

How to Measure and Give Medicine

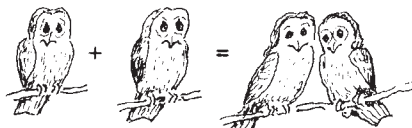
CHAPTER

8

SYMBOLS:

= means: **is equal to** or **is the same as**

+ means: **and** or **plus**



1 + 1 = 2
One plus one equals two.

HOW FRACTIONS ARE SOMETIMES WRITTEN:

1 tablet = one whole tablet =



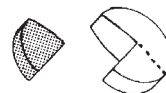
$\frac{1}{2}$ tablet = half of a tablet =



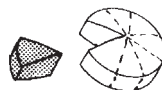
1 $\frac{1}{2}$ tablet = one and one-half tablets =



$\frac{1}{4}$ tablet = one quarter, or one-fourth of a tablet =



$\frac{1}{8}$ tablet = one-eighth of a tablet (dividing it into 8 equal pieces and taking 1 piece) =



MEASURING

The amount of medicine in each tablet or capsule is usually given as grams (g), milligrams (mg), or micrograms (mcg).

1 g = 1000 mg

1 gram has 1000 milligrams

1 mg = 0.001 g

1000 mcg = 1 mg

This means a milligram is much smaller than a gram.

It takes 1000 milligrams to make 1 gram.

Examples:



One adult aspirin tablet contains	.3 g
300 milligrams of aspirin.	0.3 g
	0.300 g
	300 mg

All these are different ways of saying 300 milligrams.



One baby aspirin contains 75 milligrams of aspirin.	.075 g
	0.075 g
	75.0 mg
	75 mg

All these are different ways of saying 75 milligrams.

Note: Where medicines are still weighed in grains (gr), 1 gr = 65 mg. This means a 5 gr aspirin tablet has about the same amount of aspirin as a 300 mg tablet.

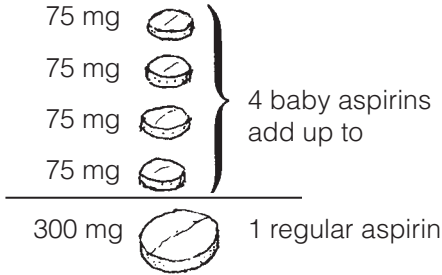
Many times it is important to know how many grams or milligrams are in a medicine.

For example, if you want to give a small piece of adult aspirin to a child, instead of baby aspirin, but you do not know how big a piece to give...

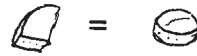
read the small print on the labels of each.
It says: aspirin: acetylsalicylic acid 0.3 g.
(acetylsalicylic acid = aspirin)



0.3 g = 300 mg and 0.075 g = 75 mg. So, you can see that one adult aspirin has 4 times as much medicine as one baby aspirin.



If you cut the adult aspirin into 4 equal pieces, each quarter = one baby aspirin



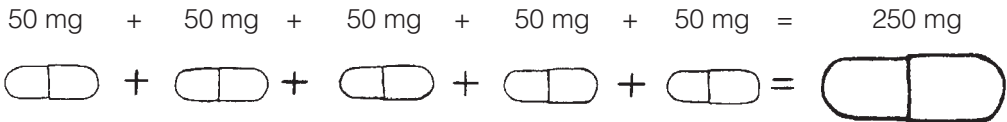
So if you cut an adult aspirin into 4 pieces, you can give the child 1 piece in place of a baby aspirin. Both are equal, and the piece of adult aspirin costs less.

CAUTION: Many medicines, especially the antibiotics, come in different strengths and sizes. For example, tetracycline may come in 3 sizes of capsules:



Be careful to only give medicine in the recommended amounts. It is very important to check how many grams or milligrams the medicine contains.

For example: if the prescription says: Take tetracycline, 1 capsule of 250 mg 4 times a day, and you have only 50 mg capsules, you have to take five 50 mg capsules 4 times a day (20 capsules a day).



MEASURING PENICILLIN

Penicillin is often measured in units.

U = unit 1,600,000 U = 1 g or 1,000 mg

Many forms of penicillin (pills and injections) come in doses of 400,000 U.

400,000 U = 250 mg

MEDICINE IN LIQUID FORM

Syrups, suspensions, tonics, and other liquid medicines are measured in milliliters:

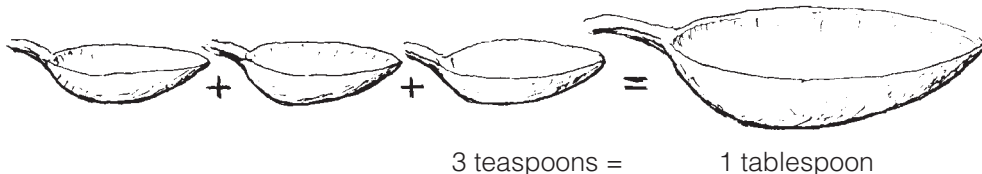
ml = milliliter

1 liter = 1000 ml

Often liquid medicines are prescribed in tablespoons or teaspoons:

1 teaspoon (tsp) = 5 ml

1 tablespoon (Tbs) = 15 ml



When instructions for a medicine say: Take 1 tsp, this means take 5 ml.

