


**Calculating IV Titration in ml/hr**

- **Example 1** To lower BP, nitroprusside in dextrose 5% in water is to be titrated 15-200 mcg per minute. The IV solution was prepared by adding 50 mg of nitroprusside to dextrose 5% in water. The final solution contains a total volume of 250 ml. You should infuse the IV solution at a rate of \_\_\_ to \_\_\_ ml per hour.

To find the ml/hour:

- Step 1 - Write down dosage rate
- Step 2 - Write down IV concentration
- Step 3 - Convert if needed
- Step 4 - Reduce the units
- Step 5 - Perform the math

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<b>Step 1</b>	<b>Step 2</b>	<b>Step 3</b>	<b>Step 5</b>
$\frac{15 \text{ mcg}}{1 \text{ min}}$	$\times \frac{250 \text{ ml}}{50 \text{ mg}}$	$\times \frac{1 \text{ mg}}{1000 \text{ mcg}}$	$\times \frac{60 \text{ min}}{1 \text{ hr}}$
			$= \frac{15 \times 250 \times 1 \times 60 \text{ ml}}{1 \times 50 \times 1000 \times 1 \text{ hr}} = \frac{225,000 \text{ ml}}{50,000 \text{ hr}}$
<b>Step 4</b>			$= \frac{4.5 \text{ ml}}{\text{hr}}$
			Rounded to the nearest whole number. 5 ml/hour. 🌟

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To find the ml/hour:

- Step 1 - Write down dosage rate
- Step 2 - Write down IV concentration
- Step 3 - Convert if needed
- Step 4 - Reduce the units
- Step 5 - Perform the math

To find the highest rate that may be administered: Repeat the calculation Using the high dosage in Step 1.

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<b>Step 1</b>	<b>Step 2</b>	<b>Step 3</b>	<b>Step 5</b>
$\frac{200 \text{ mcg}}{1 \text{ min}}$	$\times \frac{250 \text{ ml}}{50 \text{ mg}}$	$\times \frac{1 \text{ mg}}{1000 \text{ mcg}}$	$\times \frac{60 \text{ min}}{1 \text{ hr}}$
			$= \frac{200 \times 250 \times 1 \times 60 \text{ ml}}{1 \times 50 \times 1000 \times 1 \text{ hr}} = \frac{3,000,000 \text{ ml}}{50,000 \text{ hr}}$
<b>Step 4</b>			$= \frac{60 \text{ ml}}{\text{hr}}$

**Calculating IV Titration in ml/hr**

- **Example 2** Levophed in dextrose 5% in water is to be titrated 2- 4 mcg per minute to maintain BP. The IV solution was prepared by adding 4 mg of Levophed. The final solution has a total volume of 1000 ml. You should infuse the IV solution at a rate of \_\_\_ to \_\_\_ ml per hour.

To find the ml/hour:

- Step 1 - Write down dosage rate
- Step 2 - Write down IV concentration
- Step 3 - Convert if needed
- Step 4 - Reduce the units
- Step 5 - Perform the math

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### Calculating IV Titration in ml/hr

- Example 2** Levophed in dextrose 5% in water is to be titrated 2- 4 mcg per minute to maintain BP. The IV solution was prepared by adding 4 mg of Levophed. The final solution has a total volume of 1000 ml. You should infuse the IV solution at a rate of \_\_\_ to \_\_\_ ml per hour.

To find the ml/hour:

Step 1 - Write down dosage rate  
 Step 2 - Write down IV concentration  
 Step 3 - Convert if needed  
 Step 4 - Reduce the units  
 Step 5 - Perform the math

To find the highest rate that may be administered:  
 Repeat the calculation  
 Using the high dosage in Step 1.

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Step 1	Step 2	Step 3	Step 5
$\frac{2 \text{ mcg}}{1 \text{ min}}$	$\times \frac{1000 \text{ ml}}{4 \text{ mg}}$	$\times \frac{1 \text{ mg}}{1000 \text{ mcg}}$	$\times \frac{60 \text{ min}}{1 \text{ hr}}$
			$= \frac{2 \times 1000 \times 1 \times 60 \text{ ml}}{1 \times 4 \times 1000 \times 1 \text{ hr}}$
			$= \frac{120,000 \text{ ml}}{4,000 \text{ hr}}$
Step 4			$= \frac{30 \text{ ml}}{\text{hr}}$

### Calculating IV Titration in ml/hr

- Example 2** Levophed in dextrose 5% in water is to be titrated 2- 4 mcg per minute to maintain BP. The IV solution was prepared by adding 4 mg of Levophed. The final solution has a total volume of 1000 ml. You should infuse the IV solution at a rate of \_\_\_ to \_\_\_ ml per hour.

To find the ml/hour:

Step 1 - Write down dosage rate  
 Step 2 - Write down IV concentration  
 Step 3 - Convert if needed  
 Step 4 - Reduce the units  
 Step 5 - Perform the math

To find the highest rate that may be administered:  
 Repeat the calculation  
 Using the high dosage in Step 1.

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Step 1	Step 2	Step 3	Step 5
$\frac{4 \text{ mcg}}{1 \text{ min}}$	$\times \frac{1000 \text{ ml}}{4 \text{ mg}}$	$\times \frac{1 \text{ mg}}{1000 \text{ mcg}}$	$\times \frac{60 \text{ min}}{1 \text{ hr}}$
			$= \frac{4 \times 1000 \times 1 \times 60 \text{ ml}}{1 \times 4 \times 1000 \times 1 \text{ hr}}$
			$= \frac{240,000 \text{ ml}}{4,000 \text{ hr}}$
Step 4			$= \frac{60 \text{ ml}}{\text{hr}}$

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