

## Endoscopic Spinal Surgery 1st First Edition By Lewandrowski Kai Uwe Md Lee Sang Ho Md Phd Ipre Published By Jp Medical Publishers 2013

Endoscopic technology has advanced to the point where practitioners can now access, visualize, and treat spine pathologies previously only accessible through open surgical approaches. Endoscopic Spine Surgery 2nd Edition provides a comprehensive background on endoscopic spine surgery and covers an unparalleled number of minimally invasive spine procedures that have revolutionized the spine treatment paradigm. Readers will greatly benefit from many years of expertise and wisdom shared by master spine surgeons Daniel Kim, Gun Choi, Sang-Ho Lee, and Richard Fessler, and their expert contributors. Due to the narrow endoscopic view, subtle microanatomical differences in the lumbar, thoracic, and cervical regions are not always easy to visually discern. To address this challenge, the book contains detailed procedural descriptions and images mirroring endoscopic views spine surgeons encounter in the OR. Organized anatomically, 53 chapters guide readers systematically through lumbar, thoracic, cervical, and craniocervical junction procedures for pathologies ranging from low back pain and deformities to tumors, lesions, infections, and trauma. Key Features More than 1000 high quality images including color procedural photographs and medical illustrations provide in-depth visual understanding. Spinal pathologies and procedures delineated in 75 videos accessible via the Media Center - from case studies to step-by-step technique tutorials. Covers the full spectrum of spine endoscopy including percutaneous approaches, microdiscectomy, laminectomy, discectomy foraminotomy, hemilaminectomy, thoracic decompressions, fusion, fixation, and thoracoscopic procedures. The use of state-of-the-art technology such as ultrasonic bone dissectors, endoscopic radiofrequency denervation, the video telescope operating monitor (VITOM), minimally invasive tubular retractors, and 3D stereo-tubular endoscopic systems. Neurosurgical and orthopaedic residents, spine fellows, and seasoned spine surgeons will all greatly benefit from the significant knowledge and insights revealed in this remarkable multimedia resource. This book may also be of interest to neurosurgical and orthopaedic nurses, physical therapists, chiropractors, and medical device professionals.

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. Endoscopic techniques are widely used for screening, diagnostic and therapeutic maneuvers in all groups of patients and for a large spectrum of complaints. The availability of basic iterations of endoscopic techniques made screening programs for various diseases viable in most parts of the world, while the advent of modern techniques opens new perspectives for rapid and correct diagnosis. Going beyond normal human vision, innovative techniques opened the prospect of in-situ pathology. Endoscopic ultrasound has made incredible progress in recent years. Reaching the smaller orifices by endoscopy was a major step forward in the surveillance of previously inaccessible lesions. Investigatory techniques were complemented by advances in therapy, with novel applications in many major areas of medicine.

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.

A comprehensive guide to anesthesia specifically for spine surgery, explaining procedures from the point of view of both anesthesiologists and surgeons.

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.

Featuring an expanded focus on in-demand endoscopic and minimally invasive spine procedures, Surgical Anatomy and Techniques to the Spine, 2nd Edition pairs new anatomic photographs and radiographic images with expertly rendered color illustrations and clear, step-by-step descriptions to help you effectively perform all of the latest and most effective spine surgery

techniques. A multidisciplinary approach makes this medical reference book relevant and informative to all surgeons regardless of their specialty or level of surgical experience with the spine. Proceed with confidence. An atlas-style format featuring clear, concise, step-by-step descriptions of the anatomy and procedures along with clinical hints and pearls, tables, and management algorithms provideing swift answers and trusted guidance. Sharpen your surgical acumen with a deeper understanding of the anatomy of the surgical target and related anatomy.

Comprehensive information on cervical, cervical/thoracic, thoracic/lumbar, lumbar spine, lumbar/pelvis, and other surgical locations ensures the best approaches to spine surgery and results. Understand the spine from all angles with multiple-viewpoint, full-color photographs, and illustrations. Master surgical anatomy of the spine and the latest minimally invasive techniques. Sweeping revisions and updates-including 22 new chapters-provide new and expanded coverage of spine surgery procedures and topics such as surgical management in gunshot wound to the spine, vertebroplasty, and kyphoplasty. Visualize every step of each procedure thanks to new anatomic photographs and radiographic images, corresponding with expertly rendered illustrations which more in-depth than ever before. Access the entire text and illustrations online, fully searchable, at Expert Consult. With over 60 additional contributors.

