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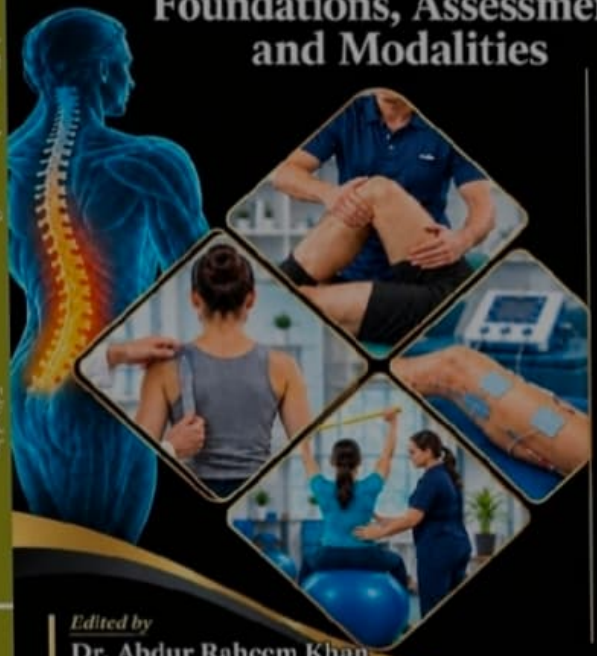
Principles and Practice *of* Physiotherapy:

Foundations, Assessment, and Modalities



FOUNDATIONS

ASSESSMENT

THERAPEUTIC EXERCISE

ELECTROTHERAPY & OTHER MODALITIES

FUNCTIONAL REHABILITATION

Edited by
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Dr. Minal Fiza

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CHAPTER 18

MUSCULOSKELETAL EVALUATION AND REGIONAL ASSESSMENT

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Abstract

Musculoskeletal (MSK) disorders represent a significant global health burden, necessitating a precise and systematic approach to clinical examination and regional assessment. The clinical evaluation of the MSK system is a fundamental skill for practitioners across various disciplines, including orthopaedics, physical therapy, and primary care. This draft chapter outlines the core principles of the MSK examination, emphasizing a structured sequence of inspection, palpation, range of motion (ROM) testing, and the application of specialized orthopaedic manoeuvre. The assessment process is grounded in a deep understanding of functional anatomy and clinical reasoning. For each major anatomical region from the cervical and lumbar spine to the peripheral joints of the upper and lower extremities specific diagnostic tests are employed to differentiate between various pathologies. This chapter describes the diagnostic utility, sensitivity, and specificity of these tests, highlighting the strengths and limitations of the physical examination in comparison to advanced imaging modalities. The integration of modern technologies such as smartphone-based assessments and telehealth is discussed as emerging components of the musculoskeletal clinical toolkit. Furthermore, the role of Clinical Prediction Rules (CPRs) and evidence-based algorithms is emphasized as a means to enhance diagnostic probability and streamline patient management.

Keywords: Musculoskeletal evaluation, Evidence based, Clinical Prediction Rules, Regional assessment, Upper limb, Lower limb.

1. Introduction

The clinical examination of the musculoskeletal system is an essential diagnostic process that begins with a comprehensive history and transitions into a methodical physical assessment [1-3]. The primary objective is to localize the source of symptoms, identify the nature of the underlying tissue involvement, and determine the functional impact of the condition [4, 5]. A thorough examination