the reader as they enter a specific chapter topic.

Overall, despite some of the limitations mentioned, this book is useful for healthcare practitioners treating athletes. It has a good overview of anatomy and pathophysiology and has a diverse content spectrum. The book skillfully guides the reader through a plethora of nerve and vascular injuries and gives sound recommendations on proper sports medicine management related to such injuries. I would recommend this text to any healthcare practitioner who manages athletes with potential nerve and vascular problems.

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ASSESSMENT AND TREATMENT OF MUSCLE IMBALANCE: THE JANDA APPROACH


Assessment and Treatment of Muscle Imbalance: The Janda Approach is a well-written, comprehensive overview of the works of Vladimir Janda. Anyone whose clinical practice has benefited from exposure to the Janda Approach through his various compendiums, videos, courses, and manuscripts will appreciate this all-inclusive reference.

The authors have broken the book into 4 sections. The first section addresses the scientific basis for Janda’s approach to muscle imbalance and they also relate Janda’s approach to several more contemporary schools of thought on muscle imbalance. They outline Janda’s key thoughts on the sensorimotor system and its role in controlling movement and mediating muscle imbalances. The authors of these chapters introduce the concept of chain reactions within the body, describing and diagrammatically representing articular, muscular, and neurological chains. In the final chapter of this opening section the authors introduce Janda’s classification of muscles prone to tightness and weakness, as well as his upper and lower crossed syndromes and layer syndrome.

The second section of the book, entitled “Functional Evaluation of Muscle Imbalance,” consists of 4 chapters devoted to the visual and palpatory skills needed to fully evaluate movement patterns and allow a window into the patient’s sensorimotor system. Chapter 5 deals with the assessment of posture, balance, and gait, and the authors present a very easily adopted algorithm for systematic postural assessment. Chapter 6 presents the evaluation of Janda’s 6 basic movement patterns, with an emphasis on the assessment of the initiation and sequencing of movement, as well as strength. Furthermore, the authors describe several contemporary tests such as the cranio-cervical flexion test and the transversus abdominis test. Chapters 7 and 8 discuss muscle length testing and soft-tissue assessment respectively and nicely relate these assessments to both muscular tender points and trigger points.

Section 3 covers the treatment of muscle imbalance syndromes. As the author’s state, “Janda firmly believed that the CNS and motor system function as one unit, the sensorimotor system.” In this section they lay out Janda’s 3 stages of treatment to normalize function of the sensorimotor system. Chapter 9 deals with normalization of peripheral structures through the use of techniques directed at the CNS to elicit peripheral changes (termed “central indirect techniques”), as well as techniques applied directly to the peripheral structures. Central indirect techniques presented include the Vojta approach, primal reflex release technique, and the Feldenkrais method; while local direct techniques presented include soft tissue mobilization, neurodynamic techniques, joint mobilization, lymphatic techniques, and orthotic techniques. All of these techniques are very briefly presented and additional texts and/or training would be needed to achieve a deeper level of understanding or proficiency. Chapter 10 covers the restoration of muscle balance. Factors leading to muscle weakness and inhibition, as well as muscle tightness and shortening, are discussed, and techniques to correct these muscle imbalances are presented. Again, a long list of techniques is presented with little detail given on any one of the techniques. This text should not be viewed as a resource to gain competency in the restoration of muscle balance, but merely a broad overview of how the various techniques presented relate to the Janda System. Chapter 11 looks at the origins of sensorimotor training (SMT) as developed by Janda, the components of SMT, and presents the 3 SMT phases (static, dynamic, and functional).

Section 4 presents an overview of the role of muscle imbalance and functional pathology of the sensorimotor system in common clinical conditions. Chapter 12 examines the cervical region, including specific diagnoses of whiplash and headache. Chapter 13 covers the upper extremity, outlining specific diagnoses of shoulder impingement syndrome and “tennis elbow.” Chapter 14 details lumbar pain syndromes, including chronic low back pain and syndromes related to the sacroiliac joint. Finally, chapter 15 focuses on the lower extremity, delving into anterior knee pain and ankle sprains specifically.

The book is well referenced. However, the references are not always the most contemporary ones available. Throughout the book the authors make good use of artistic renditions of both structural and functional anatomy, as well as clinical snapshots of patients who display muscular imbalance. Furthermore, when describing clinical evaluative and treatment techniques, the authors do a nice job providing concise written descriptions and
clinical pictures of the techniques. The book includes a thorough index to facilitate quick location of content.

Overall, Assessment and Treatment of Muscle Imbalance: The Janda Approach provides a thorough, well-organized, and well-written summary of the Janda approach to muscle imbalance. The text will be of interest to anyone who has been exposed to his techniques and writings.

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**THER EX NOTES: CLINICAL POCKET GUIDE**


Carolyn Kisner and Lynn Allen Colby may be well known as the authors of *Therapeutic Exercise: Foundations and Techniques*. In their newer text, *Ther Ex Notes: Clinical Pocket Guide*, the authors create a much more concise, comprehensive, and pocket-sized resource for the rehabilitation specialist, not just the physical therapist.