Endoscopic spine surgery essentials from expert spine surgeons Atlas of Full-Endoscopic Spine Surgery by internationally renowned spine surgeons Christoph Hofstetter, Sebastian Ruetten, Yue Zhou, and Michael Wang provides concise, step-by-step guidance on the latest full endoscopic spine procedures. The book is targeted at practicing spine surgeons, fellows, and residents currently not trained in endoscopic spine surgery who have the desire to learn and incorporate these techniques into clinical practice. It is also an excellent curriculum resource for cadaveric training courses taught at the national and international level. The book lays a solid foundation with opening chapters on anesthesia, OR setup and endoscopic tools, applied anatomy, basic endoscopic surgical tasks, and preoperative diagnostics. Additional sections include step-by-step descriptions of the full spectrum of cervical, thoracic, and lumbar endoscopic approaches.

The last section provides invaluable pearls on overcoming challenges, avoiding pitfalls, and optimizing postoperative care. Key Features Transforaminal endoscopic lumbar and thoracic discectomy approaches Trans-SAP endoscopic approach for foraminal and lateral recess decompression Interlaminar endoscopic lumbar discectomy Cervical/thoracic and lumbar unilateral laminotomy for bilateral decompression Special topics including endoscopic management of challenging cases, endoscopic revision surgery, and management of complications. Neurosurgery residents, fellows, young practicing neurosurgeons, and all healthcare practitioners involved in the care of endoscopic spine surgery patients will gain invaluable insights from this book.

Percutaneous lumbar discectomy is a new surgical method for treating lumbar disc diseases. The goal of the procedure is decompression of the spinal nerve root by percutaneous removal of the nucleus pulposus under local anesthesia. Probably 20 % of all patients requiring lumbar disc surgery can be successfully treated by this method. During the past two years, percutaneous discectomy has spread rapidly, and it is now performed in most clinical departments engaged in spinal surgery. The first International Symposium on Percutaneous Lumbar Discectomy, held in Berlin in August 1988, covered all current procedures known as "percutaneous discectomy" and the entire range of percutaneous techniques, both clinical and experimental. Its publication is important because of the recency of this new surgical procedure, the outstanding experience of the speakers - including the Japanese, American, and European "pioneers" of the technique - and last but not least the gaps in the knowledge of physicians concerning this topic. This procedure opens up new perspectives in the surgical treatment of degenerative diseases of the lumbar spine.

Minimally Invasive Spine Surgery is a beautifully illustrated atlas describing the 18 most widely accepted minimally invasive procedures in spine surgery. Written by leaders in both neurologic and orthopedic spine surgery, this book offers the most up-to-date material and the broadest perspective on the subject. Procedures range from simple to complex and cover the cervical, thoracic and lumbar regions of the spine.

A well written, insightfully organized text of an advanced surgical technique that will assist any spine surgeon looking to learn or perfect this endoscopic procedure.-- --ANS Young Neurosurgeons NewsletterEndoscopic Spine Procedures combines the vast experience of internationally recognized spine surgery experts and provides detailed coverage of operative techniques for the cervical, thoracic, and lumbar spine.The book begins with an overview of the principles of percutaneous endoscopic spine surgery followed by a detailed discussion of applied anatomy, surgical approaches and techniques, and potential complications for the different spine regions. Each chapter contains concise, step-by-step descriptions of the procedures enhanced by clearly labeled illustrations.Features Bullet-point format enables rapid reference prior to surgery 19 high-resolution videos -- one for every procedure described in the book -- appear on an accompanying MediaCenter web page 694 high-quality illustrations prepare readers for surgery, including radiographs, full-color endoscopic views, detailed drawings, and 3-D surgical views Clinical cases demonstrate how to tell the differences between spine levels and between disease states This concise technical guide is an essential resource for neurosurgeons, orthopedic surgeons, interventional radiologists, or anyone involved in the care of patients with spine disorders.

