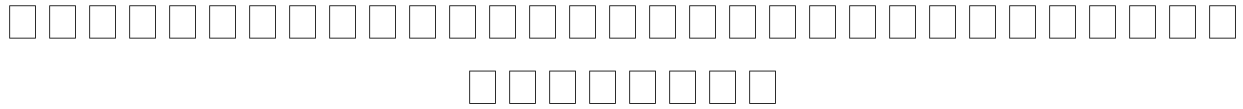


# FELINE HYPERTENSION



Hypertension, or high blood pressure, usually occurs in cats secondary to other diseases. The most common diseases to cause high blood pressure in cats are chronic renal failure (kidney disease), hyperthyroidism and anemia. Cushing's disease and certain forms of cancer can also cause high blood pressure.

Hypertension is a serious problem in the cat, as it can cause blindness and strokes, just as in people. The first symptom seen is usually sudden blindness from retinal detachment - the high blood pressure literally blows out the back of the eye. If retinal detachment is caught early, with prompt and aggressive drug treatment the retina will sometimes reattach itself at least partially, and some vision will be restored. Many cats, however, will be permanently blind as a result. Owners will sometimes notice the cat's pupils are fixed and fully dilated, or only respond very slowly and sluggishly to light. This is an emergency situation which should be treated as soon as possible.

The other common symptom of untreated high blood pressure is bleeding into the brain. Cats may suddenly show signs of disorientation, circling around and around in one spot, or otherwise acting strange. Some cats will wander the house crying as if distressed.

Ideally, high blood pressure should be diagnosed and treated before the cat becomes blind or suffers brain damage. If your cat has been diagnosed with chronic renal failure, hyperthyroidism or anemia, a blood pressure check will probably be recommended as well.

Some cats with high blood pressure will have heart murmurs or abnormal heart rhythms. If your veterinarian picks up a heart murmur or arrhythmia in a cat, especially an older cat prone to kidney or thyroid disease, a blood pressure check will be recommended. We may also pick up on high blood pressure when we draw a blood sample - if the blood gushes into the syringe without our having to pull back on the plunger, the cat's blood pressure is probably very high.

About 65% of cats with chronic renal failure have some degree of hypertension. This is a serious problem because hypertension in turn worsens the kidney disease. It becomes a vicious cycle in which the high blood pressure worsens the kidney disease, which increases the blood pressure even more, which then worsens the kidney disease, etc. Any cat diagnosed with chronic renal disease should have a blood pressure check on a regular basis.

In cats with hyperthyroidism the hypertension is usually temporary. Once the thyroid disease is controlled with medication or radiation treatment, the blood pressure goes back down. Treatment for high blood pressure in this disease is usually only needed for a few weeks to months. Treatment is still important, however, to prevent blindness and brain damage.

Although blood pressure measuring is important to monitor, it can also be difficult to do accurately in cats. Most cats are stressed and nervous at the veterinary clinic, and some are downright hostile. Blood pressure readings will probably be higher than they would be if measured when the cat was at home in its own environment. If a cat is

aggressive or terrified, readings may not be possible at all. We will advise you as to whether an accurate blood pressure reading is possible in your cat.

We try to make the experience as stress free as possible. The blood pressure should be measured before the rest of the physical exam is done, in a quiet room with the owner present to stroke and reassure the cat. If the cat was frightened by a dog or other stress factor on its way in, it should be given 5 minutes or more to settle down before blood pressure readings are taken. The measurement itself is painless, just as it is in humans, but the cat may be frightened by the procedure. The cat needs to be held on its side, a small area of hair is clipped from the leg and a Doppler monitor is used to get the measurement. The clippers and the Doppler both make noises which are frightening to some cats. The feeling of the cuff on the leg also makes some cats nervous, as does being held down on their side.

Normal systolic blood pressure is below 140 in the cat. Stress can increase blood pressure to as high as 180. Strokes generally occur when the blood pressure is greater than 200. Blood pressure over 180 is considered abnormal but in cats with kidney disease any amount of hypertension can worsen the disease, so we try to keep it under 140. A reading between 140 and 180 is a gray area if the cat is otherwise healthy - the cat should be monitored but the pressure may be perfectly normal at home in its own environment.

It takes time, patience, two to three veterinary staff members and repeated measurements to obtain a blood pressure reading in a cat. We charge about \$10 for each reading, including the rechecks needed to monitor and adjust the medication used to treat high blood pressure.

The goal of treatment is to decrease the blood pressure gradually to avoid a sudden decrease in blood flow to the kidneys, which will make kidney disease worse. In cats with chronic renal failure and high blood pressure, the pressure should be rechecked 3 days after starting on blood pressure medication, then every 3-7 days, depending on how good the first reading was. Once two good readings on two successive visits are obtained, the cat is considered stable on the medication. The blood pressure is then rechecked along with kidney blood testing about every three months. Drug treatment will be necessary for the rest of the cat's life.

There are two medications commonly used to treat hypertension. Amlodipine is usually tried first. If the response is not adequate, we will switch to benazapril. If a cat with high blood pressure also has protein in its urine, we will use benazapril as our first choice because it also improves kidney function, and we will add an additional medication called Rubenal. Occasionally, a cat will need both amlodipine and benazapril to control the high blood pressure. Rechecks will be needed every 3-7 days until good blood pressure readings are obtained.

For cats with chronic renal failure but a normal first blood pressure check, rechecks are recommended every 6-12 months. Hypertension may show up later in the course of the disease, as kidney function gradually worsens with time.

In cats recently diagnosed with hyperthyroidism, the blood pressure is usually 220 to 240 or so. We will prescribe a two to three week course of blood pressure medication for the cat while the thyroid level is coming down in response to treatment. Once the thyroid level is back in the normal range, the medication can usually be stopped.

Cats that have already suffered blindness or visual impairment from hypertension

usually get around well in their own home with some modifications to the environment. Your cat may not be able to find its way to the basement litter pan any more but blind cats rarely stop using the box as long as it is accessible to them. Be sure the food and water bowls are also accessible without climbing or jumping. Dabbing some perfume or cologne on table legs and doorways once a week at first with help your pet to smell where it's going and makes navigation easier.

If your cat is diagnosed and being treated for high blood pressure, we will call or send you a reminder in the mail when your cat is due for recheck blood pressure measurements. In the mean time, be sure to call us right away if you have trouble administering your cat's medication or you notice any change. We are always glad to help!

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