Spoons that people use at home are often called “teaspoons” but they may be smaller or bigger than a teaspoon used for measuring medicines. When using a teaspoon to give medicine, it is important that it measure 5 ml.

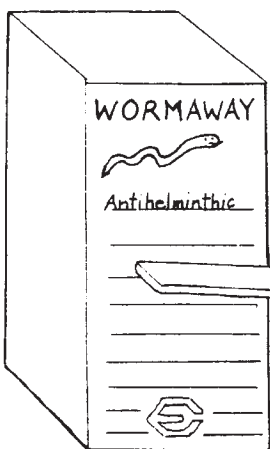
How to Make Sure that the Teaspoon Used for Medicine Measures 5 ml

- Buy a 5 ml measuring spoon.



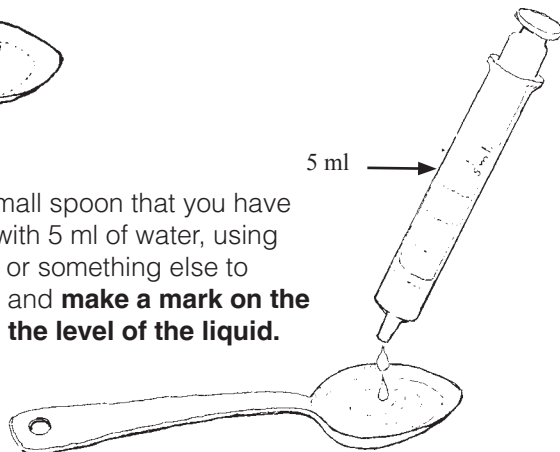
or

- Buy a medicine that comes with a plastic spoon. This measures 5 ml when it is full and may also have a line that shows when it is half full (2.5 ml). Save this spoon and use it to measure other medicines.



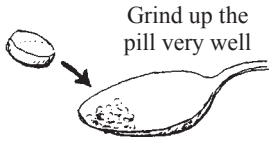
or

- Fill any small spoon that you have at home with 5 ml of water, using a syringe or something else to measure, and **make a mark on the spoon at the level of the liquid.**

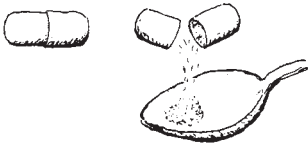


HOW TO GIVE MEDICINES TO SMALL CHILDREN

Many medicines that come as pills or capsules also come in syrups or *suspensions* (special liquid form) for children. If you compare the amount of medicine you get, the syrups may be more expensive than pills or capsules. If there are no syrups or to save money, you can make your own syrup:



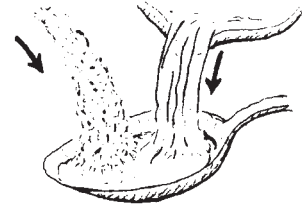
or open the capsule



and mix the powder with boiled water (that has cooled) and sugar or honey.

sugar or honey

cool boiled water



You must add lots of sugar or honey when the medicine is very bitter (tetracycline or chloroquine).

When making syrups for children from pills or capsules, be very careful not to give too much medicine. Also, do not give honey to babies under 1 year of age. Though it is rare, some babies can have a dangerous reaction.

CAUTION: To prevent choking, do not give medicines to a child while she is lying on her back, or if her head is pressed back. Always make sure she is sitting up or that her head is lifted forward. Never give medicines by mouth to a child while she is having a seizure, or while she is asleep or unconscious.

HOW MUCH MEDICINE SHOULD YOU GIVE TO CHILDREN WHEN YOU ONLY HAVE THE INSTRUCTIONS FOR ADULTS?

Generally, the smaller the child, the less medicine he needs. Giving more than needed can be dangerous. If you have information about the doses for children, follow it carefully. If you do not know the dose, figure it out by using the weight or age of the child. Children should generally be given the following portions of the adult dose:



132 lbs

Children
8 to 13 years:
 $\frac{1}{2}$ dose



66 lbs

Children
4 to 7 years:
 $\frac{1}{4}$ dose



33 lbs

Children
1 to 3 years:
 $\frac{1}{8}$ dose



17.6 lbs

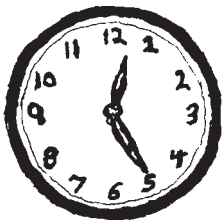
Give a child under 1 year old the dose for a child of 1 year, but get medical advice when possible.



