If the diarrhea lasts a long time, the biggest danger is malnutrition. Therefore the most important treatment is to give enough liquids and nutritious food. No matter what causes the diarrhea, always:

- 1) GIVE LIQUIDS TO PREVENT OR CURE DEHYDRATION. REHYDRATION DRINK IS VERY HELPFUL.
- 2) FOLLOW THE INSTRUCTIONS FOR "PREVENTION AND TREATMENT OF DEHYDRATION" PAGES 96-97.
- 3) BE SURE THE PATIENT EATS NUTRITIOUS FOOD.

- * A baby with diarrhea should continue to drink breastmilk.
- * A weak or thin person with diarrhea should eat a lot of body building foods and energy foods when he has diarrhea and after he gets well. If he does not eat because he is too sick or if he vomits frequently, then he should eat again as soon as he can. A person who eats food might have diarrhea more often for the first day, but that is not a problem. The food can save his life.
- * If an underweight child has diarrhea for many days or diarrhea that returns often, then give him more body building food. Often that is all the child needs.
- * When an older child or adult who is well nourished has severe diarrhea, he might recover more quickly if he only drinks tea, soup, or rehydration drink. But if the diarrhea lasts more than 1 day, he should begin to eat nutritious food.

Foods for a person with diarrhea:

When the person is vomiting or feels too sick to eat, he should drink:

- * rehydration drink
- * tea
- * rice water
- * chicken, meat, egg, or bean broth
- * breastmilk

As soon as the person is able to eat, in addition to giving the drinks listed above, he should eat energy foods and body building foods.

Energy foods:

- + ripe or cooked bananas
- + crackers
- + boiled rice
- + fresh corn (well cooked and mashed)
- + boiled potatoes
- + papaya

Body-building foods:

- + milk
- + chicken (boiled or roasted)
- + eggs (boiled)
- + meat (well cooked, without fat)
- + beans (without skins, well cooked and mashed)
- + fish (well cooked)

Do not eat or drink:

- + fatty foods
- + most raw fruits
- + very spicy food
- + alcoholic drinks
- + any kind of laxative

Diarrhea and milk:

Breastmilk is the best food for babies. Give the baby breastmilk all the time, especially when the baby has diarrhea. Breastmilk does not cause diarrhea and will help the baby to get better quickly.

Cow's milk, dry milk and canned milk are good foods for children over 1 year old who have diarrhea. However, if the child is badly malnourished, he might have trouble digesting the milk, and this might cause even more diarrhea. If diarrhea increases when the child drinks milk, give less milk and mix the milk with other foods. But remember, **a poorly nourished child with diarrhea must have enough body building food.** Therefore the child should eat more cooked and mashed foods such as chicken, eggs, meat, fish or beans. People can digest beans easier if you take off the skins and boil and mash them.

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

Medicines for diarrhea:

For most diarrhea you do not need to give any medicines. But for some kinds of diarrhea, the right medicine can help. However, many of the medicines that people use for diarrhea do little or no good. Some medicines can hurt the person.

Generally, it is better not to use the following medicines when you treat diarrhea:

- * Do not give diarrhea medicines with kaolin and pectin (*Kaopectate*). These medicines make diarrhea thicker and less frequent, but they do not cure dehydration or kill germs.

SOME DIARRHEA MEDICINES ACT LIKE PLUGS, THEY KEEP IN THE GERMS THAT NEED TO COME OUT.

- * You should not give diarrhea medicines that contain *neomycin* or *streptomycin*. They might irritate the intestines and do more harm than good.
- * Medicine like *ampicillin* and *tetracycline* are useful for some diarrhea. But they sometimes cause diarrhea, especially in small children. If a person takes these medicines for more than 2 or 3 days and diarrhea gets worse, then the child should stop taking the medicine.

How to treat different kinds of diarrhea:

You should give liquids and nutritious foods to treat all diarrhea. But sometimes you also need to give specific treatment for different kinds of diarrhea. When you consider treatment, remember that sickness outside of the intestines causes some kinds of diarrhea. Always check children for sickness in the ears, the throat and the urinary system. If you find sickness in those places, treat the sickness. Also look for signs of measles.

1) Sudden, mild diarrhea. No fever.

- * Drink lots of liquids. Eat nutritious food. Usually you do not need to give special treatment.

2) Diarrhea and vomiting.

- * If a person has diarrhea and vomits, the danger of dehydration increases, especially in small children. It is very important to give rehydration drink or other liquids. Give sips every 5 to 10 minutes.
- * If you cannot control the vomiting or if dehydration gets worse, then seek professional medical help immediately.

3) Diarrhea with mucus and blood in the feces. Often long lasting. No fever.

Possibly ameba.

- * Give *metronidazole*:

dose: adult, 3 tablets of 250 mg, 3 times each day for 7 days.

or

- * give *tinidazole*:

dose: adult, 3 tablets of 250 mg, 3 times each day for 3 days.

If the diarrhea continues after treatment, seek medical help.

4) Severe diarrhea with fever, with or without blood in the feces. Probably dysentery. Possibly typhoid fever or malaria.

- * If the person has diarrhea and a fever that lasts more than 1 day after you begin treatment for dehydration, give *amoxicillin*:
 dose: adult, 2 capsules of 250 mg, 3 times each day.
 Continue for at least 2 days after the diarrhea is gone.
- * If *amoxicillin* is not available, give *tetracycline* (do not give to children under 8 or to pregnant or nursing women):
 dose: adult, 1 capsule of 250 mg, 4 times each day.
 Continue for at least 2 days after the diarrhea is gone.
- * If the person's condition is very poor or he does not improve with *amoxicillin* or *tetracycline*, then seek medical help.

5) Yellow or green diarrhea that smells bad, has bubbles or froth, without blood or mucus. Possibly giardia or malnutrition.

- * Give plenty of liquids, nutritious foods and rest. If diarrhea is severe give *metronidazole*:
 dose: adult, 2 tablets of 250 mg, 3 times each day for 5 days.

6) Long term diarrhea or diarrhea that returns often. Possibly malnutrition or ameba.

- * The person should eat more nutritious foods, especially body building foods. If diarrhea continues, treat for ameba. If this does not work, seek medical help.

7) Severe diarrhea like rice water.

- * See Unit 11 "Cholera" page 30.

DIARRHEA AND DYSENTERY CAN BE VERY DANGEROUS, ESPECIALLY IN SMALL CHILDREN. GET MEDICAL HELP FOR ANY OF THE FOLLOWING SITUATIONS:

- * If a person has diarrhea for more than 4 days and does not get better. Also if a small child has severe diarrhea for more than 1 day.
- * If the person is dehydrated and gets worse each day.
- * If the child vomits everything he drinks, or drinks nothing.
- * If the child has convulsions, or if the feet and face swell.
- * If the person was very sick, weak, or malnourished before the diarrhea began. Especially a little child or a very old person.
- * If there is a lot of blood in the feces.

How to prevent diarrhea:

See Unit 2 "How to Prevent Many Health Problems" pages 10-16.

Some important suggestions to prevent diarrhea in babies are:

- * **Breast feed babies, do not bottle feed babies.** Give only breastmilk for the first 5 months. Breastmilk helps babies fight the germs that cause diarrhea. If it is not possible to breast feed a baby, feed him with a spoon. Do not use a baby bottle because it is harder to keep clean and more likely to cause sickness.
- * When you begin to give the baby new or solid foods, start with just a little food, and mash the food well. He has to learn to digest new foods, and if he starts with too much food, he might get diarrhea.
- * Keep the baby clean and in a clean place. Do not let him put dirty things in his mouth. Rinse the baby's dishes and spoons in boiling water before he uses them.
- * Do not give babies unnecessary medicines.

VOMITING:**Causes of vomiting:**

Many people, especially children, have occasional stomach problems and vomiting. Often you cannot find a cause. They might have a stomach ache or fever. This kind of vomiting usually is not serious and goes away without treatment.



Vomiting is a sign of many different problems. Some of the problems can be serious. Therefore it is important to examine the person carefully.

Vomiting often comes from a problem in the stomach or intestines, such as:

- * Germs in the stomach or intestines.
- * Poison produced from spoiled food.
- * Abdominal emergency or something that blocks the intestines.
- * Almost any sickness with high fever or severe pain such as:
 - malaria
 - hepatitis
 - tonsillitis
 - ear infection
 - meningitis
 - urinary infection
 - gallbladder pain
 - migraine headache.

Danger signs of vomiting:

IF A PERSON HAS ANY OF THE FOLLOWING SIGNS, SEEK MEDICAL HELP QUICKLY!

- * Dehydration that gets worse and that you cannot cure.
- * Severe vomiting that lasts more than 24 hours.
- * Severe vomiting, especially if vomit is dark green, brown, or smells like feces.
- * Constant pain in the intestines, especially if the person cannot defecate or if you cannot hear sounds when you listen with your ear on his abdomen.
- * Vomiting blood.

**How to treat vomiting:**

- * Do not eat while vomiting is severe.
- * To rehydrate give small, frequent drinks of clean water, tea or rehydration drink.
- * If the person does not stop vomiting within 12 hours, inject a medicine to control vomiting such as *diphenhydramine*:
 - dose: adult, inject 30 to 50 mg one time. If the person still vomits, repeat after 4 hours.
- or
- give *metoclopramide*:
 - dose: adult, 1 tablet of 10 mg, 3 times each day until vomiting stops or is infrequent.

Most of these medicines come in pills, liquids, injections and suppositories (soft pills you push up the anus). People should take the pills or liquids with very little water and should not swallow anything else for 5 minutes. Never give more medicine than recommended.

UNIT 13

SKIN PROBLEMS

Germs, fungus, bugs, irritating things and sicknesses can cause skin problems. Some skin problems, such as ringworm, diaper rash and warts, only affect certain body parts. Other skin problems, such as the measles rash or chicken pox, are signs of sickness that affect the whole body. Certain sores or skin problems are signs of serious sicknesses such as tuberculosis, syphilis or leprosy.

IF A SKIN PROBLEM IS SERIOUS OR GETS WORSE WHEN YOU TREAT THE PROBLEM, THEN GET MEDICAL HELP.

HOW TO TREAT MOST SKIN PROBLEMS

You should treat the different skin problems in this unit in the way suggested. But there are a few general rules for treating skin problems that often help:

RULE 1:

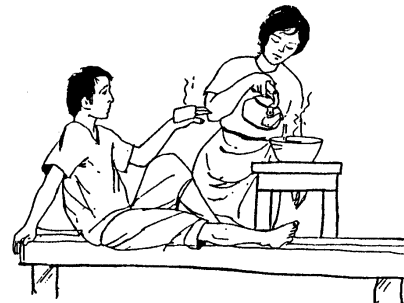
If the skin problem is hot and painful, then treat the skin area with hot, moist cloths. See "How to Use Hot Compresses" page 106.

