

# Contents

	<i>Page</i>
<b>Chapter 1:</b> General introduction	1
Introduction	3
Anatomy and biomechanical concepts of the vertebral column	3
<i>In vivo</i> vertebral kinematics and gait analysis systems	7
Lameness and back pain	10
Treatment of back problems	12
Purpose	12
Outline	13
<b>Chapter 2:</b> The effect of head and neck position on the thoracolumbar kinematics in the unriden horse.	15
<b>Chapter 3:</b> The effect of induced forelimb lameness on thoracolumbar kinematics during treadmill locomotion.	31
<b>Chapter 4:</b> The effect of induced hindlimb lameness on thoracolumbar kinematics during treadmill locomotion.	43
<b>Chapter 5:</b> Limb kinematics in horses with induced back pain.	57
<b>Chapter 6:</b> Spinal kinematics in horses with induced back pain.	71
<b>Chapter 7:</b> Effect of chiropractic manipulations on back and limbs kinematics in horses with back problems.	85
<b>Chapter 8:</b> General discussion	103
References	113
English summary	119
Nederlandse samenvatting	123
Resumen en Castellano	127
Acknowledgments	131
Curriculum vitae	135