

Dosage Calculation Drop Factor →

1.

$$1.5g / 250mL$$

$$1500mg / 250mL \text{ over 3 hours}$$

$$3hrs = 180mins$$

$$\frac{250mL (15gts)}{180mins}$$

$$= 21gts/min$$

2. 1g for 30 mins

$$1000mg / 50mL \text{ gts is 60}$$

$$\frac{50mL (60)}{30mins}$$

$$= 100gts/min$$

3. 500mg of medication per hour

$$\frac{1000mg / 250mL}{2}$$

$$= 500mg / 125mL$$

$$\frac{125mL (15gts)}{60}$$

$$= 31gts/min$$

4. 400mg of med in 1hr

$$= \frac{100mL (12gts)}{60}$$

$$= 20gts/min$$

Dosage Calculation mL/Hr →

5. 1000mL / 8hrs

$$\frac{1000mL}{8} = 125mL/hr$$

$$= 125mL/hr$$

$$\begin{array}{r} 6. \quad \frac{1000\text{mL}}{4\text{hrs}} \\ = 250\text{mL/Hr} \end{array}$$

$$\begin{array}{r} 7. \quad 1000\text{mg med q 6 hrs over 1.5 hrs} \\ 1000\text{mg} / 250\text{mL} \\ \frac{250\text{mL}}{1.5\text{hrs}} \\ = 167\text{mL/Hr} \end{array}$$

Dosage calculation IV push:

$$\begin{array}{r} 8. \quad 75\text{mcg (desired)} \\ 100\text{mcg} / 2\text{mL (Have)} \\ \frac{75\text{mcg (2mL)}}{100\text{mcg}} \\ 0.75\text{mcg (2mL)} \\ = 1.5\text{mL} \end{array}$$

$$\begin{array}{r} 9. \quad 5\text{mg (order)} \\ 20\text{mg} / 5\text{mL (Have)} \\ \frac{5\text{mg (5mL)}}{20\text{mg}} \\ 0.25\text{mg (5mL)} \\ = 1.25\text{mL} \end{array}$$

$$\begin{array}{r} 10. \quad 2\text{mg (order)} \\ 10\text{mg} / 1\text{mL} \\ \frac{2\text{mg (1mL)}}{10\text{mg}} \\ = 0.2 (1\text{mL}) \\ = 0.2\text{mL} \end{array}$$

Dosage Calculation mcg/kg/min or mcg/min

$$175 / 2.2 = 79.5 \text{ kg}$$

11.

$$50 \text{ mg} / 500 \text{ mL} = 0.1 \text{ mg/mL}$$

$$0.1 \text{ mg/mL} (1000) = 100 \text{ mcg/mL}$$

$$\frac{100 \text{ mcg/mL} \times 142 \text{ mL}}{79.5 \times 60 \text{ min/Hr}} = \frac{14,200}{4770} = 2.9769392$$

$$= 3 \text{ mcg/kg/min}$$

12. 70 kg

$$250 \text{ mg} / 500 \text{ mL}$$

$$= 0.5 \text{ mg/mL} (1000) = 500 \text{ mcg/mL}$$

$$\frac{(70 \text{ kg})(1 \text{ mcg})(60 \text{ mins/Hr})}{500 \text{ mcg/mL}} = \frac{4200}{500} = 8 \text{ mL/Hr}$$

13. 100 mg / 250 mL = 0.4 mg/mL

$$0.4 \text{ mg/mL} (1000) = 400 \text{ mcg/mL}$$

$$\frac{400 \text{ mcg/mL} \times 12 \text{ mL/Hr}}{60 \text{ mins/Hr}} =$$

$$= \frac{4,800}{60} = 80 \text{ mcg/Hr}$$

14. 165 / 2.2 = 75 kg

$$800 \text{ mg} / 500 \text{ mL} = 1.6 \text{ mg/mL} (1000) = 1600 \text{ mcg}$$

$$\frac{75 \text{ kg} (2 \text{ mcg}) (60 \text{ mins/Hr})}{1600 \text{ mcg/mL}} = \frac{9000}{1600 \text{ mL}}$$

$$= 5.6 \text{ mL/Hr}$$

15. 4 mcg/kg/min
 64 mcg/mL
$$\frac{4 \text{ mcg (1kg) (60min)}}{64 \text{ mcg/mL}} = \frac{240}{64} = \boxed{3.8 \text{ mL/hr}}$$

16. 15 mL/hr
 50 mcg/mL
pt. 65 kg
$$\frac{(50 \text{ mcg/mL}) (15 \text{ mL/hr})}{(65 \text{ kg}) (60 \text{ mins})} = \frac{750 \text{ mcg}}{3900}$$

$$= \boxed{0.19 \text{ mcg/kg/min}}$$

Heparin/Insulin Dosage Calculations

17. $500 \text{ units/hr (order)}$
 $25000 \text{ in } 250 \text{ mL}$
$$\frac{25000}{250} = 100 \text{ units/mL}$$

$$\frac{500 \text{ units/hr}}{100 \text{ units/mL}}$$

$$= \boxed{5 \text{ mL/hr}}$$

18. 5 units/hr
 $100 \text{ units / } 250 \text{ mL} = 0.4 \text{ units/mL}$
$$\frac{5 \text{ units/hr}}{0.4 \text{ units/mL}}$$

$$= \boxed{13 \text{ mL/hr}}$$

19. $4 \text{ mL} \times \text{TBSA} \times \text{kg}$
 4 mL (50) (90.9)
$$200 (90.9) = 18,182 \text{ mL} = \boxed{18 \text{ L of fluid}}$$

$$20. \quad 150 \text{ lbs} / 2.2 = 68.2 \text{ kg}$$

$$4 \text{ mL} (75) (68.2 \text{ kg})$$

$$(300) (68.2)$$

$$= 20,455 \text{ mL} / 1000$$

$$= 20 \text{ L OF FLUID}$$