- If the skin shows signs of serious infection such as:
- * red skin around the problem area
 - * swelling
 - * pain
 - * area feels hot
 - * pus in the sore

- then do the following:
- * Keep the infected part still and put it higher than the rest of the body.
 - * Put hot, wet cloths on the area.

- * If the infection is severe or the person has a fever then, give *penicillin V*:
dose: adult, 2 tablets of 250 mg, 4 times each day until at least 2 days after signs of infection are gone.

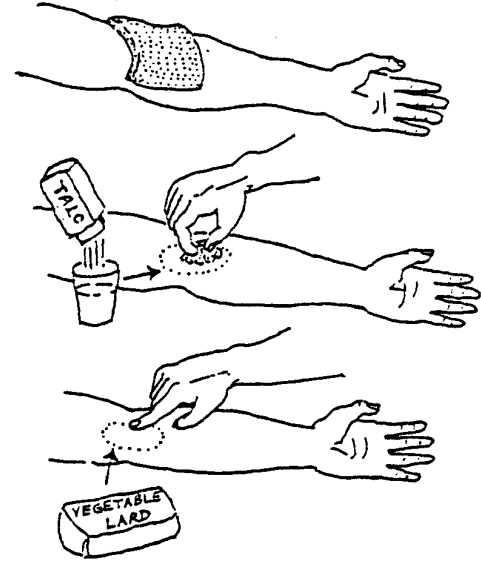
Danger signs include swollen lymph nodes, a red line above the infected area or a bad smell. If the skin problem does not get better when you treat it, give *penicillin V* as shown above and get medical help immediately.



RULE 2:

If the skin problem itches, stings or pus comes out of the sore, then treat the skin area with cool, wet cloths.

- * Add 2 tablespoons of white vinegar to 1 cup of boiled and cooled water. Soak cloths in the cool water mixture. Put the cloths on the skin problem.
- * When the skin problem feels better, and pus stops coming out, and new skin forms, then spread a mixture of 1 part talc powder and 1 part water on the skin area.
- * When the skin heals and the new skin begins to thicken or flake, rub on vegetable oil to soften the skin.



RULE 3:

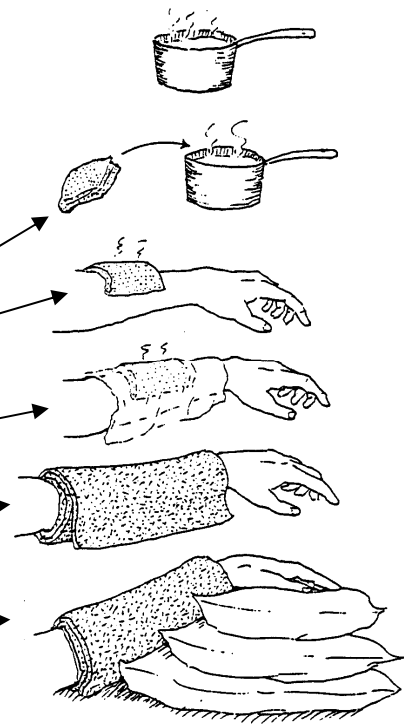
If the sun usually shines on the skin problem area, then protect that area from the sun.

RULE 4:

If clothes usually cover the skin problem areas, then expose the areas to direct sunlight for 20 minutes, 2 or 3 times each day.

HOW TO USE HOT COMPRESSES:

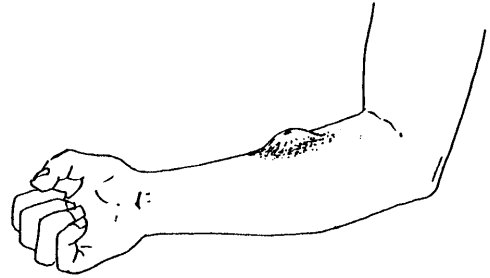
- 1) Boil water and let the water cool until it is cool enough to put your hand in.
- 2) Fold a clean cloth slightly larger than the area you want to treat. Dip the cloth in the hot water, and squeeze out the extra water.
- 3) Put the cloth on the skin problem.
- 4) Cover the cloth with a plastic bag.
- 5) Wrap the cloth and plastic bag in a towel to hold in the heat.
- 6) Keep the body part raised.



- 7) When the cloth starts to cool, put the cloth back in the hot water and repeat the treatment.

ABSCESS

An abscess is an infection that forms a sack of pus under the skin. Germs (bacteria) in the skin or sores cause abscesses. Sometimes a puncture wound or injection with a dirty needle can cause abscesses. An abscess is painful and the skin around the abscess becomes red and hot. Abscesses can cause swollen lymph nodes and fever.



How to treat abscesses:

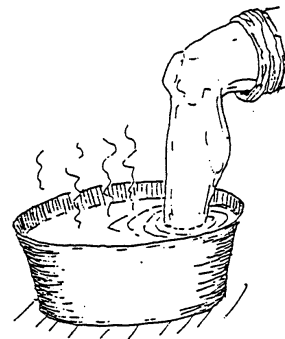
- * Put hot compresses on the abscess several times each day.
- * Let the abscess break open by itself. After the abscess breaks, continue to put on hot compresses. Let the pus drain. Never squeeze the abscess because this can cause the germs to spread to other body parts.
- * If the abscess causes swollen lymph nodes or fever, then give *penicillin V*:
dose: adult, 2 tablets of 250 mg, 4 times each day until signs are gone for 2 days.

CORNS

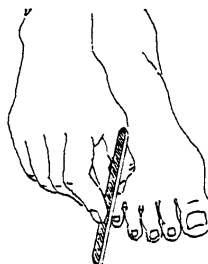
A corn is a hard, thick part of the skin. Corns start where shoes push against the skin or where toes press against each other. Corns can be very painful.

How to treat corns:

- * Get shoes that do not press on the corns.
- * To make corns hurt less:
 1. Soak the foot in warm water for 15 minutes.



2. File the corn until it is thin.



ECZEMA

Signs of eczema:

- * In small children a red patch or rash forms on the cheeks or sometimes on the arms and hands. The rash has small sores with fluid.
- * In older children and adults, eczema is usually drier and often behind the knees and on the inside of the elbows. Dry, thickened eczema is common on the feet and around the ankles.
- * Eczema itches. When people scratch, the eczema can become infected and itch more.



How to treat eczema:

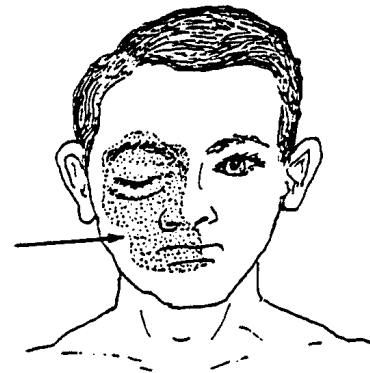
- * Put cloths soaked in cold water on the eczema.
- * If there are signs of infection, treat for impetigo.
- * Keep the rash in the sunlight.
- * To stop the itch in severe cases, rub on a cream with *hydrocortisone* and give *chlorpheniramine*:
dose: adult, 1 tablet of 4 mg, 2 to 4 times each day as long the person itches.

ERYSIPELAS

Germ (bacteria) in the skin cause erysipelas. Erysipelas is a very painful, severe skin infection.

Signs of erysipelas:

- * A skin patch becomes hot, red and swollen with a distinct border.
- * The patch spreads rapidly over the skin.
- * Erysipelas often begins on the face, at the edges of the nose.
- * Erysipelas usually causes swollen lymph nodes, fever and chills.



How to treat erysipelas:

- * Treat as soon as possible. Give *penicillin V*:
dose: adult, 2 tablets of 250 mg, 4 times each day until signs are gone for 2 days.

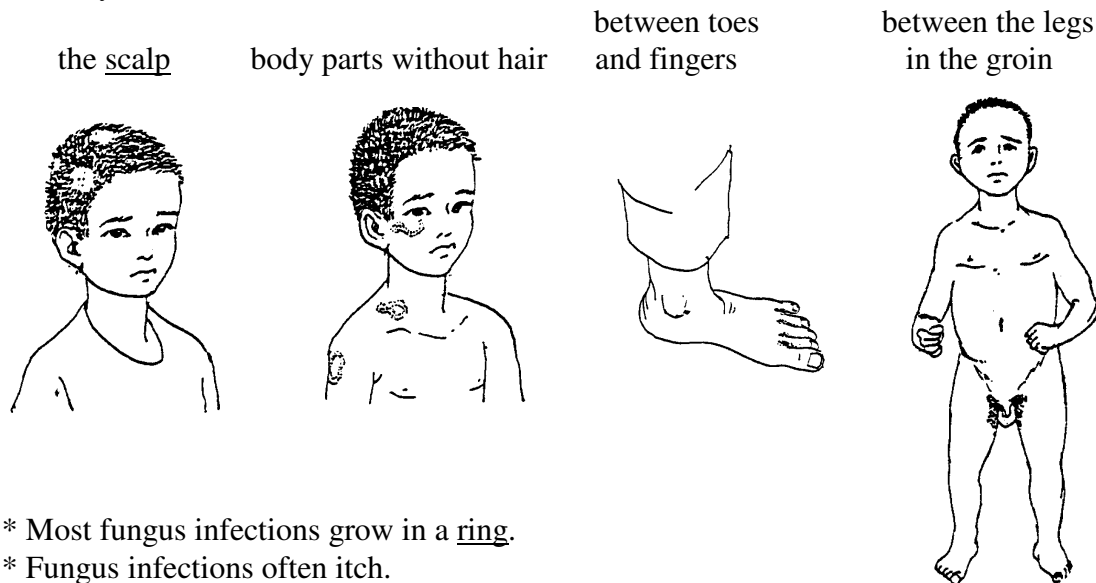
- * In serious cases with high fever inject *procaine penicillin*:
dose: adult, 800,000 units one time each day until signs are gone for 2 days.
- * To reduce pain, put on hot compresses and give *aspirin* or *paracetamol*:
dose: adult, 1 or 2 tablets, 4 times each day.

FUNGUS INFECTIONS (RINGWORM, TINEA)

A tiny fungus (plant) causes fungus infections. People who are dirty usually get fungus infections.

