

**COURTNEY W. BROWN, MD
CURRICULUM VITAE**

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LICENSURE: Colorado: No. 16214
California: No. G15240
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Arizona

DEA: Current

BOARD CERTIFICATION: American Board of Orthopaedic Surgeons
January 15, 1970

American Academy of Orthopaedic Surgeons
January 15, 1972

HOSPITAL AFFILIATIONS:

ST. ANTHONY CENTRAL HOSPITAL
4321 W. 16TH AVE.
DENVER, CO 80204

ST. ANTHONY NORTH HOSPITAL
2251 W. 84TH AVE.
WESTMINSTER, CO 80033

EXEMPLA LUTHERAN MEDICAL CENTER
8300 W. 38TH AVENUE
WHEAT RIDGE, CO 80033

ORTHOCOLORADO HOSPITAL
11650 W. 2ND PLACE
LAKEWOOD, CO 80228

CRAIG HOSPITAL
3425 SOUTH CLARKSON
ENGLEWOOD, CO 80110

THE CHILDREN'S HOSPITAL
1056 E. 19TH AVENUE
DENVER, CO 80218

EDUCATIONAL BACKGROUND:

Medical School: College of Physicians and Surgeons
Columbia University, Unit 45
650 W. 168th St.
New York, NY 10032
1958-1962 M.D. Degree

Undergraduate School: Columbia University
School of General Studies
New York, NY
1957-1958

Undergraduate School: Williams College
Williamstown, MA
1953-1957
M.B. Degree, Economics

Secondary School: Scarsdale High School
Scarsdale, NY 1953

SPECIAL TRAINING:

Internship: Mixed Surgical
St. Luke's Hospital
1000 10th Avenue
New York, NY 10019
1962-1963

Residencies: General Surgery
St. Luke's Hospital
1000 10th Avenue
New York, NY 10019
1963-1964

Orthopaedic Surgery
St. Luke's Hospital
1000 10th Avenue
New York, NY 10019
1964-1967

MILITARY SERVICE: U.S. Air Force (Captain)
Orlando AFB, Florida
1967-1968
U-tapao, Thailand
1968-1969

EMPLOYMENT HISTORY: Panorama Orthopedic, PC
(Formerly known as:
Lakewood Orthopaedic Clinic, PC)
660 Golden Ridge Road
Golden, CO 80401
July 1, 1970 to present

Solo Practice
February 1, 1970 to June 30, 1970

Colorado Orthopaedic Clinic, P.C.
1630 Carr
Lakewood, CO
October, 1969-January, 1970

ACADEMIC APPOINTMENTS:

University of Colorado Clinical Instructor of Orthopaedics
Clinical Assistant in Surgery
Health Sciences Center
Denver, CO
November 1971 to 1975

Assistant Clinical Professor of Orthopaedics
Denver, CO
1975 to present

Children's Hospital Active Staff
Denver, CO
1970 to present

COURSE/PROGRAM CHAIRMAN/BOARDS

Blue River Trauma Society, President and Annual Course Chairman, 1978 to 2000.

American Academy of Orthopaedic Surgeons sponsored course "Spinal Man," Course Chairman, Keystone, CO, March, 1984.

Western Orthopaedic Association, "Pedicule Screw Workshop," Program Chairman, Broadmoor, Colorado Springs, CO, October, 1987.

Surgical Dynamics Automated Percutaneous Lumbar Discectomy Workshop, Chairman, Denver, CO, January, 1988.

American Academy of Orthopaedic Surgeons, Summer Institute Hands-on Workshop, "Uses and Abuses of Pedicle Screws," Coordinator, Monterey, CA, September 1988.

1st – 15th Annual Colorado Spine Symposium, Program Chairman, November, 1990 – present

COURSE/PROGRAM CHAIRMAN/BOARDS (Continued):

American Academy of Orthopaedic Surgeons/Scoliosis Research Society symposium titled "Indications for Spinal Instrumentation," Chairman, Portland, OR, September 21, 1994.

Scoliosis Research Society/North American Spine Society, "Thorascopic Surgery of the Spine," Chairman, Cincinnati, OH, July 19-21, 1995.

