The Anterior Cruciate Ligament: Reconstruction and Basic Science E-Book

Elsevier Health Sciences The Anterior Cruciate Ligament: Reconstruction and Basic Science, 2nd Edition, by Dr. Chadwick Prodromos, provides the expert guidance you need to effectively select the right procedure and equipment, prevent complications, and improve outcomes for every patient. Written and edited by world leaders in hamstring, allograft, and bone-patellar tendon-bone (BTB) ACL reconstruction, this revised reference is a must-have resource for the full range of anterior cruciate ligament reconstruction techniques, plus fixation devices, rehabilitation, revision ACLR surgery, and much more! Covers the latest clinical and technical information on pain control, genetics and biologics, the use of ultrasound, and much more. Features dozens of new chapters that offer up-to-date information on pain control after ACLR, single vs. double bundle repairs, genetics and collagen type, all-inside techniques, biologics, pediatrics, ACL ganglion cysts, prognosis for ACLR success.
allografts vs. autografts, and more. Provides the experience and insight of a "dream team" of ACL experts, including James Andrews on sports medicine, Frank Noyes on HTO and ACLR, and Andrew Amis on the benefits of the older femoral tunnel placement technique.

The Anterior Cruciate Ligament Reconstruction and Basic Science

Saunders This book presents clinical and technical information on the full range of anterior cruciate ligament reconstruction techniques. It gives detailed coverage of hamstring, allograft and bone-tendon-bone (BTB) ACL reconstruction (including single versus double bundle techniques), and hamstring graft harvesting; plus fixation devices, rehabilitation, revision ACLR surgery, and more. Surgical technique videos on the DVD help you hone and refine your skill set.

Current Concepts in ACL Reconstruction

SLACK Incorporated From evaluation to outcome, Current Concepts in ACL Reconstruction will help you keep pace with the latest techniques for the treatment of anterior cruciate ligament injuries. This text provides the most complete and up-to-date information for the surgical reconstruction of a torn ACL including details about the newer double-bundle procedure. Both American and international perspectives on the treatment of ACL injuries are included to provide the most comprehensive review on the market today. Inside this richly illustrated text, Drs. Freddie H. Fu and Steven B. Cohen along with contributions from the world’s most experienced knee surgeons review the basic science, kinematic, imaging, and injury patterns surrounding the ACL. Surgical concepts, various techniques for reconstruction, and diverse opinions on approaching the ACL are also included. Current Concepts in ACL Reconstruction explains the anatomical basis in order to provide the most current surgical principles to ensure the patient receives the best surgical outcomes. To reflect recent advancements in ACL treatment, the emerging double-bundle technique is comprehensively covered. The differences between the single- and double-bundle techniques are discussed with perspectives from leading international experts in double-bundle reconstruction. An accompanying video CD-ROM demonstrates the various procedures mentioned throughout the text. In addition, several of the world’s most experienced surgeons provide their perspective from what they have learned by performing ACL surgery for over 25 years, along with their insight into the future treatment of ACL injuries. What you will want to learn more about: • Differences between single- and double-bundle reconstruction techniques • Outcomes of single- and double-bundle reconstruction • Pediatric ACL reconstruction • Gender differences in ACL injury • Radiographic imaging • Computer navigation assistance for ACL reconstruction • Injury patterns of the ACL •
Graft choices in ACL surgery • Revision ACL surgery • Postoperative rehabilitation after ACL reconstruction • Outcome measures to assess success after surgery Current Concepts in ACL Reconstruction answers the need for a comprehensive information source on the treatment of ACL injuries. Orthopedic residents and surgeons will be prepared with this thorough review of ACL reconstruction by their side.

Revision Anterior Cruciate Ligament Reconstruction

A Case-Based Approach

Springer Nature

Anterior Cruciate Ligament Reconstruction

A Practical Surgical Guide

Springer Science & Business This practical and instructional guidebook, written by international experts in anterior cruciate ligament (ACL) reconstruction, covers all challenging aspects of ACL rupture in the acute and chronic setting. It covers the latest, spectacular anatomical findings, treatment of partial ACL tears, various techniques for single- and double-bundle ACL reconstruction, and complex ACL revision surgery. Important surgical steps are clearly described with the help of instructive, high-quality photographs. Important tips, tricks, and pitfalls are highlighted and intra- and postoperative complications, rehabilitation, and prevention of re-rupture are discussed. All authors are prominent and experienced ACL surgeons.

