

## Dog Neurological Disorders: Radial Nerve Paralysis

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Does your dog show signs of a front leg injury? The radial nerve is the largest nerve in the front leg of the dog and is responsible for movement in the elbow, wrist and toes. This nerve also provides sensation to the upper-outside surface of the front leg and upper surface of the paw.

The radial nerve travels down the underside of the upper front leg and crosses over the outside just above the elbow. From this point, the radial nerve branches into the muscles of the lower front leg. Dogs with radial nerve paralysis are unable to use their front leg normally.

Trauma to the animal's front leg, where the nerve is close to the surface, is a common cause of paralysis.

Dogs with radial nerve paralysis lose the ability to use the muscles that extend the front leg and the affected limb can't bear any weight. The upper side of the paw often drags on the ground.

When muscles lose their nerve connections they begin to atrophy, or shrink, usually within five days of the injury. Physical therapy may be helpful to maintain blood flow in the atrophying muscles. If the injured nerves begin to re-grow, the animal may experience abnormal sensations from the affected limb, and this may lead to selfmutilation of the limb. If this behavior cannot be controlled, amputation of the limb may have to be considered.

Nerve injuries are very mysterious. It can be very difficult to predict if function will return after injury. Therefore it is very important to determine the extent of the injury. If the sheath surrounding the nerve fibers is still intact, then there is a chance that the

limb function will return. In these cases, time and good nursing care are the best options.