

# DRUG CALCULATIONS

**NB: Most calculations were rounded up.**

## 2% Xylazine

- Dose: 0.025 mg/Kg
- Concentration: 20 mg/mL
- Weight of Calf: 60 Kg

$$\text{Volume} = \frac{\text{Weight} \times \text{Dose}}{\text{Concentration}}$$

$$\text{Volume} = \frac{60 \text{ Kg} \times 0.025 \text{ mg/Kg}}{20 \text{ mg/mL}}$$

$$\text{Volume} = 0.08 \text{ mL}$$

## 10% Ketamine

- Dose: 0.5 mg/Kg
- Concentration: 100 mg/mL
- Weight of Calf: 60 Kg

$$\text{Volume} = \frac{\text{Weight} \times \text{Dose}}{\text{Concentration}}$$

$$\text{Volume} = \frac{60 \text{ Kg} \times 0.5 \text{ mg/Kg}}{100 \text{ mg/mL}}$$

$$\text{Volume} = 0.3 \text{ mL}$$

## Combikel

- Dose: 10,000 IU/Kg
- Concentration: 200,000 IU/mL
- Weight of Calf: 130 Kg

$$\text{Volume} = \frac{\text{Weight} \times \text{Dose}}{\text{Concentration}}$$

$$\text{Volume} = \frac{60 \text{ Kg} \times 10,000 \text{ IU/Kg}}{200,000 \text{ IU/mL}}$$

$$\text{Volume} = 3 \text{ mL}$$

## 5% Flunixin

- Dose: 1.1 mg/Kg
- Concentration: 50 mg/mL
- Weight of Calf: 60 Kg

$$\text{Volume} = \frac{\text{Weight} \times \text{Dose}}{\text{Concentration}}$$

$$\text{Volume} = \frac{60 \text{ Kg} \times 1.1 \text{ mg/Kg}}{50 \text{ mg/mL}}$$

$$\text{Volume} = 1.3 \text{ mL}$$

## 2% Lidocaine

- Dose: 2 mg/Kg
- Concentration: 20 mg/mL
- Weight of Calf: 60 Kg

$$\text{Volume} = \frac{\text{Weight} \times \text{Dose}}{\text{Concentration}}$$

$$\text{Volume} = \frac{60 \text{ Kg} \times 2 \text{ mg/Kg}}{20 \text{ mg/mL}}$$

$$\text{Volume} = 6 \text{ mL}$$

**NB:** Lidocaine will be divide into 2 giving 3 mLs of Lidocaine per site

## Toxic Dose of 2% Lidocaine

- Dose: 10 mg/Kg
- Concentration: 20 mg/mL
- Weight of Calf: 60 Kg

**NB:** ½ Toxic Dose was used

$$\text{Volume} = \frac{\text{Weight} \times \text{Dose}}{\text{Concentration}}$$

$$\text{Volume} = \frac{60 \text{ Kg} \times 5 \text{ mg/Kg}}{20 \text{ mg/mL}}$$

$$\text{Volume} = 15 \text{ mL}$$

∴ Do **NOT** exceed 15 mLs of Lidocaine

# DRUG CALCULATIONS

## EMERGENCY DRUGS

*Tolazonine* (2-4 x Xylazine Conc. Rate)

- Dose:  $(0.025 \times 2) = 0.05 \text{ mg/Kg}$
- Concentration:  $100 \text{ mg/mL}$
- Weight of Calf:  $60 \text{ Kg}$

$$\text{Volume} = \frac{\text{Weight} \times \text{Dose}}{\text{Concentration}}$$

$$\text{Volume} = \frac{60 \text{ Kg} \times 0.05 \text{ mg/Kg}}{100 \text{ mg/mL}}$$

$$\text{Volume} = 0.03 \text{ mL}$$

*Epinephrine*

- Dose:  $0.02 \text{ mg/Kg}$
- Concentration:  $1 \text{ mg/mL}$
- Weight of Calf:  $60 \text{ Kg}$

$$\text{Volume} = \frac{\text{Weight} \times \text{Dose}}{\text{Concentration}}$$

$$\text{Volume} = \frac{60 \text{ Kg} \times 0.02 \text{ mg/Kg}}{1 \text{ mg/mL}}$$

$$\text{Volume} = 1.2 \text{ mL}$$

*Atropine*

- Dose:  $0.04 \text{ mg/Kg}$
- Concentration:  $0.54 \text{ mg/mL}$
- Weight of Calf:  $60 \text{ Kg}$

$$\text{Volume} = \frac{\text{Weight} \times \text{Dose}}{\text{Concentration}}$$

$$\text{Volume} = \frac{60 \text{ Kg} \times 0.04 \text{ mg/Kg}}{0.54 \text{ mg/mL}}$$

$$\text{Volume} = 4.5 \text{ mL}$$