

Lumbar Spine Fusion Surgery

The Spine-a volume in the new Arthritis and Arthroplasty series-offers expert guidance on everything from patient selection and pre-operative planning to surgical approaches and techniques. Francis H. Shen and Christopher I. Shaffrey present clear, evidence-based coverage detailing which technology and methodology is best for each patient. Access discussions of debates on anterior versus posterior approaches for the surgical management of cervical myelopathy, indications for thoracoscopic surgery, options for minimally invasive surgery (MIS) in degenerative spinal conditions, and more. Explore the role for evolving technologies and non-fusion techniques for the management of various spinal pathologies and view expertly narrated video demonstrations of surgical techniques. In addition to providing practical, pragmatic advice in a concise, readable format, this Expert Consult title offers the full text of the book, as well as links to PubMed and periodic content updates, online at www.expertconsult.com. Access the full text of the book-as well as links to PubMed and periodic content updates-online at www.expertconsult.com. Provides evidence-based, clinically focused guidance on patient selection, pre-operative planning, surgical approach and techniques, instrumentation, disease specific options, the management and avoidance of complications, and more. Discusses variations in technique, including thoracoscopy, microdiscectomy, interbody fusion, osteotomies, laminectomy, MIS decompression techniques and more. Explores alternatives to fusion in younger arthritic patients, including disc arthroplasty, facet joint replacement, nucleus replacement. Includes a review page in every chapter for quick reference to pearls and pitfalls for each topic. Presents photographs and interpretive drawings of surgical techniques in full color to bring out intraoperative details as they appear in the operating room. Features procedural videos-narrated by experts-on the included DVD so you can see how to perform particular techniques. Your purchase entitles you to access the web site until the next edition is published, or until the current edition is no longer offered for sale by Elsevier, whichever occurs first. Elsevier reserves the right to offer a suitable replacement product (such as a downloadable or CD-ROM-based electronic version) should access to the web site be discontinued.

Lateral Access Minimally Invasive Spine SurgerySpringer

Cervical laminoplasty for the treatment of ossification of the posterior longitudinal ligament was developed and refined in Japan during the 1970s. Since that time, various cervical laminoplasty techniques have been further analyzed and modified, and have proven to be clinically successful. Until now cervical laminoplasty has been practiced primarily in Japan, and surgeons outside Japan had only limited access to the detailed English literature needed to make full use of the procedures. This book fills that gap in English information and provides a detailed, up-to-date guide to performing safe and effective cervical laminoplasty. Drawing on the latest knowledge from Japan, the book covers the history of cervical laminoplasty, surgical anatomy, basic procedures, modified procedures, possible complications, and perspectives on the future of expansive laminoplasty. This volume by leaders in the field is an excellent guide for all surgeons interested in laminoplasty. Purpose: The purpose of this research was to determine the effectiveness of continuous cryotherapy in postoperative spinal fusion patients related to pain control, reduction of cost, and reduced length of stay in the acute care setting. This investigation was a quantitative, comparative research design and was accomplished by retrospective chart audit followed by statistical analysis of the collected data. A total of 186 charts of patients who underwent Posterior Lumbar Interbody Fusion (PLIF) surgery by the same surgeon at Comanche County Memorial Hospital (CCMH) in Lawton, Oklahoma were reviewed in this study. The principles behind accomplishing research and conducting this study on continuous cold therapy were two-fold: to close the gap that exists in the literature on the efficacy of cold therapy in spinal fusion patients and provide advanced practice nurses as well as other health care providers with adequate evidence for practice. Results: When comparing intramuscular milligrams of morphine during three time intervals (0-8 hours, 8-16 hours, and 16-24 hours) post operatively following lumbar fusion surgery, ANOVA analysis revealed that significantly less (p=.037) analgesics were used in the non-cooling group than in the cooling group. The non-cooling group used less morphine than the cooling group over the first 24 hours post operatively. Pain ratings were also analyzed for the first 24 hours following spinal fusion surgery and the results revealed less pain was consistently reported in the non-cryotherapy versus the cryotherapy group and is indeed statistically significant (p=.000008). T tests were utilized to examine the length of stay between the cooling and the non-cooling groups. The cooling group passed the t test and stayed approximately 35 hours less than the non-cooling group despite having higher pain ratings and higher analgesic use for the first 24 hours post operatively. The results of this study are inconclusive and suggest, due to several limitations being present in the study, that the findings can not be generalized to all patients undergoing spinal fusions. Further research needs to be conducted to evaluate the efficacy of cryotherapy in post operatively lumbar fusion patients.

