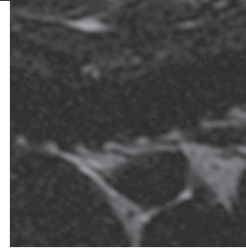
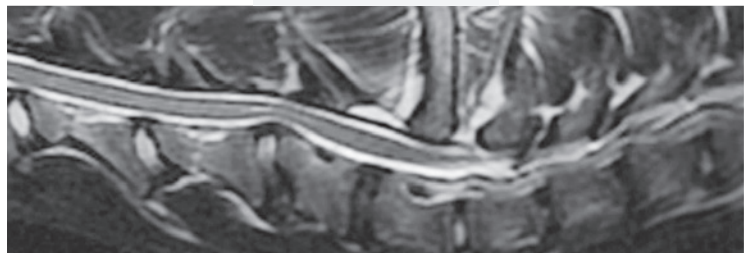
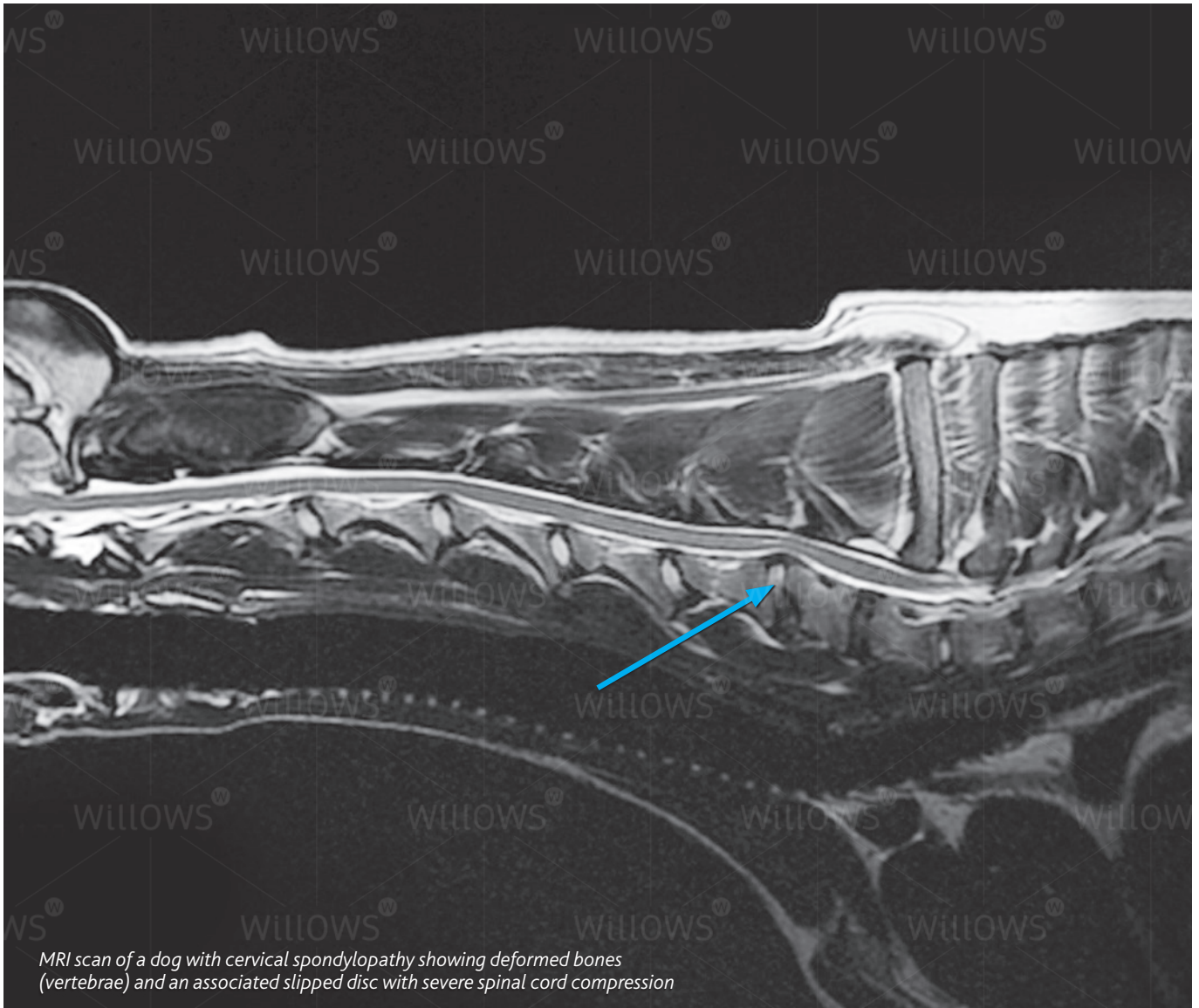