The ACL Handbook

Knee Biology, Mechanics, and Treatment

Springer Science & Business Media The new age of biologic treatment of the ACL is coming. In The ACL Handbook: Knee Biology, Mechanics, and Treatment, the authors cover the past and current state of ACL injuries and treatment, and then introduce and explain the key concepts for understanding the new biologic approach to ACL treatment. The use of factors to enhance graft healing are reviewed, as well as an in-
depth review of the science of platelet-rich plasma and its cellular components (platelets, white cells, and plasma). Chapters on in vitro models for science as well as the advantages and disadvantages of animal models for ACL research are included, as are chapters on the new technique of bio-enhanced ACL repair. All are discussed in easily readable text aimed at anyone with an interest of what is coming next in ACL surgery.

**ACL Injury and Its Treatment**

*Springer* This volume presents detailed information on surgically relevant anatomy and histology of the anterior cruciate ligament (ACL), biomechanics, diagnostics, and ACL reconstruction. In light of the growing body of evidence demonstrating the advantages of anatomic ACL reconstruction over traditional methods, there are also discussions of single anteromedial bundle reconstruction and anatomic ACL reconstruction with abundant descriptions of experimental and clinical studies. In addition, particular attention is given not only to techniques such as ACL augmentation, bone-patella tendon-bone reconstruction and computer-assisted navigation, but it also presents expert analysis of revision of ACL reconstruction, complications, and the future perspectives of ACL reconstruction. Edited by authoritative orthopedic surgeon from the Japanese Orthopaedic Society of Knee, Arthroscopy and Sports Medicine (JOSKAS), this book provides up-to-date information for orthopedic surgeons and physical therapists specializing in the ACL. The research evidence will broaden readers’ understanding and enable them to optimize outcomes for patients. As ACL rupture is a common injury especially for high-level athletes, it will also attract sports trainers and team physicians who are interested in a recent update on this field.

**Anatomic ACL Reconstruction, An Issue of Clinics in Sports Medicine,**

*Elsevier Health Sciences* The Adult ACL world is constantly changing and is in need of continual updates; approximately 60,000-75,000 ACL reconstructions are performed annually in the United States. Dr. Freddie Fu just held a world-wide symposium on this topic and is considered the expert. In the Clinics survey sent in the fall of 2010, survey takers were most interested in seeing an issue on ACL repair and injury prevention.

**Recent Advances in Arthroscopic Surgery**

*BoD – Books on Demand* This book is aimed at providing an overview of arthroscopic joint surgery involving major joints in the body. It discusses all aspects of arthroscopy including complex surgical procedures, feasibility of performing surgery as an OPD procedure, and complications associated with these surgeries. The
chapters are organised in regional basis and presented in an easy-to-understand format. This book will benefit all sports medicine physicians, orthopaedic surgeons and trainees, physiotherapists, and all clinicians involved in treating joint diseases. The combination of the authors' shared experiences with facts and presentation of figures and photographs will help the reader in understanding the complex principles involved. This can be used as a text for an individual or a "must have" reference book for any medical library.

Controversies in ACL Reconstruction, An Issue of Clinics in Sports Medicine, E-Book

Elsevier Health Sciences ACL reconstruction remains one of the most common orthopedic procedures performed today. This issue will discuss controversies that can arise. Articles to be included are: Diagnosis of ACL Injury: Epidemiology, mechanism of injury patterns, history, PE, and ancillary test findings including x-ray and MRI; Anatomy of the ACL: Gross, arthroscopic, and Radiographic as a basis of ACL surgery; Graft selection in ACL surgery: Who gets what and why; Management of the ACL injured knee in the skeletally immature athlete; Indications for Two-incision (outside in) ACL Surgery and many more exciting articles!

The Pediatric Anterior Cruciate Ligament Evaluation and Management Strategies

Springer This unique book fills the void in the existing literature related to the diagnosis and evaluation of pediatric ACL injuries and presents both current and emerging surgical techniques for pediatric ACL reconstruction. Once considered rare, these injuries are on the rise as children are increasingly active and engaged in high-impact sports. Historically, these injuries have been treated with benign neglect, but there is increasing evidence that non-operative treatment approaches can lead to recurrent instability, further injury to the meniscus or cartilage, and eventually joint degeneration. Opening with discussion of epidemiology, developmental anatomy, and assessment and radiography, this one-stop resource then presents conservative and surgical management strategies and algorithms, including ACL reconstruction without bone tunnels, use of epiphyseal tunnels, trans-physeal tunnels, or hybrid techniques. Special attention is given to the young female athlete, complications, prevention strategies, rehabilitation and return to play considerations. Bringing
together the latest clinical evidence with the preferred techniques of experts in the field. The Pediatric Anterior Cruciate Ligament is a comprehensive and detailed analysis of the inherent problems in treating ACL injuries in the pediatric patient, useful for pediatric orthopedic surgeons, orthopedic sports medicine surgeons, primary care sports medicine physicians and other professionals working with the young athlete.

