“Calculating Drip Rates”

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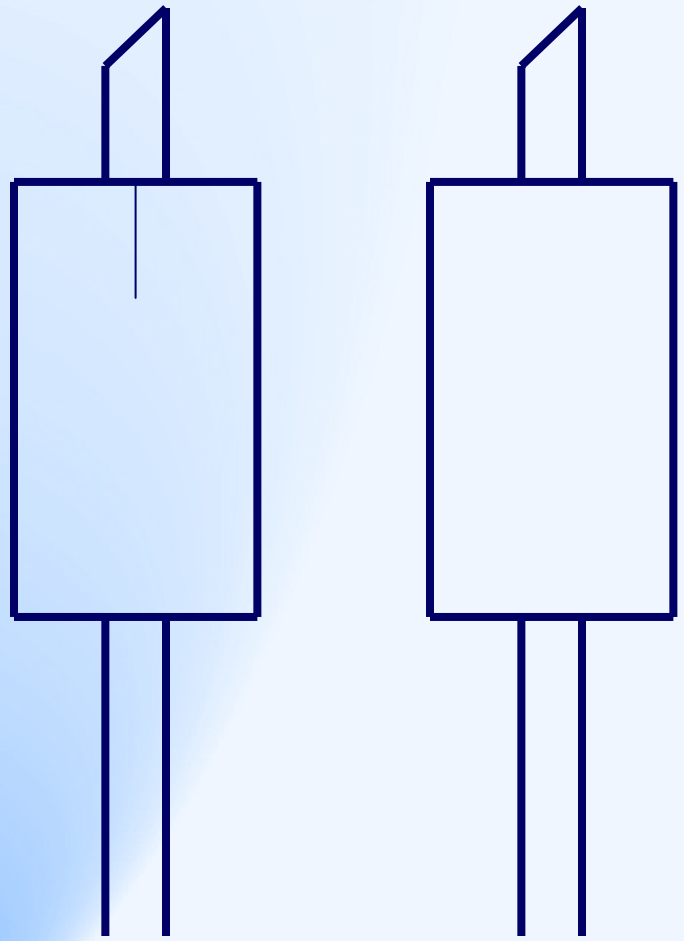
NREMTP

Micro & Macro Drip Sets



60 gtt/mL set

- 60 gtt/min = 1 cc

10 gtt/mL set

- 10 gtts/min = 1cc

15 gtt/mL set

- 15 gtts/min = 1 cc

Fluid Volume Over Time

$$\frac{\text{Volume X Drip Factor}}{\text{Time in Minutes}} = \text{gtts/min}$$

$$\frac{\text{500 cc X 10 gtt/mL}}{\text{60 minutes}} = \text{83.3 gtts/min}$$

Calculating mg/min

$$\frac{\text{dose} \times \text{gtt factor}}{\text{Solution Concentration}} = \text{gtts/min}$$

$$\frac{2\ \text{mg} \times 60\ \text{gtt/mL}}{4\ \text{mg}} = 30\ \text{gtts/min}$$

Using a 60 gtt set:

- 30 gtt/min = 30 cc/hr

Calculating mcg/kg/min

$$\frac{\text{dose X kg X 60 min}}{\text{solution concentration}} = \text{cc/hr}$$

$$\frac{\text{5 mcg/min X 75 kg X 60 min}}{\text{1600 mcg/cc}} = \text{18.75 cc/hr}$$