Signs of fungus infection:

Fungus infections can be on any body part, but fungus infections grow most commonly on:



- * Most fungus infections grow in a ring.
- * Fungus infections often itch.
- * Fungus on the head can produce round spots with scales and loss of hair.
- * Fungus on the fingernails make the nails rough and thick.

How to treat fungus infections:

- * Wash the infected area every day with soap and water.
- * Keep the skin area dry and uncovered. Let the sun shine on the infected area. Change underwear and socks often, especially after the person sweats a lot.
- * Rub on creams with *salicylic acid* or *miconazole* to help kill the fungus.

- * For severe fungus on the scalp or fungus all over the body which does not go away with the above treatment, give *griseofulvin*:
dose: adult, 1 tablet of 500 mg, one time each day until the fungus is gone. The person might need to take *griseofulvin* for weeks or even months to completely kill the fungus.

How to prevent fungus infections:

Fungus infections spread easily.

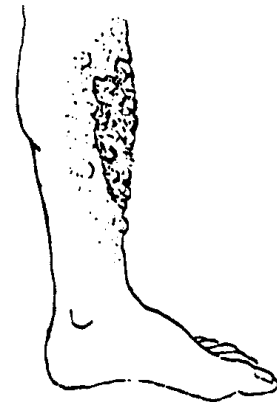
- * Do not let the person with fungus sleep with other people.
- * Do not let different children use the same comb or wear each other's clothing unless the comb and clothes are washed in boiling water.
- * Immediately treat a person with fungus.

GANGRENE

Germ (bacteria) in a wound causes gangrene. Gangrene is a very severe and very dangerous infection.

Signs of gangrene:

- * There is a bad smelling gray or brown liquid in the wound.
- * The skin near the wound might have dark blisters and air bubbles.
- * Gangrene begins between 6 hours and 3 days after the injury.
- * Gangrene quickly gets worse and spreads fast.
- * Without treatment, gangrene kills the person in a few days.



How to treat gangrene:

- * Open the wound as wide as possible. Wash the wound with boiled water and soap. Clean out the dead and damaged flesh. If possible, pour *hydrogen peroxide* or another antiseptic in the wound every 2 hours.
- * Inject *penicillin (crystalline)* if possible):
dose: adult, 1,000,000 units every 3 hours.
- * Leave the wound uncovered so that air gets to it.
- * **Get medical help immediately.**

How to prevent gangrene:

- * Wash a cut with soap and water or antiseptic soon after you get the cut.
- * If a cut gets infected, treat the cut to stop the infection. See Unit 5 "How to Treat Infected Wounds" page 48.

IMPETIGO**Cause of impetigo:**

Germ (bacteria) in the skin cause impetigo.

Signs of impetigo:

- * There are sores with shiny, yellow crusts.
- * Impetigo spreads rapidly on the body.
- * Children often get impetigo on the face, especially around the mouth.
- * Impetigo spreads easily to other people, especially children who play together.

**How to treat impetigo:**

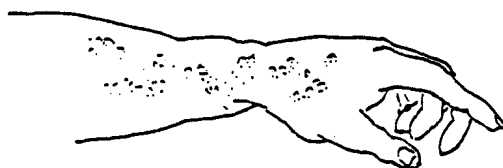
- * Wash the impetigo with soap and boiled water. Gently soak off the crusts.
- * Put *gentian violet* or an antibiotic cream with *neomycin* or *tetracycline* on the sores.
- * If the infection spreads over a large area or causes fever, give *penicillin V*:
dose: adult, 2 tablets of 250 mg, 4 times each day until the sores disappear.

How to prevent impetigo:

- * Bathe children every day and protect them from bedbugs and biting flies. If a child gets scabies, treat him as soon as possible.
- * Do not let a child with impetigo sleep with or play with other children. Treat the child when he first gets signs of impetigo.

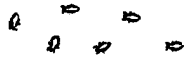
ITCHY SKIN FROM PLANTS, BUGS AND OBJECTS

Some plants and insects that touch the skin cause blisters, burns or rashes that itch. Rubber shoes, watchbands, eardrops, certain medicines, cosmetics, perfumes or soaps can cause these problems in allergic people. Sometimes yellow pus comes from the sores.



How to treat the sores and rash:

- * The rash and sores will go away when the things that cause them no longer touch the skin.
- * Rub on *hydrocortisone cream* to stop the itch.
- * If the rash is severe, give *chlorpheniramine*:
dose: adult, 1 tablet of 4 mg, 2 to 4 times each day as long the person itches.

LICE

Lice are bugs that live in the hair and cause itching and sometimes skin infections and swollen lymph nodes.

How to treat lice:

- * Make shampoo from 1 part scabies medicine, 10 parts water and a little soap. Wash the hair with the shampoo. Be careful not to get shampoo in the eyes. If the shampoo gets in the eyes, rinse the eyes for 15 minutes with water. Leave the shampoo on the hair for 15 minutes. Next rinse the hair with clean water. Repeat one week later.
- * To get rid of lice eggs, soak hair in hot vinegar and water for half an hour, then comb the hair with a fine-toothed comb.

**How to prevent lice:**

- * Stay clean.
- * Put sleeping mats, beds, pillows and bedding in the sunshine every day.
- * Bathe and wash hair often.
- * Check children's hair. If children have lice, treat them immediately. Do not let a child with lice sleep with other children.

MASK OF PREGNANCY

During pregnancy many women get dark areas on the face, breasts and down the middle of the abdomen. Sometimes the dark areas disappear after birth and sometimes they do not disappear. These dark areas can also appear on women who are taking birth control pills or on women who get birth control injections. The marks are normal and are not from sickness. You do not need to treat them.

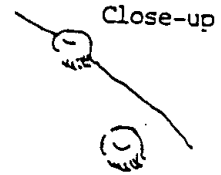


MOLLUSCUM CONTAGIOSUM

[Check if you have this in your area.]

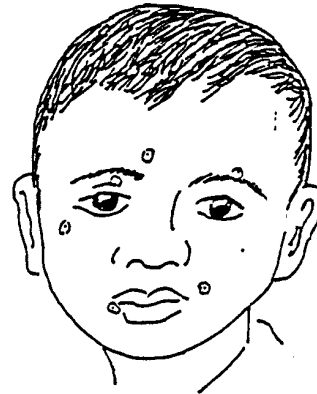
Cause of molluscum contagiosum:

A germ (virus) on the skin causes molluscum contagiosum.



Signs of molluscum contagiosum:

- * The person has many round bumps on the skin with flat tops and holes in the center. The bumps do not itch or hurt.
- * The insides of the bumps contain a thick liquid.
- * The person is not sick.



How to treat molluscum contagiosum:

There is no treatment. The bumps will go away in 1-3 weeks or longer.

PELLAGRA

Cause of pellagra:

Pellagra is malnutrition that causes skin problems. People who do not eat enough body building foods and protective foods get pellagra.

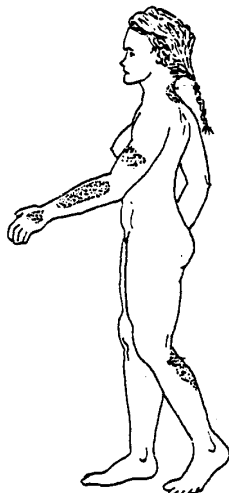
Signs of pellagra:

Adults:

- * Skin is dry and cracked.
- * The skin peels off.

Children:

- * Skin on the legs might have dark marks, bruises and peeling sores.
- * The feet might swell.



Often the person will have other signs of malnutrition such as:

- * Swollen abdomen.
- * Sores in the corner of the mouth.
- * Sore tongue.
- * Weakness.
- * Loss of appetite.
- * Underweight.

How to treat and prevent pellagra:

- * Eat nutritious foods such as chicken, eggs, fish, nuts, beans and milk.
- * Take vitamin pills that have B vitamins. But remember, eating nutritious food is more important than taking vitamin pills.

PIMPLES

Germ (bacteria) in skin pores cause pimples. Young people sometimes get pimples on their face, chest or back, especially if their skin has a lot of oil in it. Pimples are little lumps that form tiny white tops of pus or black tops of dirt. Sometimes pimples become sore and large.

How to treat pimples:

- * Wash the face two times each day with soap and hot water.
- * Sunshine helps pimples go away.
- * Eat nutritious food, drink a lot of liquids and sleep enough.
- * Before going to sleep, put a mixture of 10 parts alcohol and 1 part sulfur on the pimple area. You can also use creams that contain 2.5% *benzoyl peroxide*.
- * If pimples form large bumps with pus and the lumps do not go away when the person uses the treatment above, then give *tetracycline* (do not give to children under 8 or pregnant or nursing women):
 dose: adult, 1 capsule of 250 mg, 4 times each day for one week and then continue with 1 capsule, 2 times each day until the large lumps go away. The person might need to take this dose every day for several months.

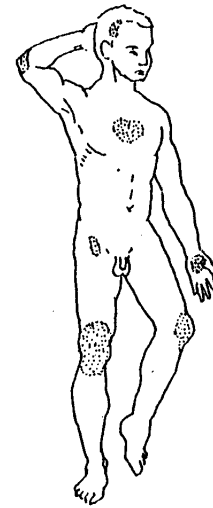
PSORIASIS

Cause of psoriasis:

Germ do not cause psoriasis and psoriasis is not dangerous. Psoriasis usually lasts a long time or comes and goes away again.

Signs of psoriasis:

- * Thick, rough patches of red or blue-gray skin covered with white or silver scales. The patches are usually on the scalp, elbows, knees, and back. Sometimes patches cover the whole body. Usually the fingernails are abnormal and have small dents.

**How to treat psoriasis:**

- * Let the sunlight shine on the skin.
- * Use ointments with *hydrocortisone* or coal.
- * In severe cases, seek medical help.

RASH THAT ITCHES

If an allergic person touches, eats, injects or breathes certain things, then he might get an itchy rash with bumps. The bumps are thick, raised areas that look like bee stings and itch. The rash can come and go rapidly or move from one area to another area.

Look for any reaction after you give certain medicines, especially injections of penicillin. The rash can start after a few minutes and up to 10 days after you inject the medicine.

IF A PERSON GETS AN ITCHY RASH, BUMPS OR ANY OTHER ALLERGIC REACTION AFTER HE EATS MEDICINE OR IS INJECTED WITH MEDICINE, THEN THAT PERSON SHOULD NEVER USE THAT MEDICINE AGAIN!

How to treat a rash that itches:

- * Bathe in cool water or put a cloth soaked in cool water on the itchy area.
- * If itching is severe, give *chlorpheniramine*:
dose: adult, 1 tablet of 4 mg, 2 to 4 times each day as long the person itches.
- * Cut a baby's fingernails short or cover hands to prevent scratching.