One Anterior Cruciate Ligament injury is enough!

Focus on female football players

Linköping University Electronic Press

Background: Anterior cruciate ligament (ACL) injury is a severe and common injury, and females have 2-4 times higher injury risk compared to men. Return to sport (RTS) is a common goal after an ACL reconstruction (ACLR), but only about two thirds of patients RTS. Young patients who RTS may have a 30-40 times increased risk of sustaining an additional ACL injury to the ipsi- or contralateral knee compared with an uninjured person. Aims: The overall aim of this thesis was to increase the knowledge about female football players with ACLR, and patients with bilateral ACL injuries, and to identify predictors for additional ipsi- and/or contralateral ACLR. Methods: This thesis comprises four studies. Study I and II were cross-sectional, including females who sustained a primary ACL rupture while playing football and underwent ACLR 6-36 months prior to study inclusion. In study I, 182 females were included at a median of 18 months (IQR 13) after ACLR. All players completed a battery of questionnaires. Ninety-four players (52%) returned to football and were playing at the time of completing the questionnaires, and 88 (48%) had not returned. In study II, 77 of the 94 active female football players (from study I) with an ACLR and 77 kneehealthy female football players were included. A battery of tests was used to assess postural control (the Star excursion balance test) and hop performance (the one-leg hop for distance, the five jump test and the side hop). Movement asymmetries in the lower limbs and trunk were assessed with the drop vertical jump and the tuck jump using two-dimensional analyses. Study III, was a cohort study including all patients with a primary ACLR (n=22,429) registered in the Swedish national ACL register between January 2005 and February 2013. Data extracted from the register to identify predictors for additional ACLR were: patient age at primary ACLR, sex, activity performed at the time of ACL injury, primary injury to the right- or left knee, time between injury and primary ACLR, presence of any concomitant injuries, graft type, Knee injury and Osteoarthritis Outcome Score and Euroqol Index Five Dimensions measured pre-operatively. Study IV was cross-sectional. In this study, patient-reported knee function, quality of life and activity level in 66 patients with bilateral ACL injuries was investigated and outcomes were compared with 182 patients with unilateral ACLR. Results: Factors associated with returning to football in females were: short time between injury and ACLR (0-3 months, OR 5.6; 3-12 months OR 4.7 vs. reference group >12 months) and high
motivation (study I). In all functional tests, the reconstructed and uninvolved limbs did not differ, and players with ACLR and controls differed only minimally. Nine to 49% of the players with ACLR and controls had side-to-side differences and movement asymmetries and only one fifth had results that met the recommended guidelines for successful outcome on all the different tests (study II). Main predictors for revision and contralateral ACLR were younger age (fourfold increased rate for <16 vs. >35-year-old patients), having ACLR early after the primary injury (two to threefold increased rate for ACLR within 3 months vs. >12 months), and incurring the primary injury while playing football (study III). Patients with bilateral ACL injuries reported poorer knee function and quality of life compared to those who had undergone unilateral ACLR. They had a high activity level before their first and second ACL injuries but an impaired activity level at follow-up after their second injury (study IV). Conclusions: Female football players who returned to football after an ACLR had high motivation and had undergone ACLR within one year after injury. Players with ACLR had similar functional performance to healthy controls. Movement asymmetries, which in previous studies have been associated with increased risk for primary and secondary ACL injury, occurred to a high degree in both groups. The rate of additional ACLR seemed to be increased in a selected group of young patients who desire to return to strenuous sports like football quickly after primary ACLR. Sustaining a contralateral ACL injury led to impaired knee function and activity level.

ACL Injuries in Female Athletes

Elsevier Health Sciences This easy-to-read reference presents a succinct overview of clinically-focused topics covering the prevention, treatment, and rehabilitation of ACL injuries in the female athlete. Written by two professional team physicians, it provides practical, focused information for orthopaedic and sports medicine surgeons and physicians. Covers ACL injury risk factors and prevention, including biomechanics, biology, and anatomy of the female athlete. Discusses graft choices, the biology of healing, rehabilitation and return to play, future options for treatment, and more. Addresses special considerations such as pediatric ACL and revision ACL. Consolidates today’s available information and experience in this timely area into one convenient resource.