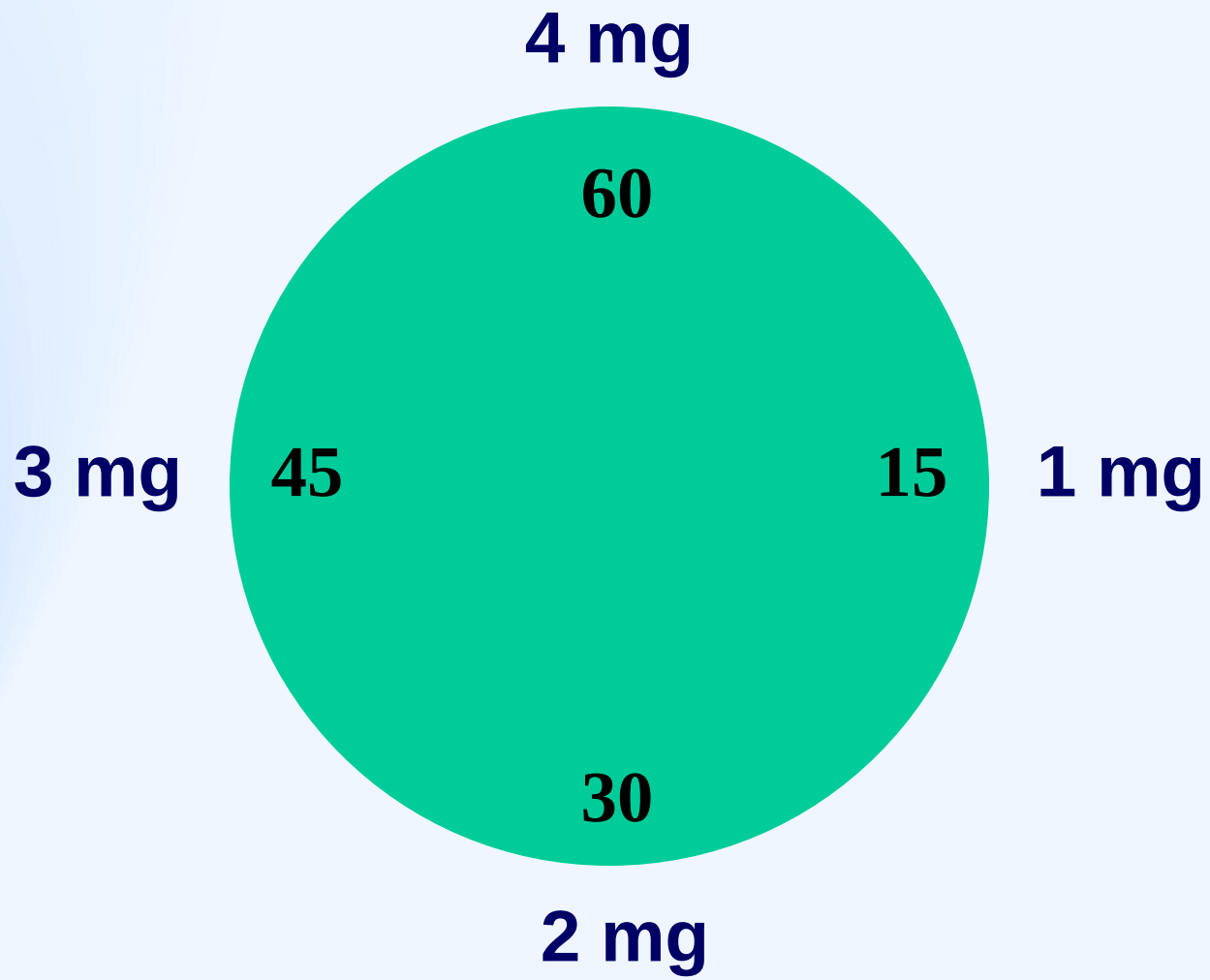
Using a 60 gtt set:

- 18.75 cc/hr = 18.75 gtts/min

Lidocaine Clock

- Lidocaine is prepared by mixing:
  - 2 Grams Lidocaine in 500 mL D5W
  - 1 Gram Lidocaine in 250 mL D5W
- 2000 mg / 500 mL = 4 mg/mL
- Using a 60 gtt set
  - 60 gtts/min = 1 mL
  - 1 mL = 4 mg

