

Calculating Pitocin/Oxytocin

IV Pitocin for induction of labor will be ordered in milliunits/minute. Pitocin is packaged in units.

There are 1000 milliunits per 1 unit of Pitocin/Oxytocin

Common concentrations available:

20 units Oxytocin per 1000ml of Lactated Ringer's or Normal Saline

30 units Oxytocin per 500 ml of Lactated Ringer's or Normal Saline

ORDER:

Start patient on 2mu/min, increasing 1 to 2 milliunits every 15 minutes until labor is established

Step 1: Determine the concentration of Pitocin/mL:

If I have a bag of Lactated Ringer's 1000 ml with 20 units of Oxytocin added, I need to calculate how many milliunits there are per milliliter

1 unit = 1,000 milliunits

20 units = 20,000 milliunits

$$\frac{20,000 \text{ milliunits}}{1000\text{cc}} = \underline{20 \text{ milliunits/ml}}$$

Step 2: Calculate (at this concentration) how many mL/hour will be given:

2 milliunits/minute = 120 milliunits/hour (2 milliunits X 60 minutes/hour)

$$120\text{milliunits/hour} \div 20 \text{ (milliunits/ml)} = 6\text{ml/hr}$$

-or

1000 ml/20 units (dose on hand) x **2 units/2000 mu** (conversion factor) x **2 mu/minute** (dose desired) x **60 minutes/hour** (conversion factor) = **6 ml/hour** (IV rate)