Revision ACL Reconstruction

Indications and Technique

Springer Science & Business Media Although anterior cruciate ligament (ACL) reconstruction has a high success rate, a substantial number of patients are left with unsatisfactory results. Revision ACL Reconstruction: Indications and Technique provides detailed strategies for planning and executing revision ACL reconstructions. Concise chapters by a leading group of international orthopedic surgeons cover the diagnosis of failed ACL reconstruction, patient evaluation, preoperative planning for
Arthroscopy
Basic to Advanced

Springer This book, published in cooperation with ESSKA, is an exceptionally comprehensive guide to arthroscopy that covers all major joints and all potential arthroscopic procedures. Sections on the knee, shoulder, elbow, hip, wrist, and ankle provide in-depth descriptions of each procedure, including indications, technique, complications, and results, as well as essential information on diagnostic work-up and classification systems/rating scales. The text is supported by a wealth of color illustrations, and clear treatment algorithms are included for most sports injuries. An introductory section describes the history of arthroscopy, explains general principles, and provides information on instrumentation, electronic equipment, anesthesia, pain control, and prevention of complications. A special chapter focuses on the operative report, with description of an electronic form that can be used by every surgeon to store operative records or participate in European multicenter ESSKA studies. The authors include the most renowned arthroscopic surgeons in Europe. Arthroscopy will be an invaluable textbook and reference for orthopaedic surgeons, general orthopaedic physicians, sports traumatologists, residents, and physical therapists.

Anterior Cruciate Ligament Reconstruction with a Bone-patellar Tendon-bone Autograft
A Five- to Nine-year Follow-up of 101 Patients

Repair and Regeneration of Ligaments, Tendons, and Joint Capsule

Springer Science & Business Media Recent advances in surgical and experimental techniques have yielded great insight into the molecular biology and mechanical properties of tendon and ligament healing, as well as new strategies for their augmentation and reconstruction. In Repair and Regeneration of Ligaments,
Tendons, and Joint Capsule, distinguished researchers and clinicians comprehensively review the most important scientific and clinically relevant topics today in ligament, tendon, and capsular biology, including their biomechanics and surgical reconstruction. The authors review the basic science of tendons in the hand and shoulder ligaments, the current clinical status of the shoulder and cruciate ligaments, and the latest advances in research on the healing of ligaments and tendons to bone, artificial ligaments, and gene therapy. They also cover the major type 1 collagen soft tissues that are of particular interest to upper extremity surgeons and sports medicine specialists. Comprehensive and up-to-date, Repair and Regeneration of Ligaments, Tendons, and Joint Capsule provides an authoritative survey of the biology and surgical reconstruction of connective tissues in the body, with special reference to tendons and ligaments in the shoulder and knee.

**ACL Made Simple**

Springer Science & Business Media ACL Made Simple is a book/CD-ROM combination that educates orthopedic residents, athletic trainers, and various medical support staff about the fundamentals of ACL injuries. The content is both thorough and practical. Readers will benefit from comprehensive discussions of diagnosis, partial tears, treatment options, operative techniques, and complications. This definitive guide also outlines a six-month rehabilitation program complete with goals, stages, and exercises. More than 150 photographs and diagrams illuminate key concepts. A CD-ROM keyed to each chapter complements the text and makes it easy for users to locate sections of particular interest. The numerous graphics and narrated video clips are dynamic tools that highlight topics including the mechanism of injury, physical examination, and surgical techniques.

**Functional Outcomes of Anterior Cruciate Ligament Reconstruction Surgery**

Anterior cruciate ligament (ACL) is one of the most common sports injuries with a reported yearly incidence rate of over two million injuries worldwide. The main aim of this thesis is to investigate various aspects related to the functional outcomes of ACLR through a series of clinical studies. Ethical approval was sought and granted by the North of Scotland Research Ethics Service. A systematic review was conducted to investigate the outcome measures used in Level I and II clinical ACLR studies. The review showed wide variability in the outcome measures utilised with no consensus on the ideal outcome instrument or combination of instruments to report the outcome of ACLR. Five-year results from the UK National Ligament Registry (NLR) were analysed with review for limitations of registry data and future recommendations. The data analysed provided a comprehensive review for the demographics, surgical techniques and functional outcomes of ACLR surgery across
The Anterior Cruciate Ligament Reconstruction And Basic Science E

