Foreword

The successful workup of an orthopedic disorder is predicated on a targeted, methodical lameness examination. In conjunction with general and neurological examinations, the orthopedic examination marks the beginning of a process that leads to a diagnosis, or to the development of an expanded diagnostic plan.

Different schools of thought and philosophies naturally give rise to varying strategies. In this book, we seek to teach a systematic approach.

Every lame dog is examined using the same process: history-taking, gait analysis, examination of the dog in the standing position, examination of the dog in recumbency. In each case, all of the limbs are assessed. Diagnostic imaging only comes into play at the end of the orthopedic examination. At first glance, this may seem anachronistic, since x-ray and ultrasound machines are readily available in virtually all veterinary practices, and computed tomography and magnetic resonance tomography have become affordable. Why not simply go ahead and scan a lame dog and see what this reveals?

In addition to the increased burden of exposure to radiation and anaesthesia, several factors highlight the paradox of failing to start with the best tool of all, namely the human brain, with its diverse range of sensors including the eyes, ears and fingers. The brain is faster than any machine, can use logic to arrange information appropriately on an intellectual meta-level, can use experience to distinguish the significant from the non-significant, can evaluate the relevance of aspects of the history and signalment with respect to the existing clinical presentation and, not least, can keep the client informed of diagnostic developments.

Thus, we are also providing instruction in an "art" – the art of the orthopedic examination. This art may not be new, but it deserves renewed attention, because our „sensors" are only as good as the knowledge that informs them.

This first English edition incorporates the latest findings from innovative locomotion research conducted at the Friedrich Schiller University Jena. In part 1 of the book, these insights provide a deepened functional understanding of the anatomy and physiology of the musculoskeletal system. In light of the close relationship between orthopedic and neurological disorders – in terms of anatomy as well as differential diagnosis - the first English edition provides a guide to both the orthopedic and neurological examinations, accompanied as required by relevant anatomy. While not presuming to serve as a therapeutic text, part 3 summarizes the most important orthopedic and neurological disorders.

Yet this book is not "only" a book; it is also a film. The accompanying URLs and QR codes enable the reader to use their tablet, mobile telephone or computer to view the entire examination process in video format.

Our book is intended for students of veterinary medicine, general practitioners, physiotherapists, osteopaths, chiropractors and other therapists with an interest in orthopedics, and also for inquisitive laypeople. It aims to create order in the sequence of diagnostic steps, to facilitate the use of observation and underlying anatomical and physiological fundamentals to establish an accurate clinical diagnosis, and to provide an overview of treatment.

January 2019
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