Signs and Symptoms of Athletic Injuries
J.B. Gallaspy and J.D. May.
Mosby-Year Book, Inc., 1996,
11830 Westline Industrial Drive, St. Louis, Missouri 63146
518 pages, softbound, illustrated, $60.95,
ISBN 0-8151-4039-8.

Primarily intended as a reference source for students and practitioners of athletic therapy, *Signs and Symptoms of Athletic Injuries* was created to assist readers in the evaluation of athletic injuries. Besides describing the signs and symptoms of athletic injuries in written form, this text also provides visual illustrations, a kind of color atlas of athletic injuries. In the opinion of the authors, themselves athletic therapists, this feature makes their text unique and of particular usefulness for novice sports practitioners.

The book is organized into three major sections. Section one consists of a glossary of general terminology and classification of athletic injuries. Section two consists of eighteen chapters devoted to regional injuries and conditions, including definitions, clinical signs and symptoms, and illustrations. A brief section at the end of each chapter describes tests for evaluating and assessing specific injuries. Section three provides a condensed description of acute injury management and an appendix of medical specialists.

The glossary of general terminology provides a good overview of requisite terminology for the sports medicine field. A homespun phonetic spelling for each term is provided in parentheses after each boldface entry. The simplified definitions are occasionally incorrect (as for *dermatome, neurotmesis, pronation,* and *supination*), there are some spelling mistakes (Colle's fracture spelled with one "1"), and terms are not always listed in alphabetic order (*sprain* listed before *spasm*). The classification system for sprains, strains and contusions is insufficient to adequately grade the severity of these injuries, and key grading criteria, such as painful resisted, passive or active range of motion, inability to weight-bear, and crepitus, are not included.

The full spectrum of sports injuries is commendably demonstrated in section two. Unfortunately it falls short on its promise to aid novice sports practitioners in the visual recognition of sports injuries and conditions. Close to half the illustrations, whether of xrays, MRIs, CT scans, photographs, or diagrams, fail to illustrate the conditions discussed. This constitutes my greatest disappointment with this book. Further, the kind of omissions, errors and oversights encountered in section one continue to frustrate the reader in section two. Naive spellings (i.e. *ruffening*, for the word *roughening*), inadequate descriptions of conditions (i.e. for subarachnoid hematoma, Morton's neuroma, migraine headaches), inadequate descriptions of what constitutes a positive test (i.e. for the glenohumeral translation test), and omitting the interpretation or significance of specific signs or positive tests (i.e. for the sulcus sign, Babinski's sign, painful resisted range of motion, cervical distraction test), are all examples of this section's shortcomings.

This reference text, aimed at entry-level athletic therapists to help recognize various sports injuries and make appropriate medical referrals, is of questionable use for sports-oriented chiropractors. Chiropractors are trained diagnosticians, and even those with a budding interest in sports will find the theoretical content of this book of little benefit. Chiropractic students may find some utility in this book, but will quickly outgrow it. Those not aware of the finer points of orthopaedic testing and classification of athletic injuries should be cautioned as they may be misled by errors that prevail throughout the text. I would recommend this atlas-style sports injuries text on the merits of the illustrations alone if they were more effective. Unfortunately this is not the case.

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Athletic Injuries and Rehabilitation
James E. Zachazewski, David J. Magee, William S. Quillen.
W.B. Saunders Company, 1996.
The Curtis Center, Independence square West,
Philadelphia, Pennsylvania 19106.
1022 pages, Hardcover, Illustrated, $138.00.
ISBN 0-7216-4946-8.

"As society's emphasis on continued physical activity and athletics throughout the lifespan has increased, so have the knowledge and skill required by the community of health care providers involved on managing the related injuries," profoundly stated by the authors of this book. The intent of reviewing this book is to provide you with a good source of such knowledge.

This text is divided into five sections: Arthrology and Tissue Physiology, Physiology of Rehabilitation, Applied Sport Biomechanics in Rehabilitation, Clinical Considerations and Management, and Special Topic Areas.

Section I, Arthology and Tissue Physiology, consists of ten chapters: The process of Athletic Injury and Rehabilitation, Ligament Injuries: Pathophysiology and Healing, Tendon Injuries: Pathophysiology and treatment, Adaptability of Skeletal Muscle: Response to Increased and Decreased Use, Muscle: Deformation, Injury, Repair, Delayed-Onset Muscle Soreness, Bone Biology and Mechanics, Cartilage of Human Joints and Related Structures, Articular Neurophysiology, Nerve: Structure, Function, and Physiology.

