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# Blood transfusions



## Donor:

Healthy >25kg, between 2- 7 years old

Blood Bag =450ml

Blood smear= negative for Babesia or any other abnormalities

## Cross-matching:

- Not as important if first transfusion in dogs.
- Always recommended in cats or if animal has had more than one transfusion

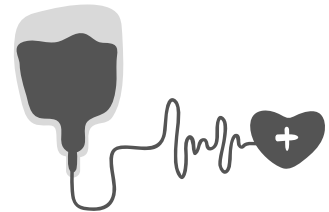
### Rapid slide method:

- EDTA sample from recipient and donor. Spun down to separate into serum and RBC
- Label 4 slides:
  - *Donor control*: donor RBC +donor serum
  - *Major cross match*: donor RBC + recipient serum
  - *Minor cross match*: recipient RBC + donor serum
  - *Recipient control*: recipient RBC + recipient serum
- 1 drop of undiluted RBC and 2 drops serum
- Mix sample and observe for 2 minutes under microscope and again 5 minutes later

## Amount:

$$\text{Amount ml} = \frac{\text{Recipient BW (kg)} \times (\text{desired PCV\%} - \text{recipient PCV\%})}{\text{PCV\% of donor}/100}$$

- For packed RBC: assume donor PCV =75%
- Desired PCV:
  - Cats: >20
  - Dogs: >25 - 30



## Rate:

- Initially 1ml/kg/hr for first 30 minutes then give rest of blood needed over 3 - 4 hours.

## Transfusion reaction:

### Symptoms:

- *Acute*: weakness, pallor, tachypnoea and open-mouth breathing , skin rashes, strange behaviour. GIT signs, angio-oedema, collapse, tremors, fever
- *Delayed*: jaundice, depression, haemoglobinuria, raised liver enzymes

### Treatment:

- Mild symptoms and < 30 minutes: Stop transfusion and cross match
- If mild and > 30 minutes then can reduce the rate and monitor to see if reaction persists - check every 15 minutes.
- If severe then stop transfusion, check BP and have emergency drugs handy. Start on fluids. Furosemide if pulmonary oedema. Antihistamines and corticosteroids if angio-oedema
- Oxygen