

## CPR

= CARDIOPULMONARY RESUSCITATION

There are three key aspects to successful CPR:

A-AIRWAY B-BREATHING C-CIRCULATION

**A-AIRWAY** Check for debris, blood, etc in the throat, clear out then try to pass an endotracheal tube, preferably cuffed. There is unfortunately no substitute for sheer practice in developing your ability to do this. A small bore tube ( e.g. urinary catheter) can be used to get oxygen into the lungs if all else fails, and this can even be passed via the nose, although this is also an acquired skill. Tracheotomy may be necessary as a surgical procedure, and a very large gauge needle can also be passed into the trachea between the rings.

**B-BREATHING** Use Intermittent Positive Pressure Ventilation (IPPV). It is best to use 100% oxygen supplied by an appropriate anaesthetic circuit and machine. The lungs are inflated using the bag in the circuit. REMEMBER when you squeeze the bag to inflate the chest, the increase in pressure forces blood out of the chest, so make the inflation short, then let the chest deflate naturally. This pressure change is the exact opposite of normal breathing, in which falling pressure in the chest draws in air. Any air flow is better than none, so if necessary use room air (20% oxygen) or your own breath (16% oxygen). 20 breaths/min for cats, 12 breaths/min for dogs

**C-CIRCULATION** The heart and chest circulation contain one-way valves (mitral, tricuspid, pulmonic, aortic), so if you can persuade blood to move in and out of the chest, by and large it will flow in the right direction. This can be achieved by simply squeezing the heart, but unfortunately, the heart is difficult to reach through the chest wall in broad chested breeds and animals over 20 kg. In these patients, it may be possible to cause sufficient pressure change within the chest to move blood without direct heart massage.

- i) The Cardiac Pump- , Cats and animals under 20 kg of normal conformation Brace the animal's spine with it lying on one side. Apply pressure sharply over the lower parts of ribs 3-6 then relax. Try for 60 per minute, and works best if co-ordinated with respiration so that when a breath is due the chest should be compressed at the same time as the breathing bag is squeezed.
- ii) The Thoracic pump- Large, fat, odd-shaped breeds. Can be used with the animal on its side or back - Compress over upper third of ribs 6-7. The aim is to get sufficient pressure change in the chest to cause blood flow, not to directly squeeze the heart. Best co-ordinated with breathing as above. Less effective than cardiac massage, but better than nothing!

STOP AFTER 15 MINUTES IF UNSUCCESSFUL.