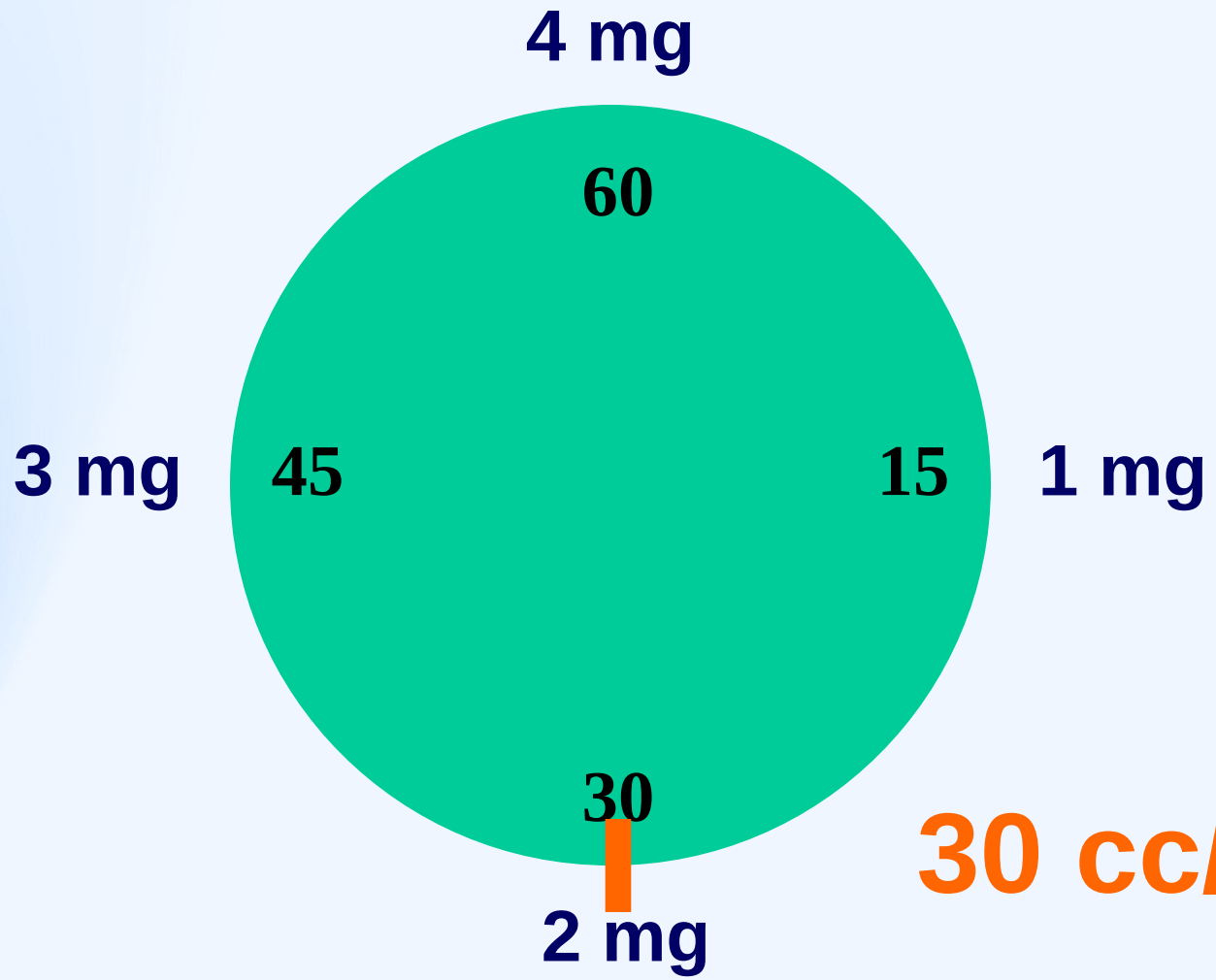
Lidocaine Clock



Lidocaine Clock

- You are preparing to start a Lidocaine infusion on your patient. You would like to give the patient 2 mg/min. Using the clock method, how many cc/hr should you set your pump at?

