

## F-230 Calculating Medication Dosages Converting Dosage Systems

To convert dosages from metric to apothecaries or household systems, it is necessary to memorize or refer to equivalency tables on the following pages.

To convert milligrams to grains, use this formula:

$$1 \text{ grain} \div \text{milligrams per grain} = \text{dose desired} \div \text{dose on hand}$$

Example: 1 grain is to 60 milligrams as X grains is to 180 milligrams

$$60X = 180, \text{ or } X = 3$$

### Equipment/Supplies

Orders for dosage of medication needed

Dosage of medication on hand

### Calculate

oral dosages:  $D \div H = X$

dose desired (D)  $\div$  dose on hand (H) = dose to administer (X)

when in liquid form:  $D \div H \times Q = X$

dose desired (D)  $\div$  dose on hand (H) times quantity (Q) = dose to administer (X)

parenteral dosages:  $D \div H \times Q = X$

dose desired (D)  $\div$  dose on hand (H) times quantity (Q) = dose to administer (X)

Metric	Apothecary	Household
.06 ml	1 minim	1 drop
5(4) ml	1 fl dram	1 teaspoon
15 ml	4 fl drams	1 tablespoon
30 ml	1 fl oz	2 tablespoons
180 ml	6 fl oz	1 teacup
240 ml	8 fl oz	1 glass

Apothecary Equivalents, volume	
Metric	Apothecary
1 ml	15 minims
1 ml	15 minims
.06 ml	1 minim
4 ml	1 dram
30 ml	1 ounce
500 ml	1 pint
1000 ml	1 quart

Apothecary Equivalents, weight	
Metric	Apothecary

1.0 gram or 1000 mg	gr. 15
0.6 gram or 600 mg	gr. 10
0.5 gram or 500 mg	gr. 7.5
0.3 gram or 300 mg	gr. 5
0.2 gram or 200 mg	gr. 3
0.1 gram or 100 mg	gr. 1.5
0.06 gram or 60 mg	gr. 1
0.05 gram or 50 mg	gr. 3/4
0.03 gram or 30 mg	gr. 1/2
0.015 gram or 15 mg	gr. 1/4
0.010 gram or 10 mg	gr. 1/6
0.008 gram or 8 mg	gr. 1/8
4 grams	1 dram
30 grams	1 ounce
1 kg	2.2 pounds

**Related Procedures**

None.

**Policy History**

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