

Metric System

Health professionals use the metric system, so it is important to be familiar with it for appropriate dosing calculations and administration. In the metric system, weight is measured in units of grams; as we commonly see prescriptions written in grams and milligrams. 1 kilogram (kg) = 1,000 grams (g), 1 gram (g) = 1,000 milligrams (mg), 1 milligram (mg) = 1,000 micrograms (mcg), and 1000 micrograms (mcg) = 1 milligram (mg). In the metric system, the liter (L) is used to describe volume. One liter = 1000 milliliters (mL). The meter is used to describe length in the metric system. Conversions between the units in the metric system can be done by multiplying or dividing by 1000. To convert larger to smaller, multiply by 1,000, or move the decimal point 3 places to the right. To convert smaller to larger, divide by 1,000, or move the decimal point 3 spaces to the left.



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Weight

Kilogram (kg)

[Killa-graham-cracker](#)

In the metric system, the gram (g/gm) is used to describe weight. 1 kilogram (kg) = 1,000 grams (g).

Gram (g/gm)

[Graham-cracker](#)

In the metric system, the gram (g/gm) is used to describe weight. 1 gram (g) = 1,000 milligrams (mg).

Milligram (mg)

[Millionaire-graham-cracker](#)

In the metric system, the gram (g/gm) is used to describe weight. 1 milligram (mg) = 1,000 mcg.

Microgram (mcg)

[Microphone-graham-cracker](#)

In the metric system, the gram (g/gm) is used to describe weight. 1,000 microgram (mcg) = 1 milligram (mg).

Volume

Liter (L)

[Liter-of-cola](#)

In the metric system, the liter (L) is used to describe volume. 1 liter = 1,000 milliliters (mL).

Milliliter (mL)

[Millionaire-liter-of-cola](#)

In the metric system, the liter (L) is used to describe volume. 1 liter = 1,000 milliliters (mL).

Length

Meter (m)

Meter-Pan

In the metric system, the meter is used to describe length.

Converting

Larger to Smaller: Multiply

Large Metro Car Turned into a Small Metro Car by Multiplying

The metric system applies the idea that units within the system get larger or smaller by a power of 10. Conversions between the units in the metric system can be done by multiplying or dividing by 1,000. To convert larger to smaller, multiply by 1,000, or move the decimal point 3 places to the right.

Smaller to Larger: Divide

Small Metro Car Turned into a Large Metro Car by Dividing

The metric system applies the idea that units within the system get larger or smaller by a power of 10. Conversions between the units in the metric system can be done by multiplying or dividing by 1,000. To convert smaller to larger, divide by 1,000 or move the decimal point 3 spaces to the left.