Specialist Referral Service  
Willows Information Sheets

# Cervical spondylopathy





*MRI scan of a dog with cervical spondylopathy showing deformed bones (vertebrae) and an associated slipped disc with severe spinal cord compression*

## Cervical spondylopathy

### What is meant by cervical spondylopathy?

Cervical spondylopathy is an uncommon condition involving abnormal development of the bones in the neck (the cervical vertebrae). The deformed bones may directly compress the spinal cord or cause soft tissues in the spine, such as the discs between the vertebrae, to thicken and compress the spinal cord. Instability of the abnormal vertebrae may play an important role in the development of the condition.

A common term for cervical spondylopathy is 'wobbler syndrome', due to the characteristic wobbly gait that many of these dogs develop. Protrusion of the disc ('slipped disc') secondary to cervical spondylopathy is a common combination, referred to as cervical spondylopathy-associated disc protrusion (or disc-associated wobbler syndrome).

## What types of dogs get cervical spondylopathy?

Dobermans and Great Danes are the most common breeds that develop cervical spondylopathy. The majority of dogs show signs of spinal cord compression as young to middle-aged adults, for example four to six years of age. Occasionally dogs with severe deformities of their vertebrae will develop problems when they are immature (five to ten months old).

## Could my dog have cervical spondylopathy?

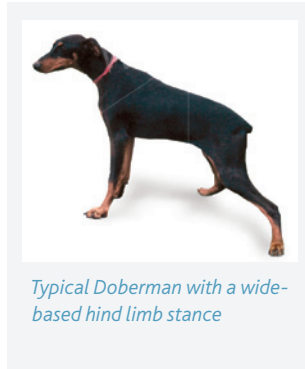
Dobermans and Great Danes who start becoming weak or wobbly or show signs of neck pain should be considered as potentially having cervical spondylopathy. Signs usually develop gradually and are progressive over many months. Occasionally affected dogs can go from appearing normal to having great difficulty walking within a few days.

Signs of cervical spondylopathy are either due to **(1) spinal nerve injury** or **(2) neck pain**.

### 1 Nerve injury

Compression of the spinal cord causes weakness and incoordination. The back legs (hind limbs) tend to be more severely affected than the front legs (fore limbs). Indeed the latter may appear to be normal initially. Scuffing of the paws and dragging of the toe nails is common.

This may be heard and examination of the nails may show excessive wear. Typically the fore limbs have a shortened stride with a choppy action and the hind limbs look disconnected. Inability to walk and incontinence are very uncommon with cervical spondylopathy.



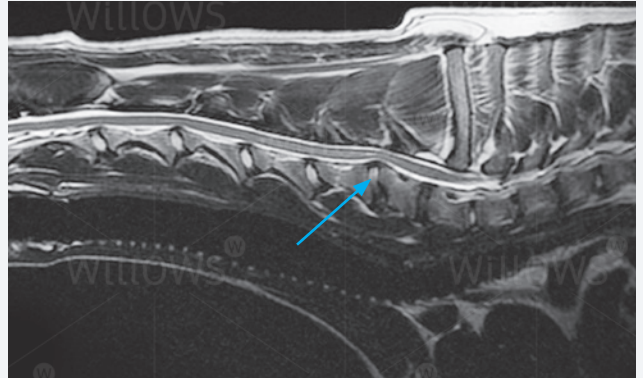
### 2 Neck pain

Signs of neck pain may be obvious e.g. yelping and crying or rigidity of the neck. More subtle signs include reluctance to jump or climb and low head carriage. Difficulty lowering the head to eat from the floor may be evident.

## How is cervical spondylopathy diagnosed?

A neurological examination is necessary to detect evidence of spinal cord compression and neck pain. There are many other causes of neck pain and nerve injury in addition to cervical spondylopathy. As a result, investigations are necessary to confirm the diagnosis and exclude other conditions.

Normal X-rays of the neck may show deformity of the vertebrae. In adult dogs there may be evidence of disc disease, such as disc space narrowing. However, more advanced investigations are necessary to assess the possibility and nature of any spinal cord compression. Of these advanced imaging techniques, an [MRI scan](#) or a [CT-myelogram scan](#) are the preferred methods of investigating cervical spondylopathy – there are advantages and disadvantages of each technique.



