

## UNCONSCIOUSNESS AND DEATH

DEATH is irreversible damage resulting in loss of body functions to the extent that maintenance of life is no longer possible.

UNCONSCIOUSNESS is a change in the brain (usually reversible) causing loss of awareness of self and surroundings and accompanied by a varying loss of response to stimuli.

### IT IS IMPORTANT TO BE ABLE TO TELL THE DIFFERENCE

	Dead	Unconscious
Heart Beat	-	+ (pulse)
Respiration	-	+ (variable quality)
Eye	Central fixed staring	Varies with depth
Pupil	Dilated fixed	Light responsive
Movement	- (rigor)	Varies +/-
Palpebral reflex	-	varies
Corneal reflex	-	+
Temperature	Falls to ambient	Maintained above ambient

COLLAPSE is the loss of ability to maintain a normal upright posture and loss of the ability to walk or move about normally. It is REPORTED commonly as an emergency, but may or may not be as bad as the pet's owner thinks.

Always: TAKE A HISTORY: Assess the extent of the collapse. Is the animal conscious or not, and has it collapsed on some or all legs? What is its posture (lateral recumbency, upright, etc) Find out if there is any previous history of disease, particularly cardiovascular or neurological disease. Find out if the animal is conscious, i.e responsive, and whether the collapse occurred at exercise or in association with excitement. Collapse does not automatically entail loss of consciousness, but it may be a matter of degree as to whether a collapsed animal lapses into unconsciousness.

Causes of collapse and / or unconsciousness:

1/ NEUROLOGICAL Damage to the Central Nervous System (CNS), i.e. Brain and Spinal Cord. Causes include:

- a) Trauma (for example RTA ) and intervertebral disc disease in which a degenerating disc bursts upwards into the nerves of the spine, a so-called "slipped disc".
- b) Spinal haemorrhage. Causes pressure on the nerves
- c) Other disease- infections, abscesses
- d) Tumours (cause pressure)

e) Hydrocephalus ( increased pressure in the brain), usually due to an anatomical abnormality in young animals, particularly the toy breeds and those with very rounded heads e.g Yorkies, Pokes.

f) Some infections - Distemper, Toxoplasma

2/ HYPOXIA (Lack of Oxygen) Loss of ability of the lungs to take up oxygen due to:

a) Obstruction- faulty larynx, foreign bodies, tumours, haemorrhage into the lungs in warfarin poisoning.

b) Loss of lung area- collapse due to trauma, abscess, ruptured diaphragm.

c) Loss of lung function- poisonings, chronic (long term) or acute (sudden onset) lung disease.

d) Loss of the blood's ability to take up Oxygen- Anaemia, Carbon monoxide poisoning.

3/ CIRCULATORY FAILURE

a) Heart failure

b) Excessive haemorrhage

c) Clots within the circulation

d) SHOCK

4/ MUSCULOSKELETAL

a) Fractures

b) Muscle and tendon ruptures

c) Myasthenia gravis ( The immune system is attacking the connecting junction between the muscles and the controlling nerves - the "motor end plate")

5/ METABOLIC

a) Glucose problems. - Hypoglycaemia (Low glucose in the blood) in over-treated diabetics and a rare tumour- the insulinoma. -Hyperglycaemia( high blood glucose) and ketoacidosis (acidosis due to ketones in the blood) in long-term untreated diabetics.

b) Calcium problems. Eclampsia is a severe drop in circulating calcium in bitches with a new litter of pups. Calcium is necessary for muscle function.

c) Sodium and Potassium disturbances. (Addison's disease. Kidney failure in cats). Correct levels are necessary for muscle cell and nerve function.

6/ OTHERS:- Excess cold, heat, electric shock, some poisons (e.g. strychnine)