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.

This issue of Neurosurgery Clinics of North America is devoted to "Minimally Invasive Spine Surgery" and is edited by Zachary A. Smith, MD and Richard G. Fessler, MD, PhD. Articles in this issue include: Complications and complication avoidance of minimally invasive spine surgery; Radiation exposure risk and avoidance; Current techniques in the management of cervical myelopathy and radiculopathy; Thoracic disc/pathology management through minimally invasive routes; Transforaminal Lumbar Interbody fusion: Long term outcomes and complications; Computer-assisted navigation technique for minimally invasive transforaminal lumbar interbody fusion and lateral interbody fusion; Safety and the Anatomy of the retroperitoneal lateral corridor; Minimally invasive extracavitary transpedicular corpectomy for the management of spinal tumors; Minimally invasive anterolateral corpectomy for spinal tumors; Minimally invasive approaches for the management of intramedullary spinal tumors; Percutaneous fixation of thoracolumbar fractures; Advances and feasibility of advanced minimally invasive techniques in deformity correction; Direct lateral approach: Outcomes and Deformity Correction; and Evidence basis and outcomes.

In the past few years spine surgery has undergone revolutionary changes leading towards minimally invasive techniques. This book is a survey of microsurgical as well as endoscopic surgical techniques for

the treatment of a variety of spinal disorders. The structure of the individual chapters includes terminology, history, surgical principles, advantages/disadvantages, indications, surgical technique, complications and hazards as well as results. However all chapters are focused on a very didactic presentation of surgical steps. Thus, the reader will get familiar with a variety of new techniques some of which are already integrated into clinical routine others still being part of ongoing clinical trials and development.

Topics on Spinal Anaesthesia consists of eight important and updated chapters covering subarachnoid anaesthesia for major orthopaedic surgeries, ambulatory and short stay plastic surgical procedures, complications, and discussing the usefulness of opioids and non opioids drugs as spinal adjuvants to enhance subarachnoid block, transoperative analgesia and postoperative analgesia in various clinical scenarios. InTech invited respectable anesthesiologists from different countries to write this book. The authors and co-authors discussed in detail the advances in these subjects, so that the reader has an updated view and can use this knowledge on his/her patients. It is a practical book covering current information about subarachnoid anaesthesia.

The second congress of the Pacific Asian Society of Minimally Invasive Spine Surgery (PASMIS) held in Phuket, Thailand, August 5–6, 2002, was highly successful. Dr. Akira Dezawa, the president, had worked hard in organizing the congress, which was well attended. All scientific papers presented were of the highest standard and were worthy of publication in book form. This scientific meeting brought to light the practice of this modern surgical technique as it is being performed by spine surgeons in the Asia-Pacific region. Dr. Dezawa has made a great effort to collect the papers from the congress, and to have them edited and published as a text that covers all aspects of the minimally invasive spine surgical approach. Minimally invasive spinal surgery will be a highlight of operative approaches in the twenty-first century and already has been popularized worldwide. This procedure will provide surgical options that address several pathological conditions in the spinal column without producing the types of morbidity commonly seen in open surgical procedures. The contents of this book provide highly relevant and detailed information. I certainly believe that it will be a great benefit to all orthopedic surgeons who are interested in performing minimally invasive spine surgery. Charoen Chotigavanich, M.D. Chairman, Spinal Section The Royal College of Orthopedic Surgeons of Thailand V Preface Recent decades have been characterized by revolutionary changes in spinal surgery. Concurrent progress in implant technology and functional endoscopes and the improvement of less invasive surgical techniques has opened a new dimension for spine surgery.