*Ther Ex Notes* is broken down into 8 chapters: an introduction, spine, shoulder, elbow/wrist/hand, hip, knee, leg/ankle/foot, and a balance/plyometrics chapter, with a reference section for each chapter. The introductory chapter includes an abbreviation list corresponding to the terminology utilized in the text, as well as exercise interventions, including guidelines, precautions, and contraindications related to range of motion, stretching, joint mobilization, neural tissue mobilization, and resistance and aerobic exercise. This chapter also includes generic protocols for treating connective tissue and joint injuries, chronic inflammatory syndromes, rheumatoid arthritis, osteoarthritis, and fibromyalgia. As throughout this text, these protocols include patient presentations, the corresponding plans of care, as well as interventions for the various conditions.

The spinal chapter includes guidelines for spinal rehabilitation, exercises to increase range of motion, and nerve mobilizations. As in all chapters, interventions are well illustrated, described, and justified. Exercises to improve muscle performance, such as cervical stabilization, lumbar stabilization, and dynamic strengthening exercises, are also included. This chapter also includes specific treatment approaches, along with patient presentations and interventions biased on either extension or flexion, as well as non–weight-bearing and weight-bearing approaches. Soft tissue and postural pain syndrome presentations, with treatment approaches/interventions, are also mentioned.

The shoulder chapter discusses guidelines for shoulder rehabilitation, exercises to increase range of motion, including joint mobilizations, mobilization with movement, and stretching exercises. The shoulder chapter includes exercises to improve muscle performance, such as assistive exercises and isometric/stabilization exercises, as well as open and closed chain exercises. *Ther Ex Notes* also has treatment and progression protocols for glenohumeral joint arthritis, total shoulder arthroplasty, painful shoulder syndromes, subacromial decompression, full thickness rotator cuff repairs, glenohumeral joint stabilization, SLAP lesion repairs, and nonoperative thoracic outlet management.

The elbow/wrist/hand chapter discusses guidelines for rehabilitation exercises to increase motion, including joint mobilizations and tendon gliding exercises. Kisner and Colby also include treatment protocols for elbow arthritis, “pushed” and “pulled” elbow, total elbow arthroplasty, lateral and medial epicondylitis, arthritis of the wrist and hand, as well as postoperative exercises and precautions for extensor tendon surgery, correction of boutonniere deformity, correction of swan-neck deformity and CMC joint arthroplasty of the thumb. Protocols for carpal tunnel nonsurgical and postsurgical management are described, as well as complex regional pain syndrome.

The hip chapter discusses guidelines for hip rehabilitation, exercises to increase motion including joint mobilizations, mobilization with movement, stretching exercises. Also included are exercises to improve muscle performance using open and closed chain exercises. This chapter also includes protocols for treatment of hip arthritis, total hip arthroplasty, hip arthroscopic procedures (anterior capsulorraphy, microfracture, and rim trimming), open reduction and internal fixation, and painful hip syndromes. This chapter includes signs and symptoms of failure of open reduction and internal fixation surgery.

The knee chapter discusses standard guidelines for knee rehabilitation, including exercises to improve muscle performance, such as isometric exercises, as well as open and closed chain exercises. This chapter also includes treatment protocols for knee joint arthritis, articular cartilage repair, total knee arthroplasty, patellofemoral dysfunction, lateral release, extensor mechanism realignment, meniscal repair, ligament injuries of the knee, and cruciate ligament reconstruction.

The leg/ankle/foot chapter discusses guidelines for ankle rehabilitation, exercises to increase motion, including joint mobilizations, mobilization with movement, and stretching exercises. Also included are exercises to improve coordination and neuromuscular control. This chapter also includes treatment protocols for arthritis, repetitive trauma syndrome, ligamentous injuries (nonoperative and operative management), and Achilles tendon repair.

The balance and plyometric chapter includes concepts and strategies for balance control, as well as precautions, general considerations and parameters to progress balance training. The authors also include pictures of balance activ-
He discovered that muscle imbalance is systematic and predictable and involves the entire body. In 1979, he defined his crossed syndromes: the upper-crossed, lower-crossed, and layer syndromes. The maximum voluntary contraction of eight muscle groups in the lower extremities of 15 children with spastic diplegia, 15 with spastic hemiplegia, and 16 age-matched peers was determined using a hand-held dynamometer. Children with spastic diplegia were shown to be weaker than age-matched peers in all muscles tested, as were the children with hemiplegia on the involved side, with strength differences also noted on the uninvolved side. Assessment and Treatment of Muscle Imbalance: The Janda Approach is the only text to offer practical, evidence-based application of Janda's theories. Filled with illustrations, photos, and step-by-step instructions, Assessment and Treatment of Muscle Imbalance uses a systematic approach in presenting information that can be used in tandem with other clinical techniques. The role of muscle imbalance and functional pathology of sensorimotor systems for specific pain complaints, including cervical pain syndrome, upper- and lower-extremity pain syndromes, and low back pain syndromes Assessment and Treatment of Muscle Imbalance provides an evidence-based explanation of muscle imbalance.