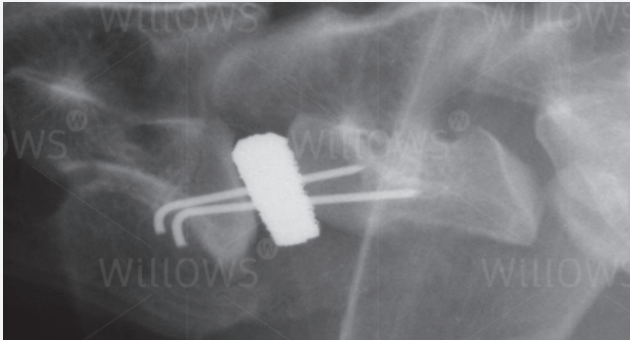
*MRI scan of a dog with cervical spondylopathy showing deformed bones (vertebrae) and an associated slipped disc with severe spinal cord compression*

Instead of X-rays, MRI uses high powered magnets and a computer to generate images of the spine. MRI provides information not only on the bones and soft tissues, including the discs, but also on the nature of any injury to the spinal cord. CT-myelography (which is an advanced X-ray technique) involves injecting a small volume of a dye (contrast agent) around the spinal cord and using a CT scan to see if the flow of dye is interrupted due to the pressure on the spinal cord. This imaging technique provides better information about the bones of the spine (the vertebrae) than an MRI scan but poorer detail of the soft tissues, such as the spinal cord (the nerve tissue). With either technique the spine can be put in traction (stretched) in order to see if the compression on the spinal cord is reduced or eliminated.



*CT-myelogram in a dog showing deformed vertebrae with collapse of the disc space, protrusion of the disc, and spinal cord compression*

Many dogs with disc protrusions associated with cervical spondylopathy have compressions that temporarily reduce with traction. These advanced imaging techniques enable an accurate diagnosis to be made and assist greatly in deciding the best course of treatment for the individual patient.



*X-ray showing vertebral distraction-stabilisation using a tantalum spinal fusion block*

Both MRI and CT-myelography require the dog to have a general anaesthetic.

Occasionally it is necessary to collect some fluid (cerebrospinal fluid – CSF) from the spine and send it to a laboratory for analysis. This test assists in the diagnosis of inflammatory conditions that affect the spine.

## How can cervical spondylopathy be treated?

Cervical spondylopathy tends to be a progressive condition. The abnormally formed vertebrae and associated instability cause the soft tissues, such as the discs, to continually thicken and compress the spinal cord. As a result many cases are managed surgically to try and prevent further injury to the spinal cord. Some old dogs and those where the outlook with surgery is very poor may be managed conservatively.

### 1 Surgery

The aim of surgery is to relieve the compression on the spinal cord. This may be done in one of two ways. Firstly the abnormal tissue, such as the thickened disc, can be cut away from the spinal cord (termed direct decompression). Alternatively the abnormal tissue, providing it is soft tissue and not bone, may be stretched to reduce compression on the spinal cord (termed indirect decompression). Stabilisation (or fusion) of the abnormal vertebrae may be necessary. Vertebral distraction-stabilisation procedures are often indicated in dogs with cervical spondylopathy-associated disc protrusions.

### 2 Conservative treatment

When dogs with cervical spondylopathy are managed conservatively, their exercise should be restricted with avoidance of unnecessary jumping and climbing. Short walks on a harness may be preferable to long periods of free exercise. Painkillers may be necessary if there are signs of neck pain.

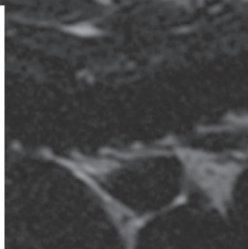
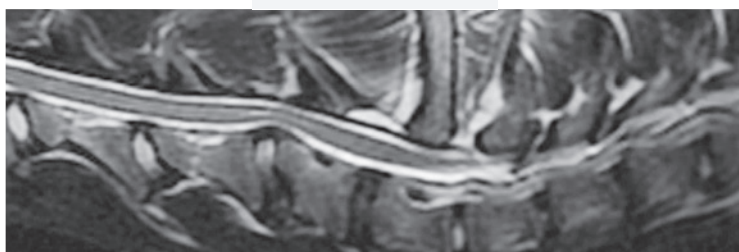
## What is the outlook with cervical spondylopathy?

The outlook or prognosis with cervical spondylopathy is variable. In severe cases that are managed conservatively, progressive spinal cord compression often results in deterioration in strength and co-ordination. Some dogs become unable to walk. Progression of signs may be gradual or sudden.

The success rate with surgery depends on the nature of the spinal cord compression, the number of areas of compression and whether or not the compression(s) respond to traction. The best scenario is generally a single, traction-responsive, disc protrusion. In these cases the outlook is often favourable, although a degree of weakness and inco-ordination may persist. Unfortunately, with cervical spondylopathy the spinal cord has often been compressed for a long time prior to treatment and this results in some of the nerve injury being irreversible.

***If you have any queries or concerns, please do not hesitate to [contact us](#).***

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