New motion-preserving devices are revolutionizing spine surgery...but the learning curve for these operations is steep, and great attention must be given to patient and device selection and the perfect execution of each procedure. Only one reference spells out exactly how to perform these new techniques...and its peerless author team, comprised of key investigators involved in the devices' actual clinical trials, is uniquely qualified to help you get the best results! These global leaders in this area discuss the advantages and disadvantages of the full range of non-fusion technologies...and present the step-by-step, richly illustrated operative guidance you need to achieve optimal outcomes! Select the best device and approach for each patient! \* cervical total disc arthroplasty \* lumbar total disc arthroplasty \* lumbar partial disc replacement: nucleus replacement \* lumbar posterior dynamic stabilization: pedicle screw based \* lumbar posterior dynamic stabilization: interspinous based \* lumbar facet replacement Produce optimal outcomes with detailed advice on... \* advantages and disadvantages of each option \* indications and contraindications \* patient selection \* interpretation of imaging studies \* surgical anatomy and biomechanics \* surgical techniques \* tips and pearls See how to perform each technique, thanks to step-by-step, full-color illustrations

The emphasis throughout the text is to provide clear and practical step-by-step guidance to the many knot and suturing techniques in the surgeon's armamentarium Each stage of the various knots and procedures described is illustrated by clear, three colour line drawings and accompanied by definitive text.

Authored by a multi-disciplinary team that includes orthopedists and neurosurgeons, Textbook of the Cervical Spine is a practical, clinically focused medical reference for treating patients with the full range of cervical spine disorders. From degenerative spine conditions and inflammation, to trauma and infections, it guides today's spine surgeons, orthopaedic surgeons, neurosurgeons and residents through state-of-the-art surgical and fixation techniques, today's emerging technologies, and possible complications. Consult this title on your favorite e-reader, conduct rapid searches, and adjust font sizes for optimal readability. Accurately handle complex situations with image-guided techniques for the management of cervical spine pathology, as well as helpful information on patient management and surgical decision making. Stay up to date on hot topics with recent case studies that orient you toward important clinical information in the field. Quickly find the information you need with succinct chapters that focus on highlights, key points, tips, and tricks.

This book describes and illustrates state-of-the-art techniques in laser spine surgery. Laser technology has revolutionized surgeries in many specialties to perform minimally invasive and cutting-edge procedures. Recent advances in spinal surgery have led to the increasingly widespread use of minimally invasive techniques based on endoscopy and microscopy. Nevertheless, the application of laser in the context of spinal surgery remains less well known, and the aim of this book is to present practical usage of laser in spine surgery to our readers. A wide variety of minimally invasive approaches to spine surgery using CO<sub>2</sub>, Ho: YAG, and Nd: YAG lasers are presented in detail, with a discussion of equipment and specific recommendations on laser settings. Care has been taken to ensure that the content is faithful to the fundamental principles of spine surgery and evidence-based medicine. The book will be an essential resource for all who use or are intending to use lasers in spine surgery.

This book is a superbly illustrated guide to the latest endoscopic approaches employed in surgery to the lumbar spine. In the past, spinal endoscopic surgeries have been performed mainly in the treatment of lumbar disc herniation, but indications have now expanded owing to breakthroughs in surgical methods and instruments. Furthermore, in addition to the traditional percutaneous transforaminal approach, various other approaches are now feasible, including the posterior, paraspinous, transpedicular, and contralateral. This book describes and illustrates the full array of approaches in indications including lumbar central stenosis, lumbar foraminal stenosis, and lumbar disc herniation. Detailed guidance is also provided on endoscopic lumbar interbody fusion, covering the oblique, uniportal, and biportal approaches. Supplementary surgical videos further facilitate understanding and execution of the described procedures. Written by expert spinal endoscopy surgeons with extensive practical experience and a record of academic achievement, the book will be an ideal aid for spine surgeons at all levels of experience.

Endoscopic Spinal Surgery provides a comprehensive, practical and timely review of the minimally invasive endoscopic surgical techniques used to treat conditions of the cervical, thoracic, and lumbar spine. Recent advances in technology, together with improved clinical outcomes, have established percutaneous endoscopic spinal procedures as alternatives to traditional open spinal surgery. This text describes the most effective endoscopic techniques currently available and discusses indications, surgical approaches, complications, and clinical outcomes. An

authoritative, international team of contributors provides surgical insight and expert guidance. Provides a definitive 'go to' reference for spinal surgeons, orthopaedic surgeons and neurosurgeons Gives expert guidance on the full range of minimally invasive endoscopic techniques used in the management of spinal disorders, in chapters organized by spinal section Includes general chapters on instrumentation, relevant neuroanatomy, and anesthetic considerations Dedicates a chapter to classification and coding issues

