TOTAL INTRAVENOUS ANESTHESIA

$$\mathbf{MG} = \frac{\mathbf{MG/KG/HR}}{\mathbf{ML/KG/HR}} \times \mathbf{DILUENT\ VOLUME\ (ML)}$$

WHERE:

- **MG**: total amount in milligrams of drug to add to the diluent volume
- **MG/KG/HR**: drug infusion rate
- **ML/KG/HR**: fluid infusion rate
- **DILUENT VOLUME (ML)**: total diluent volume of fluid in the bag (1liter bag = 1000mLs)

DRUG DOSES FOR TIVA

DRUG	BOLUS	INFUSION RATE	VIAL CONCENTRATION
KETAMINE	**5 MG/KG**	**1.8 MG/KG/HR**	**100MG/ML**
MIDAZOLAM	**0.25 MG/KG**	**0.2 MG/KG/HR**	**5MG/ML**
HYDROMORPHONE	**0.1 MG/KG**	**0.05 MG/KG/HR**	**2MG/ML**
PROPOFOL*	**3-6 MG/KG**	**12-24 MG/KG/HR**	**10MG/ML**

* DO NOT DILUTE - USE SYRINGE PUMP FOR INFUSION

EXAMPLE:

KETAMINE:

- DRUG INFUSION RATE: 1.8MG/KG/HR
- FLUID INFUSION RATE: 5 ML/KG/HR
- DILUENT VOLUME: 1000MLs

$$\textbf{MG} = \frac{\textbf{MG/KG/HR}}{\textbf{ML/KG/HR}} \times \textbf{DILUENT VOLUME (ML)}$$

$$\frac{\textbf{1.8}\ \text{MG/KG/HR}}{\textbf{5}\ \text{ML/KG/HR}} \times \textbf{1000}\ \text{MLs} = \textbf{360 MG}\ \text{of drug to add to a 1L fluid bag}$$

KETAMINE VIAL CONCENTRATION:100MG/ML

VOLUME(MLs) of DRUG to add to the diluent bag :
360MG/100MG/ML = 3.6MLs

EXAMPLE:

MIDAZOLAM:

- DRUG INFUSION RATE: 0.2MG/KG/HR
- FLUID INFUSION RATE: 5 ML/KG/HR
- DILUENT VOLUME: 1000MLs

$$\textbf{MG} = \frac{\textbf{MG/KG/HR}}{\textbf{ML/KG/HR}} \times \textbf{DILUENT VOLUME (ML)}$$

$$\frac{\textbf{0.2}\ \text{MG/KG/HR}}{\textbf{5}\ \text{ML/KG/HR}} \times \textbf{1000}\ \text{MLs} = \textbf{40 MG}\ \text{of drug to add to a 1L fluid bag}$$

MIDAZOLAM VIAL CONCENTRATION:5MG/ML

VOLUME(MLs) of DRUG to add to the diluent bag :
40MG/5MG/ML = 8MLs

EXAMPLE:

HYDROMORPHONE:

- DRUG INFUSION RATE: 0.2MG/KG/HR
- FLUID INFUSION RATE: 5 ML/KG/HR
- DILUENT VOLUME: 1000MLs

$$\textbf{MG} = \frac{\textbf{MG/KG/HR}}{\textbf{ML/KG/HR}} \times \textbf{DILUENT VOLUME (ML)}$$

$$\frac{\textbf{0.05}\ \text{MG/KG/HR}}{\textbf{5}\ \text{ML/KG/HR}} \times \textbf{1000}\ \text{MLs} = \textbf{10 MG}\ \text{of drug to add to a 1L fluid bag}$$

MIDAZOLAM VIAL CONCENTRATION:2MG/ML

VOLUME(MLs) of DRUG to add to the diluent bag :
10MG/2MG/ML = 5MLs