Nursing Conversion Chart

Name: _____ Unit: _____

Date: _____ dd / mm / yyyy Reference version: _____

WEIGHT

To convert | Multiply by | Example

Pounds to kilograms | 0.454 (or divide by 2.2) | 154 lb = 70 kg

Kilograms to pounds | 2.2 | 70 kg = 154 lb

Ounces to grams | 28.35 | 4 oz = 113 g

Grams to kilograms | Divide by 1,000 | 2,500 g = 2.5 kg

Weigh in kilograms wherever you can

Most weight-based dosing is written per kilogram. Converting a pound weight at the bedside adds a step where an error can enter, which is why many organisations require kilograms to be recorded as the primary weight.

VOLUME

Measure | Metric equivalent | Note

1 teaspoon | 5 mL | Household teaspoons vary - supply a dosing syringe

1 tablespoon | 15 mL | Equals 3 teaspoons

1 fluid ounce | 30 mL | 29.57 mL exactly; 30 is the clinical convention

1 cup | 240 mL | 8 fluid ounces

1 pint | 480 mL | 2 cups

1 quart | 960 mL | 2 pints

1 litre | 1,000 mL

METRIC PREFIXES AND LENGTH

Conversion | Value

1 gram | 1,000 milligrams

1 milligram | 1,000 micrograms

1 kilogram | 1,000 grams

1 litre | 1,000 millilitres

1 inch | 2.54 centimetres

1 centimetre | 10 millimetres

1 foot | 30.48 centimetres

Write micrograms in full

The abbreviation for micrograms is a recognised source of thousandfold errors when handwritten. Most safety bodies recommend writing micrograms out in full rather than abbreviating it.

TEMPERATURE

Conversion | Formula | Example

Celsius to Fahrenheit | (C x 9/5) + 32 | 37 C = 98.6 F

Fahrenheit to Celsius | (F − 32) x 5/9 | 100.4 F = 38 C

Celsius | Fahrenheit

35.0 | 95.0

36.0 | 96.8

37.0 | 98.6

38.0 | 100.4

39.0 | 102.2

40.0 | 104.0

41.0 | 105.8

CALCULATION FORMULAS

To find | Formula | Example

Dose to give | (Desired / Available) x Quantity | Need 250 mg, have 500 mg in 5 mL: (250/500) x 5 = 2.5 mL

Drip rate (gtt/min) | (Volume in mL x drop factor) / time in minutes | 1,000 mL over 480 min, 15 gtt/mL: (1,000 × 15) / 480 = 31 gtt/min

Infusion pump rate (mL/h) | Total volume / total hours | 1,000 mL over 8 h = 125 mL/h

Weight-based dose | mg/kg x weight in kg | 5 mg/kg x 70 kg = 350 mg

Dose per minute | (Concentration x rate) / weight | Check against the prescription every time

Always have a second person check

This chart is a reference, not an authorisation. Follow your organisation's independent double-check policy for high-alert medications, and verify every calculation against the prescription and the product label.

Unit-specific conversions, pump settings and local protocols

Unit-specific conversions, pump settings and local protocols

Sources: General-purpose reference sheet. Verify every calculation against the prescription, the product label and your local policy.