The Scoliosis Research Society Symposium "Videoscopic Anterior Approaches to Thoracic and Lumbar Spine Surgery," Chairman, Cincinnati, Ohio, June 12-13, 1996.

GICD-USA "The Surgical Management of Adult Spinal Deformity with Degeneration," Co-chairman, Paradise Island, Bahamas, July 11, 2001.

Editorial Advisory Board for the journal "Advances in Osteoporotic Fracture Management" October 2001

North American Spine Society, 16th Annual Meeting Pre-Course: Techniques of Vertebral Augmentation, Faculty, Seattle, WA, October 31/ 2001.

SCHOLARLY AWARDS & HONORS:

Visiting Professor
Kyun Hee University Hospital
Percutaneous Discectomy Workshop
Seoul, Korea
June 1988

Visiting Professor
Percutaneous Discectomy Workshop
Kaohsiung, Taiwan
October 1988

Visiting Professor
Seoul National University
Percutaneous Discectomy Workshop
Seoul, Korea
October 1988

Visiting Professor
Automated Percutaneous Discectomy Workshop
Melbourne-Sidney, Australia
November 1988

Visiting Professor
Medical College of Georgia
Section of Orthopaedics
June 1991

COMMUNITY SERVICE:

Scoliosis School Screening Program
Denver Public Schools
Jefferson County Public Schools

SOCIETY MEMBERSHIPS:

American Academy of Orthopaedic Surgery 1972 to present

- Board of Councilors 1998 to 2005
- Executive Committee 2001 to 2005
- Board of Councilors Communications Committee 1998 to 2004
- Rehabilitation Committee 1981 to 1989
- Chair 1987 to 1989
- Subcommittee on Adult Spine Evaluation 1996 to 2000

Scoliosis Research Society 1975 to present

- Board of Director 1992 to 2000
- Treasurer 1993 to 1997
- President 1998 to 1999
- Instrumentation Committee 1987 to 1992
- Chair – 1992

American Orthopaedic Association 2000 to present

Colorado Orthopaedic Society 1985 to present

- Founding President 1985 to 1987
- Board of Directors 1985 to 2001

NASS 1985 to present

- Managed Care Committee 1995 to 1998
- Chair 1996 to 1998

Council of Spinal Societies (COSS) 1995 to present

- Secretary 1999 to 2001
- Chairman 2001 to 2003

Association of Bone and Joint Surgeons 1985 to present

- Audio Visual Committee 1991 to 1996
- Historian 1999 to 2003

Western Orthopaedic Association 1970 to present

- Board of Directors 1986 to 1989
- Membership Committee 1991 to 1994
- Planning and Development Committee 1985 to 1989
- Chair - 1989

SOCIETY MEMBERSHIPS (Continued):

Western Orthopaedic Association Rocky Mountain Chapter 1970 to present

- Treasurer, Rocky Mountain Chapter 1978 to 1980
- Board of Directors 1981 to 1984, 1986 to 1989
- President, Rocky Mountain Chapter 1988

Orthopaedic Rehabilitation Association 1990 to present

Turkish Spine Society 2004 – present

Spinal Arthroplasty Society 2007 to present

CONTRIBUTIONS TO MEDICAL LITERATURE:

"Surgical Repair of the Posteriorly Unstable Shoulder," American Academy of Orthopaedic Surgeons meeting, January, 1969. Now on permanent file in the American Academy of Orthopaedic Surgeons film library.

"Scoliosis in Paraplegia," Paraplegia, Vol. 11, No. 4, February 1974, p. 290.

"A Balancing Femoral Traction Suspension System," Clinical Orthopaedics and Related Research, No. 103, September, 1974, p. 27.

Courtney W. Brown, MD., John A. Odom, Jr., MD., Duane G. Messner, MD., and Robert G. Mitcheltree, MD, "A Simplified Operative Approach for the Lateral Meniscus" Journal of Sports Medicine, 1975 Vol. 3, No. 6, November/December, p. 265-269

"Anterior Approach to the Thoracolumbar Spine," Archives of Surgery, Vol. 3 April, 1976, p. 456.

"Surgical Treatment of Scoliosis of Myelodysplasia," Myelomeningocele, 1977, p. 581.

"Surface Electrical Stimulation for the Treatment of Scoliosis," Biomed Science Instrum, Vol. 18, 1982, pp. 83-85.

