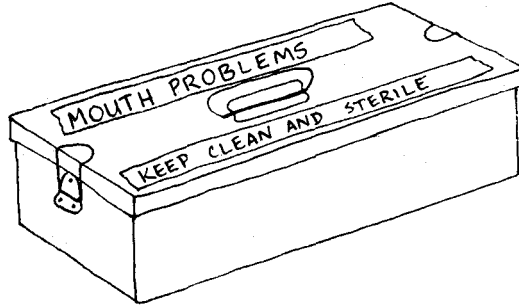


THE DENTAL KIT



In the next 10 pages, there are lists of medicines, instruments, and other supplies recommended in this book. Keep them together in a kit. **You may want to change some of them, or add others to meet your own needs.**

As a dental worker, you will be able to get many of the items on the lists from your government medical stores. Some things you will have to buy yourself. That can be expensive, so we make several suggestions to help you save money.

Before you order, decide how many of each thing you need. Ask yourself: How many persons do I treat each day? For what problems? Then order enough medicines and supplies for three months. **Note:** as more people learn about the treatment you can give, more will come to ask for your help. Remember this when you order. Remember, also, that some persons may need more than one treatment.

On pages 164 to 169 we give an example. We recommend how many medicines, supplies, and instruments you will need if you see 10 people a day—200 a month. You cannot be exact, of course, because you cannot predict exactly what problems will arise. However, we can say that, **on the average:**

In a group of 10 persons with urgent problems:

- 6 persons need you to take out 1 or more teeth (so you must inject)
- 2 persons need cement fillings
- 2 persons need medicine before you can treat them.

Many of these persons must return for another visit:

- 5 persons need you to scale their teeth and teach them how to care for them better
- 1 person will need a cement filling
- 2 persons will need treatment after taking medicine.

MEDICINES

Use ↓	Proper Name ↓	Local name (write in here) ↓	Amount you need in 3 months ↓	Amount to keep in kit ↓	See Page ↓
For Pain	1. aspirin, 300 mg tablets	_____	2,000 tablets	100 tablets	88
	2. acetaminophen (paracetamol) 500 mg tablets	_____	500 tablets	10 tablets	88
For Infections	1. penicillin, 250 mg tablets	_____	2,000 tablets	100 tablets	88
	2. erythromycin, 250 mg tablets	_____	500 tablets	40 tablets	88
	3. nystatin, creme or solution	_____	12 small tubes or bottles	2 small tubes or bottles	99

Another antibiotic, tetracycline, is not recommended for any of the treatments in this book because it is a broad-spectrum antibiotic. Narrow-spectrum antibiotics (see 'antibiotics', p. 182) are usually safer and just as effective for most dental problems. If you do use tetracycline, read page 353 of *Where There Is No Doctor* and remember, **do not give tetracycline to a pregnant woman or to a young child.** Tetracycline can make a young, developing tooth turn yellow.

SUGGESTIONS:

1. Compare prices before you buy medicines. Often the same medicine has many different names. The *generic name* (the name we use on this page) usually is cheapest, and the medicine is just as good as the 'brand-name medicines'. Use the generic name to order and buy, not the brand name.

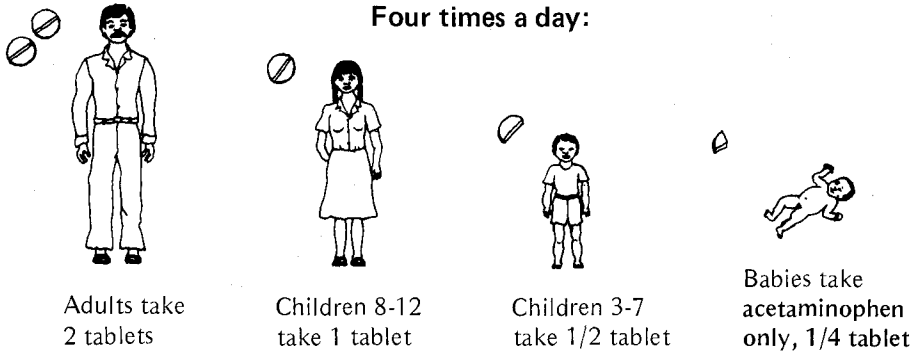
2. Always look for a date on the package. It is called the expiration date (or expiry date). **If today is later than that date, do not buy or use that medicine.**