Advanced Concepts in Lumbar Degenerative Disk Disease

Modern Thoraco-Lumbar Implants for Spinal Fusion

Treatment and Prevention

Minimally Invasive Spinal Deformity Surgery

An Evolution of Modern Techniques

Complications of Spine Surgery

Although there are a number of excellent books dedicated to spinal deformities, this text employs a case-based format which offers the advantage of easy readability. This format will allow the reader to better synthesize the dense information encompassing spinal deformity complications and pearls to avoid them. Example cases highlight the importance of appropriate diagnosis, radiographic assessment, classification, surgical decision making, and complication avoidance. In addition, complication management is emphasized since complications will occur regardless of skill level, experience, or meticulous technique given the complex nature of spinal deformity. Written by key thought leaders, this book not only provides state of the art concepts and techniques but also provides pearls and tips to manage and avoid complications. This book will be useful to the spinal surgeon of any experience level who is interested in optimizing their care for patients with symptomatic spinal deformity. In addition, the concepts presented in this text will be valuable to residents and fellows training in spinal surgery.

Contemporary spinal surgeons, whether orthopedic or neurosurgeons, are increasingly recognizing minimally invasive spine surgery (MISS) as a desirable option to manage advanced degenerative diseases. MISS techniques minimize blood loss, surgical site pain, and speed recovery. Thus, the marriage of MISS with adult spinal deformity was a natural one. Currently, the techniques, technologies, and education of surgeons have finally reached a point where MISS deformity surgeries are becoming commonplace. Nevertheless, the field is young enough that no comprehensive texts have addressed the unique challenges faced by surgeons exploring this evolving field. This book will fill the gap.

This best-selling resource explores the full spectrum of surgical techniques used in spine surgery, and describes how to avoid and manage complex problems. It emphasizes how to achieve successful outcomes and minimize risks. The 2nd Edition delivers more than 25 brand-new chapters, as well as extensive revisions and updates throughout, to reflect all of the latest advances in the field. It also features contributions from an increased number of orthopaedic surgeons to round out the strong coverage provided by the many neurosurgeon contributors. Features contributions from well-known neurosurgeons and orthopaedic surgeons, for well-rounded, authoritative coverage from beginning to end. Offers more than 825 outstanding illustrations that demonstrate how to perform every procedure step by step. Provides more than 25 brand-new chapters, as well as extensive revisions or total rewrites to the majority of existing chapters-to present all of the most up-to-date information available on every aspect of spine surgery. Includes chapters on hot topics such as Nonspinal Pathology Masquerading as Spinal Disease · Bone Void Fillers: Bone and Bone Substitutes · Data Management · Posterior Lumbar Interbody Fusion · Ankylosing Spondylitis and Related Disorders · Craniocervical Junction Deformities · Pediatric Spinal Deformities · Subsidence and Dynamic Spinal Stabilization · and The Nonoperative Management of Neck and Back Pain. With 267 additional contributing experts.

In this book, leading international specialists in the field join forces to discuss topics, issues and approaches that are of key importance in the optimal treatment of lumbar degenerative disk disease. The coverage is wide ranging, from current understanding of physiopathology and genetics and modern imaging techniques through to the diverse minimally invasive, non-fusion, and fusion surgical techniques. Detailed attention is drawn to the most important aspects to be considered when approaching the patient and making treatment decisions. The role of conservative management is appraised, and surgical techniques and their indications are carefully described. In the concluding section, some of the top specialists from across the world reflect on the lessons that they have learned during lifetimes in spinal surgery. Advanced Concepts in Lumbar Degenerative Disk Disease will be an instructive and fascinating source of information for all spine surgeons and other spine care providers.

The Utah Lumbar Fusion Outcome Study

Instrumented Fusion of the Degenerative Lumbar Spine

The spine

Essentials of Spinal Stabilization

Benzel's Spine Surgery E-Book

Extreme Lateral Interbody Fusion (XLIF)