Section II, Physiology of Rehabilitation contains five chapters: Physiological Principles of Conditioning, Return to Competition: Functional Rehabilitation, Environmental Considerations for Exercise, The Use of Ergogenic Aids in Athletics. These two sections are excellent reviews of current literature and in my opinion they can even be used as an up-to-date sport physiology text book.

Section III, Applied Sport Biomechanics in Rehabilitation includes four chapters: Biomechanics of Swimming, Throwing,

Running, and Cycling. This section details the normal and abnormal Biomechanics of the most common sports activities commonly used for general fitness, conditioning, and rehabilitation.

Section IV, Clinical Consideration and Management consists of seventeen chapters: Head Injuries, Traumatic Injuries to the Cervical Spine, Maxillofacial Injuries, Peripheral Nerve Injuries, Injuries to the Thoracolumbar Spine and Pelvis, Abdominal and Thoracic Injuries, Shoulder Injuries, Elbow Injuries, Hand and Wrist Injuries, Hip and Thigh Injuries, The Knee: Ligamentous and Meniscal Injuries, The Knee: Patellofemoral and Soft Tissue Injuries, Leg, Foot, and Ankle Injuries, Emergency Care of the Injured Athlete, Psychology of the Injured Athlete, Dermatologic Considerations in Athletics, Medical Problems in Athletes. The authors of this section present up-to-date information on the topics, focusing on the conservative management and rehabilitation techniques. Although the use of modalities, mobilization, massage and exercise has been discussed in detail, unfortunately manipulation of the spine or the extremities is not mentioned except for cautionary use of Cyriax's forceful manipulation of the elbow. There is no mention of chiropractic treatment in this book.

Section V, Special Topic Areas consists of seven chapters: The Female Athlete, Preparticipation Sports Physicals, Nutritional Concerns in Athletes, Protective Equipment Considerations, The Child and Adolescent Athlete, The Athlete With a Disability, Pharmacology and Drugs in Sports: Common Use, Abuse, and Testing. This section and the chapters on psychology of the injured athlete, Dermatologic considerations in athletics, and medical problems in athletes makes this book unique from other texts in its class.

The contributing authors are well-known experts from the United States, Canada, and Australia. The list of authors includes a number of medical doctors, surgeons, physiologists, nutritionists, physical therapists, athletic trainers, only one doctor of osteopathy, and unfortunately no doctor of chiropractic. Although this text has 82 contributors, and therefore, different styles of writing, the authors have kept the reading material fluent. There are numerous cross references to other chapters to eliminate repetition. Each chapter is up to date and very well referenced, ranging from 25 to 297 references per chapter with an average of 120 references per chapter. Each author mentions different conservative and surgical methods of management but focuses on his/her own preferred method. The focus of this book is to give the reader the fundamentals of how to set a rehabilitation protocol specific to the patient's need. In addition, the editors warn the reader not to use a given rehabilitation protocol for every patient, but only use it as a guideline and tailor it to the specific needs of a patient. Hence, only a few actual rehabilitation protocols can be found throughout the book. The tables, figures, photographs and radiographs used in the text are very informative and illustrative, but in my opinion more of these and summary charts would have made the book more accessible for quick reference and review.

Overall, this book is an excellent value for the money and in my opinion any health care sciences student, professional, and library interested in sports injuries and rehabilitation should purchase a copy of this book.

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Explosive Power and Strength
Complex Training for Maximum Results.
Donald A. Chu.
Human Kinetics Publishers, Inc., 1996,
P.O. Box 5076, Champaign, Il, U.S.A.
$23.95 Cad. Price.
ISBN 0-87322-643-7.

This solo-authored text was designed to introduce the concept of "complex training" as a workout system to the sporting community. It was intended for the individual athlete, coach and trainer. It is intended to offer a workout system to produce maximum results.