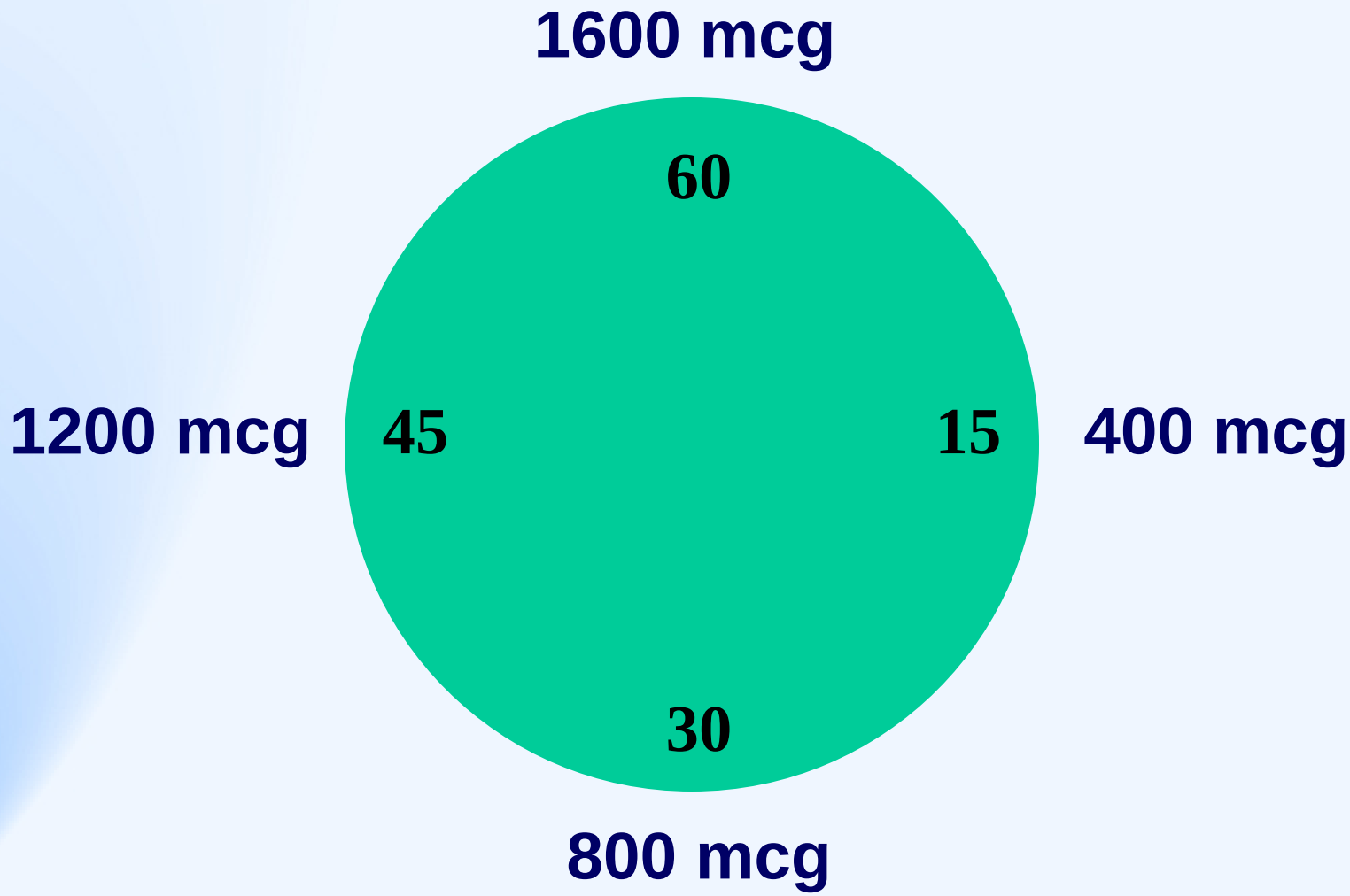
Lidocaine Clock



Dopamine Clock

- Dopamine is prepared by mixing:
  - 800 mg Dopamine in 500 mL D5W
  - 400 mg Dopamine in 250 mL D5W
- 800 mg / 500 mL = 1.6 mg/mL
- Using a 60 gtt set
  - 60 gtts/min = 1 mL
  - 1 mL = 1600 mcg