3. Be careful to give the correct dose. Read the next two pages carefully, as well as the 'Treatment' section of each problem in Chapter 7. If pages 165 and 166 are not clear to you, read Chapter 8 (pages 59 to 64) of *Where There Is No Doctor*.

4. For serious infections or serious pain, see page 166.

THE CORRECT DOSE

Before you give medicine, think about the sick person's weight and age. The smaller children are, the less medicine they need. For example, pain medicine like aspirin (300 mg tablets) or acetaminophen (500 mg tablets) can be broken up into smaller tablets:



Notes: Do not hold aspirin on the bad tooth. Aspirin has acid that can hurt the tooth. Always swallow aspirin immediately. **For severe pain**, when aspirin does not help, an adult can take a 30 mg tablet of codeine.

Antibiotics: To Fight Infection

Antibiotics kill bacteria that cause infections. Some antibiotics work better than others on certain bacteria. If you can, test the pus (p. 186) to find which antibiotic works best.

Do not give penicillin to a person who is allergic to it. Ask about the person's allergies before you give penicillin pills or injections. When you inject penicillin, always keep epinephrine (*Adrenalin*) ready to inject if the person shows signs of allergic shock. Stay with the person for 30 minutes. If you see these signs . . .

- cool, moist, pale, gray skin (cold sweat)
- weak, rapid pulse (heartbeat)
- difficulty breathing
- loss of consciousness

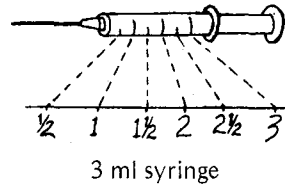
. . . immediately inject epinephrine: 1/2 ml for adults or 1/4 ml for children. For more information on allergic shock, see *Where There Is No Doctor*, pages 68 to 72.

Always give the full dose of penicillin or any antibiotic, even if the person feels better. See page 88 for the correct dose of penicillin or erythromycin in 250 mg tablets. Erythromycin also comes in liquid form. It has 125 mg in 5 ml, so 10 ml of liquid (about two large teaspoons) is the same as one tablet.

It is important to take a strong first dose of penicillin or erythromycin, and then smaller doses four times a day for 3 to 5 days after that. Carefully read the instructions on page 88.

INJECTIONS: FOR SEVERE INFECTIONS

It is always safer to take medicine by mouth. Sometimes, however, an infection is so bad that you need to give medicine by injection. **Learn how to give injections from an experienced health worker.** The injections described on this page are not like the anesthetic injections in Chapter 9 of this book—you must inject these medicines into a large muscle in the buttocks or arm. For more instructions on this kind of injection, see Chapter 9 (pages 65-74) of *Where There Is No Doctor*.



For severe infection: There are two kinds of penicillin to inject.

Procaine Penicillin

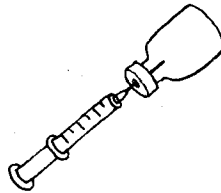


300,000 units
in 1 ml

Crystalline Penicillin



500,000 units
in 1 ml



You will usually use 'aqueous procaine penicillin'. Give only 1 injection per day.

For very severe infections, give 'crystalline penicillin' every 6 hours for the first day. It acts quickly and for a short time only.

