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## **HYPERTENSION**

Hypertension is the medical name for high blood pressure. Hypertension is fairly common as your pet gets older, particularly in cats.

### **How is blood pressure measured?**

Measuring blood pressure is completely painless. We have two different types of blood pressure machines. Our doppler machine uses a cuff placed around the front leg, this is inflated manually and a special probe is placed under the paw to detect the pulse. When using this machine headphones can be worn to avoid the noise upsetting your pet.

Our oscillometric machine uses a cuff around your pet's tail which means you can give them a cuddle and hopefully make it a little less stressful for them. This machine automatically inflates and deflates the cuff and calculates the blood pressure, no probe is required.

We use our oscillometric machine most of the time but with very small kittens or puppies the doppler machine may be more accurate.

We look at the systolic blood pressure value which in both cats and dogs should be below 150mmHg. We do allow for small increases at the surgery as we appreciate that the stress of a vet visit can result in elevated blood pressure, this is also seen in humans and is known as "white coat syndrome."



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## What are the effects of hypertension?

- **Eyes** – high blood pressure causes bleeding of the blood vessels at the back of the eyes causing loss of vision. Eye problems are much more common in cats with high blood pressure and changes at the back of the eye can be seen in between 60-100% of cats with high blood pressure compared with only 5-20% of dogs.
- **Nervous system** – high blood pressure can cause bleeding in the blood vessels in the brain and other parts of the nervous system. This can cause altered behaviour, confusion and fits. Serious complications such as fitting are rare but many owners will report that their pets' demeanour improves with successful management of hypertension.
- **Heart** – high blood pressure makes it harder for the heart to pump blood around the body. This can lead to thickening of the heart muscle, rhythm problems, heart murmurs and possible heart failure. A nose bleed can be a sign that there has been damage to the blood vessels from high blood pressure.
- **Kidneys**– high blood pressure increases the risk of kidney failure by damaging the glomeruli which are the filtration units in the kidney. This can result in protein in the urine which can be easily detected on a urine test.



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It often takes several months before the hypertension causes damage to the body. For this reason it is sensible to have your pets blood pressure checked regularly as they get older, so that high blood pressure can be treated before any of the above problems develop.

### **What causes hypertension?**

Hypertension can be described as primary or secondary. In primary hypertension there is no underlying cause and your pet just develops high blood pressure.

	<b>Dogs</b>	<b>Cats</b>
In secondary hypertension, it is caused by another condition. Kidney disease is a common cause of high blood pressure in both cats and dogs. <b>Disease</b>		
Chronic kidney disease	common	common
Hyperthyroidism	N/A	Seen in about 20% of cats with



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		hyperthyroidism. This can be both before and after treatment.
Hyperadrenocorticism (Cushing's disease)	Common, seen in over 60% of cases.	This condition is extremely rare in cats and doesn't tend to cause high blood pressure
Diabetes mellitus	Seen in 25-50% of cases	Not seen
Primary hyperaldosteronism (Conns syndrome)	Extremely rare	Rare but high blood pressure is almost always seen.

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