Book Review: The Human Extremities: Mechanical Diagnosis & Therapy
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The Human Extremities by Robin McKenzie and Stephen May is a remarkable work that challenges the reader to apply critical thinking to the assessment and treatment of musculoskeletal problems (MP). This is one the first text's that brings together the prevalence of MP and recommends the use of a non-specific impairment classification. Previous researchers have suggested this classification type for low back disorders.1

The first chapter introduces the reader to the natural history and prevalence of MP. Although it reads like an epidemiological text, it is written by physiotherapists for clinicians, introducing the importance of systematic reviews and evidence based practice.

The Human Extremities' chapter Soft Tissue Properties is an excellent review for the clinician and would provide an appropriate introduction for the student. Their discussion of tissue injury and repair/remodelling research (page 28) provides a model for the clinician. The authors provide a unique presentation of clinical pathophysiology matching it to the "stage and status" of the disorder. They argue that "...the same disorder may present anywhere along a continuum, depending upon the time at which the patient attends for treatment." (page 66). Stage and status of the impairment have a profound effect on management strategies. Examples of conditions such as lateral epicondylitis and supraspinatus tendinitis are illustrated. They cite historical studies which demonstrate that chronic tendon problems have never found inflammatory cells2,3,4, but instead show the presence of degenerative changes and failed attempts at tendon repair.4,5 In a recent review, Khan and Cook also argue whether inflammation exists in chronic soft tissue lesions.6

The Human Extremities has reprinted nineteenth century physician Sir Astley Cooper's engravings. The engravings demonstrate how truly remarkable human anatomy can adapt to imposed demands. This section is a necessary review for all clinicians including physiotherapists, physicians, osteopaths or chiropractors. The plates (engravings) illustrate how human joints can create a new acetabulum (Plate II) or glenoid cavity after dislocation (Plate XXII).

McKenzie trained therapists familiar with the spinal principles have been applying them to other joints; however, The Human Extremities: Mechanical Diagnosis has organized these concepts systematically. Another strength of this text is how McKenzie and May have re-introduced the comparison of symptom response to traffic light signals. Test movements causing pain to increase would be considered an "Amber Light" if the pain did not remain worse, whereas movements that cause pain to decrease and abolish would be considered a "Green Light." "Red Light" movements are those that increase or produce pain that remains worse. This traffic light approach allows for simple patient education.

The theme of this book is self-treatment, and they give many examples with common musculoskeletal disorders. McKenzie and May state that their book is not a manual of therapist techniques and cite other sources for such information.7-10 Readers should take note that this is unlike other texts, which have listed treatment protocols by conditions.11 They state quite clearly on page 280, that their text is "not a recipe book of procedures to apply in all situations," instead it is a text about mechanical diagnosis and assessment of symptomatic and mechanical presentations. Exercise for one disorder may be used for another if suitable. They emphasize that the physiotherapist use "clinical reasoning" as part of management strategies.

McKenzie and May question the continued use of passive modalities such as ultrasound. They cite two meta-analysis on ultrasound's use and quote research that conclude "there seems little evidence to support the use of ultrasound...and...that ultrasound had...an unimportant analgesic effect across a variety of disorders."12,13 They warn that continued use of passive modalities can lead to iatrogenic disability. The authors repeatedly stress the importance of using evidenced-based decision making in the dispensing of treatment.

McKenzie and May's text emphasize the principle of mechanical diagnosis and therapy. They believe that both the therapist and patient should understand "why" do movements before they can know "what" to do. David Poulter, former director of the McKenzie Diploma programme, once wrote "understanding the principles of mechanical diagnosis and therapy will allow you (the therapist) and your patients to adapt to changes...understanding the principles is understanding why you do something, not what you do."14 This book is about principles of practice that is based on reasoning and is supported by research evidence.

All clinicians will benefit from this text. Critics of the McKenzie System are sceptical of the simplicity and logic on which the system is based. Human Extremities focuses on the underlying importance of mechanical diagnosis, history, and physical examination to daily physiotherapy practice. The Human Extremities: Mechanical Diagnosis and Therapy will provide its reader the concepts needed to apply these techniques to clinical practice. These principles are supported with the best available evidence.
References


**Reviewer’s Note: References 6, 11 and 14 are not found in the Human Extremities reference list.**