This soft cover text is divided into three sections and eight chapters, including introduction of complex training, components of this system, program design, plus bibliography and index. The first section includes an overview of the components of complex training such as: resistance training, plyometrics, sprint training and sport-specific training. A brief non technical reference is made to the physiological responses by the body to training in general. The muscular system, the nervous system, the neuromuscular connection and the cardiovascular systems are briefly mentioned and not thoroughly covered considering the topic at hand. The second section highlights various types of resistance exercises using machines, free weights, and cable systems. The author uses 54 pages of diagrams outlining different free weight lifts and describing proper technique and mechanics from his perspective. Each of the illustrations gives a brief description of how to perform the lift. Included are the athletes required starting position going into the lift, the procedure during the lift and the return to the starting position. Some illustrations include free weight lifts and others are cable type lifts with weight stacks. The author also points out that collars should be used, his preference being the "E-Z on" type, particularly for longer olympic and power lifting bars with snap on levers. The author recommends that in order to "Test" a lever it should be tried. Spotters are recommended for leg lifts and lifts requiring you to lye on your back. This section then goes into 61 pages of illustrations related to the techniques and mechanics of performing various plyometric exercises. Each of the plyometric exercise illustrations also gives a brief description. Three areas are usually addressed including: equipment, start position and ending position. At times the actual action is described in detail leaving no doubt as to how to perform the

activity. The third section includes discussions on "super compensation", over training, recovery times, motivation, periodization and program design. Program desings are introduced in a sport specific and athlete specific manor. In all 11 sports are discussed. A 'Precompetition Phase Workout' form is also included as a sample worksheet to chart progress. Chapter 8 includes a section on "Norms". Norms are provided for both females and males in the areas of: Standing Long Jump, Standing Triple Jump, Vertical Jump, Fly 30, 25-Meter Single Leg Hop, 5-Meter Sprint From a Crouch, Lateral Change of Direction and Squat Strength. This section concludes with the assessment of the athlete both pre and post competition and identifies various assessment components. Finally the bibliography is short and not as up-to-date as it could be with 3 of the references missing the names of the authors. An exercise inidex is provided to allow the reader minimal time for locating specific exercises and a more detailed index follows to end the book.

The text comes complete with many tables and illustrations. All are easy to read and can be quickly used as reference items for an individual athletes progress. All charts and norms provided are from publications of the National Strength and Conditioning Association (NSCA), USA. Over-all this text is easy to read. It simulates a technique manual in many ways and is not intended as an academic text. Dr. Chu was president of the NSCA at the time this text was written. The author holds a PhD in physical therapy and kinesiology from Stanford University.

When compared to similar training texts of its kind it fits well into the illustrated manual category. It is not intended as a comprehensive text on power and strength training but rather to introduce the concept of "Complex Training" which the author claims is not popular in North America but rather in Europe.

The price of $23.95 Cad. makes it a reasonable purchase and this text would be a complement to any sports chiropractor's library. It would be of value to those practitioners involved in the training, delivery of health care and tracking of sports teams and or individual athletes.

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Mechanically Assisted Manual Techniques: Distraction Procedures
Thomas F. Bergmann and P. Thomas Davis.
Mosby-Year Book, Inc. 1998,
11830 Westline Industrial Drive, St. Louis, MO 63146.
280 pages, hardcover, illustrated $123.00.
ISBN 0-8151-0900-8

The mainstay of chiropractic is spinal manipulation, and sometimes it is not well tolerated by the patient. This book provides alternative, and possibly more tolerable, mechanical distractive techniques. It is a concise compilation of information regarding the pathomechanics of joint structures and clinical applications of distractive-traction techniques.

The text is written concisely with ample photographs, radiographs and drawings to aid the reader. Techniques with distraction are introduced and supported by the available literature, rather than the *de rigueur* of followers of a specific technique. An entertaining section reviews tractioning equipment from ancient devices to modern-day tables, paralleling patients' evolving preferences.

Basic biomechanics of joint loading is discussed, along with the effects of immobilization and trauma. This background develops intelligently and omits the smaller research minutiae, giving the reader a broad overview. A novel explanation is given of "tensegrity" (from tensional integrity) proposing the icosahedron as a model for the spinal column. The structural-mechanical aspects of the spinal column are used to rationalize distractive techniques.

Manual therapy terminology and parameters are reviewed and the effects of manual therapy upon soft tissues, nerve receptors, nervous system and psychology of the patient are explained. Aspects of the history and exam are shown with a concise flow chart for procedures involving the low back and neck. Useful for the chiropractic student are introductions to Pain Drawings, the Oswestry and the Neck Disability Index.