The learning curve in the management of painful degenerative lumbar spine patients is steep because every case has singular characteristics. Surgical Care of the Painful Degenerative Lumbar Spine: Evaluation, Decision-Making, Techniques by Edgar Weaver reflects more than 35 years of neurosurgical practice devoted to refining degenerative spine disease evaluation and techniques. The book emphasizes and instructs a symptom-focused approach in the surgical decision-making process, with determinant radiographic features used mainly supportively. The text begins with a thorough overview of anatomy, spino-pelvic and sagittal balance metrics, stabilization, and clinical evaluations. Throughout 11 chapters, step-by-step guidance is provided on therapeutic decision-making to achieve optimal individualized outcomes. From the fundamentals of open and minimally invasive techniques to the impact of socioeconomic factors on the treatment of PDLs patients, the authors offer invaluable firsthand insights. Key Features Discussion of techniques including en bloc laminectomy, the U-turn approach to root decompression, hemilaminectomy □ a safe and versatile decompressive technique, and the lateral intra-muscular planar (LIMP) procedure The use of a descriptive clinical sub-classification system for low back pain and grading scale based on a simple testing maneuver Extensive post-operative care chapter emphasizes pain and infection control Challenges including chronic axial lumbar pain, post-operative junctional stress, sagittal imbalance, spondylolisthesis, and coronal deformity Uniquely insightful, this concise guide covers the fundamental clinical and technical skills necessary to care for patients with degenerative lumbar spine pain. It is essential reading for neurosurgical and orthopedic residents, spine fellows, spine surgeons and all clinicians involved in administrating surgical and nonsurgical spine care.

Minimally invasive techniques are now the preferred method for spine surgery because the incision is much smaller, causing less damage to surrounding muscles, pain is usually greatly reduced, and recovery time is faster. This book is a practical guide to minimally invasive diagnostic and surgical techniques for spine operations. Beginning with an overview of spinal anatomy and the basics of minimally invasive surgery, the following chapters examine the management of numerous different spinal conditions. A complete chapter is dedicated to patients with spinal cord injury and rehabilitation. More than 200 clinical photographs, diagrams and tables enhance the comprehensive text, making it an invaluable resource for both trainees and practising spine surgeons. Key points Comprehensive guide to minimally invasive spine surgery Covers diagnosis and treatment of numerous spinal disorders Complete chapter dedicated to spinal injury and rehabilitation Includes more than 200 photographs and illustrations

Lumbar spine disease constitutes the most common condition affecting the spine. Degeneration among all other pathologies frequently impairs the normal functioning of the lumbar spine. Lumbar interbody fusion (LIF) surgery is, thus, the most common surgery performed by spine surgeons, neuro, and orthopaedic surgeons. LIF techniques have evolved and been modified over decades for the best clinical outcomes. The advent of newer technologies and instrumentation have further minimized tissue damages. Spine surgeons, who need to be versatile, need to have sufficient knowledge about pros and cons of each approach to get the best clinical outcomes. This book is a reference resource to fulfil that purpose. Salient Features: The discussion elaborates on different LIF procedures. Provides an overview algorithm to use different available procedures in various clinical scenarios based on the advantages of each procedure. Eminent international and national experts have shared their expertise and experiences in their chapters.

Spinal Fusion: Science and Technique puts the experience of top professionals into your own hands. Drs. Jerome M. Cotler and Howard B. Cotler and their impressive group of contributors, including researchers, educators, and clinicians, have joined together to bring you this concise, comprehensive reference. Sections relating to history, basic science, surgical indications and techniques, complications, postoperative management, as well as a philosophical chapter on the future of spine surgery are presented. With the help of over 250 superb illustrations, Spinal Fusion: Science and Technique contains the most current and authoritative compilation of knowledge relating to surgical management of disorders of the spine. It is destined to become an essential tool in your working library.

Eficacia y seguridad de la proteína osteogénica 1 en la cirugía de fusión lumbar

Value-Based Approaches to Spine Care

Benzel's Spine Surgery

Surgical Care of the Painful Degenerative Lumbar Spine

Cervical Laminoplasty

Recent Advances in Spinal Surgery

This book presents an updated perspective on spinal implants currently used in thoraco-lumbar spine surgery, leading to a rigid or dynamic spine fusion. The development of new surgical devices and techniques is mostly focused on a spinal fusion for lumbar instability due to trauma, tumours or degenerative or infectious diseases. Pedicle-screw fixation and fusion are currently considered to be the gold standard for most of the above-mentioned pathologies, and modern implants are designed to improve the accuracy of pedicle-screw placement and to allow the use of new surgical techniques and minimally invasive approaches. The content is relevant for surgeons, orthopaedic specialists, neurosurgeons, physiotherapists and osteopaths.