the UK. NLR data is limited by multiple factors including high rate of incomplete data, duplication of data, poor patient compliance and lack of validation of the data. A study was conducted to examine the hypothesis that patients with ACLR do not return to their pre-injury functional status at two years postoperatively. The study showed significant improvement in patient symptoms postoperatively compared to their post-injury scores, but the majority of patients failed to achieve their pre-injury functional outcome scores at 2 years postoperatively. In a comparative study, the anteromedial portal (AM) technique in femoral tunnel drilling was compared with the trans-tibial (TT) technique with respect to radiological and functional outcomes. The hypothesis was that AM portal produces better functional outcomes compared with TT technique. We found that the AM portal achieved a more anatomical position of the graft but there was no difference between the two techniques in functional outcome at 2 years postoperatively. However, ACLR with the AM portal technique had higher graft failure rate compared with the TT technique. The medium-term outcome of all-inside meniscal repairs was investigated in a longitudinal study. Meniscal repairs with concomitant ACLR had a lower failure rate compared with isolated meniscal repairs. This indicates that surgeons should have a low threshold for repairing meniscal tear during ACLR surgery. The healing response technique was studied in a selected group of patients with complete proximal ACL tears. This technique yielded good functional outcome for most of the patients at 2 years postoperative follow up. The studies included in this thesis provides substantial information for surgeons treating patients with ACL injuries. It provides a platform for further research studies investigating the outcomes of ACLR surgery.

Anterior Cruciate Ligament Surgery

Amer Academy of Orthopaedic This monograph aims to help doctors learn how to prevent complications during ACL Surgery, as well as be ready to treat them effectively when they do occur. Each chapter discusses case examples of complications - from initial treatment to how the complication was treated (including rationale).

Sports Injuries and Prevention

Springer This book presents the incidence of sports-related injuries, the types of injuries specific to particular sports, and the importance of factors such as age and gender. Possible injury mechanisms and risk factors are presented based on an analysis involving recent scientific findings. A variety of sports are included to allow the reader to better generalize the results as well as to apply appropriate procedures to specific sports. The authors have emphasized basic scientific findings to help the reader gain a broad knowledge of sports injuries. The potential audience includes medical doctors, physical therapists, athletic trainers, coaches and interested parents. This book is expected to play a prominent role in the construction of training programs for both healthy and injured players. The focus on junior athletes will aid in their education, injury prevention and increased performance. It will also benefit instructors at the junior and senior high school levels. The book is composed of
seven parts. In the beginning part, current situations and the general characteristics of sports-related injuries are outlined on the basis of an investigation utilizing statistical data involving a large number of populations. In the following parts, detailed information on the injuries in terms of the types of sports activities, body sites, symptoms and the relationships among these factors are discussed. Part 2, for example, deals with topics on concussion and severe head–neck injuries which occur frequently in rugby and judo. In Parts 3 and 4, as one of the major sports-related injuries, anterior cruciate ligament (ACL) injuries are discussed. Beginning with the underlying mechanisms as assessed by using the latest measuring techniques, characteristic features of their occurrence are described. Further, Part 4 deals with topics on post-operative (ACL reconstruction) aspects of ACL injuries, especially those related to muscle functions and tendon regeneration in the hamstring muscles. Part 5 deals with muscle strain and focuses particularly on those occurring in the hamstring muscles, as this muscle group is known, as one of the most frequent sites of muscle strain. In Part 6, disorders related to the ankle and foot are introduced. Finally, Part 7 provides information on lower back disorders. Included are detailed mechanisms of their incidence, epidemiology and implications for their prevention.

The Anterior Cruciate Ligament
Current and Future Concepts

Lippincott Williams & Wilkins

Joint Preservation in the Adult Knee

Springer This book offers a comprehensive overview of the basic science and clinical evidence for non-arthroplasty interventions in the adult knee. It aims to cover all aspects of joint-preserving knee surgery, from injectable therapies such as platelet-rich plasma and stem cell therapies to surgical interventions such as meniscal repair and replacement, ligament reconstructions, and osteotomies. Following discussion of clinical assessment and imaging, individual chapters focus on specific clinical problems, including patellofemoral joint disorders, chondral injuries, and bone tumors. For each condition, a thorough overview is provided, describing clinical assessment, management (including surgical and non-surgical methods), and novel therapies. The contributors are experts in their fields from across Europe and are drawn from the worlds of clinical and academic orthopedic surgery. This book is unique in its coverage of the entire span of non-arthroplasty knee surgery and its focus on both clinical and basic science aspects. It will be helpful for knee surgeons and those engaged in research on knee-related topics, but also for students and other physicians involved in the care of patients with disorders of the knee.
ACL Injuries in the Female Athlete
Causes, Impacts, and Conditioning Programs