SCABIES

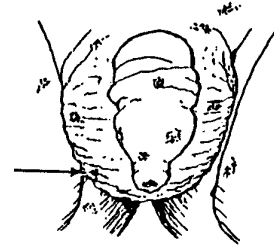
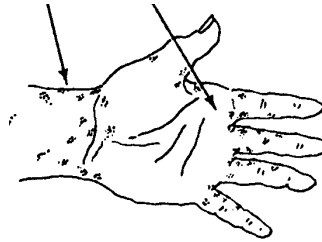
[What are local cures? Are they harmful?]

Cause of scabies:

Scabies are tiny bugs that dig in the skin. Scabies spread when a person touches skin, clothes and bed linens that have scabies.

Signs of scabies:

- * Scabies are common on children.
- * Scabies cause itchy little bumps.
- * Scabies are most common:
 - Between the fingers.
 - On the wrist.
 - Around the waist.
 - On the genitals. Small itchy sores on the penis and scrotum of young boys are usually scabies.
- * Scratching scabies can cause infections and sores with pus. The person might have swollen lymph nodes or fever.



How to treat scabies:

- * If one person has scabies, you should treat everyone in the family.
 - * Scrub the whole body with soap and hot water. Mix 1 part scabies medicine (ask the medicine seller what is available in your area) with 15 parts petroleum jelly. Heat the mixture and stir well. Rub the mixture on the whole body, except the face. Keep the mixture on the body for 1 day and then bathe well. But you should not use most scabies medicine for pregnant women or babies.
- or
- * Wash the body. While still wet, rub on 28% *benzyl benzoate* lotion. If you have 50% *benzyl benzoate*, dilute it in half with water, then rub it on the body. Do not rub onto the pink area of the genitals, or close to the eyes or mouth. Let the *benzyl benzoate* dry. When dry, rub on another layer. Let it dry. Bathe after 48 hours.
 - * After you treat with scabies medicine or *benzyl benzoate*, put on clean clothes and use clean bed linen.
 - * Repeat this treatment 1 week later if necessary.

CAUTION: Some scabies medicines, such as *Lindane*, are strong medicine and can poison a person if he uses it too often. Do not use *lindane* more than one time each week and be sure to bathe well the day after you use lindane.

How to prevent scabies:

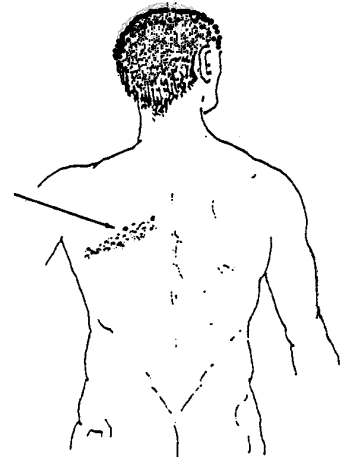
- * Personal cleanliness is very important. Bathe and change cloths every day.
- * Wash all clothes and bed linen and hang them in the sunshine.

SHINGLES**Cause of shingles:**

A germ (virus) causes shingles. The same germ causes chickenpox and usually affects people who had chickenpox before. Shingles is not dangerous. However, in younger people, shingles can be the first sign of AIDS. In old people, shingles can sometimes be a sign of cancer.

Signs of shingles:

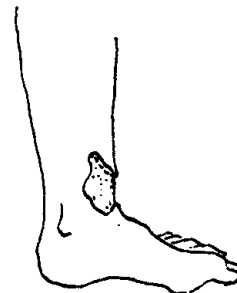
- * A line or patch of painful blisters that appear suddenly on one side of the body is probably shingles.
- * Shingles is most common on the back, chest, neck or face.
- * The blisters usually last 2 or 3 weeks, then go away.
- * Sometimes the pain continues or returns after the blisters are gone.

**How to treat shingles:**

- * Put thin bandages over the rash so that clothes do not rub the rash.
- * To reduce the pain, give *aspirin* or *paracetamol*:
dose: 1 or 2 tablets, 4 times each day.
- * Antibiotics are not necessary unless the rash is infected. See "How to Treat Sores with Pus" page 118.

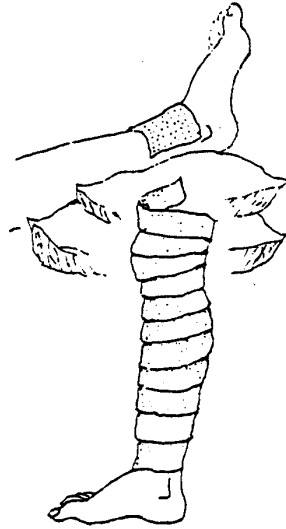
SKIN ULCERS FROM POOR BLOOD CIRCULATION

Poor blood circulation usually causes long term ulcers on the ankles of older people. Women with varicose veins can easily get leg ulcers. The blood does not move fast enough through the legs and cannot fight infections. Some ulcers can become very large. The skin around the ulcer is dark blue, shiny and very thin. Often the foot is swollen.



How to treat skin ulcers:

- * These ulcers heal very slowly. The ulcers only heal if you treat them correctly. It is very important to keep the foot up, as high as possible. Sleep with the foot raised on pillows. During the day, rest with the foot up high every 15 to 20 minutes. Walking helps the ulcer heal, but standing in one place and sitting with the feet down are harmful.
- * Put clothes soaked in warm salt water on the ulcer. Make the salt water with 1 teaspoon salt in 1 liter of boiled water. Cover the ulcer loosely with sterile gauze or clean cloth. Keep the ulcer clean.
- * Support the varicose veins with elastic stockings or an elastic bandage. Continue to use these and put the feet up often after the ulcer heals. Be careful not to injure the delicate scar.



PREVENT SKIN ULCERS, TREAT VARICOSE VEINS EARLY.

SORES WITH PUS

When a person scratches bug bites, scabies or skin irritations with dirty fingernails, this can cause sores with pus.

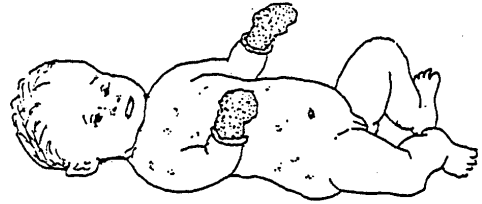


How to treat sores with pus:

- * Wash the sores with soap and boiled water. Gently soak off the scabs. Do this every day until the pus is gone.
- * Leave small sores open to the air. Bandage large sores and change the bandage frequently.
- * If the skin around a sore is red and hot,
or if the person has a fever,
or if red lines are coming from the sores,
or if there are swollen lymph nodes, then
give *penicillin V*:
dose: adult, 2 tablets of 250 mg, 4 times each day until 2 days after signs
of infection are gone.

How to prevent sores with pus:

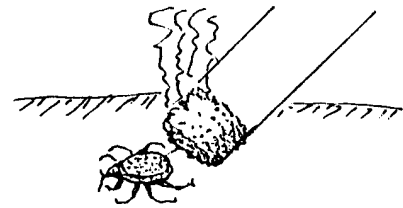
* Do not scratch sores or skin problems. Scratching makes the sores worse and can spread infection to other parts of the body. Cut small children's fingernails very short or put gloves or socks over their hands so they cannot scratch.



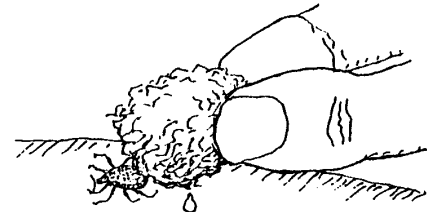
* Never let a child with sores play or sleep with other children. Skin infections spread easily.

TICKS

When you remove a tick that is firmly attached to the skin, be careful that the tick's head does not remain under the skin. If the tick's head remains under the skin, it can cause infection. Never pull on a tick's body. To make the tick come off, touch the tick with a lit cigarette, or a hot stick, or rub some alcohol on the tick.



To prevent ticks from biting you, put *sulfur powder* on your body before going into the fields or forests. Especially put *sulfur powder* on ankles, wrists, waist and underarms.

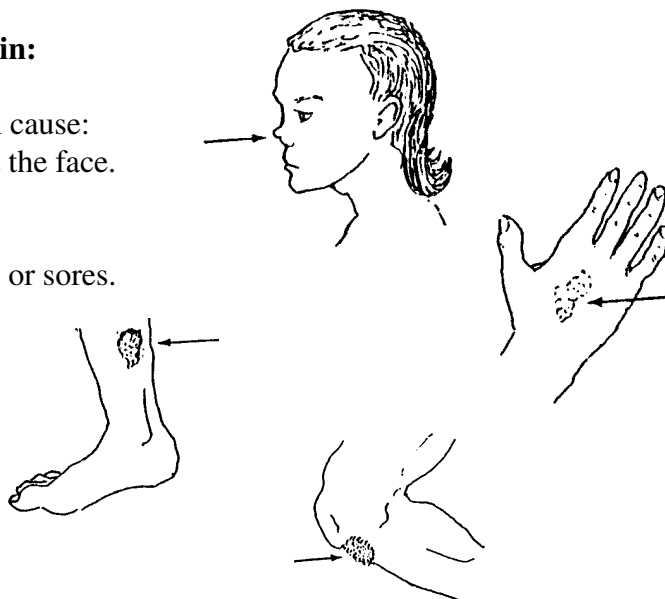


TUBERCULOSIS OF THE SKIN

The same germ (bacteria) that causes tuberculosis of the lungs also can affect the skin.

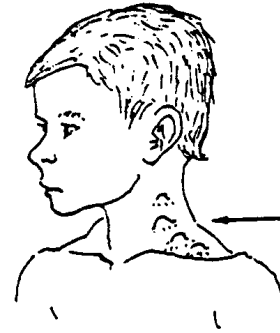
Signs of tuberculosis of the skin:

- * Tuberculosis of the skin can cause:
 - Painless tumors that distort the face.
 - Painless, long term patches or sores.
 - Painless skin ulcers.
 - Painless, big warts.



* Usually tuberculosis of the skin develops slowly, lasts a long time and comes back over a period of months or years.

* Tuberculosis sometimes infects the lymph nodes of the neck or the area behind the collar bone, between the neck and the shoulder. The lymph nodes become large, open and drain pus. Then the lymph nodes close for a time and then open and drain again. Usually the sores are not painful.