This well-illustrated textbook is the first comprehensive and authoritative source of information on minimally invasive lateral access spine surgery. It covers all aspects of the subject, including patient selection, approach and monitoring techniques, soft tissue management, application in a variety of pathologies, technical nuances, and the prevention and management of complications. In addition, current controversies in the field are discussed and the biomechanics of lateral spinal reconstruction, the physiologic benefits, and cost implications are explained. As use of the lateral approach in spinal surgery has become more popular, so its diversity and complexity have increased. Nevertheless, publications devoted entirely to the technique are lacking, and Lateral Access Minimally Invasive Spine Surgery is designed to fill this vacuum. Written by the world's experts on the topic, it will be an excellent resource for both beginning and experienced surgeons.

With contributions from more than 100 renowned authorities in the field, this reference compiles treatment recommendations and tips for a myriad of complications associated with nonoperative and operative management of various spinal pathologies in children and adults-providing expert guidance on complication identification, recognition, management, and prevention, as well as the legal and ethical aspects of contemporary spinal care.

This text includes stabilization techniques for the entire spinal column, ranging from the cranio-cervical junction to the pelvis. The information is presented in an easily digestible format that is suitable for those in school or training, yet includes pearls and insight that can be appreciated by even the most seasoned surgeon. The text is divided into major sections based on the anatomical regions of the spine – cervical, thoracic, and lumbosacral.

An additional section is devoted to related surgical concepts and principles such as spinal biomechanics and bone grafting options. Each chapter has a uniform design including background, indications, patient selection, preoperative considerations, surgical technique, technical pearls, and strategies for complication avoidance. Preoperative and postoperative images and/or illustrations are utilized to highlight the presented information. Edited by a Neurosurgeon and an Orthopedist and written by leading national and international Neurosurgery and Orthopedic spine experts, Essentials of Spinal Stabilization provides a text which will broadly appeal to all spine care professionals.

Techniques and Operative Nuances Book & 2-DVD Set

Minimally Invasive Spine Fusion

Spinal Instability

Spinal Deformity

Evaluation, Decision-Making, Techniques

New Technologies in Spine Surgery, An Issue of Neurosurgery Clinics of North America E-Book

Offering in-depth coverage of an often-neglected topic, Revision Lumbar Spine Surgery identifies clinical problems and discusses recent major advances in this challenging area. Dr. Robert F. Heary and a team of international experts share their knowledge and experience with even the most difficult lumbar cases, helping you provide optimal outcomes for your patients. You'll find authoritative guidance on indications, diagnosis, approaches, and follow-up, with a focus on the significant advances that have occurred over the past two decades in this fast-changing field. Identifies the clinical problems related to unsuccessful back spine surgery as well as indications, diagnosis, and new treatment options and advances in this complex area. Provides in-depth information on the multiple options that exist for most clinical situations: anterior, posterior, lateral, and combined anterior and posterior approaches. Covers methods of fixation, the use of interbody grafting, and surgical planning related to scar tissues, bleeding, and spinal fluid leaks. Discusses critical follow-up topics such as key clinical procedures, radiography, patient reported outcomes, and pain management. Includes timely chapters on robotics, bone density issues, medical fitness concerns, instrumentation options, imaging considerations, and much more.

With an emphasis on set-up and execution and lessons learned from expert practitioners, this concise, practical guide for residents and fellows presents the essentials for both common and complex spine surgery. Proceeding anatomically from the cervical to the sacroiliac, and including chapters on spinal tumors, infection and revision surgery, nearly 40 different procedures are highlighted, from corpectomy, arthroplasty and laminectomy to percutaneous screws, decompression and fusion. Chapters include all the information a resident will need to know: indications and contraindications, imaging and diagnosis, OR set-up and instrumentation selection, the specific operative technique, post-operative protocols, and clinical pearls and pitfalls. Radiographs and full-color intraoperative photographs accompany each procedure. Whether suturing dura or performing a lateral interbody fusion, spinal surgery is a technical pursuit, and having a firm grasp of the details can ultimately determine the procedure's success. Written and edited by veterans in orthopedic surgery and neurosurgery, The Resident's Guide to Spine Surgery is just the detailed, user-friendly resource for up-and-coming clinicians looking to develop and expand their surgical expertise.

Written by internationally recognized experts, this book is a comprehensive, practical guide to prevention, recognition, and management of complications in spine surgery. Sections cover the cervical spine and the thoracolumbar/lumbosacral spine and discuss the full range of complications that may be encountered, including those associated with the newest technologies, procedures, and instrumentation. Each chapter focuses on a specific type of problem and presents "how-to" strategies for avoiding and managing the problem in specific surgical procedures. Of special note are the detailed discussions of complications related to instrumentation. Each chapter includes extensive, up-to-date references. More than 150 illustrations complement the text.

