

# LOWER BACK PAIN AND BEHAVIOURAL CHANGES IN CATS:

## A SHORT TERM FOLLOW UP AFTER ORTHOMANUAL TREATMENT

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### INTRODUCTION

Chronic back pain in cats is a common and underestimated problem. Reasons for this discrepancy might be a lack of understanding about the aetiology of spinal disorders in cats, a weak correlation between medical imaging findings, intervertebral disc disease and clinical signs, and the difficulty of pain detection in cats.

Chronic pain in cats generally causes gradual changes in behaviour and lifestyle rather than profound gait abnormalities. Owner questionnaire-based outcome measures have proven to be reliable in the assessment of chronic pain. Orthomaneual medicine assumes that spinal pain may be caused by a misalignment of consecutive vertebrae. Furthermore, it is theorized that vertebral misalignment causes facet joint subluxation and predisposes to intervertebral disc herniation. Cranioventral angulation or misalignment of the sacrum has been associated with lumbosacral instability and stenosis; the main cause of lower back pain in dogs and possibly, in cats as well. In dogs, the predominant sign of lumbosacral stenosis is reluctance to rise and jump, and a consistent finding during clinical examination is pain evoked by pressure applied on the lumbosacral region.

Orthomaneual medicine assumes that spinal pain may be caused by a vertebral misalignment. A vertebral misalignment is defined as a slight displacement of a vertebra in relation

to consecutive vertebrae with concomitant facet joint subluxation. It is theorized that vertebral misalignments may be a result of trauma or repetitive mechanical overload, and an underlying cause of relative vertebral instability such as intervertebral disc degeneration, congenital vertebral anomalies, iatrogenic causes, or inflammatory, neoplastic or other degenerative processes of vertebrae, the spinal cord or surrounding structural tissues.

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Orthomaneual therapy is a manipulative technique designed to correct vertebral misalignments and facet subluxation and has shown to be beneficial in the treatment of thoracolumbar disc disease in Dachshunds.

This study describes behavioural and lifestyle changes in 21 cats with lower back pain before and after orthomaneual therapy.

### MATERIALS & METHODS

Cats included in the study were those presented at the Practice for Veterinary Orthomaneual Medicine with the primary owner complaint of behavioural changes indicative of back pain and presence of lower back pain, assessed by elicitation of pain on digital palpation of the lumbosacral region by the orthomaneual veterinarian. Cats included were clinically diagnosed with lumbosacral instability by detection of one or more vertebral misalignments in the lumbosacral area.

### RESULTS

In total 21 cats were included: 18 domestic shorthair, 1 Abyssinian, 1 Sphynx and 1 Blue Russian. 15 were female neutered and 6 male neutered. The mean age was 7.1 years. 12 cats (57%) had no concurrent orthopedic conditions, 9 (43%) cats had concurrent knee problems, of which 4 (19%) had patellar luxation. One cat (5%) had a concurrent and unidentified hip problem.

The most common owner complaints were reluctance to jump (38%) and signs of pain when touching the cat's lower

back (24%). A misalignment of S1 was found and treated with orthomaneual therapy in 16 cats (76%) and of L7 in 6 cats (29%).

There was a statistically significant improvement in the owners' overall questionnaire scores from a mean of 5.3 at baseline to 4.2 at 14 days ( $P < 0.0001$ ). Greatest improvement was reported in the categories of activity, mobility and general happiness of the cat as perceived by the owner.

### DISCUSSION

The predominant owner complaints in this feline patient group match those reported in dogs with lumbosacral pain. However, aspecific signs like reduction in general happiness or wellbeing, and behavioural changes such as hiding and avoiding contact with the owner were also common and sometimes the only owner complaint. This is consistent with the established impression that manifestations of chronic pain in cats can be subtle and aspecific, and therefore conditions that cause chronic pain may be easily overlooked. This may especially apply to conditions causing spinal pain, which often fail to show radiographic abnormalities and fail to respond to treatment with analgesics.

Other conditions such as osteoarthritis are known to cause similar symptoms and bias due to comorbidity can not be ruled out. However, most of the patients in this study had been treated unsuccessfully with analgesics and exercise restriction prior to the orthomaneual treatment.

We conclude that orthomaneual treatment of cats with lumbosacral pain and vertebral misalignments in the lumbosacral area seems to provide at least short-term pain relief and significant improvement of owner-perceived behavioural and lifestyle changes indicative of chronic pain. Due to the subjective nature of owner questionnaire assessment and the absence of a control group, a placebo effect on the assessment of behaviour can not be ruled out.

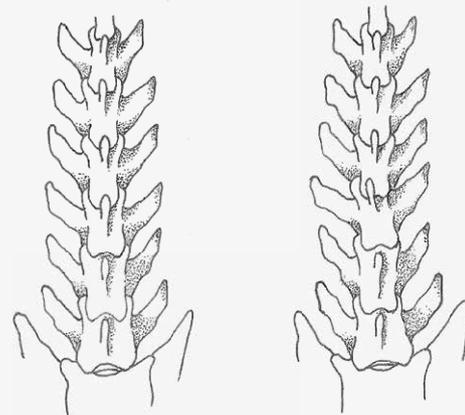


Figure 1. Normal alignment of the vertebral column (left) and misalignment of the 5th lumbar vertebra in the frontal plane.

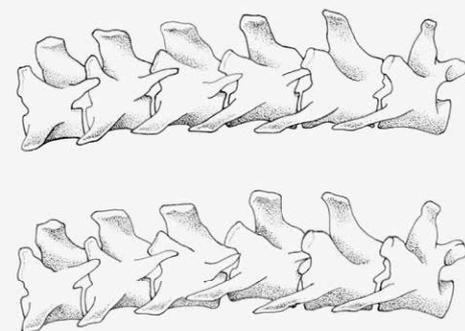


Figure 2. Normal alignment of the vertebral column (upper illustration) and slight craniodorsal displacement or misalignment (lower illustration). The caudal site of the animal is on the right in the figure.