Dopamine Clock

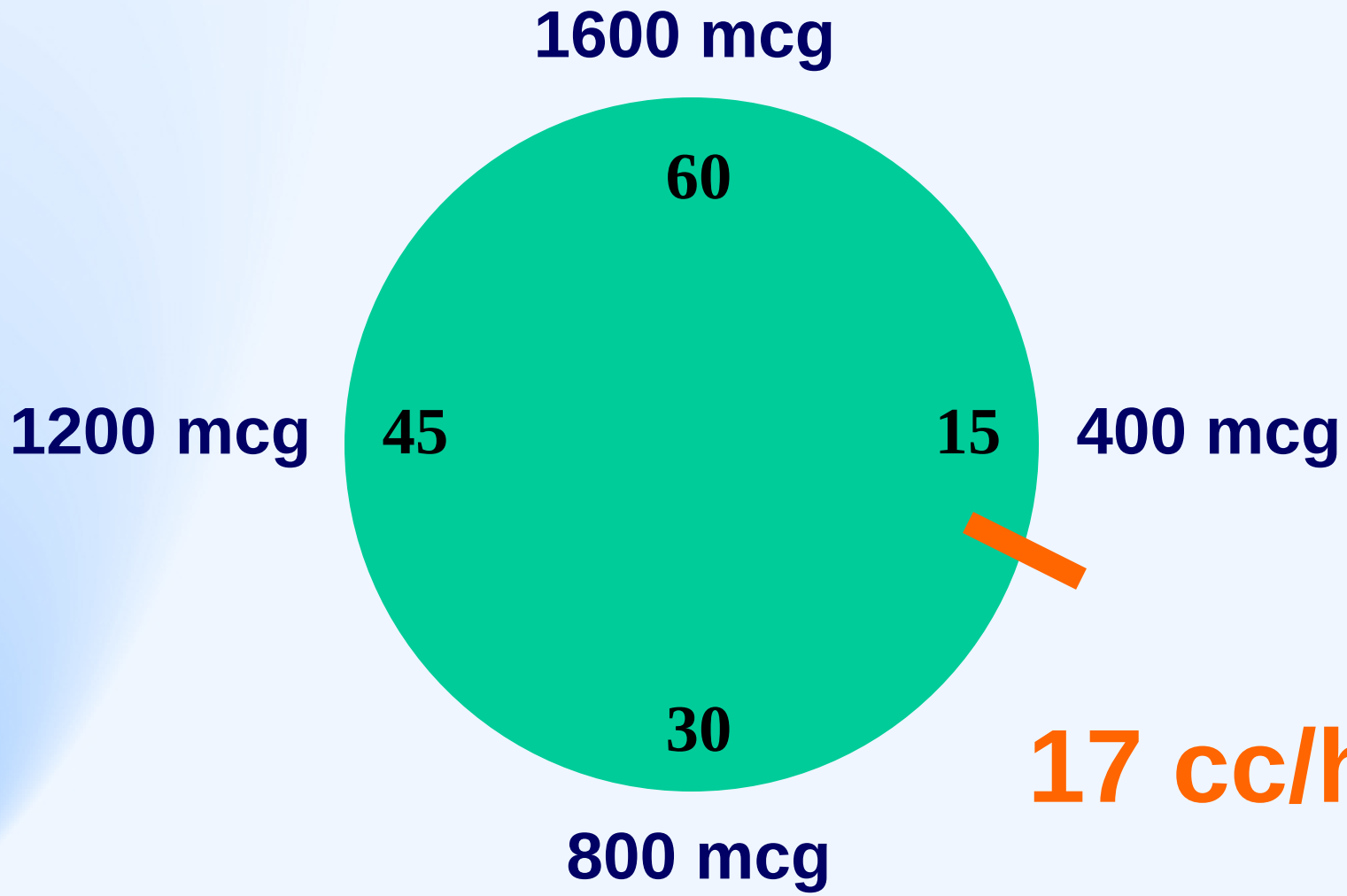


Dopamine Clock

- You are about to start a Dopamine drip on your patient. You would like to start this drip at 5 mcg/kg/min. Your patient weighs 100 kg. Using the clock method, how many cc/hr would you start your drip at?

5 mcg X 100 kg = 500 mcg/min

Dopamine Clock



17 cc/hr

You are assuming care of a patient that is on a Dopamine drip currently running at 9 cc/hr. The patient's weight is 84 kg. There is 400 mg of Dopamine in 250 mL of D5W. How many mcg/kg/min is this patient receiving?

Magic Number

- Works for any medication that is delivered in mcg/kg/min.
- Sol'n Concentration (mcg) divided by 60 divided by pt weight (kg) = Magic Number.
- Magic Number X cc/hr = mcg/kg/min

Magic Number

- Sol'n Concentration
  - 400mg / 250 mL = 1.6 mg
  - 1.6 mg X 1000 = 1600 mcg
- 1600 mcg / 60 cc = 26.6
- 26.6 / 84 kg = .31
- .31 X 9 cc/hr = 2.84 mcg/kg/min

ANY QUESTIONS?