The field of spine surgery is in a state of flux, with minimally invasive and open surgical procedures vying for dominance. A new volume in the Minimally Invasive Orthopaedic Surgery series, Minimally Invasive Spine Surgery weighs the pros and cons of today's open versus minimally invasive techniques, allowing you to choose the approaches that will best meet your patients' needs. In each chapter, accomplished experts describe the advantages, indications, setup, technical aspects, and problem areas associated with a given minimally invasive procedure, including critiques from surgeons who favor a standard open approach – to give you a balanced, objective foundation for surgical decision making.

Sustainable Practices in an Era of Over-Utilization

Revision Lumbar Spine Surgery

Modern Techniques in Spine Surgery Spinal Fusion Science and Technique

Written and edited by world-renowned experts in the field, Benzel ' s Spine Surgery: Techniques, Complication Avoidance and Management, 5th Edition, provides expert, step-by-step guidance on the evaluation and management of disorders of the spine. This definitive, two-volume work explores the full spectrum of techniques used in spine surgery, giving you the tools you need to hone your skills and increase your knowledge in this challenging area. Clearly organized and extensively revised throughout, it features contributions from both neurosurgeons and orthopaedic surgeons to present a truly comprehensive approach to spine disease. Offers a thorough overview of the effective management of patients with spinal disorders, including fundamental principles, biomechanics, applied anatomy, instrumentation, pathophysiology of spinal disorders, surgical techniques, motion preservation strategies, non-surgical management, and complication avoidance and management, as well as controversies. Focuses on both pathophysiology and surgical treatment of spine disease, with an increased emphasis on minimally invasive surgery. Contains new features such as key points boxes at the beginning of chapters and algorithms to help streamline the decision making process. Covers today ' s hot topics in spine surgery, such as health economics, artificial intelligence, predictive analytics, new less invasive techniques including endoscopic spine surgery, and the future of spine surgery. Provides expert coverage of key topics including biomechanics of motion preservation techniques, spinal injuries in sports, biologics in spine fusion surgery, anterior sub-axial cervical fixation and fusion techniques, complex lumbosacropelvic fixation techniques, and many more. Features more than 1,500 high-quality illustrations, as well as new procedural videos on en bloc spondylectomy, minimally invasive endoscopic posterior cervical foraminotomy, cervical total disc replacement, minimally invasive lumbar decompression of stenosis, and more.

Over the past decade, minimally invasive techniques have developed rapidly and are widely applied in the management of spine disorders. With the development of enabling technologies, including specifically designed spinal retractor systems, intraoperative imaging and navigation technologies, and real-time neural monitoring, minimally invasive spine surgery (MISS) techniques are safe, effective and reproducible. Indeed, studies have confirmed the clinical and economic advantages of these procedures. Minimally Invasive Spine Surgery includes detailed discussions of enabling technologies, surgical techniques (including posterior decompression and fusion), approaches to specific diseases and conditions, as well as strategies to manage the unique risks and complications of MISS. Generously illustrated, this will be an essential reference for orthopedic surgeons, neurosurgeons and all health care professionals who treat the spine.

Minimally Invasive Spine Fusion: Techniques and Operative Nuances provides spine surgeons with the comprehensive information they need to incorporate minimally invasive fusion techniques and instrumentation into their practices. Edited and authored by the experts in spine surgery, this comprehensive publication is filled with detailed clinical information to help the spine surgeon skillfully execute these procedures. Every technique is described in precise step-by-step fashion and incorporates information on preoperative assessment and planning, treatment options, operative technique, potential complications and management, outcome data, and tips and tricks. Beautiful color illustrations and intraoperative photos highlight the key steps for performing these techniques safely and effectively. Numerous preoperative and postoperative images demonstrate the possible results that can be achieved. Instrumentation, monitoring, outcome analysis, and complications are also discussed in detail. In addition, you can step into the operating room with Dr. Perez-Cruet as he demonstrates minimally invasive surgical techniques for treating different spine problems. The invaluable two-DVD set is the perfect companion to the textbook and provides an additional educational value. DVD 1 Contents Microdiscectomy for L5-S1 Transforaminal Lumbar Interbody Fusion Minimally Invasive Thoracic Discectomy at T10-11With L3-4 and L4-5 Decompression Laminectomy and Posterior Lateral Fusion DVD 2 Contents Minimally Invasive Lumbar Laminectomy Minimally Invasive Laminectomy and Posterior Lateral Fusion for Spinal Stenosis For experienced spine surgeons or for those spine surgeons wishing to expand their practices to include minimally invasive techniques, this book and DVD set is a must! No other source provides so much sound, practical advice or such complete coverage.

