

# How to Measure and Give Medicine

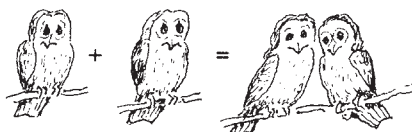
## CHAPTER

## 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 =



1/2 tablet = half of a tablet =



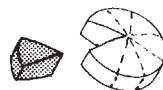
1 1/2 tablet = one and one-half tablets =



1/4 tablet = one quarter, or one-fourth of a tablet =



1/8 tablet = one-eighth of a tablet (dividing it into 8 equal pieces and taking 1 piece) =

**MEASURING**

Medicine is usually weighed in grams (g), milligrams (mg), or micrograms (mcg).

1000 mg = 1 g (one thousand milligrams make one gram)

1 mg = 0.001 g (one milligram is one one-thousandth part of a gram)

1000 mcg = 1 mg (one thousand micrograms make one milligram)

**Examples:**

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

} All these are different ways of saying 300 milligrams.



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

} All these are different ways of saying 75 milligrams.

**Note:** In some countries some medicines are still weighed in grains; gr = grain and 1 gr = 65 mg. This means a 5 gr aspirin tablet weighs about 300 mg.

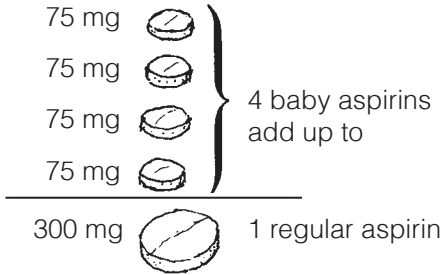
Many times it is important to know how many grams or milligrams are in a medicine.

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...

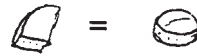
read the small print on the labels of each.  
It says: aspirin: acetylsalicylic acid 0.3 g.  
(acetylsalicylic acid = aspirin)



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



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



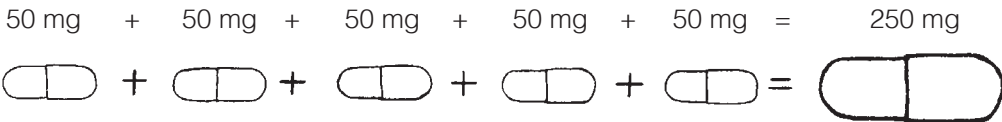
So if you cut an adult aspirin into 4 pieces, you can give the child 1 piece in place of a baby aspirin. Both are equal, and the piece of adult aspirin costs less.

**CAUTION:** Many medicines, especially the antibiotics, come in different weights 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:

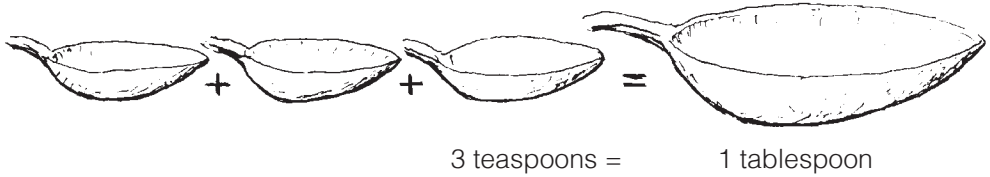
ml = milliliter

1 liter = 1000 ml

Often liquid medicines are prescribed in tablespoons or teaspoons:

1 teaspoon (tsp) = 5 ml

1 tablespoon (Tbs) = 15 ml



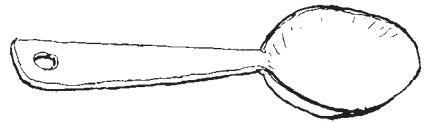
When instructions for a medicine say: Take 1 tsp, this means take 5 ml.

Many of the 'teaspoons' people use hold as much as 8 ml or as little as 3 ml.

**When using a teaspoon to give medicine, it is important that it measure 5 ml. No more, no less.**

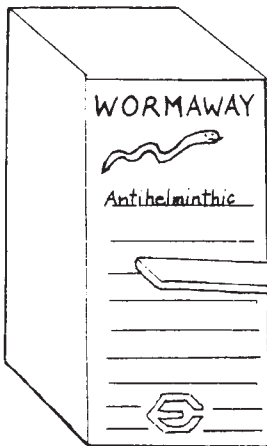
### How to Make Sure that the Teaspoon Used for Medicine Measures 5 ml

1. Buy a 5 ml measuring spoon.



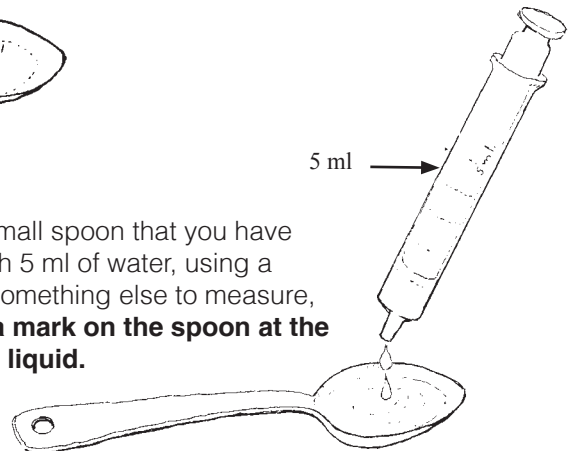
or

2. 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.



