Tutorial: Dosage Calculation and Safe Medication Administration 3.0
Module: Critical Care Medications

✖ CLOSE

Time Spent: 00:27:22

Calculator

🔍 Case studies

Close ✕

Q

A nurse is converting a client's weight from pounds and ounces to kilograms. What is the client's weight in kilograms?

(Review the MAR, flow sheet, and medication label. Round the answer to the nearest hundredth.)

✓ | 9.18

First, determine the client's weight in pounds.

Step 1
What is the unit of measurement the nurse should calculate? (Place the unit of measure being calculated on the left side of the equation.)

$X \text{ lb} =$

Step 2
Find the ratio in the item that contains the same unit as the unit being calculated. (Place the ratio on the right side of the equation, ensuring that the unit in the numerator matches the unit being calculated.)

$X \text{ lb} = \dfrac{1 \text{ lb}}{16 \text{ oz}}$

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Time Spent: 00:27:27

Calculator

🔍 Case studies

Close ✕

A nurse is calculating the dosage of cimetidine. Available is cimetidine oral liquid 40 mg/mL. How many milliliters should the nurse administer?

(Review the MAR, flow sheet, and medication label. Round the answer to the nearest tenth.)

✓ | 1.3

Step 1
What is the unit of measurement the nurse should calculate? (Place the unit of measure being calculated on the left side of the equation.)

$X \text{ mL} =$

Step 2
Find the ratio in the item that contains the same unit as the unit being calculated. (Place the ratio on the right side of the equation, ensuring that the unit in the numerator matches the unit being calculated.)

$X \text{ mL} = \dfrac{1 \text{ mL}}{40 \text{ mg}}$

Step 3

Tutorial: Dosage Calculation and Safe Medication Administration 3.0
Module: Pediatric Medications

⊗ CLOSE

Time Spent: 00:03:28

Calculator

Case studies

Close ✕

Q

A nurse is preparing to reconstitute amoxicillin. How much diluent should the nurse add to this medication?

(Review the MAR, flow sheet, and medication label. Round to a whole number.)

Directions for mixing: Tap bottle until all powder floats freely. Add approximately 1/3 total amount of water reconstituted. (total=35 mL) shake vigorously to wet powder. Add remaining water, again shake vigorously.

Amoxicillin
for Oral Suspension, USP

400 mg/5 mL

50 mL when reconstituted
Rx only

Net contents: Equivalent to 4 g anhydrous amoxicillin.

Store dry powder at 20° to 25°C (65 to 77° F). Excursions permitted to 15° to 30°C (59° to 86°F) (see USP Controlled Room Temperature).

Each 5 mL (1 teaspoonful) will contain amoxicillin trihydrate equivalent to 400 mg anhydrous amoxicillin.

Dosage: Administer every 12 hours. See accompanying prescribing information.

Keep tightly closed.

Shake well before using. Refrigeration preferable but not required.

Discard suspension after 14 days.

Batch:

Expiry:

✓ | 35

Directions for mixing: Tap bottle until all powder floats freely. Add approximately 1/3 total amount of water reconstituted.

Amoxicillin

Net contents: Equivalent to 4 g anhydrous amoxicillin.

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Module: Critical Care Medications

⊗ CLOSE

Time Spent: 00:27:42

Calculator

Case studies

Close ✕

A nurse is calculating the dosage of amoxicillin. How many milliliters should the nurse administer?

(Review the MAR, flow sheet, and medication label. Round to the nearest tenth.)

Directions for mixing: Tap bottle until all powder floats freely. Add approximately 1/3 total amount of water reconstituted. (total=35 mL) shake vigorously to wet powder. Add remaining water, again shake vigorously.

Amoxicillin
for Oral Suspension, USP

400 mg/5 mL

50 mL when reconstituted
Rx only

Net contents: Equivalent to 4 g anhydrous amoxicillin.

Store dry powder at 20° to 25°C (65 to 77° F). Excursions permitted to 15° to 30°C (59° to 86°F) (see USP Controlled Room Temperature).

Each 5 mL (1 teaspoonful) will contain amoxicillin trihydrate equivalent to 400 mg anhydrous amoxicillin.

Dosage: Administer every 12 hours. See accompanying prescribing information.

Keep tightly closed.

Shake well before using. Refrigeration preferable but not required.

Discard suspension after 14 days.

Batch:

Expiry:

✓ | 1.6

Step 1
What is the unit of measurement the nurse should calculate? (Place the unit of measure being calculated on the left side of the equation.)

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Module: Pediatric Medications

CLOSE

Time Spent: 00:05:37

Calculator

Case studies

Close X

A nurse is calculating a client's daily maintenance fluid requirement. What is the daily maintenance fluid requirement for the client?

(Review the MAR, flow sheet, and medication label. Round the answer to the nearest whole number.)

918

Step 1
What is the formula?

$$X = (100 \times 10) + (50 \times 10) + (20 \times \underline{\quad})$$

Step 2
What is the client's weight? (Convert to kg if needed.)

9.18 kg

Step 2
Divide the infant's weight into three portions: the first 10 kg, the second 10 kg, and the remainder of the weight in kg.
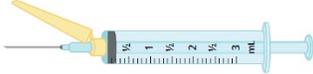
First 10 kg = 9.18 kg

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CLOSE

Time Spent: 00:27:58

Calculator

Case studies

Close X

PAIN RELIEF
SUSPENSION DROPS

FEVER REDUCER
PAIN RELIEVER
ACETAMINOPHEN

1 FL OZ (30 mL)
80 mg per 0.8 mL

1.2

Tutorial: Dosage Calculation and Safe Medication Administration 3.0
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⊗ CLOSE

Time Spent: 00:28:02

Calculator

Case studies

Close ✕

A nurse is calculating the fluid bolus prescribed for a client. The nurse should set the IV pump to deliver how many mL/hr?

(Review the MAR, flow sheet, and medication label. Round the answer to the nearest whole number.)

✓ 63

Step 1
What is the unit of measurement the nurse should calculate? (Place the unit of measure being calculated on the left side of the equation.)

$X \text{ mL/hr} =$

Step 2
Find the ratio in the item that contains the same unit as the unit being calculated. (Place the ratio on the right side of the equation, ensuring that the unit in the numerator matches the unit being calculated.)

$X \text{ mL/hr} = \dfrac{250 \text{ mL}}{4 \text{ hr}}$

Step 3

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Module: Pediatric Medications

⊗ CLOSE

Time Spent: 00:08:13

Calculator

Case studies

Close ✕

A nurse is preparing to administer amoxicillin. The recommended dose of amoxicillin is 25 to 50 mg/kg/day. How does the prescribed amount compare to the recommended dosage range?

(Review the MAR, flow sheet, and medication label. Round to the nearest whole number.)

A Greater than the recommended dosage range

B Less than the recommended dosage range

✓ C Within the recommended dosage range

D Unable to determine with information provided

Step 1
Look up the recommended dosage.

25 to 50 mg/kg/day

Step 2