

Oxytocin Calculations

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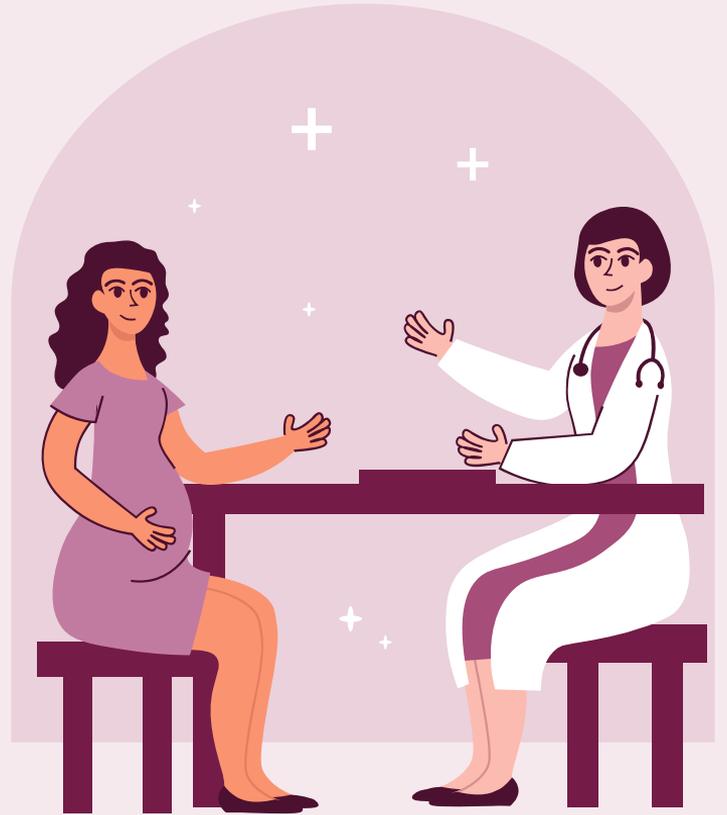


Table of contents



01 Oxytocin Cafe

02 Barista Math

03 Dimensional Analysis

04 Desire/Have Method

05 Practice Problems





01

OXYTOCIN Cafe





Welcome to the Oxytocin Cafe

Serving Labor and Delivery 24/7

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Café Menu

Latte of Love : Bond and breastfeeding(promotes let-down reflex, uterine contractions postpartum)

Contraction Cappuccino: Labor induction and augmentation

Hemorrhage Mocha: Postpartum Hemorrhage control





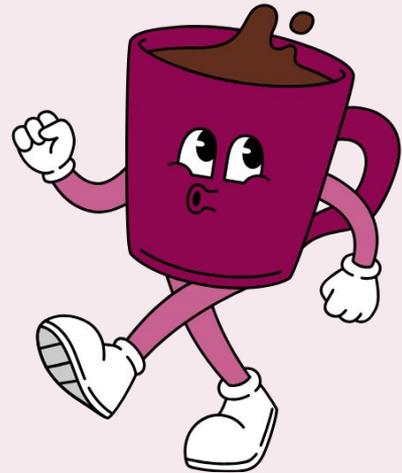
Meet your Barista

- Prepares “orders” (calculates infusion)
- Monitors “customers” (mom and baby)
- Adjusts the “brew” (rate changes per contractions/FHR)



Cafe Rules = Safety

- No Double Shots! - Don't mix with other high alert meds.
- Check Before You Serve! - Continuous FHR and Vitals
- Spill Control! - Stop if hyperstimulation/fetal distress



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Sweet Treat Mnemonic (Purpose of Oxytocin)

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Labor

Augmentation

Tone

Tighten contraction

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Ejection (milk)



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02

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Barista Math

Calculating Oxytocin

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Cafe Recipe Card

- **Oxytocin concentration** = the coffee syrup (strong, concentrated).
- **IV fluid (500 mL, 1000 mL, etc.)** = milk/water that dilutes it.
- **Pump rate (mL/hr)** = how fast the coffee pours.
- **Milliunits/min** = “shots” of espresso.



Calculating Oxytocin



**1 unit = 1000 mU
(milliunits)**



**Oxytocin is ordered
“mU/min”**

Two formulas



**Dimensional
Analysis**



**Desire/Have
Method**

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π

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03

Calculating Oxytocin: Dimensional Analysis

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Dimensional Analysis

There is an order for Oxytocin 3 mU/min IV via the pump. Available is Oxytocin 30 U/1000 mL of Lactated Ringers. How many mL/hr should the pump be set at?

- **First:** To use the dimensional analysis method, we need convert Units to mU.
 - There is 30 U / 1,000 mL
 - 1 unit = 1,000 mU
 - 30,000 mU / 1000 mL
- **Second:** Now plug it in!