Springer This successful book, now in a revised and updated second edition, reviews all aspects of anterior cruciate ligament (ACL) injuries in female athletes, with the focus on complete, noncontact ACL injuries. The opening section discusses anatomy and biomechanics and explains the short- and long-term impacts of complete ACL ruptures, including long-term muscle dysfunction and joint arthritis. Risk factors and possible causes of the higher noncontact ACL injury rates in female athletes compared with male athletes are then discussed in depth. Detailed attention is devoted to neuromuscular training programs and their effectiveness in reducing noncontact ACL injury rates in female athletes, as well as to sports-specific ACL injury prevention and conditioning programs of proven value. Rehabilitation programs after ACL injury and reconstruction that reduce the risk of a future injury are explored, and the concluding section looks at worldwide implementation of neuromuscular ACL injury prevention training and future research directions. The book will be of value to orthopedic surgeons, physical therapists, athletic trainers, sports medicine primary care physicians, and strength and conditioning specialists.

The Knee Joint
Surgical Techniques and Strategies

Springer Science & Business Media Pushed by the progress of biology, technology and biomechanics, knee surgery has dramatically evolved in the last decades. This book is a "state of the art" concerning all aspects of knee surgery from ligament reconstruction to Total Knee Arthroplasty. An international panel of renowned authors have worked on this didactic fully illustrated book. It will help young surgeons to understand basic sciences and modern surgical techniques. The experienced surgeon will find help to deal with difficult cases and clarifications in recent technologic advances such as cartilage surgery, navigation and mini invasive surgery.

Basic Methods Handbook for Clinical Orthopaedic Research
A Practical Guide and Case Based Research Approach

Springer This book is designed to meet the needs of both novice and senior researchers in Orthopaedics by providing the essential, clinically relevant knowledge on research methodology that is sometimes overlooked during training. Readers will find a wealth of easy-to-understand information on all relevant aspects, from protocol design, the fundamentals of statistics, and the use of computer-based tools through to the performance of clinical studies with different levels of evidence, multicenter studies, systematic reviews, meta-analyses, and economic health care studies. A key feature is a series of typical case examples that will facilitate use of the volume as a handbook for most common research approaches and study types. Younger researchers will also appreciate the guidance on preparation of abstracts, poster and paper presentations, grant applications, and publications. The authors are internationally renowned orthopaedic surgeons with extensive research experience and the book is published in collaboration with ISAKOS.

Evidence-Based Orthopedics

John Wiley & Sons Evidence-Based Orthopedics is an up-to-date review of the best evidence for the diagnosis, management, and treatment of orthopedic conditions. Covering orthopedic surgery as well as pre- and post-operative complications, this comprehensive guide provides recommendations for implementing evidence-based practice in the clinical setting. Chapters written by leading clinicians and researchers in the field are supported by tables of evidence that summarize systematic reviews and randomized controlled trials. In areas where evidence is insufficient to recommend a practice, summaries of the available research are provided to assist in decision-making. This fully revised new edition reflects the most recent evidence using the approved evidence-based medicine (EBM) guidelines and methodology. The text now places greater emphasis on GRADE—a transparent framework for developing and presenting summaries of evidence—to allow readers to easily evaluate the quality of evidence and the strength of recommendations. The second edition offers a streamlined presentation and an improved standardized format emphasizing how evidence in each chapter directly affects clinical decisions. Incorporating a vast amount of new evidence, Evidence-Based Orthopedics: Features thoroughly revised and updated content, including a new chapter on pediatric orthopedics and new X-ray images Provides the evidence base for orthopedic surgery as well as pediatric orthopedics and orthopedic conditions requiring medical treatment Covers the different methods for most orthopedic surgical procedures, such as hip replacements, arthroscopy, and knee replacements Helps surgeons and orthopedic specialists achieve a uniform optimum standard through a condition-based approach Aligns with internationally accepted guidelines and best health economic principles Evidence-Based Orthopedics is an invaluable resource for orthopedic specialists, surgeons, trauma surgeons, trainees, and medical students.
Mastering Orthopedic Techniques: Knee Reconstruction

JP Medical Ltd Part of the highly successful Mastering Orthopedic Techniques series, this book is a comprehensive guide to knee reconstruction. Topics are presented in a step by step, “how to” approach, covering both basic and more complex issues. Enhanced by nearly 600 images, diagrams and tables.