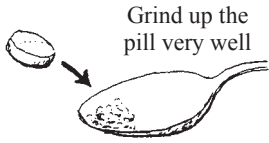
or

3. 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.**

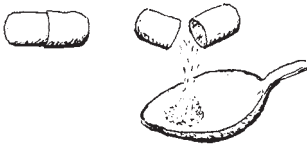


## HOW TO GIVE MEDICINES TO SMALL CHILDREN

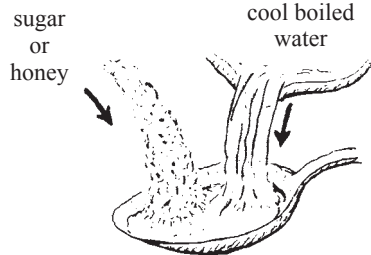
Many medicines that come as pills or capsules also come in syrups or *suspensions* (special liquid form) for children. If you compare the amount of medicine you get, the syrups are usually more expensive than pills or capsules. You can save money by making your own syrup in the following way:



or open the capsule



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



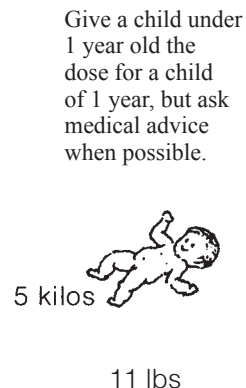
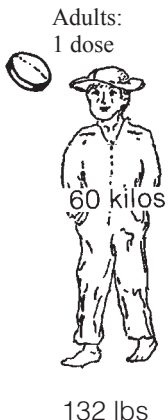
You must add lots of sugar or honey when the medicine is very bitter (tetracycline or chloroquine).

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 fit, 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:



**1 kilogram (kg) = 2.2 pounds (lbs)**

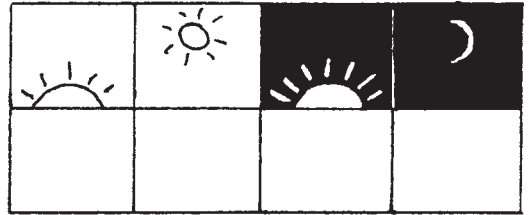
## HOW TO TAKE MEDICINES



It is important to take medicines more or less at the time recommended. Some medicines should be taken only once a day, but others must be taken more often. If you do not have a clock, it does not matter. If the directions say '1 pill every 8 hours', take 3 a day: one 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 more or less 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.

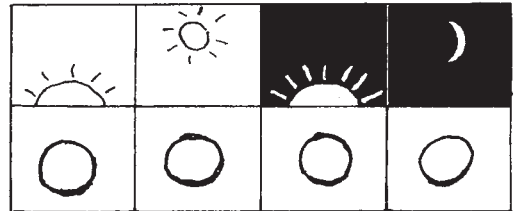
To remind people who cannot read when to take their medicine, you can give them a note like this



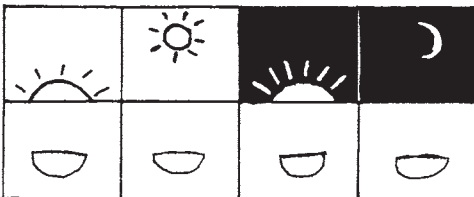
In the blanks at the bottom draw the amount of medicine they should take and carefully explain what it means.

**For example:**

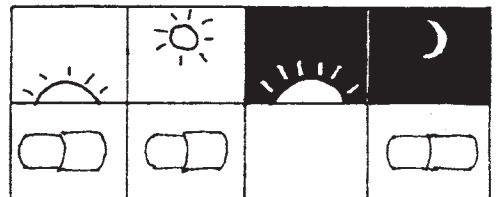
This means 1 tablet 4 times a day, 1 at sunrise, 1 at noon, 1 at sunset, and 1 in the middle of the night.



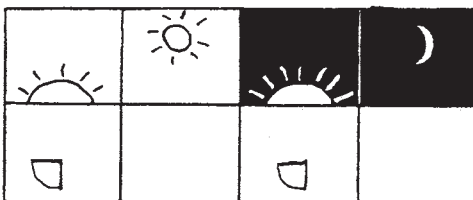
This means 1/2 tablet 4 times a day.



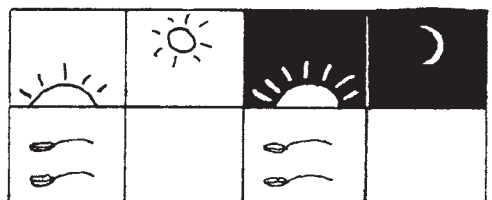
This means 1 capsule 3 times a day.



This means 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 of the medicine →
- what it is for →
- the dosage →

			
			
Name: <i>Johnny Brown</i>			
Medicine: <i>Piperazine 500mg tablets</i>			
For: <i>thread worm</i>			
Dosage: <i>take 2 tablets twice a day</i>			

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 use them as needed. When you run out, you can make more 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.

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  
1 hour 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.