INJECTABLE MEDICINES						
Proper Name	SUPPLIES		DOSES			
	Amount you need in 3 months	Amount to keep in kit	Adult (over 40 kg)	Child 6-12 years old (22-39 kg)	Child 1-6 years old (10-22 kg)	
1. procaine penicillin, bottle with 300,000 units per ml	200 bottles	4 bottles	4 ml once/day	2 ml once/day	1 ml once/day	
2. crystalline penicillin, bottle with 1,000,000 units per ml	50 bottles	1 bottle	3 ml 4x/day	1 1/2 ml 4x/day	1/2 ml 4x/day	

SUPPLIES

<u>Use</u> ↓	<u>Proper Name</u> ↓	<u>Local name</u> <u>(write in here)</u> ↓	<u>Amount you need</u> <u>in 3 months</u> ↓	<u>Amount to</u> <u>keep in kit</u> ↓	<u>See</u> <u>Page</u> ↓
To make dressings	1. clean cotton gauze	_____	8 packages of 100	20 pieces	185
	2. clean cotton rolls	_____	10 packages of 50	8 rolls	140
To fill cavities	3. oil of cloves (eugenol)	_____	50 ml	1 small bottle	139
	4. zinc oxide powder	_____	500 grams	1 small bottle	139
To harden sensitive teeth	5. fluoride water, concentrated	_____	50 ml	1 small bottle	86
To give injections of local anesthetic	6. lidocaine 2% 1.8 ml cartridge	_____	8 boxes of 100 cartridges	10 cartridges	130
	7. disposable needles, 27 gauge, long	_____	8 boxes of 100 needles	10 needles	130
	8. lidocaine topical anesthetic	_____	5 small tubes	1 tube	135

FLUORIDE WATER

You can use a solution of fluoride and water (above, number 5) in two ways:

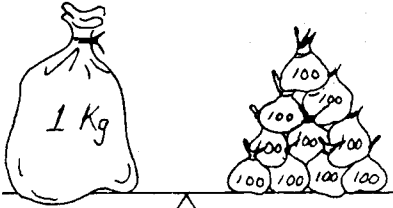
To treat a sensitive tooth, make this concentrated mixture (see box above). Mix:

- 500 tablets sodium fluoride (1.1 mg each) in 59 ml of water
- or
- 1 gram of sodium fluoride powder with 50 ml of water.

Put cotton rolls between the lip and gum on each side of the bad tooth. Dry the bad tooth with cotton and look for the small groove that is causing the pain. Wet some cotton with the fluoride water and rub it on the tooth. Keep the tooth wet with fluoride water for 1 minute. One week later, give the same treatment again.

To help prevent cavities, especially in children, make a solution of fluoride and water using sodium fluoride powder. Mix 2 grams of the powder with 1 liter of water. Then, **once a week**, take a mouthful and rinse for 60 seconds with teeth closed together, 'washing' every surface of every tooth. Then spit it out—**do not swallow the fluoride water**. Also, do not eat or drink for 30 minutes.

School is a good place to do a weekly fluoride rinse. Students can brush each day at school (page 57), and then on the same day each week, they can each take a mouthful from the liter bottle of fluoride water. On page 22 of this book, children are shown using a twice-yearly application of a special paste, a 'topical fluoride gel'. This is good, but the weekly rinse is even better, for the teeth.

Weight (how heavy something is)

1 kilogram (kg) = 10 x 100 grams (g)

1 kilogram = 1000 grams

1 gram = 1000 mg

1 grain = 65 mg

Volume (how full something is)

1 liter 1 cup 1 teaspoon

1000 ml = 1 liter

236.5 ml = 1 cup

5 ml = 1 teaspoon

1 ml = 1 cubic centimeter (cc)

<u>Use</u>	<u>Proper Name</u>	<u>Local name (write in here)</u>	<u>Amount you need in 3 months</u>	<u>Amount to keep in kit</u>	<u>See Page</u>
To make rinses	1. salt	_____	2 kilograms	100 grams	7
	2. hydrogen peroxide	_____	3 liters	500 ml	8
To keep instruments clean	Zephiran , concentrated solution	_____	12 small bottles	1 small bottle	85
Note: You can clean instruments with a homemade solution, See page 85.					
To keep instruments sharp	Arkansas sharpening stone	_____	1 stone	1 stone	128
For examining	wooden tongue depressors	_____	8 boxes of 50 per box	10	73

SUGGESTIONS:

If you order your supplies in bulk long before you need them, you probably will pay lower prices. If you have a place to store supplies that is clean, dry, and free from cockroaches and rats, consider ordering enough for one year instead of only 3 months.