11 lbs

1 kilogram (kg, kilo) = 2.2 pounds (lbs)

HOW OFTEN TO TAKE MEDICINES

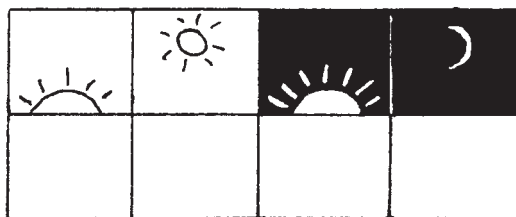


It is important to take medicines as close as you can to the times recommended. Some medicines should be taken only once a day, but others must be taken more often. If you do not have a clock, there are other ways you can do this. If the directions say "1 pill every 8 hours," take 3 a day: one early in the morning, one in the afternoon, and one at night. If they say "1 pill every 6 hours," take 4 each day: one in the morning, one at midday, one in the afternoon, and one at night. If the directions are "1 every 4 hours," take 6 a day, allowing about the same time between pills.

Whenever you give a medicine to someone else, it is a good idea to write the instructions and also to have the person repeat to you how and when to take the medicine. Make very sure he understands.

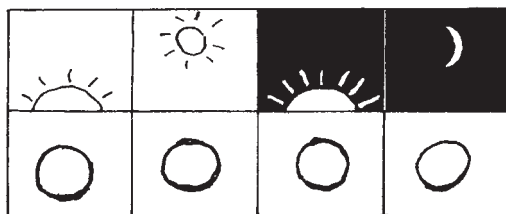
To remind people who cannot read well when to take their medicine, you can give them a note like this

In the blanks at the bottom draw the amount of medicine they should take and carefully explain what it means.

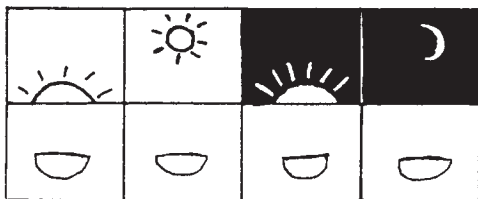


For example:

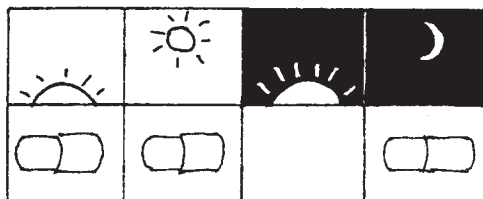
This means 1 tablet 4 times a day,
1 early in the morning, 1 at midday,
1 in the afternoon, and 1 late at night.



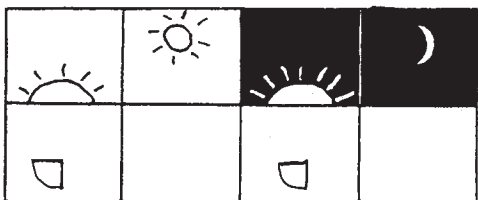
This means $\frac{1}{2}$ tablet 4 times a day.



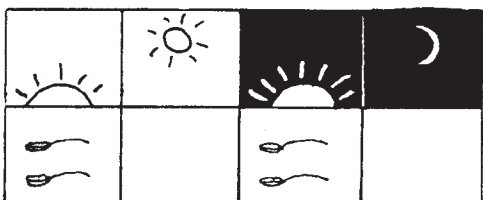
This means 1 capsule 3 times a day.



This means $\frac{1}{4}$ tablet twice a day.









This means 2 teaspoons twice a day.



WHEN YOU GIVE MEDICINES TO ANYONE . . .

Always write all the following information on the note with the medicine—even if the person cannot read:

- the person's name →
- the name and strength of the medicine →
- what it is for →
- the dosage →

			
			
Name: Johnny Brown			
Medicine: Piperazine 500mg Tablets			
For: Threadworm			
Dosage: Take 2 tablets twice a day			

This information can be put on the same note as the drawing for dosage.

A page of these dosage blanks is included at the end of the book. Cut them out and make extra copies to use as needed. You can also draw these yourself.

When you give medicine to someone, it is a good idea to keep a record of this same information. If possible, keep a complete Patient Report (see p. 44).

TAKING MEDICINES ON A FULL OR EMPTY STOMACH

Some medicines work best when you take them when the stomach is empty—that is, one hour before meals or at least 2 hours after a meal.

Other medicines are less likely to cause upset stomach or heartburn (chest pain) when taken along with a meal or right afterwards.

Take these medicines
1 hour before or 2 hours after meals:

- penicillin
- ampicillin
- doxycycline
- tetracycline

It is better not to drink milk or take antacids 2 hours before or after taking doxycycline or tetracycline.

Take these medicines
together with or soon after
meals (or with a lot of water):

- aspirin and medicine that contains aspirin
- ibuprofen
- iron (ferrous sulfate)
- vitamins
- erythromycin

Antacids do the most good if you take them when the stomach is empty, 1 or 2 hours after meals and at bedtime.

Note: It is best to take medicines while you are standing or sitting up. Also, try to drink a glass of water each time you take a medicine. If you are taking a sulfa medicine, it is important to drink lots of water, at least 8 glasses a day, to prevent harm to the kidneys.