Ligament Reconstructions

World Scientific The ACL or anterior cruciate ligament is the most important ligament in the knee. When it is completely torn, it can lead to instability or buckling of the knee. There are several options to choose from when selecting a graft for ACL reconstruction such as using autografts including patellar tendon, hamstring tendon, and quadriceps tendon, and allografts (also known as donor tissue or cadaver tissue). Artificial ligaments are also discussed since they are still used in Europe and Asia. This book summarizes the pros and cons of each graft option in detail.

Lengthening at the Sites of Fixation and a Increase in Anterior Laxity Following Anterior Cruciate Ligament Reconstruction

An in Vivo Study Using Roentgen Stereophotogrammetric Analysis

Torn

A Simple Guide to ACL Tears and Healing for Girls

Tracks Publishing Torn is the story of author Joy Werner's struggle with two anterior cruciate ligament (ACL) injuries over the course of 24 months. ACL tears are serious knee injuries that plague youth sport, particularly young female athletes, and this book describes the long journeys of healing that the injuries demand, including the
emotional and mental challenges. The personal perspective is supported by general information about the ACL, ACL injuries, and treatment. Torn is not only a guide but a real-world tale of what a young athlete had to endure and overcome when confronted with ACL injuries. It will be helpful to the thousands of young people and their families who face this trauma each year.

Anterior Cruciate Ligament Reconstruction and Dynamic Stability at Time of Release for Return to Sport

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

With an elevated risk of a second anterior cruciate ligament (ACL) injury following ACL reconstruction (ACLR), determining when an athlete can safely return to sport (RTS) is a challenging task for rehabilitation professionals. Lack of dynamic postural control has been associated with ACL injury and reinjury and should therefore be included in the assessment for readiness to RTS. The primary purpose of this investigation was to examine dynamic stability using the Dynamic Postural Stability Index (DPSI) in athletes following ACLR at the time of release for RTS compared to healthy, matched controls. A secondary purpose was to examine how dynamic postural stability is affected in athletes following ACLR when performing a jump-landing task in three different directions. We hypothesized that 1) athletes with ACLR would demonstrate decreased dynamic postural stability at time of release for RTS compared to matched controls, and 2) dynamic stability for athletes with ACLR would significantly differ among the three jump-landing tasks.

Netter's Advanced Head and Neck Flash Cards E-Book

Elsevier Health Sciences Netter’s Advanced Head & Neck Anatomy Flash Cards are the perfect portable study tool for quizzing yourself on key anatomic structures and clinical conditions of the head and neck. They accentuate the clinically relevant anatomy through beautiful Netter illustrations and new artwork in the Netter tradition, making for a fast and fun review at any stage of your healthcare career.
Cards are cross-referenced to the parent text, Netter's Head and Neck Anatomy for Dentistry, 3rd Edition, and include much of the new art from the textbook. Beautiful, well-known Netter illustrations accentuate the clinically relevant anatomy. Includes additional Imaging, New Art, and Clinical Correlate cards. Perfect for quick, portable study for head and neck and dental anatomy courses. Allow you to quiz yourself on key anatomy terms and test your knowledge of classic presentations of disease.

Sports Injuries
Prevention, Diagnosis, Treatment and Rehabilitation

Springer Sports Injuries: Prevention, Diagnosis, Treatment and Rehabilitation covers the whole field of sports injuries and is an up-to-date guide for the diagnosis and treatment of the full range of sports injuries. The work pays detailed attention to biomechanics and injury prevention, examines the emerging treatment role of current strategies and evaluates sports injuries of each part of musculoskeletal system. In addition, pediatric sports injuries, extreme sports injuries, the role of physiotherapy, and future developments are extensively discussed. All those who are involved in the care of patients with sports injuries will find this textbook to be an invaluable, comprehensive, and up-to-date reference.