Minimally invasive spinal surgery has made tremendous strides in the past decade, with advances in instrumentation and techniques rapidly changing the scope of these procedures. Highlighted by nearly 650 high-quality images, this is the first text to comprehensively review the critical aspects and developments in the field. It features in-depth guidelines and approaches for performing cervical, thoracic, and lumbar spine surgery; percutaneous procedures; and image-guided and robotic surgery. You will also find key discussions of minimally invasive interbody fusion, thoracic discectomy, trauma stabilization, lumbar decompression, tumor resection, and more. With contributions from leading surgeons throughout the country, this text provides a solid foundation in minimally invasive spinal techniques. For all neurosurgeons, orthopedic surgeons, and spinal surgeons, it is both a useful tool and an educational resource for integrating these operative methods into practice.

Contemporary Endoscopic Spine Surgery brings the reader the most up-to-date information on the endoscopy of the spine. Key opinion leaders from around the world have come together to present the clinical evidence behind their competitive endoscopic spinal surgery protocols. Chapters in the series cover a range of aspects of spine surgery including spinal pain generators, preoperative workup with modern independent predictors of favorable clinical outcomes with endoscopy, anesthesia in an outpatient setting, management of complications, and a fresh look at technology advances in a historical context. The reader will have a first-row seat during the illustrative discussions of expanded surgical indications from herniated disc to more complex clinical problems, including stenosis, instability, and deformity in patients with advanced degenerative disease of the human spine. Contemporary Endoscopic Spine Surgery is divided into three volumes: Cervical Spine, Lumbar Spine, and Advanced Technologies to capture an accurate snapshot in time of this fast-moving field. It is intended as a comprehensive go-to reference text for surgeons in graduate residency and postgraduate fellowship training programs and for practicing spine surgeons interested in looking for the scientific foundation for their practice expansion into endoscopic surgery. This volume (Cervical Spine) covers the following topics Cervical Endoscopy: Historical Perspectives, Present & Future Anesthesia For Minimally Invasive Surgery Of The Cervical Algorithms To Choose Between Anterior And Posterior Cervical Endoscopy Contemporary Clinical Decision Making In Full Endoscopic Cervical Spine Surgery Indications And Outcomes With Endoscopic Posterior Cervical Rhizotomy Anterior Endoscopic Cervical Discectomy Anterior Transcorporeal Approach Of Percutaneous Endoscopic Cervical Discectomy Anterior Endoscopic Cervical Discectomy And Foraminoplasty For Herniated Disc And Lateral Canal Stenosis Posterior Full Endoscopic Cervical Discectomy & Foraminotomy Endoscopic Decompression For Cervical Spondylotic Myelopathy

Learn state-of-the-art MIS techniques from master spine surgeons! Significant advances have been made in minimally invasive spine (MIS) surgery approaches, techniques, and innovative technologies. By preserving normal anatomic integrity during spine surgery, MIS approaches enable spine surgeons to achieve improved patient outcomes, including faster return to normal active lifestyles and reduced revision rates. Exposing only the small portion of the spine responsible for symptoms via small ports or channels, requires a deep understanding of spinal anatomy and spinal pathophysiology. Building on the widely acclaimed first edition, An Anatomic Approach to Minimally Invasive Spine Surgery, Second Edition, provides an expanded foundation of knowledge to master minimally invasive spine surgery. World-renowned spine neurosurgeons Mick Perez-Cruet, Richard Fessler, Michael Wang, and a cadre of highly regarded spine surgery experts provide masterful tutorials on an impressive array of cutting-edge technologies. Organized by seven sections and 51 chapters, the book presents a diverse spectrum of current safe and efficacious MIS procedures and future innovations. Nonsurgical approaches include injection-based spine procedures and stereotactic radiosurgery. Surgical technique chapters discuss MIS anterior, posterior, and lateral approaches to the cervical, thoracic, and lumbar spine, with procedures such as endoscopic microdiscectomy, vertebroplasty and kyphoplasty, percutaneous instrumentation, and robotic spine surgery. Key Features Step-by-step illustrations, including more than 400 depictions by master surgical and anatomic illustrator Anthony Pazos portray the surgeon's-eye-view of anatomy, intraoperative images, and surgical instruments, thereby aiding in the understanding of anatomy and procedures 20 online videos feature real-time operative fluoroscopy, pertinent anatomy, operative set-up, and common cervical, thoracic, and lumbar approaches Discussion of novel MIS techniques reflected in 16 new or expanded chapters, including Robotic Assisted Thoracic Spine Surgery and Stem-Cell Based Intervertebral Disc Restoration There is truly no better clinical reward for spine surgeons than giving patients suffering from debilitating spinal disorders their life back. This quintessential MIS surgery resource will help surgeons and clinicians accomplish that goal.

