Dosage Calculations per kg
Study Development Quick Guide

Formulae

Daily dose ((mg or ml)/day) = patient weight (kg) x dosage for one day ((mg or ml)/kg/day)

$$\text{Single dose ((mg or ml)/dose)} = \frac{\text{daily dose ((mg or ml)/day)}}{\text{number of doses in a given time period (doses/day)}}$$

$$\text{Dose volume (ml)} = \frac{\text{single dose (mg)}}{\text{concentration of drug (mg/ml)}}$$

Example

A patient is prescribed a drug that has a dosage of 2mg/kg of bodyweight per day. The patient weighs 81kg, and the drug has a concentration of 3mg/ml. What volume of the drug should the patient be given in a single dose if they must take the drug 3 times per day?

Answer

Daily dose (mg/day) = patient weight (kg) x dosage for one day (mg/kg/day)

= 81kg x 2mg/kg per day = 162mg/day.

$$\text{Single dose (mg/dose)} = \frac{\text{daily dose (mg/day)}}{\text{number of doses in a given time period (doses/day)}} = \frac{162 \text{ mg/day}}{3 \text{ doses/day}} =$$

54mg/dose.

$$\text{Dose volume (ml)} = \frac{\text{single dose (mg/dose)}}{\text{concentration of drug (mg/ml)}} = \frac{54 \text{ mg/dose}}{3 \text{ mg/ml}} = 18 \text{ ml/dose.}$$

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