



What is a stroke?

An infarct, or stroke, is caused by sudden disruption of blood flow to the brain or spinal cord. Strokes can be secondary to blood clots (called ischemic infarct) or bleeding (hemorrhagic infarct). Strokes have a classic presentation of coming on very suddenly, being worse on one side (left versus right), and staying the same or gradually improving over time (although some can get worse over the first 12-24 hours).

What are the symptoms of a stroke?

The symptoms depend on where the stroke occurred. Strokes in the forebrain can cause seizures, circling, decreased vision, and behavior changes. Strokes in the brain stem can cause weakness, loss of balance, decreased responsiveness, and abnormalities in blinking, chewing, and swallowing. Strokes in the spinal cord can cause weakness in all four limbs if they occur in the neck, or the hind limbs only if they occur in the back. In some cases, strokes are so localized to one side that they will cause lameness in a single limb or weakness on one side of the body.

What causes a stroke?

In some cases, animals have an underlying disease process that predisposes them to have a stroke. In cats, the most common concurrent diseases are high blood pressure, hyperthyroidism, kidney disease, and heart disease. In dogs, the most common underlying diseases are hypertension, hypothyroidism, cancer (i.e. hemangiosarcoma), kidney disease, Cushing's disease, and immune-mediated hemolytic anemia. In many animals, the underlying cause for the stroke is never identified.

How is a stroke diagnosed?

If a stroke is suspected, tests to look for systemic diseases that could predispose to stroke should be done (i.e. bloodwork, urine analysis, thyroid panel, blood pressure, clotting profile, chest x-rays, abdominal ultrasound). The best way to image a stroke in the brain or spinal cord is to do an MRI, although some small strokes may be missed. They are often not visible on a CT scan. Spinal fluid analysis is done in some cases to help rule out other diseases.

What is the treatment for a stroke?

There is no specific treatment for a stroke other than time and supportive care. It is important to first determine if there is an underlying disease that predisposed the animal to have a stroke and if so, treat it appropriately. Removal of the blood clot is not typically performed in animals as it is in people. Blood thinners such as aspirin are only given in cases where clinically indicated. Physical therapy is recommended in some patients to improve the rate of recovery. In animals with seizures secondary to a stroke, an anti-seizure medication is typically prescribed.

What is the prognosis for a stroke?

Most animals with strokes gradually improve over time (days to months). How quickly or completely an animal recovers depends on the size and location of the stroke and how quickly blood flow is redistributed. While most animals become functional and have a good quality of life, many never become 100% normal. It is typically recommended to allow a minimum of 1-2 weeks for clinical improvement to occur before assessing whether a long-term recovery is likely.