Unsustainable healthcare costs and sophisticated predictive modeling based on large-scale medical data is rapidly changing models of healthcare delivery. The shift towards a value-based, consumer-driven industry has created an urgent need for validated tools to increase cost efficiency, reduce rates of adverse events, and improve patient outcomes. Value-based approaches to spine care will be presented, highlighting models for the future. These approaches stress cost effectiveness and sustainable approaches to spinal disease, where quality and safety are paramount. Beginning with a review of current trends in health care delivery leading to more value-based platforms, the discussion then focuses on how modern spine care is being shaped by the aging population, scientific and technological advancements, and the economic impact of various treatment modalities, providing insight into the seminal efforts surrounding sustainable spine care guideline development. The over-utilization of spine fusion surgery and adult spinal deformity are presented as examples that have led to a decline in the value of care delivered, as well as how a multidisciplinary evaluation by the range of clinicians involved in spine surgery can revise recommendations for management. The benefits and risks of LEAN methodology for streamlining and standardizing spine care approaches are discussed, and the specific approach of the Seattle Spine Team is presented as an example of successful system-wide improvement. Similar changes to outcome measurement, specifically for adult spinal deformity, are described. Last, the future of technology in spine care is presented, including robotics, nanotechnology, 3D printing, and the use of biologics and biomaterials. Given the broad scope of topics covered in this book, the intended audience includes not only orthopedic and spinal surgeons, neurosurgeons, physiatrists, and medical students, residents and fellows, but also hospital CEOs, CMOs, administrators, health services researchers, and health care policymakers, consultants and strategists.

Predicting Lumbar Fusion Surgery Outcomes from Presurgical Patient Variables

Arthritis and Arthroplasty

Minimally Invasive Spine Surgery

A Case-Based Approach to Managing and Avoiding Complications

Lumbar Interbody Fusion

Surgical Techniques and Disease Management

Offering in-depth coverage of an often-neglected topic, Revision Lumbar Spine Surgery identifies clinical problems and discusses recent major advances in this challenging area. Dr. Robert F. Heary and a team of international experts share their knowledge and experience with even the most difficult lumbar cases, helping you provide optimal outcomes for your patients. You'll find authoritative guidance, approaches, and follow-up, with a focus on the significant advances that have occurred over the past two decades in this fast-changing field. Identifies the clinical problems related to unsuccessful back spine surgery as well as indications, diagnosis, and new treatment options and advances in this complex area. Provides in-depth information on the multiple options that exist for most clinical situations, combined anterior and posterior approaches. Covers methods of fixation, the use of interbody grafting, and surgical planning related to scar tissues, bleeding, and spinal fluid leaks. Discusses critical follow-up topics such as key clinical procedures, radiography, patient reported outcomes, and pain management. Includes timely chapters on robotics, bone density issues, medical fitness concerns, insurance considerations, and much more. Enhanced eBook version included with purchase. Your enhanced eBook allows you to access all of the text, figures, and references from the book on a variety of devices.

Recent developments in surgical techniques have led to an increased demand for bone stock. Fusion enhancement, bone-void filling in tumor surgery and trauma are only a few examples. Autologous bone can be considered as the most successful bone graft material, and constitutes the accepted "gold standard," as it combines all the properties required from the bone graft. In this book a 'state-of-the-art' approach to bone grafting is presented. The general principles of bone biology and bone healing are outlined, as are recent advances in understanding and influencing bone formation. A variety of substitutes are described and compared.

Written by leading authorities in the field of spine care, this book is a comprehensive reference for the latest techniques for managing intervertebral disc disorders affecting the lumbar spine. Divided into four main sections, the book opens with a review of fundamental basic science concepts, including epidemiology, anatomy, pathophysiology, biology, biomechanics, and mechanisms of pain. The second section discusses the management of disc herniation, with chapters guiding clinicians from the pathophysiology of the herniated disc to clinical presentation to various treatment strategies. The final sections of the book present in-depth coverage of degenerative disc disease and provide essential information for imaging and testing, diagnosis, patient screening, treatment, and rehabilitation. Highlights: Detailed coverage of the full spectrum of disc disorders, including nonsurgical treatments, minimally invasive procedures, biologic techniques, and motion-preserving procedures, enables clinicians to select the appropriate treatment for each clinical situation More than 200 high-quality illustrations and images demonstrate key concepts Valuable discussion of safety considerations and how to avoid and manage potential complications Ideal for practicing spine surgeons, neurosurgeons, orthopedic surgeons, physiatrists, and researchers in these specialties.