Build a solid foundation of knowledge based on the fundamentals and employ step-by-step instruction from Spine Surgery. Edited by Edward C. Benzel, this best-selling medical reference explores the full spectrum of surgical techniques used in spine surgery and delivers the comprehensive, cutting-edge guidance you need to achieve successful outcomes. Online access, thorough updates, contributions by leading international authorities, an abundance of detailed illustrations, and procedural video clips provide everything you need to avoid and manage complex problems. Glean essential, up-to-date, need-to-know information in one comprehensive reference that explores the full spectrum of surgical techniques used in spine surgery. Hone your surgical skills and technique with intraoperative videos and more than 800 outstanding illustrations demonstrating each technique step by step. Grasp and apply the latest knowledge from 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 including motion preservation technologies, endovascular management, back pain and psychosocial interactions, biomechanics, and more. Consult with the best. Renowned neurosurgery authority Edward C. Benzel leads an international team of accomplished neurosurgeons and orthopedic surgeons - many new to this edition - who provide dependable guidance and share innovative approaches to surgical techniques and complications management. Equip yourself to address increasing occurrences of pain among aging and physically active patients. Access the information you need, where you need it on your laptop or mobile device via expertconsult.com, with fully searchable text, a wealth of procedural videos, online updates from the experts, downloadable image gallery and links to PubMed.

This book presents the latest devices and techniques in transforaminal full-endoscopic lumbar discectomy (TELD). This minimally invasive procedure can be used to treat various spinal

conditions, such as herniated nucleus pulposus, discogenic pain, foraminal stenosis, lateral recess stenosis, and infection. The book offers an overview of TELD, and discusses discectomy, thermal annuloplasty (TA) and other trending topics. It also explores the history and anatomy of transforaminal full-endoscopic lumbar surgery, complications, TELD techniques, and TELD and TA for athletes. As such the book provides a much-needed foundation for the further development of this increasingly widespread procedure. Transforaminal Full-Endoscopic Lumbar Surgery Under the Local Anesthesia is a valuable resource for orthopedic surgeons, clinical residents and medical students, alike.

Endoscopic Spine Surgery and Instrumentation Thieme

Minimally invasive procedures are increasingly utilized and are replacing open surgery to reduce scarring and pain, enhance patient recovery, and minimize cost. Minimally Invasive Spine Surgery provides step-by-step guidance, expert instruction, and detailed illustration of current minimally invasive orthopedic spine procedures. With a variety of c

