



# Feline Stroke

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A diagnosis that your cat has suffered a stroke can be very worrying. After all, we all know how debilitating a stroke can be to a human. The good news is that with animals strokes are generally much less crippling, and in many cases a can make almost a full recovery fully within a few weeks.

## **What is a stroke?**

A stroke is a term for a condition where there is a sudden reduction of the blood supply to the brain. There are two types of stroke:

**Ischemic stroke** - caused by a sudden loss of blood supply to the brain.

**Hemorrhagic stroke** - caused by bleeding within the brain.

More than any other organ, the brain relies on a constant blood supply to bring oxygen and nutrients and to remove waste products. If the blood supply to the brain fails, brain function is severely disrupted (ischemia) or parts of the brain destroyed (infarct).

In most cases the main lesion (area of damage) involves the middle cerebral artery on one side of the brain (unilateral lesions).

## **What are the underlying causes of a stroke?**

Although a single episode of stroke is usually not very debilitating to a cat, finding the underlying cause is important to prevent this happening again.

The diseases which can cause an ischemic stroke are those which cause the narrowing of an artery (thrombosis) or which block it altogether (often referred to as embolism). Ischemic strokes may be associated with kidney disease, heart disease, under or over-active thyroid glands, Cushing's disease, diabetes or high blood pressure (hypertension). Unfortunately, the reason for more than half of all strokes is never discovered.

In a hemorrhagic stroke there blood leaks into the brain. A leak directly into the brain tissue is referred to as intraparenchymal. If the blood leaks into the space between the skull and the brain, the vet will call this a subdural or subarachnoid leak. Hemorrhagic strokes are often associated with with diseases that interfere with blood clotting. For example, if the cat has eaten rodent poisons which contain warfarin-like products. There is also congenital clotting disease or immune-mediated thrombocytopenia. (A condition in which there is an abnormally small number of platelets in the circulating blood.) Other diseases such as vasculitis (inflammation of the arteries) or the abnormal development of the blood vessels may also be contributory factors in a stroke.

Finally a blow to the head, or bleeding from a brain tumor also need to be ruled out as possible causes of a hemorrhagic stroke.

So there are multiple conditions which can cause a stroke and finding the actual villain can be a very drawn-out process.

### **What are the symptoms of a stroke?**

The signs of a stroke in cats are very different to those seen in humans and, fortunately, they are normally much milder. The first signs are often general or partial seizures, while other common signs are: tilting of the head, loss of balance, some trouble with vision, falling and circling. A cat with a unilateral cerebral lesion will often walk in circles turning towards the side with the lesion. There may also be reduced facial movement (problems with the closing eyes or moving the lips). Look out also for changes in behavior, which may happen especially if the lesions are in the front part of the brain. Temporary blindness even though the pupils widen as normal suggests frontal lesions whereas blindness with dilated unresponsive pupils suggests the problem is in the midbrain.

However, none of these symptoms necessarily mean that your cat has had a stroke. There are other issues that can cause the same symptoms, hence the difficulty in diagnosing strokes. However, the good news is that if it is a stroke most cats seem to recover almost fully within weeks. However, on rare occasions when there is a large stroke involving a vital part of the brain, recovery may not be possible. For example, some cats may develop secondary epilepsy following stroke.

### **Diagnosis of the stroke**

From the symptoms, the vet may suspect that your cat has suffered a stroke. However, to make a definite diagnosis some more specialized tests are needed, including imaging the cat's brain. These are CT (computed tomography) or MRI (magnetic resonance imaging) which will allow a direct look into the brain to see what is happening there. These images tell the vet how widespread the lesions are and if there is a brain tumor or vascular disease. The full diagnosis often also involves collecting a small sample of spinal fluid to look for signs of inflammation (white blood cells in the spinal fluid may indicate brain inflammation).

### **How can my cat be treated?**

There is no particular treatment for a stroke. Expect the vet to suggest nothing more specific than careful observation. If the seizures are controlled and the cat eats and drinks normally she can be cared for at home. Cats do recover much better than humans and can lead a long and normal life after having had a stroke. In most cases the clinical signs are non-progressive and if some recovery is seen within the first two weeks the prognosis for the recovery is very good.