



Assessing quality and passive range of motion in equine distal limb joints

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Objective

To describe and demonstrate subjective and objective techniques for assessing the quality and passive range of motion (ROM) of the distal forelimb and hind limb joints of the horse. Special attention will be given to the tarsus, carpus, and fetlock joints, as these sites are most prone to injury and/or pathology and thus most clinically relevant.

Animals

Adult horses undergoing distal limb joint ROM assessment for clinical diagnostic or treatment monitoring purposes.

Methods

First, subjective techniques for assessing distal limb joint motion and end-feel as well as general guidelines for normal joint ROM are described and demonstrated in the sagittal plane (flexion/extension). Then, a step-by-step guide to objective joint ROM assessment using goniometry is presented for the metacarpophalangeal, metatarsophalangeal, radiocarpal, and tibiotarsal joints. Finally, clinical considerations, indications, and contraindications for distal limb joint ROM assessment are discussed, alongside common pathologies associated with increased or decreased joint ROM.

Results

Instructions for obtaining goniometric measures of joint flexion/extension angle in selected distal forelimb and hind limb joints are provided and, when executed correctly, correlate to radiographic measurements, offering a straightforward, objective technique for establishing a baseline and monitoring treatment progress.

Clinical Relevance

A systematic assessment of distal limb joint ROM, combining subjective and objective techniques, is an integral part of the clinical orthopedic examination of equine patients. When executed correctly, quantifying distal limb joint ROM with the use of goniometry, which has been shown to correlate with joint angles measured radiographically, can aid the clinical decision-making process and enables objective monitoring and response to treatment.

Keywords: horse, joint movement, quality of movement, assessment, range of motion

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