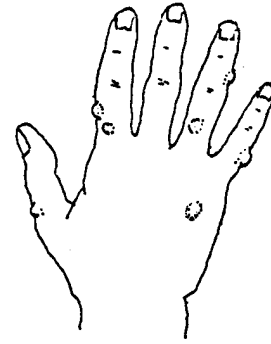


How to treat tuberculosis of the skin:

When a person has a long term sore, ulcer or swollen lymph nodes, it is best to seek medical help. The person might need medical tests to find the cause. You treat tuberculosis of the skin in the same way you treat tuberculosis of the lungs. To be sure the infection will not return, the person must take the medicines several months after the skin looks well. See Unit 11 "How to Treat Tuberculosis" page 80.

WARTS

Most warts, especially warts on children, last 3 to 5 years and then go away. Flat, painful warts, on the sole of the feet are either warts or corns.



How to treat warts:

- * Traditional cures often get rid of warts. But do not use strong acids or poisonous plants that cause burns or sores.
- * A health worker can cut out painful warts on the feet.

WHITE SPOTS OR PATCHES ON THE FACE AND BODY

There are 4 things that cause white spots or patches on the skin:

1. Fungus can cause small dark or light spots with distinct and irregular borders, often on the neck, chest and back. The fungus usually does not itch and is not serious.

How to treat the fungus:

- * Make an ointment with 3 parts *salicylic acid* and 100 parts petroleum jelly. Put the ointment on the spots until they disappear. You can also use a cream with *miconazole*.



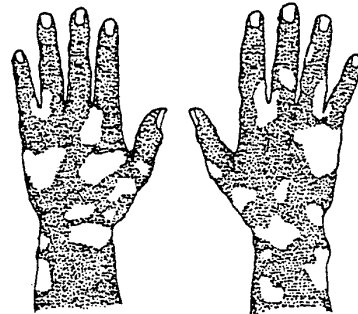
or

* Use Selsun (selenium sulfide) shampoo. Rub Selsun on the area before you go to sleep and wash it off the next morning. Repeat this for 1 week. Selsun will kill the fungus quickly, but the skin will not be the normal color for several weeks.

2. There is another kind of small white spot that is common on the cheeks of children with dark skin who play or work in the sunlight. The border is not distinct. These spots are not a fungus and are not a health problem. Usually the spots go away as the child grows up. The child does not need treatment.



3. In some people, areas of skin lose the natural color. Then white patches appear (vitiligo). The white patches are most common on the hands, feet, face and the upper body. This is not a sickness. It is similar to an old person's hair turning white. No treatment helps. Protect the skin from sunburn. Often the skin returns to its normal color.

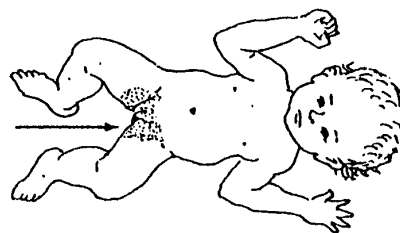


4. Any pale patch that has no feeling when you prick it with a pin is probably leprosy. Seek medical help immediately. If you wait, your nerves may become damaged.

SKIN PROBLEMS OF BABIES

DIAPER RASH

Urine in a baby's clothes or bed linen can cause red patches or rash between a baby's legs or buttocks. The rash is painful and can become infected if you do not treat it.

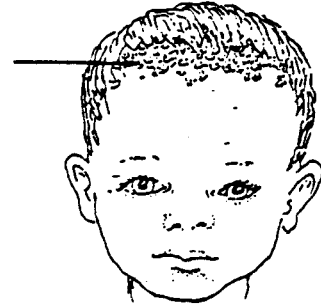


How to treat and prevent diaper rash:

- * Bathe the child every day with warm water and soap.
- * To prevent or cure diaper rash, keep the child naked, without diapers, and take him into the sunshine.
- * When diapers or clothes get wet, change them. After you wash diapers, rinse them in water with a little vinegar.
- * Do not use baby powder until the rash is gone.

CRADLE CAP:

Cradle cap is an oily, yellow crust that forms on a baby's scalp. The skin is often red and irritated. A baby can get cradle cap when the mother does not wash the baby's head often, or when the mother keeps a hat on the baby's head.

**How to treat cradle cap:**

- * Wash the head every day. If possible, use antiseptic soap.
- * Wrap the head in towels soaked in lukewarm water to loosen the crust. Gently wash off all the flakes and crust. You can also soak the area first in vegetable oil to soften the skin.
- * Keep the baby's head uncovered to let the air and sunlight dry the scalp.
- * If there are signs of infection, treat for impetigo.

A BARE HEAD PREVENTS CRADLE CAP.

UNIT 14

EYE PROBLEMS

DANGER SIGNS:

The eyes are delicate. You need to care for the eyes well. If a person has any of the following signs, he should go to a health center immediately:

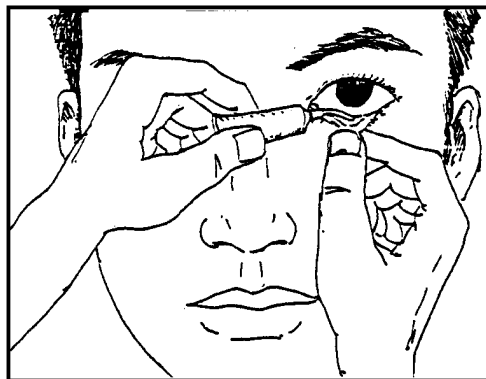
- * A cut on the eyeball.
- * A painful, grey spot on the eyeball, with redness in the white part of the eye (eye ulcer).
- * Severe pain inside the eye (glaucoma).
- * The pupils are different sizes (brain damage, stroke, glaucoma).
- * The person has trouble seeing.
- * An eye infection that does not go away after you treat the infection with antibiotics for 5 days.
- * The eye is hit and there is blood in the pupil.



HOW TO PUT ANTIBIOTIC EYE OINTMENT INTO THE EYE:

Antibiotic eye ointment usually contains tetracycline. You use antibiotic eye ointment to treat and prevent eye infections. To put antibiotic eye ointment into the eye:

1. Pull down the lower eyelid.
2. Put a line of antibiotic eye ointment between the eyelid and the eyeball.
3. Use the antibiotic eye ointment 4 times each day until the problem is gone.

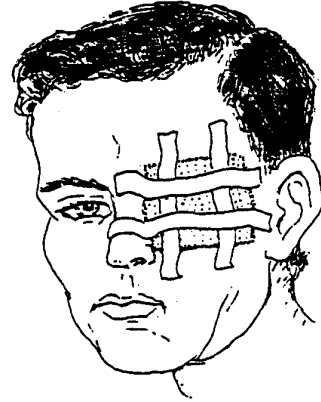


EYE INJURIES

All eye injuries are dangerous because they might cause blindness. Even small cuts on the eyeball can become infected and reduce vision. Deep cuts that go through the white part of the eyeball are very dangerous. If something hits a person in the eye and the eyeball fills with blood, this is dangerous.

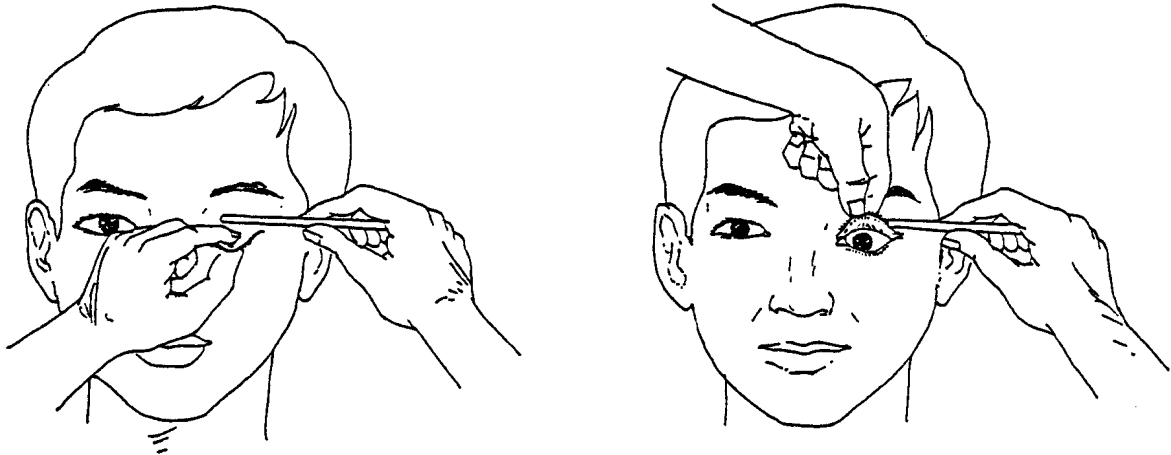
How to treat eye injuries:

- * If the person can see well after an eye injury, put antibiotic eye ointment in the eye and cover the eye with a soft, thick bandage. If the eye is not better in 2 days, get medical help.
- * If the injured eye cannot see well or if there is a deep cut or if there is blood inside the eyeball, then cover the eye with a clean bandage and send the person to a health center.
- * Do not try to remove splinters that are tightly stuck in the eyeball. Get medical help.



HOW TO REMOVE DIRT FROM THE EYE

If there is dirt in the eye, then wash the eyeball with clean water to remove the dirt. Or touch the piece of dirt with the corner of a clean cloth. The dirt usually sticks to the cloth and you can take the dirt out. If the dirt is under the upper eyelid, turn the upper eyelid over a thin stick and take the dirt out with the corner of a clean cloth.



If you cannot get the dirt out, put antibiotic eye ointment in the eye, cover the eye with a bandage and get medical help.

RED EYE

Cause of red eye:

Germs (bacteria and virus) in the eyes cause red eye. People spread the germs when they touch their red eye and spread the germs to other people.

Signs of red eye:

- * The eye is red, watery and itches.
- * Pus might come out of the eye and the eyelids often stick together when the person sleeps.

**How to treat red eye:**

- * Wash the pus out of the eye with a cloth dipped in boiled water.
- * Put antibiotic eye ointment in the eye 4 times each day until the problem is gone.

How to prevent red eye:

- * Red eye spreads easily. Do not let children with red eye play with other children or use the same towel.
- * Do not let children with red eye sleep with other children.
- * People with red eye should wash their hands after they touch their eyes.