A high-yield and comprehensive text-and-video resource for managing commonly encountered spinal conditions Spine surgery has experienced several paradigm shifts during the past few decades, with highly complex techniques introduced at an astoundingly rapid pace. In order for new generations of spine surgeons to stay current and thrive in this innovative era of spine surgery, access to diverse multimedia learning tools is imperative. Video Atlas of Spine Surgery by renowned spine surgeon and educator Howard An and Rush University Medical Center colleagues Philip Louie, Bryce Basques, and Gregory Lopez, is a cutting-edge resource for non-operative and operative management of a diverse spectrum of cervical, thoracic, and lumbar spine conditions. Consisting of 19 chapters, the text is streamlined to facilitate learning the most important steps for each procedure. The book begins with discussion of physical exam maneuvers used to accurately diagnose specific spinal pathologies. Subsequent chapters detail extensive spine surgery techniques for managing degenerative cervical and lumbar conditions. The remaining chapters cover spinal cord, cervical, and thoracolumbar injuries; idiopathic, degenerative, and early-onset scoliosis; kyphosis; spondylolisthesis; spinal infections and inflammatory disorders; and thoracic disc disorders. Key Features Concise, bulleted text and consistent chapter outlines feature epidemiology and prevalence, pathogenesis, clinical presentation, image findings, classification, conservative and surgical management, techniques, postoperative care, and more A myriad of meticulous diagrams and illustrations, spinal imaging and photographs, and 50 high-quality spine surgery videos maximize learning Technical pearls, case examples, and board-style orthopaedic surgery questions at the end of each section optimize comprehension and retention of information This remarkable resource is a must-have for orthopaedic and neurosurgery residents and fellows, as well as practicing spine surgeons. This book follows a context-based approach to management of early-onset scoliosis (EOS) in countries with limited resources in education, finance, and research. Due to the great variety in etiology, onset age, progression rate, and severity associated with EOS, it calls for a unique treatment plan. This book enumerates the optimal provision of surgical and non-surgical services, from education/training of local surgeons, to effective teamwork, to implementing an effective data collection system; helping the surgeon to gain a hands-on experience. It also illustrates the successful execution of deformity correction using real life experiences from countries in Asia, Africa, and Latin America. Key Features Discusses biomedical principles that will help to get universally standard implants that are credible and affordable for countries with limited resources. Specific surgical Guidelines and the ability to develop evidence-based practice for this service would be an interesting read for surgeons working in global organizations as well as to local surgeons. First book to focus on countries with limited resources for the management of early onset scoliosis.

Interest in this area is increasing rapidly. The most rapid growth of endoscopic spinal surgery has occurred in the past 5 years, due largely to improvement in tools and instrumentation. A new book is therefore needed, both instruct those spine surgeons entering into the field, and to update those surgeons already performing these procedures.

The definitive state-of-the-art resource on pediatric endoscopic endonasal approaches Today, expanded endonasal approaches (EEA) have revolutionized the surgical treatment paradigm for pediatric central skull base lesions. Specially adapted micro-instruments have been developed to permit passage through the narrow sinonasal pathways in children, enabling access to the entire midline skull base, from the crista galli to the cervico-medullary junction. Pediatric Endoscopic Endonasal Skull Base Surgery by Harminder Singh, Jeffrey Greenfield, Vijay Anand, and Theodore Schwartz is the first textbook focused solely on endoscopic endonasal management of cranial base pathologies in children. The book reflects in-depth expertise from an extraordinary group of international contributors from five continents, who share extensive knowledge on this emerging field. Thirty chapters are presented in three comprehensive sections. Key Features Core topics including anatomy, rhinological and anesthetic considerations, patient positioning and OR set-up, instrumentation, and endonasal corridors and approaches Fifteen chapters detail endoscopic treatment of a full spectrum of pediatric pathologies, such as craniopharyngioma, meningoencephalocele, basilar invagination, and benign and malignant tumors, among others Discussion of multiple skull-base closure techniques, managing complications, and neurosurgical and otolaryngological postoperative care Visually rich, the succinct text is enhanced with 500 high-quality surgical illustrations and intraoperative photographs, as well as procedural videos This unique reference is essential reading for neurosurgical and otolaryngology residents and fellows, as well as veteran surgeons, nurse-practitioners, and physician-assistants who treat and care for pediatric patients with skull-base conditions.

This 4th edition of Mastery of Endoscopic and Laparoscopic Surgery presents both the common procedures residents must master as well as the more challenging procedures required of fellows and practitioners.

