



Dosage Calculation Examples With Answers

1. **Calculating PO (tablets/capsules) doses:** Order is for 0.4g PO every 8 hr. Capsules are 200mg/capsule. How many capsules should you administer?

$$0.4 \text{ g} \times 1000 \text{ mg/g} \times 1 \text{ capsule}/200 \text{ mg} = \mathbf{2 \text{ capsules}}$$

2. **Calculating PO (liquid medication) doses:** Order is for 0.5g PO every 12 hours. Medication available as 250mg/5ml. How many ml should you administer?

$$0.5 \text{ g} \times 1000 \text{ mg/g} \times 5 \text{ ml}/250 \text{ mg} = \mathbf{10 \text{ ml}}$$

3. **Calculating IV/IM/Subcutaneous doses:** Order is for Heparin 5,000 units subcutaneously every 8 hours. Heparin is available in 10,000 units/mL. How many mL to administer with each dose? How many total mL would you administer in a day (24 hours)?

$$5,000 \text{ units} \times 1 \text{ ml}/10,000 \text{ units} = \mathbf{0.5 \text{ ml administered with each dose.}}$$

$$0.5 \text{ ml}/8 \text{ hrs} \times 24 \text{ hours} = \mathbf{1.5 \text{ ml administered in a 24 hour period.}}$$

4. **Dosing based on patient's weight:** Patient weighs 150 lb. Order is for 0.3 mL/kg of body weight. How many mL should the patient get? Round to the nearest tenth.

$$150 \text{ lbs} \times 1 \text{ kg}/2.2 \text{ lbs} \times 0.3 \text{ ml/kg} = \mathbf{20.5 \text{ ml}}$$



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5. **Dosing based on patient's weight:** Order is for 12 mg/kg/day divided in doses every 8 hours. Child weighs 22 lbs. Medication available in 200 mg/5 ml. How many mL should be administered per dose?

$$22 \text{ lbs} \times 1 \text{ kg}/2.2 \text{ lbs} \times 12 \text{ mg/kg} = 120 \text{ mg for the day.}$$

$$120 \text{ mg}/24 \text{ hours} \times 8 \text{ hours} = 40 \text{ mg per dose.}$$

$$40 \text{ mg} \times 5 \text{ ml}/200 \text{ mg} = \mathbf{1 \text{ ml per dose.}}$$

6. **IV pump calculations:** Order for 1000ml NS to infuse over 6 hours. What is the IV pump rate in ml/hr? Round to nearest whole number.

$$1000\text{ml}/6\text{hrs} = \mathbf{167 \text{ ml/hr}}$$

7. **IV pump calculations:** IV infusion is running at 125 ml/hr. How many hours will it take a 500ml bag of NS to infuse?

$$500 \text{ ml} \times 1 \text{ hr}/125 \text{ ml} = \mathbf{4 \text{ hrs}}$$

8. **Drop factor calculations:** Order for 500ml NS to infuse over 4 hours. Drop factor of IV tubing is 12 gtt/mL. How many gtt/min should be delivered to the patient?

$$500 \text{ ml}/4 \text{ hr} \times 12 \text{ gtt}/1 \text{ ml} \times 1 \text{ hr}/60 \text{ min} = \mathbf{25 \text{ gtt/min}}$$



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9. **Total IV fluids received:** Patient getting NS at 50 ml/hr in one IV. Patient getting IV antibiotic every 8 hours in 100ml of fluid. Patient getting a second IV antibiotic every 12 hours in 50ml of fluid. How much IV fluids will the patient receive in 24 hours?

$$IV \#1: 50 \text{ ml/hr} \times 24 \text{ hrs} = 1,200 \text{ ml}$$

$$IV \#2: 100 \text{ ml}/8 \text{ hr} \times 24 \text{ hrs} = 300 \text{ ml}$$

$$IV \#3: 50 \text{ ml}/12 \text{ hr} \times 24 \text{ hrs} = 100 \text{ ml}$$

$$\text{Add up above: } 1,200 + 300 + 100 = \mathbf{1,600 \text{ ml.}}$$