In the latest edition of Benzel's Spine Surgery, renowned neurosurgery authority Dr. Edward C. Benzel, along with new editor Dr. Michael P. Steinmetz, deliver the most up-to-date information available on every aspect of spine surgery. Improved visuals and over 100 brand-new illustrations enhance your understanding of the text, while 26 new chapters cover today's hot topics in the field. A must-have reference for neurosurgeon and orthopedic spine surgeon, Benzel's Spine Surgery provides the expert, step-by-step guidance required for successful surgical outcomes. Glean essential, up-to-date information in one comprehensive reference that explores the full spectrum of techniques used in spine surgery. Covers today's hot topics in spine surgery, such as pelvic parameters in planning for lumbar fusion; minimally invasive techniques for disc herniation; and biologics and stem cells. A total of 18 intraoperative videos allow you to hone your skills and techniques. New editor Michael P. Steinmetz brings fresh insights and improvements to the text. Features the addition of 26 chapters, including: -Biologics in Spine Fusion Surgery -Endoscopic and Transnasal Approaches to the Craniocervical Junction -Cervical Myelography -Discography -Discogenic Pain -Minimally Invasive Techniques for Thoracolumbar Deformity -Spinal Cord Herniation and Spontaneous Cerebrospinal Fluid Leak -MIS Versus Open Spine Surgery Extensive revisions to many of the existing chapters present all of the most up-to-date information available on every aspect of spine surgery. Improved visuals and over 100 brand-new illustrations enhance learning and reading.

Pearls and Techniques

The Use of Bone Substitutes in Spine Surgery

Surgery for Low Back Pain

Lumbar Intervertebral Disc

Techniques, Complication Avoidance, and Management

Complications of Pediatric and Adult Spinal Surgery

Get comprehensive, practical coverage of both surgical and non-surgical treatment approaches from the world's most trusted authorities in spine surgery and care. Rothman-Simeone and Herkowitz's The Spine, 7th Edition, edited by Drs. Steven R. Garfin, Frank J. Eismont, Gordon R. Bell, Jeffrey S. Fischgrund, and Christopher M. Bono, presents state-of-the-art techniques in both text and video formats, helping you apply today's newest developments in your practice. Highlights critical information through the use of pearls, pitfalls, and key points throughout the text, as well as more than 2,300 full-color photographs and illustrations. Offers a newly revised, streamlined format that makes it easier than ever to find the information you need. Contains new chapters on the clinical relevance of finite element modeling and SI joint surgery. Includes an expanded section on minimally invasive spine surgery, including recent developments and future directions. Provides the latest evidence-based research from high-quality studies, including new randomized controlled trials for lumbar stenosis, surgery, fusion, and injections. Presents the knowledge and expertise of new international contributors, as well as new editorial leadership from Dr. Steven Garfin. Expert Consult eBook version included with purchase. This enhanced eBook experience allows you to search all of the text, figures, and references from the book on a variety of devices.

Recent Advances in Spinal Surgery is a comprehensive, illustrated collection of the most recent developments in the field. An editorial team of US-based experts ensures authoritative content throughout. Also features discussion on surgical options for patients for whom non-operative interventions are unsuccessful, and covers total disc replacement for both the cervical and lumbar spines. 88 full colour illustrations enhance this important update in the field of spinal surgery.

Low back pain is a very common problem that is increasingly being treated surgically. This book aims to evaluate carefully the possible surgical approaches to low back pain, with detailed appraisal of the factors leading to their success or failure. It begins by explaining the scientific basis for surgery and considering the different diagnostic techniques that may be employed, thereby elucidating the surgical rationale, indications, and contraindications. The value of conservative options is also assessed to help the reader weigh the need for surgery. The various surgical modalities, including the most recent, are then fully described and evaluated with the aid of numerous illustrations. The book concludes with a chapter devoted to evidence-based analysis of the outcome of surgery in patients with low back pain. This book will be invaluable to orthopaedic and neurosurgeons, rheumatologists, neurologists, and all who are concerned with the effective treatment of this often debilitating condition.