INSTRUMENTS

When you are treating several people on the same day, you will need to clean some instruments (see pages 82 to 85) at the same time that you are using others. Therefore, it is necessary to have several of each kind of instrument, to be sure that the instrument you need will be ready (clean or sterile) when you need it.

There are three instruments you will need for each person who comes to you, no matter which treatment is needed. They are: a mirror, probe, and cotton pliers. Keep them together. Below we recommend that you have 15 of each of these, so you can keep one in each treatment kit. **You do not need to buy all of these instruments.** You can make several of them—see pages 170-172. If you like, buy only one example of each of the instruments below, and use them as models to copy when you make your own extra instruments.*

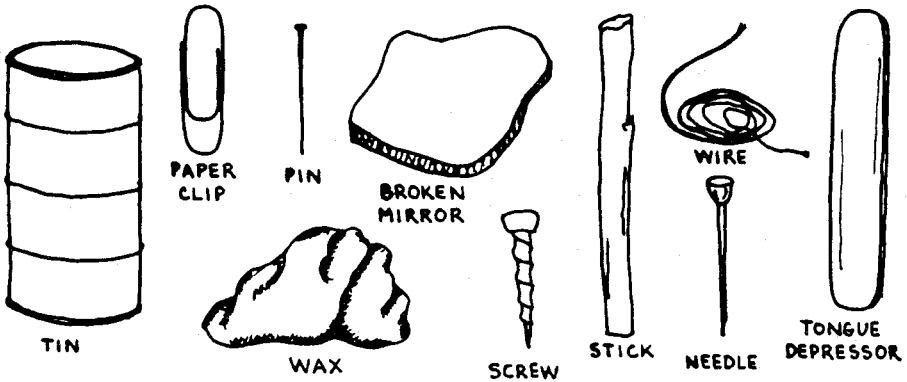
<u>Use</u> ↓	<u>Proper Name</u> ↓	<u>Local name</u> <u>(write in here)</u> ↓	<u>Number to</u> <u>buy or make</u> ↓	<u>See</u> <u>Page</u> ↓
To examine or to give any treatment	1. dental mouth mirror	_____	15	73
	2. explorer	_____	15	73
	3. cotton pliers	_____	15	122
To inject	Aspirating dental syringe (to use with 1.8 ml cartridges)	_____	3	129
To scale teeth	1. Ivory C-1 scaler	_____	1	122
	2. Gracey 11-12 curette	_____	1	122
To place cement fillings	1. spoon excavator	_____	1	139
	2. filling instrument	_____	1	139
	3. cement spatula	_____	1	139
To remove teeth	1. spoon excavator	_____	3	139
	2. straight elevator (no. 34)	_____	3	149
	3. upper universal forcep (no. 150)	_____	3	149
	4. lower universal forcep (no. 75)	_____	3	149

Note: See pages 149-150 for recommendations of other elevators and forceps that are good to have if you can afford them.

*If you want the help of a charitable organization in buying instruments, see page 173.

MAKING YOUR OWN DENTAL INSTRUMENTS*

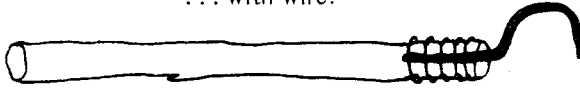
Here are a few ideas for making instruments at low cost. Try to use materials that are available where you live.



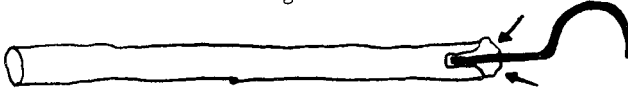
Can you think of any other materials you can use?