RED EYE IN NEWBORN BABIES**Cause of red eye in newborn babies:**

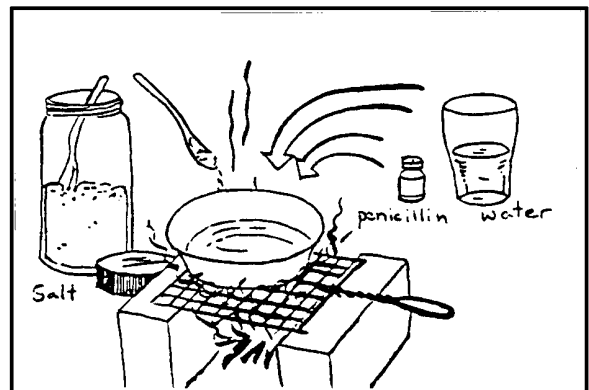
A baby who gets red eye in the first 2 days after birth probably has gonorrhea. A mother who has gonorrhea spreads gonorrhea to her baby when he is born.

Signs of red eye in newborn babies:

- * Usually a baby does not have tears until he is 3 weeks old. Red eye causes a baby to have tears sooner.
- * The baby's eyes are red, swollen and have pus in them.

How to treat red eye in newborn babies:

- * Inject *crystalline penicillin*:
dose: baby, 150,000 units, 2 times each day for 3 days.
- * Make *penicillin eyedrops* to put in the baby's eyes. Add 1/2 teaspoon salt to 1/2 cup water. Boil the mixture. After the mixture cools, add 1,000,000 units of *crystalline penicillin* to the mixture.



Hold the child's head back and hold the eye open with your fingers. Put one drop of the mixture into the corner of the baby's eye every 10 minutes for 1 hour. Then put one drop in the baby's eye every hour for 6 hours. Then put one drop in the baby's eye every 2-3 hours for 3 days.

* Treat the parents for gonorrhoea if the newborn baby has red eye.

How to prevent red eye in newborn babies:

- * Put one drop of *1% silver nitrate* into a baby's eyes the day he is born. Only do this one time. Do this for every baby. Sometimes a mother has gonorrhoea and she does not know it.
- * If you do not have *1% silver nitrate*, put antibiotic eye ointment in the eyes 3 times each day for 3 days after the baby is born.

GLAUCOMA

Cause of glaucoma:

Pressure in the eyeball causes glaucoma. Glaucoma can cause blindness. There are 2 kinds of glaucoma - severe glaucoma and long term glaucoma.

Signs of severe glaucoma:

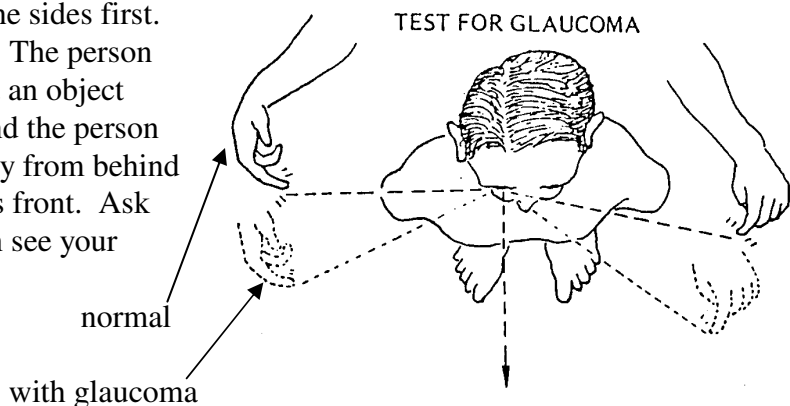
- * Starts suddenly with a headache and severe pain in the eye.
- * The eyeball becomes red and the person sees things blurry.
- * The eyeball feels hard when you touch it.
- * The person might vomit.
- * The pupil of the painful eye is bigger than the pupil of the normal eye.



Signs of long term glaucoma:

- * Usually there is no pain. The person loses his sight slowly and often the person does not notice the loss.

- * The person loses sight on the sides first. You can test for glaucoma. The person covers one eye and looks at an object straight ahead. Stand behind the person and move your hands slowly from behind both sides of his head to his front. Ask him to tell you when he can see your hands.



Normally a person can see your hands when they are even with his face. But a person with glaucoma cannot see your hands until they are further in front of his face.

How to treat glaucoma:

- * Get medical help fast. Severe glaucoma can cause blindness in a few days.
- * A doctor can give special eyedrops to prevent blindness from long term glaucoma.

TEAR SAC INFECTION

Cause of tear sac infection:

Germ (bacteria) in the tear sac cause tear sac infection.

Signs of tear sac infection:

- * Redness, pain and swelling under the eye near the nose.
- * The eye is watery.
- * If you press on the swollen area, a drop of pus might come out at the corner of the eye.



How to treat tear sac infection:

- * Put a towel soaked in hot water on the eye.
- * Put antibiotic eye ointment in the eye.
- * Give *penicillin V*:
dose: adult, 1 tablet of 250 mg, 4 times each day until 2 days after the infection is gone.

A PERSON CANNOT SEE CLEARLY

People who cannot see clearly or who get headaches when they read might need glasses. It is normal for people to see worse when they get old. Send them to an eye doctor or health worker who can examine the eyes.

EYES THAT DO NOT LOOK STRAIGHT

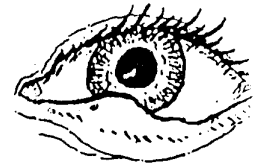
If a child has one eye that turns in or turns out or looks the wrong way, then cover the normal eye with a patch. This will help the other eye look straight.



Start to use the patch when the child is 6 months old if possible. Keep the normal eye covered until the other eye looks straight. You might only need to cover the normal eye for 1-2 weeks for a 6 month old child. It is more difficult to make an older child's eye look straight. Older children should visit a health worker. If one eye is always turned the wrong way, a patch might not help. He should visit a health worker.

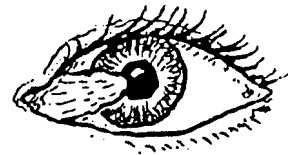
INFECTED EYELID (STY)

The edge of the eyelid is red and swollen. Put a towel soaked in hot salt water on the eye. Put antibiotic eye ointment in the eye 3 times each day until the infection is gone for 2 days.

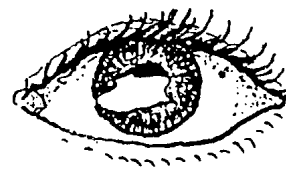


A THICK COVERING THAT GROWS ON PART OF THE EYE

Sometimes too much light, wind and dust in the eye cause part of the eye to grow thick. The thick part starts at the edge of the eye and grows towards the middle of the eye. The person should wear dark glasses to protect the eye from light. A doctor should remove the covering before it reaches the pupil.



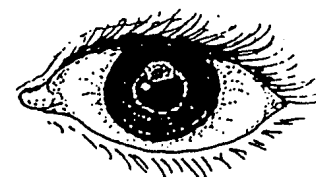
An eye injury or sore can cause a white patch to appear on the eye. The person should visit a doctor to check if he needs surgery.



A SORE ON THE EYE

A sore on the eye might look gray or less shiny than the rest of the eye. If the sore gets worse, it might cause blindness. Put antibiotic eye ointment in the eye and give *penicillin V*:

dose: adult, 1 tablet of 250 mg, 4 times each day for 5 days. If the eye is not better in 2 days, get medical help.



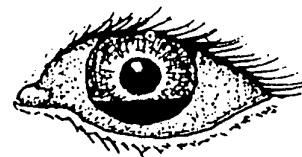
BLEEDING IN THE WHITE PART OF THE EYE

Lifting heavy objects, coughing hard or an injury can cause blood vessels to break in the white part of the eye. This will not hurt the person and will go away slowly without treatment. Babies commonly have red patches in the white part of the eye. You do not need to treat them.



BLEEDING IN THE BROWN PART OF THE EYE

A hit on the eye can cause a dangerous injury. Blood behind the brown part of the eye is a sign of a dangerous injury. Cover the eye and make the person rest in bed for several days. If the pain gets worse after a few days, he might have permanent damage. Take the person to a doctor immediately.



PUS BEHIND THE BROWN PART OF THE EYE

Pus in the brown part of the eye is a sign of severe infection and swelling. This is very dangerous.

Give *penicillin V*:

dose: adult, 1 tablet of 250 mg, 4 times each day until the infection is gone for 2 days. Get medical help immediately.



CATARACTS

When you shine a light in the pupil, the pupil is cloudy and looks grey or white. Cataracts are common in older people. If a person with cataracts can still see light and dark and movements, then eye surgery might help him see again. Medicines do not help cataracts.



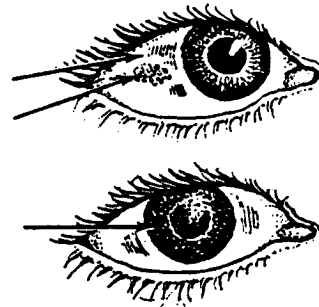
NIGHT BLINDNESS

Cause of night blindness:

A lack of foods with vitamin A causes night blindness.

Signs of night blindness:

- * Night blindness is most common in children between 2 and 5 years old.
- * The person cannot see in the dark as well as other people.
- * Later the eyes become dry, lose their shine and begin to wrinkle. This often begins after a child gets a sickness such as diarrhea, whooping cough or TB.
- * Little gray bubbles might form on the eyes.
- * When the eyes get worse, the eye becomes dry and dull with little pits.
- * The eye might bulge or break open and the person can become blind.



How to treat and prevent night blindness:

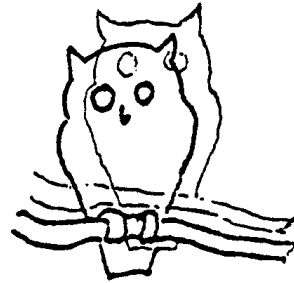
- * Examine the eyes of all sick and underweight children to check for night blindness.
- * Children should eat nutritious foods. Breastfeed babies for 2 years if possible. When a child is 6 months old, give him dark green leafy vegetables, ripe papaya, carrots, tomatoes, squash, milk, eggs and liver.
- * If the child cannot get nutritious food or if he has signs of night blindness, then give him vitamin A:
 - dose: 1 capsule of 200,000 units (60 mg retinal) 1 time every 6 months. Do not give to babies under 6 months old. If the signs do not go away after 7 days, give the child another vitamin A capsule. Do not give more vitamin A than shown above. Too much vitamin A can be poisonous.
- * If the child's eyes are dull, have pits or bulge, then cover the eyes with a bandage and give vitamin A. Get medical help immediately.

SEEING SPOTS:

Sometimes people see small spots that move when the eye moves. The spots usually cause no harm and do not need treatment. But if a lot of spots appear suddenly and the person cannot see well with one eye, get medical help immediately.

DOUBLE VISION:

Many things can cause people to see double. If a person suddenly sees double or sees double for a long time, then he might have a severe sickness. Get medical help. If the person sees double only occasionally, he might be weak, tired or malnourished. A person who sees double should eat nutritious food.