Postsurgical Orthopedic Sports Rehabilitation
Knee & Shoulder

Elsevier Health Sciences Written by well-known experts in a reader-friendly style, this is the only book to focus specifically on post-surgical guidelines for successful rehabilitation of the knee and shoulder for sports patients. Content covers basic concepts related to soft tissue healing, as well as core concepts in sports medicine rehabilitation, all of which lay the groundwork for discussions of specific protocols. Detailed descriptions of the latest post-surgical procedures for various knee and shoulder pathologies equip readers with essential knowledge needed to recommend the most effective treatment plans. Includes a separate section on multiple ligament knee injuries. Numerous photos and radiographs of topics discussed in the text serve as excellent visual references in the clinical setting. Detailed descriptions of the most current surgical protocols for various knee and shoulder pathologies help readers recommend the best treatment based on proven rehabilitation plans. The inflammatory response is described, with regard to its role in soft tissue healing following surgical procedures of the knee and shoulder. Protocols based on the most recent research available promotes evidence-based practice. A chapter on rotator
cuff injuries includes authoritative, up-to-date information on this topic. A chapter on cartilage replacement focuses on the "nuts and bolts" of rehabilitation for this common injury, offering current, hands-on information about one of the fastest changing treatment protocols. Contributors are expert therapists and physicians - respected leaders in their field. Each chapter highlights post-op guidelines and protocols in a consistent format that's immediately accessible and easy to reference. Comprehensive information on soft tissue healing is presented. A separate section on multiple ligament knee injuries presents hard-to-find information that's rarely covered in other resources or literature.

A Comparison of Anterior Cruciate Ligament Reconstruction Using a Patellar Tendon Graft Vs. a Hamstring Tendon Graft

Senior Honors Thesis

Identifying Neural Activity Associated with Kinesiophobia After Anterior Cruciate Ligament Reconstruction

**Background:** Anterior cruciate ligament injury (ACL) is one of the most common knee injuries in physically active populations. ACL injuries are typically treated by surgical reconstruction and post-surgical rehabilitation in the United States. However, even after completing rehabilitation and being cleared by physicians, there is a high percentage of re-injury risk in ACL injury patients. The high re-injury rate could be explained by neuromuscular deficits: which are one of the key factors which contribute to re-injury. In addition to the neuromuscular deficits, movement pattern and physical activity levels could be affected by psychological status after ACL reconstruction (ACLR). Kinesiophobia, fear of movement, is one of the psychological factors we can measure after ACLR. Elevated levels of kinesiophobia is reported in 61% of ACLR patients within 1-2 months after surgery. Also, kinesiophobia correlates with post-surgical activity level and return to play status. However, there is limited knowledge of association between kinesiophobia and knee motor control neural activity after ACLR. **Purpose:** The purpose of the current study was to determine the
correlation between the Tampa Scale for kinesiophobia (TSK) and brain activation during hip-knee joint movement in ACLR patients. Method: Cross-sectional study, ten participants were included in current study (4 males and 6 females, 20.3±2.00 years, 1.72±0.11 m, 68.72±14.79 kg, 29.1±25.7 months from injury). All participants completed the TSK prior to the functional neuroimaging season. Functional magnetic resonance imaging (fMRI) technique was used to measure brain activation during hip-knee joint extension-flexion movements in a supine position. The task consisted of a total of four cycles for 30 seconds of activation and 30 seconds of rest. Result: Mean TSK score was 31.3±3.65 (range: 26-37). Higher TSK scores were positively correlated with three clusters. Cluster 1 included the left thalamus (z=5.41, p

Theoretical Biomechanics

BoD – Books on Demand During last couple of years there has been an increasing recognition that problems arising in biology or related to medicine really need a multidisciplinary approach. For this reason some special branches of both applied theoretical physics and mathematics have recently emerged such as biomechanics, mechanobiology, mathematical biology, biothermodynamics. This first section of the book, General notes on biomechanics and mechanobiology, comprises from theoretical contributions to Biomechanics often providing hypothesis or rationale for a given phenomenon that experiment or clinical study cannot provide. It deals with mechanical properties of living cells and tissues, mechanobiology of fracture healing or evolution of locomotor trends in extinct terrestrial giants. The second section, Biomechanical modelling, is devoted to the rapidly growing field of biomechanical models and modelling approaches to improve our understanding about processes in human body. The last section called Locomotion and joint biomechanics is a collection of works on description and analysis of human locomotion, joint stability and acting forces.

Anterior Cruciate Ligament Reconstruction Surgeries and Rehabilitation

Anterior Cruciate Ligament Reconstruction with Bone-patellar
Tendon-bone Graft
Postoperative Intervention and Influential Factors for Patient-relevant Long-term Outcome