The first two sections of this text address endoscopic and keyhole surgical procedures for cranial base and deep brain structures. These sections provide a comprehensive, state-of-the-art review of this minimally invasive field and will serve as a valuable resource for clinicians, surgeons and researchers with an interest in cranial base surgery. The philosophy, techniques, indications and limitations of endoscopic and keyhole cranial base surgery are covered in detail. This reference includes a discussion of the basic principles of these approaches as well as the preoperative planning, intraoperative pearls, and reconstruction techniques. The thorough descriptions of the practical and technical aspects are accompanied by extensive illustrations, figures and operative images. Extending beyond the technical details of these procedures, this text provides a third section that focuses on a thorough analysis and comparison of the endoscopic, keyhole and traditional open approaches to specific intracranial regions. Utilizing a "target-based" approach, the utility of each surgical technique is evaluated in regard to accessing pathology of the anterior, middle and posterior fossa cranial base as well as the deep central regions of the brain. All chapters are written by experts in their fields and include the most up to date

scientific and clinical information. Endoscopic and Keyhole Cranial Base Surgery will be a valuable resource to specialists in optimizing surgical results and improving patient outcomes. The use of minimally invasive spine surgery (MISS) has grown rapidly over the last decade and remains the fastest growing area in spine surgery. Now in a revised and expanded second edition including 19 new chapters, this comprehensive textbook provides an updated presentation of the field of MISS, highlighting surgical techniques and clinical outcomes as well as providing a unique focus on how these techniques are applied for specific spinal conditions. Minimally Invasive Spine Surgery, Second Edition includes detailed discussions of enabling technologies, surgical techniques, approaches to specific diseases and conditions, a new section on out-patient/ambulatory spine surgery, and strategies to manage the unique risks and complications associated with MISS. Each chapter, whether revised or new, is formatted in a consistent manner, including bulleted key learning points as well as review questions, pearls and pitfalls, and generous illustrations and intra-operative photographs. Written and edited by thought leaders in the field, this user-friendly textbook will be an essential resource for orthopedic and neurosurgery trainees, as well as a valuable reference and review for spine surgeons and health care professionals who treat the spine.

The term "minimally invasive spinal surgery" was coined in early 1990 following publication of the first edition of this text entitled Arthroscopic Microdiscectomy: Minimal Intervention in Spinal Surgery, and subsequent establishment of the International Society for Minimal Intervention in Spinal Surgery (ISMIS) under the auspices of the International Society of Orthopaedic Surgery and Traumatology (SICOT) in April 1990. The orthopedic and neurological surgeons who participated in lectures and hands-on workshops both in Philadelphia and abroad have witnessed the evolution of minimally invasive spinal surgery from blind nucleotomy to endoscopic fragmentectomy, decompression of lateral recess stenosis, foraminoplasty, and spinal stabilization. In Arthroscopic and Endoscopic Spinal Surgery: Text and Atlas, Second Edition, experts describe and illustrate various techniques and approaches that are currently used in this field. In addition, the ongoing research for the betterment of spine care via minimally invasive approaches is briefly reviewed. I would like to express my sincere appreciation to so many of my colleagues who supported my efforts in the field of minimally invasive spinal surgery throughout the years. Many of them participated in our teaching symposiums and have provided valuable contributions to this text.

John Regan demonstrates the procedures discussed in the book. Contains footage of operations with narration; reviews indications/contraindications; description of pertinent anatomy; recommendations for operating room set up; and tips about complications.

150 contemporary barbecue dishes, sauces and condiments by award-winning barbecue chef and firefighter David Veljacic.

Written and edited by leading international authorities in the field, this book provides an in-depth review of knowledge of tuberculosis of the central nervous system, with emphasis on clinical, diagnostics, and therapeutic features. Tuberculosis, one of the most lethal diseases in human history, still poses a serious threat in the world together with economic and social problems, although a great progress in the fight against this infectious disease in the last century. It covers the full range of tuberculosis of central nervous system and the chapters are organized into six sections: (1) the cranial; (2) the spinal; and (3) the peripheral portions of the nervous system; followed by (4) a section on the laboratory studies in tuberculosis; (5) a section on medical and surgical therapy; and (6) further insights into tuberculosis. This comprehensive reference book will be an ideal source for neurosurgeons, neurologists and specialists upon infectious diseases seeking both basic and more sophisticated information and surgical procedures relating to the complications associated with tuberculosis involving the spine, brain and peripheral nerves.

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