UNIT 15

TEETH, GUMS AND MOUTH

CARE OF THE TEETH AND GUMS:

[Do people chew betel nut?]

People should care for their teeth well because:

- * People need healthy teeth to chew food.
- * A person who does not care for his teeth well might get toothaches and sore gums.
- * Rotten teeth can cause other sicknesses that hurt the body.

[Are toothbrushes available? Affordable?]

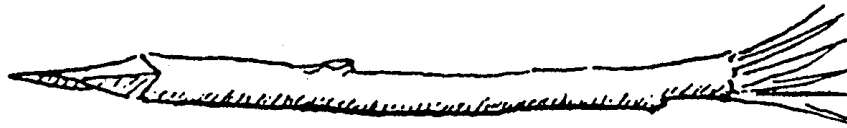
To keep the teeth and gums healthy:

- * Do not eat a lot of sweets or soft drinks. Sweets and soft drinks make the teeth soft and weak.
- * Brush teeth every day. Brush teeth after you eat sweet food. Start to brush children's teeth when the teeth come in. Teach older children to brush their own teeth. Brush the teeth up and down, not side to side. Brush the front, back and top of every tooth.
- * Do not bottle feed babies if possible. Babies that breastfeed have better teeth.

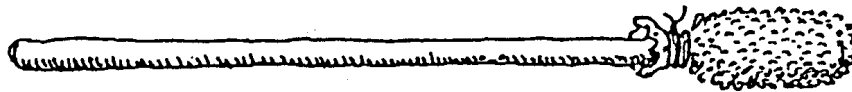


HOW TO MAKE A TOOTHBRUSH:

If you do not have a toothbrush, you can make a toothbrush. Chew on the end of a stick until it is soft enough to brush your teeth.



Or tie a rough piece of cloth on the end of a stick to brush your teeth.

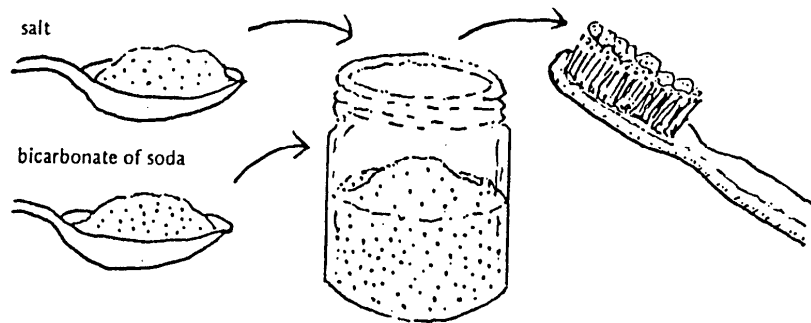


HOW TO MAKE POWDER TO CLEAN YOUR TEETH:

[Is baking soda available?]

If you cannot buy toothpaste, you can make a special toothpowder to use when you brush your teeth. Brushing with toothpowder will make your teeth cleaner than brushing without toothpowder.

Mix equal amounts of salt and baking soda (bicarbonate of soda). Wet your toothbrush and put it in the powder. If you do not have baking soda, just use salt.



TOOTHHOLES AND TOOTHACHES:

If a person has a small, dark hole in his tooth, he should not eat sweets and he should brush his teeth after every meal. Send the person to a dental worker who can fill the hole and prevent a toothache.

If a person has a toothache, treat it immediately to prevent more problems:

- * Clean the hole in the tooth. Be sure there is no food in the hole. Then rinse the mouth with warm salt water.
- * To reduce pain, give *aspirin* or *paracetamol*:
dose: adult, 1 or 2 tablets of 500 mg, 4 times each day.
- * If the gums and face swell, or there is pus in the mouth or the lymph nodes on the neck swell, then the tooth is infected. Give *penicillin V*:
dose: adult, 1 tablet of 250 mg, 4 times each day until 2 days after the infection is gone.
- * If the pain does not go away, someone should pull the tooth.

GUM SICKNESS:

Not brushing the teeth well and a lack of nutritious foods causes swollen, red and painful gums.

How to treat and prevent gum sickness:

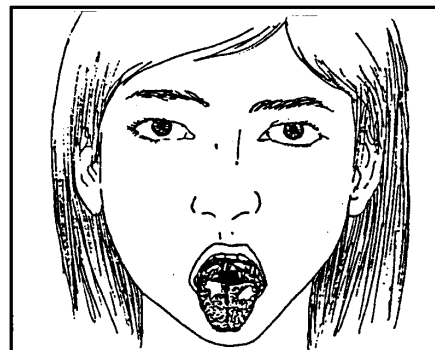
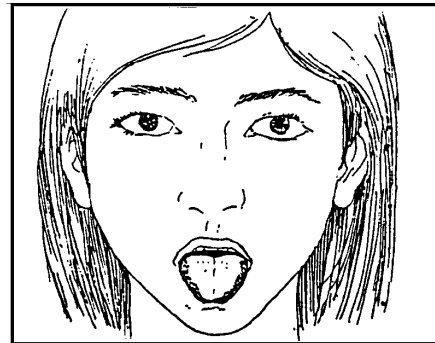
- * Brush teeth well after every meal. Scrape off the yellow crust where the teeth touch the gums. Clean between the teeth with a thread. The gums might bleed, but soon the gums will become healthier and bleed less.
- * Eat protective foods such as vegetables, fruits, eggs and meat. Do not eat sweet or sticky food.

SORES OR CRACKS AT THE CORNER OF THE MOUTH:

Sores and cracks at the corners of a person's mouth are a sign of malnutrition. People with sores and cracks should eat protective foods and body building foods such as vegetables, fruits, milk, eggs, meat, fish and nuts.

**WHITE PATCHES OR SPOTS IN THE MOUTH:**

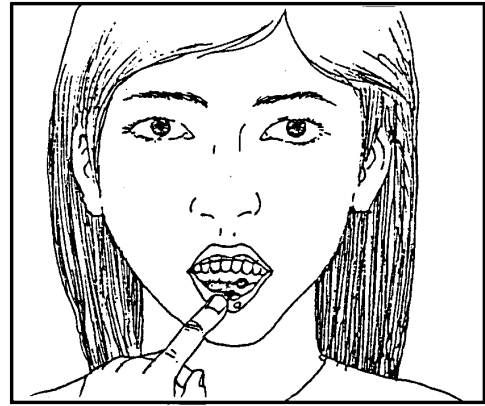
- * Many sicknesses can cause a white covering on the tongue or roof of the mouth. This is not a problem. Rinse the mouth with warm salt water several times each day.
- * Very small white spots in a child's mouth with a fever might be an early sign of measles.
- * A fungus causes small, thick white patches on the inside of the mouth. This is common in babies and in people who take antibiotics and in people who have AIDS. The person should stop taking the antibiotic if it is not necessary. Paint the inside of the mouth with *gentian violet*. Chew garlic or eat yoghurt to help get rid of the white patches.



If the fungus is severe, give *nystatin*:
dose: adult, 1 tablet, 3 times each day until the patches are gone.

* Stress or a fever can cause small, white, painful sores inside the lip or mouth. The sores usually disappear after 1-3 weeks. Rinse the mouth with warm salt water.

* Herpes can cause small, painful blisters on the lips that break or form scabs. See Unit 11 "Herpes" page 52.



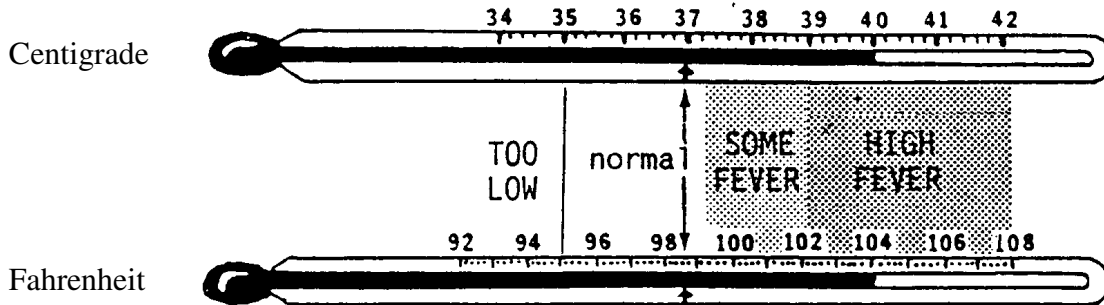
PROCEDURE LIST

How to make rehydration drink	Unit 4, page 33 Unit 12, page 96
How to inject adrenaline	Unit 11, page 20
How to stop choking	Unit 5, page 41
Mouth to mouth breathing	Unit 5, page 42
How to stop bleeding	Unit 5, page 43
How to clean wounds	Unit 5, page 44
How to close and bandage wounds	Unit 5, page 45-47
How to treat broken bones	Unit 5, page 51
How to treat burns	Unit 5, page 57-59
How to check the temperature	Unit 8, page 17-18
How to check the pulse	Unit 8, page 19
How to take the blood pressure	Unit 8, page 20
How to check feeling in the skin	Unit 8, page 26
How to measure medicine	Unit 9, page 32-34
How to figure medicine dose	Unit 9, page 35
How to give injections	Unit 9, page 40-44
How to drain mucus from the lungs	Unit 11, page 35
How to breath steam	Unit 11, page 34
How to use a catheter	Unit 11, page 67
How to wash the vagina with water and vinegar	Unit 11, page 86
How to use hot compresses	Unit 13, page 106
How to treat skin with wet cloths	Unit 13, page 106
How to put eye ointment in the eye	Unit 14, page 123
How to examine the breasts for cancer	Unit 17, page 33

REVIEW OF VITAL SIGNS

TEMPERATURE

You can use Fahrenheit (F) or centigrade (C) to measure temperature.



PULSE OR HEARTBEAT

The normal pulse for **adults** is 60-80 beats each minute.

The normal pulse for **children** is 80-100 beats each minute.

The normal pulse for **babies** is 100-140 beats each minute.

The pulse increases 20 beats each minute for each degree centigrade, C (or each 2 degrees Fahrenheit, F) increase in temperature.

BREATHING

The normal breathing rate for **adults** and **large children** is 12-20 breaths each minute.

The normal breathing rate for **children** is up to 30 breaths each minute.

The normal breathing rate for **babies** is up to 40 breaths each minute.

More than 40 breaths each minute usually means the person has pneumonia.