This volume describes the variety of techniques and instrumentation devices that have been developed for lumbar spinal fusion and critically assesses the use of these devices for treatment of degenerative lumbar disorders. Leading international experts present views of the major controversies surrounding surgical management of degenerative low back pain - whether and when fusion is indicated, which techniques and devices to use, and how to evaluate results.

Rothman-Simeone and Herkowitz's the Spine

Predictors of the Incidence and Charges for Lumbar Spinal Fusion Surgery in Florida Hospitals During 2010

Spine Surgery

State of the Art, Questions, and Controversies

The Resident's Guide to Spine Surgery

Vol. 2

Over the past several decades rates of spine surgeries in the U.S. have increased dramatically. Spinal fusion surgery rates, in particular, have grown exponentially despite being one of the most costly, invasive, and controversial methods for treating patients suffering from back conditions. Furthermore, lumbar fusion surgeries continue to be performed at increasing rates despite a lack of scientific evidence and consensus that they are cost-effective and produce better clinical outcomes than less radical treatment of lower back pain. As a result, large amounts of healthcare dollars continue to be invested in these costly procedures which are potentially dangerous and have questionable efficacy in terms of improving patient outcomes.

Importantly, there is a lack of population studies in the literature on spinal fusion surgeries from a health services research perspective. Therefore, the present research is a population based study using an administrative database and includes patients of all ages and payer types. The data used in the present study come from the Florida Agency for Health Care Administration (AHCA) and include all hospitalizations in Florida in 2010. The objective of the study is to analyze the incidence of spinal fusion surgeries in Florida hospitals for patients of all ages and payer types by demographic variables to understand who gets these surgeries and for which conditions. The first null hypothesis is that there are no statistically significant predictors of the incidence of lumbar/lumbosacral, dorsal/dorsolumbar spinal fusion surgeries in Florida hospitals. Logistic regression was used to analyze the incidence of fusion surgeries. The binary dependent variable was coded as a "1" for all patients who were a case (i.e. they received one of the five procedure codes being studied in the present research) and a "0" for all patients who were controls (meaning they did not receive any of the five fusion procedure codes).

In this volume, world authorities on spinal surgery from the fields of Neurosurgery, Orthopaedic Surgery, and Neuroscience present current data on the basic science and clinical management of the unstable spine. Unique to this book: a frank presentation of controversies in the field.

This issue of Neurosurgery Clinics, guest edited by Dr. Nathaniel P. Brooks and Dr. Michael Y. Wang, is devoted to New Technologies in Spine Surgery. Articles in this issue include: Endoscopic Lumbar Discectomy, Endoscopic Cervical Foraminotomy, Endoscopic Lumbar Interbody Fusion, Endoscopic Lumbar Decompression, Lateral Lumbar Interbody Fusion, Retropleural Thoracic Approach, Novel Intervertebral Technologies, Surface Technologies for Fusion, Cell derived/Stem Cell Technologies for Fusion, Disk Replacement, Enhanced Recovery in Spine Surgery/Perioperative pain management, Imaging Technologies, Robotic Instrumentation Placement, Minimally Invasive Deformity Advances, Tissue Engineering/Regenerative Treatments, Minimally Invasive Tumor Ablation, and more.

Minimally Invasive Spine Surgery combines up-to-date research on surgical techniques with high-definition surgical video and concise algorithmic evidence. Each of its sixteen chapters begins with a brief summary followed by imaging indications, instrumentation, a step-by-step surgical technique (and video guide), as well as the potential complications and adverse outcomes that may develop. Techniques discussed in the text include: Posterior Cervical Foraminotomy; Percutaneous Posterior Pedicle Screw Placement; Lumbar Discectomy; Transforaminal Lumbar Interbody Fusion (TLIF); Lateral Lumbar Interbody Fusion (LLIF). Also included is a discussion on the types of implants and instrumentation available today and the potential advantages they offer, making Minimally Invasive Spine Surgery an essential and relevant book for orthopaedic and neurosurgeons. Key Points Authored by experts from Rush University Medical Centre and Thomas Jefferson University Hospital in the United States Includes DVD to enhance clinical instruction 273 full colour illustrations

The Textbook of Spinal Surgery

Efficacy of Continuous Cryotherapy in Post Lumbar Spinal Fusion Patients

Lateral Access Minimally Invasive Spine Surgery

Revision Lumbar Spine Surgery E-Book