The techniques developed by Cyriax, McManis, Cox, Leander and Hill are elaborated, with the emphasis that they

must be explored to fully determine which combination is appropriate for the clinician and patient. Techniques and tables are illustrated and discussed according to rationales, patient positioning, application of therapy, and limitations, and are then applied to the lumbar, thoracic and cervical spines. Various adjusting techniques with distractive techniques and drop pieces are described and depicted accordingly.

This book also introduces various distraction modalities for the lumbar and cervical spines, and for carpal tunnel syndrome. A few of these devices have undergone testing to evaluate clinical usefulness and safety. The clinician is urged to maintain a critical mind and to carefully observe the potential effects of each therapeutic modality.

In my opinion, this book can be potentially useful for both the chiropractic student and field practitioner who would like to explore distractive therapeutic techniques. The first four chapters are more valuable for a student of chiropractic, while the latter four chapters can be used to aid both the student and the field practitioner. However, the clinician contemplating a possible change in technique may not find the book's overview adequate, especially considering its price. Other fundamentally based books detailing specific techniques would probably prove a more valuable investment.

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Clinical Assessment of Neuromusculoskeletal Disorders
Gary M. Greenstein, D.C.
Mosby-Year Book, Inc. 1997,
11830 Westline Industrial Drive, St. Louis, MO 63146.
234 pages, hardcover, illustrated $70.95.
ISBN 08151-3948-9.

This textbook is ideal for the chiropractic student. It provides a solid grounding not commonly found in textbooks of similar genre. The text is written concisely and logically, keeping the student in mind. Twenty-six relevant and realistic case reports with learning objectives provide provocative questions that encourage the student to engage in self-directed learning. Topics within each chapter are appropriately delegated to 20 other authors corresponding to their specialties.

In the first chapter, Greenstein succinctly introduces the reader to the salient concepts of neuroscience. The second chapter follows with background in the neuroscience of the musculoskeletal system. There is ample explanation of the rudiments of neuromuscular embryological development, with an introduction to the pertinent anatomy of the peripheral and central nervous system.

A description of the head and neck is undertaken in the third chapter. Of particular note is a well-written explanation of the temporomandibular joint complex, describing its anatomy and mechanics.

The fourth chapter devotes considerable text to the anatomical structures of the spinal column. Aspects regarding the various joints, innervation and biomechanics are explored, along with a cursory introduction to applicable orthopaedic tests for the three regions of the spinal column.

The fifth chapter explains the functional anatomy and biomechanics of the upper and lower extremities. Neurological disorders that manifest due to physical abnormalities are depicted, with brief mention of pertinent orthopaedic tests. The reader should note that there are some errors; e.g., in labelling the muscle insertion sites in the forearm, and in femoral angle terminology.

Chapter six follows with a discussion of the neuroscience of human locomotion. This explanation encompasses the reflexes of locomotion as well as the biomechanics and kinematics of gait.

The final chapter summarizes the literature pertaining to musculoskeletal and neuromuscular injury by drawing from the works of Janda and Lewit. This section introduces the student to tissue healing processes, and how patient management strategies are incorporated for the immediate to long-term goals required for the healing process.

Overall, this is a well written undergraduate textbook which touches many disciplines and provides a wide base of knowledge for disorders of the neuromusculoskeletal system. Despite wide authorship, there is a coherent theme, implying that the text has been edited extensively by Greenstein. However, this book contains a significant number of typographical errors that can begin to annoy the reader. Despite these errors, the book is well worth the expense, and imparts a plethora of knowledge that would aid the student. It is a book that should rightfully occupy shelf space in any chiropractic student's library.

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Review of "B.J. of Davenport"
Joseph C. Keating, Jr. PhD
Price $49.95 + Tax.

In the foreword of the book, Dr. W. Heath Quigley, nephew of the late Mabel Palmer states,

"Dr. Keating performed a scholarly search of the Chiropractic Archives to assure authenticity of his findings. In my opinion Dr. Keating's book is the most objective and reliable account of B.J.s professional life that has been published."

The book is over 300 pages and published by the Association for the History of Chiropractic, assisted by a grant from the National Chiropractic Mutual Insurance Co.

It is well written, easy to read, with an impressive bibliography at the end of each chapter. It is a book that should be in every chiropractor's library.

It may be purchased from the Supply Department of C.M.C.C., 1900 Bayview Avenue, Toronto, Ontario M4G 3E6.

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