BLOOD PRESSURE

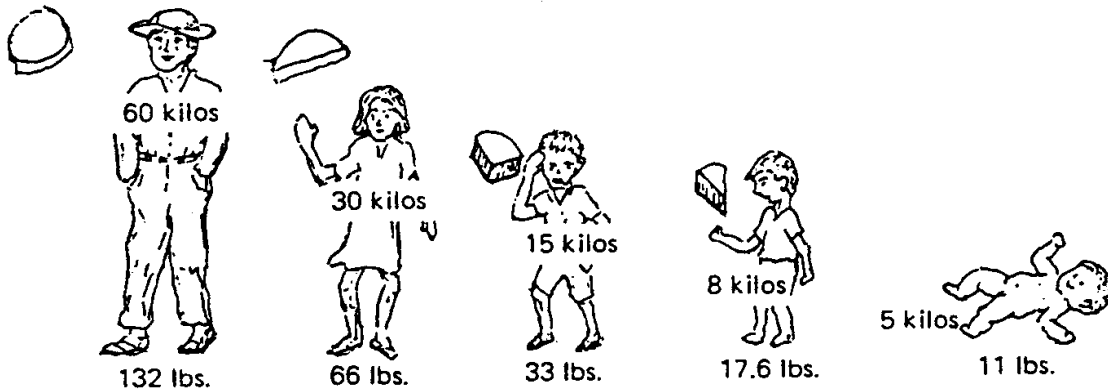
120/80 is the normal blood pressure, but this varies a lot.

If the second number, is over 100, then the person might have high blood pressure.

WEIGHT AND VOLUME

WEIGHT

The average weights for people of different size are:



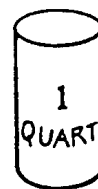
Weight Measurement Equivalents

- 16 ounces (oz.) = 1 pound (lb.)
- 1 pound = 454 grams (g)
- 1000 grams = 1 kilogram (kilo, kg)
- 1 kilogram = 2.2 pounds
- 1 ounce = 28 grams
- 1 gram = 1000 milligrams (mg)
- 1 grain = 65 milligram

VOLUME (How much space something takes, used to measure liquids.)

Volume Measurement Equivalents

- 1000 milliliters (ml.) = 1 liter
- 3 teaspoons (tsp.) = 1 tablespoon (Tbs.)
- 1 teaspoon = 5 milliliters
- 1 tablespoon = 15 milliliters
- 30 milliliters = 1 ounce
- 8 ounces = 1 cup
- 32 ounces = 1 quart
- 1 quart = .95 liters
- 1 liter = 1.06 quarts

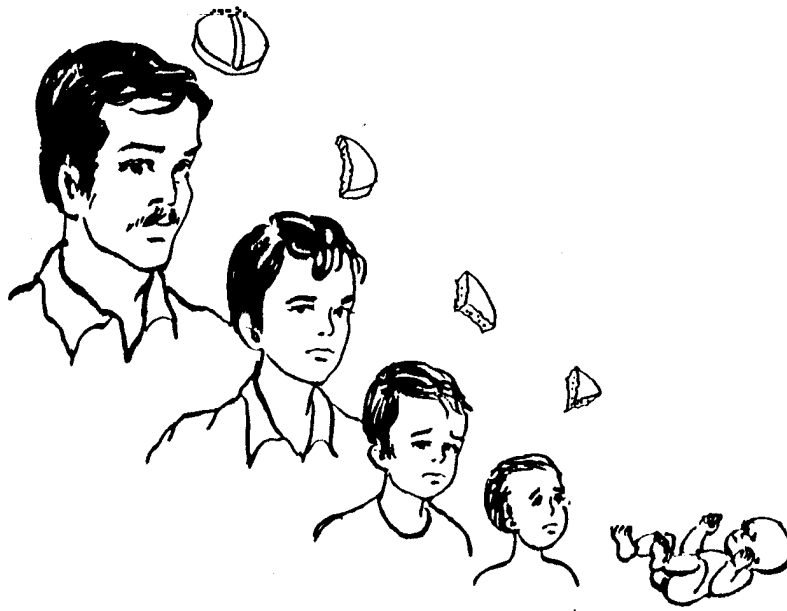


1 liter is a little more than 1 quart

MEDICINE DOSE

This book usually tells the amount of medicine you need to treat sicknesses for adults only. When you treat children, you will need to calculate the correct amount of medicine for them. Generally, smaller children need less medicine. If a you give a person more medicine than they need, it can be dangerous.

Give children the following portions of the adult dose:



Adult (60 kg): 1 dose

Children 8 to 13 years (30 kg): 1/2 dose

Children 4 to 7 years (15 kg): 1/4 dose

Children 1 to 3 years (8 kg): 1/8 dose

Give children under 1 year old the dose for a child 1 year old, but ask medical advice if possible.

List of Health Problems and Where to Find Them in This Book

Abdominal emergencies	Unit 5	Page 56
Abscess	Unit 13	Page 107
AIDS	Unit 11	Page 16
Allergic reaction to medicine	Unit 9	Page 39
Allergies	Unit 11	Page 19
Ameba	Unit 11	Page 20
Anemia	Unit 11	Page 21
Arthritis	Unit 11	Page 22
Asthma	Unit 11	Page 23
Back pain	Unit 11	Page 25
Bell's palsy	Unit 11	Page 27
Bleeding and wounds	Unit 5	Page 43
Bleeding in the brown part of the eye	Unit 14	Page 129
Bleeding in the white part of the eye	Unit 14	Page 129
Breast abscess	Unit 17	Page 33
Broken bones	Unit 5	Page 51
Bronchitis	Unit 11	Page 27
Burns	Unit 5	Page 57
Cancer	Unit 11	Page 28
Cataracts	Unit 14	Page 130
Chicken pox	Unit 11	Page 29
Choking	Unit 5	Page 40
Cholera	Unit 11	Page 30
Colds and flu	Unit 11	Page 31
Constipation	Unit 11	Page 33
Convulsions	Unit 11	Page 33
Corns	Unit 13	Page 107
Cough	Unit 11	Page 34
Cradle cap	Unit 13	Page 122
Cretinism	Unit 19	Page 50
Dehydration	Unit 12	Page 95
Dengue (hemorrhagic) fever	Unit 11	Page 36
Diabetes	Unit 11	Page 37
Diaper rash	Unit 13	Page 121
Diarrhea and dysentery	Unit 12	Page 97
Diphtheria	Unit 11	Page 37
Dislocated joints	Unit 5	Page 54
Drowning	Unit 5	Page 42
Ear infection	Unit 11	Page 38
Eczema	Unit 13	Page 108
Encephalitis	Unit 11	Page 39
Epilepsy	Unit 11	Page 40
Erysipelas	Unit 13	Page 108

Eye injuries	Unit 14	Page 123
Filariasis	Unit 11	Page 41
Fluke	Unit 11	Page 42
Fungus infection	Unit 13	Page 109
Gallbladder sickness	Unit 11	Page 43
Gangrene	Unit 13	Page 110
Glaucoma	Unit 14	Page 126
Goiter	Unit 11	Page 44
Gonorrhea	Unit 11	Page 44
Gum sickness	Unit 15	Page 133
Headaches and migraines	Unit 11	Page 46
Heart problems	Unit 11	Page 47
Hemorrhoids	Unit 11	Page 48
Hepatitis A	Unit 11	Page 48
Hepatitis B	Unit 11	Page 49
Hernia	Unit 11	Page 50
Herpes	Unit 11	Page 52
High blood pressure	Unit 11	Page 53
Impetigo	Unit 13	Page 111
Infected eyelid	Unit 14	Page 128
Itchy skin from plants, bugs & objects	Unit 13	Page 111
Kidney or bladder blockage	Unit 11	Page 53
Leprosy	Unit 11	Page 54
Lice	Unit 13	Page 112
Loss of consciousness	Unit 5	Page 40
Malaria	Unit 11	Page 56
Malnutrition	Unit 11	Page 58
Mask of pregnancy	Unit 13	Page 112
Measles	Unit 11	Page 60
Meningitis	Unit 11	Page 61
Miscarriage	Unit 17	Page 33
Molluscum contagiosum	Unit 13	Page 113
Mumps	Unit 11	Page 62
Night blindness	Unit 14	Page 130
Painful nipples	Unit 17	Page 32
Pellagra	Unit 13	Page 113
Phimosis	Unit 11	Page 63
Pimples	Unit 13	Page 114
Pneumonia	Unit 11	Page 63
Poisoning	Unit 5	Page 59
Polio	Unit 11	Page 65
Postpartum sepsis	Unit 11	Page 66
Prostate problems	Unit 11	Page 67
Psoriasis	Unit 13	Page 114
Pus behind the brown part of the eye	Unit 14	Page 129

Rabies	Unit 11	Page 69
Rash that itches	Unit 13	Page 115
Red eye	Unit 14	Page 124
Rubella	Unit 11	Page 70
Scabies	Unit 13	Page 116
Scorpion and spider bites	Unit 5	Page 61
Septicemia	Unit 11	Page 71
Shingles	Unit 13	Page 117
Shock	Unit 5	Page 39
Sinus infection	Unit 11	Page 72
Skin ulcers from poor blood circulation	Unit 13	Page 117
Snakebite	Unit 5	Page 60
Sore on the eye	Unit 14	Page 129
Sore throat	Unit 11	Page 72
Sore with pus	Unit 13	Page 118
Sores or cracks at the corner of mouth	Unit 15	Page 134
Spastic child	Unit 19	Page 50
Sprains	Unit 5	Page 55
Stroke	Unit 5	Page 57
Syphilis	Unit 11	Page 73
Tear sac infection	Unit 14	Page 127
Tetanus	Unit 11	Page 75
Thalassemia	Unit 11	Page 77
Thick covering growing on the eye	Unit 14	Page 128
Thyroid problems	Unit 11	Page 77
Ticks	Unit 13	Page 119
Toothaches	Unit 15	Page 133
Toxemia	Unit 17	Page 9
Trichinosis	Unit 11	Page 78
Tubal pregnancy	Unit 11	Page 79
Tuberculosis	Unit 11	Page 79
Tuberculosis of the skin	Unit 13	Page 119
Typhoid fever	Unit 11	Page 81
Typhus	Unit 11	Page 83
Ulcers in the stomach/lower chest pain	Unit 11	Page 84
Urinary tract infection	Unit 11	Page 85
Vaginal infection	Unit 11	Page 86
Varicose veins	Unit 11	Page 88
Vomiting	Unit 12	Page 103
Warts	Unit 13	Page 120
White patches or spots in the mouth	Unit 15	Page 134
White spots or patches on the face/body	Unit 13	Page 120
Whooping cough	Unit 11	Page 89
Worms	Unit 11	Page 90