Each instrument has two parts: a **handle** and a **working piece** at the end. Join them together:

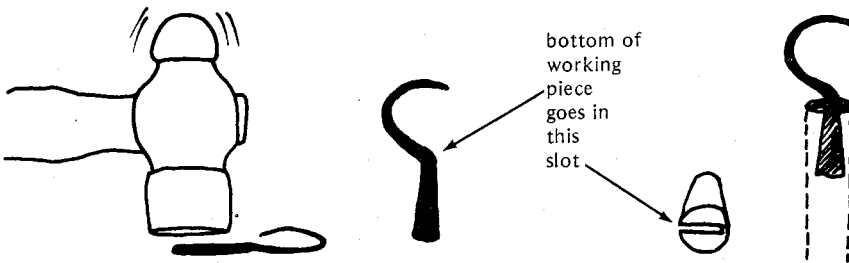
... with wire:



... with glue or even wax:



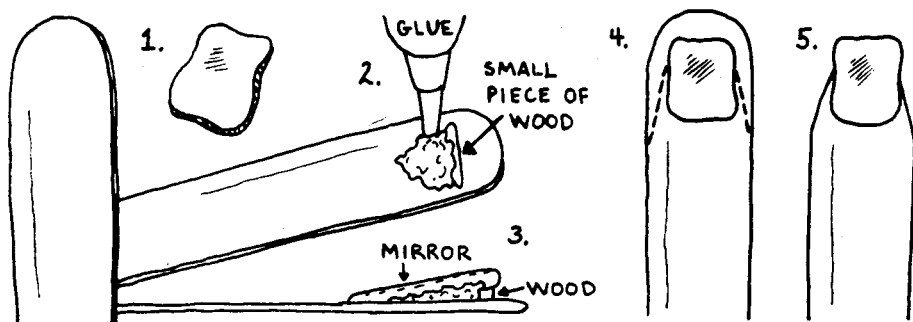
If you make the end flat, it can prevent the working piece from turning. Pound the working piece with a hammer and make a flat slot in the handle so the working piece cannot turn.



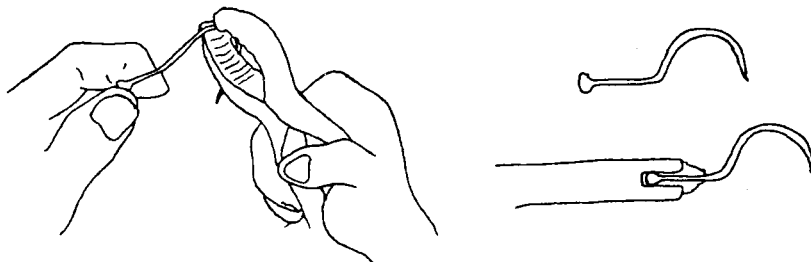
*I am grateful to Aaron Yaschine for the ideas in this section.

Making the Three Instruments You Use Most

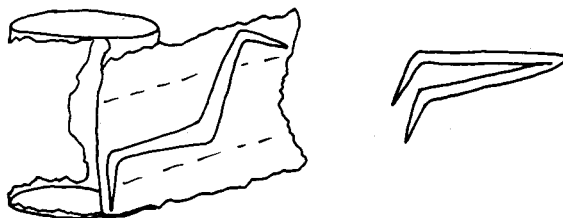
Mirror: Use old pieces of mirror or a shiny piece of tin. You even can use a polished silver coin. A tongue depressor is the handle.



Probe: Use the end of a paper clip, pin or needle for the working piece. Rub it against a smooth stone to sharpen it. Bend it so it can reach around to the back of a tooth. Attach the working piece to a smooth stick handle (p. 170).

