

DECLARATION

I, Anna Margaretha van der Walt, declare that this dissertation is my own work. It is being submitted for the degree Master of Science in Physiotherapy, to the University of the Witwatersrand, Johannesburg, South Africa. It has not been submitted before for any degree or examination at this or any other University.

.....

AM van der Walt

..... day of 2008

This study is dedicated to all the special veterinarians,
fellow physiotherapists, dog owners and their dogs,
who have supported me in my endeavours in the
field of animal physiotherapy.

I would particularly like to extend my thanks to:

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ABSTRACT

Key words: Canine cranial cruciate ligament; hip joint; hip extension range

Canine cruciate ligament (CCL) rupture is a common veterinary orthopaedic problem, and has been associated with problems at the ipsilateral hip joint. However, the relationship between stifle and hip dysfunction has not been fully investigated. The purpose of this study was to establish whether CCL pathology is associated with a limitation in hip extension range large enough to affect gait. In a prospective, cross-sectional study, passive and active hip extension range was determined in normal dogs as well as CCL deficient dogs. There was a significant reduction in ipsilateral passive hip extension range in the CCL deficient dogs ($18.63^{\circ} \pm 7.57$). There was a significant increase in hip extension range of the unaffected leg during gait compared to the normal group ($7.03^{\circ} \pm 8.41$). It was therefore concluded that canine CCL pathology directly affects hip extension range to a degree sufficient to affect normal gait.

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LIST OF ABBREVIATIONS

RCCL		Ruptured Cranial Cruciate Ligament
CCL		Cranial Cruciate Ligament
ROM		Range of Motion
PVF		Peak Vertical Force
VI		Vertical Impulse
FCI		Federation Cynologique International
MSM		Methylsulfonylmethane
SD		Standard Deviation
CI		Confidence Interval