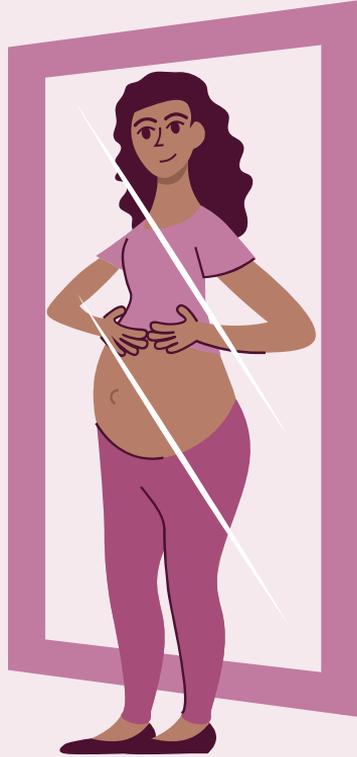
Dimensional Analysis Formula

$$\text{mU/min} \times \text{mL/mU} \times \text{min/hr} = \text{XmL/hr}$$

$$3/1 \times 1,000/30,000 \times 60/1 =$$

$$6 \text{ mL/hr}$$





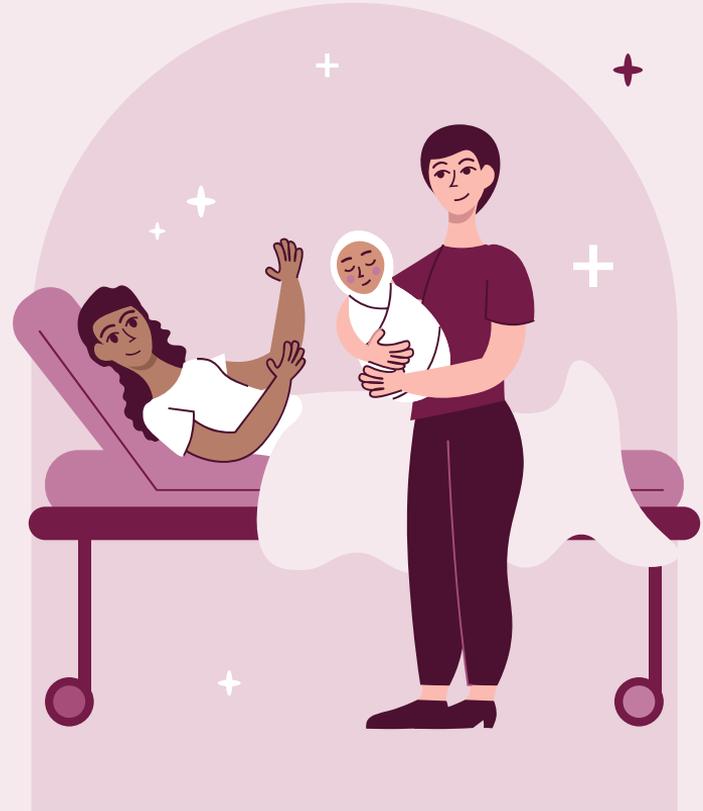
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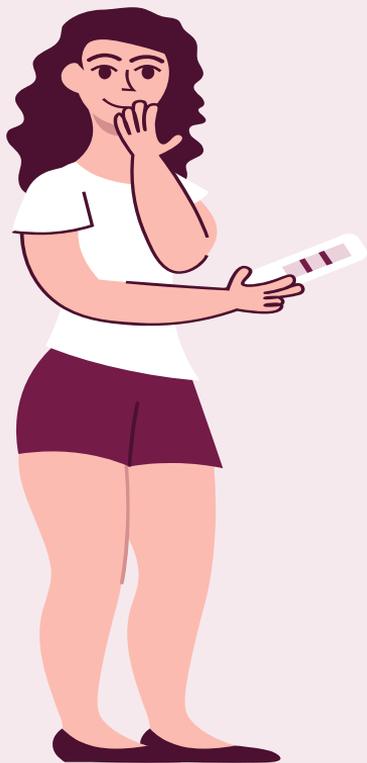
Calculating Oxytocin: Desired/Have Method

Desired/Have

There is an order for 8 mU/min of Oxytocin.
Available is Oxytocin 20 units/125 mL. How many mL/hr should the pump be set at.

- First Step: Figure out desired amount
 - Order for 8 mU
- Second Step: Figure out amount on hand
 - 20 units/125 mL
- Third Step: Convert Oxytocin into mU
 - 20 units = 20,000 mU
- Fourth Step: Plug it in!





05

Cafe Challenge:

Can You Fill This "Order"?

(Practice Problems)



Practice Problems

- Order: 4mU/min. Available: Oxytocin 30 units/250mL. How many mL/hr should the pump be set at? 2 mL/hr
- Order: 8mU/min. Available: Oxytocin 40 units/250mL. How many mL/hr should the pump be set at? 3 mL/hr
- Order: 7mU/min. Available: Oxytocin 20 units/1,000mL. How many mL/hr should pump be set at? 21 mL/hr





Thank you for stopping by the
Oxytocin Cafe - *Where every drop counts*