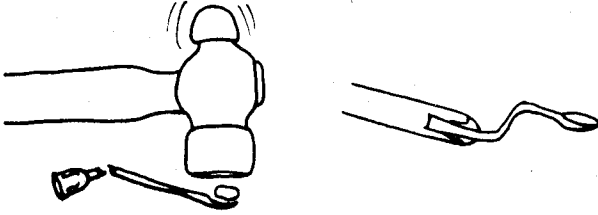


Tweezers: Draw the shape on a piece of tin and then cut it out with strong scissors. Use a file or a smooth stone to make the edges smooth. Bend in half to make the tweezers.



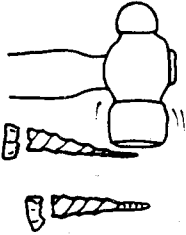
Making Other Instruments and Supplies

Spoon: Bend a paper clip or needle. Flatten the end. Then pound a small stone against the end, to make it hollow. Make 2 bends and attach to a stick handle.

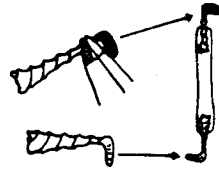


Filling Tool: Remove the heads from 2 long screws.

With a file and hammer, make the end of one screw flat and the end of the other screw round.



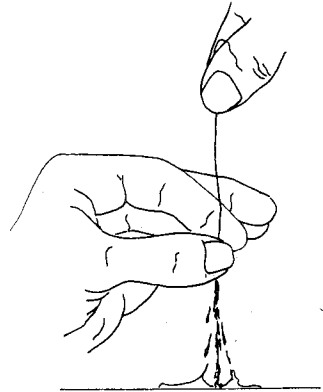
Bend each end in the direction of the edge (not the face) of the flat side.



Attach both working pieces to a small stick handle.

Dental Floss: When using string to clean between your teeth (pages 69-70), you may have trouble getting this string down in between your teeth. Sometimes, also, the string gets caught there, forming a kind of 'bird's nest'. Three things can cause problems with dental floss:

- 1. An incorrectly made filling**—flat and rough instead of round and smooth. Replace it.
- 2. Teeth too tight together.** Use the floss on a tooth. Then pull the string out from between the teeth as you press the free end down against the gum with the fingers of your other hand. If there is a sharp filling on a tooth, the string will stay under it as it comes free.



- 3. String that is too thick.** Make thinner but stronger floss by waxing as in this picture. The wax also will make the floss easier to slide between your teeth.

(1) Soak thin string in hot wax. (2) To remove the extra wax, pull the string between your fingers.

Buying Dental Instruments

When you do not have much money, you must spend wisely. Dental instruments are very expensive, especially when you buy them at commercial prices. You may want help to find the lowest prices available to you.

The Dental Health Services Unit of AHRTAG (AHRTAG means Appropriate Health Resources and Technologies Action Group Ltd.) may be able to help. Write to them and tell them what you are doing and what you need. AHRTAG can use the information to develop the right kind of projects in other countries. In return, AHRTAG possibly can give you good advice to help you buy or make your own low-cost dental equipment. Their address is:

AHRTAG
85 Marylebone High Street
London W1M 3DE
England.

There are many organizations that collect health supplies, including dental instruments. Some prefer to help church-sponsored health projects, but others will provide instruments at reduced cost to whoever needs them. One of the best of these organizations is ECHO. They can provide any of the instruments mentioned in this book. They also sell at lower than commercial prices. For example, for the four instruments at the bottom of page 169 for removing teeth (excavator, elevator, upper forcep, and lower forcep), ECHO's 1983 price is £17.98, or about 28 U.S. dollars. Write to them with a list of the instruments you need:

ECHO
4 West Street
Ewell Surrey KT17 1UL
England.

Other organizations who may be able to help are:

MAP International
P.O. Box 50
Wheaton, IL 60187
U.S.A.

International Human Assistance
Programs
360 Park Avenue, South
New York, NY 10010
U.S.A.

Operation California
336 Foothill Road
Beverly Hills, CA 90210
U.S.A.

Direct Relief Foundation
P.O. Box 30820
Santa Barbara, CA 93105
U.S.A.