"Eggshell Decompression of Spine Fractures," Orthopaedic Transactions, 1987, pp 163-164

Courtney W. Brown, MD, John L. Brugman, MD, "Acute Spinal Fractures in Winter Sports," Surgical Rounds for Orthopaedics, March, 1989.

Courtney W. Brown, MD, John L. Brugman, MD, "Acute Spinal Fractures in Winter Sports," Orthopedics/Rheumatology Digest, 1989, Vol. 7, p. 20. pp. 46-54.

Michael R. Moore, G. Clay Baynham, Courtney W. Brown, David H. Donaldson and John A. Odom, Jr. "Analysis of Factors Related to Truncal Decompression Following Cotrel-Dubousset Instrumentation," Journal of Spinal Disorders, June, 1991, Vol. 4, No. 2, p. 188-192

CONTRIBUTIONS TO MEDICAL LITERATURE (Continued):

Michael R. Moore, MD, Courtney W. Brown, MD, John L. Brugman, MD, David H. Donaldson, MD, Tom G. Friermood, MD, Jeffrey B. Kleiner, MD and John A. Odom, Jr., "Relationship Between Vertebral Intraosseous Pressure pH, PO₂, and pCO₂ Magnetic Resonance Imaging Signal Inhomogeneity in Patients with Back Pain. An *in Vivo* study," Spine, June 1991, Vol. 16, p S 239-S242.

"The Natural History of Thoracic Disc Herniation," Spine, Vol. 17, No. 6, Supplement, June, 1992, p. 97.

"Neuropathic (Charcot) Arthropathy of the Spine Following Traumatic Spinal Paraplegia," Spine, Vol. 17, No. 6, Supplement, June, 1992, p. 103.

"Open Reduction and Internal Fixation of an Acetabular Fracture During Pregnancy," Journal of Orthopaedic Trauma, Vol. 6, No. 3, 1992, pp. 379-381,

Terry R. Yochum, DC, DACBR, Robert L. Lile, MD, Gary D. Schultz, DC, DACBR, Timothy J. Mick, DC, DACBR and Courtney W. Brown, MD, "Acquired Spinal Stenosis Secondary to an Expanding Thoracic Vertebral Hemangioma," February 1993, Spine, Vol. 18, No. 2, p. 299-305.

James S. Gebhard, MD, David H. Donaldson, MD, and Courtney W. Brown, MD, "Soft Tissue Injuries of the Cervical Spine," Orthopaedic Review, May 1994. p. 9-17

"Spinal Instrumentation Techniques," Editor, Scoliosis Research Society, March, 1994.

Maj. Howard M. Place, MD, MC, David H. Donaldson, MD, Courtney W. Brown, MD, and Elizabeth A. Stringer, MSN, "Stabilization of Thoracic Spine Fractures Resulting in Complete Paraplegia. A Long-Term Retrospective Analysis" Spine, 1994, Vol. 19, No. 15, pp. 1726-1730.

"Orthosis for Spinal Trauma and Postoperative Care," with Gregory H. Chow, MD., Editor, John E. Lonstein, MD., Atlas of Orthotics and Assistive Devices, Third Edition, American Academy of Orthopaedic Surgeons, Mosby, Editor, Robert Hurley.

Gregory H. Chow, MD, James S. Gebhard, MD, and Courtney W. Brown, MD, "Multifocal Metachronous Epidural Abscesses of the Spine," Spine, May 1996, Vol. 21, No. 9, pp. 1094-1097.

John M. Gorup, MD, Courtney W. Brown, MD, David H. Donaldson, MD, "The Biomechanics of Transpedicular Fixation," Spinal Biomechanics II, Sept. 1996, Vol. 10, No. 3, pp. 489-495.

Howard M. Place, MD, LTC, MC, Raymond J. Enzenauer, MD, LTC, MC, Barbara J. Muff, RN, BSN, PhJ Ziporin, MD, Courtney W. Brown, MD, "Hypomagnesemia in Postoperative Spine," Spine, 1996, Vol. 21, No. 19, pp. 2268-2272.

"Return to Noncontact Sports After Spinal Injury," with John M. Gorup, MD.; Courtney W. Brown, M.D., Sports Medicine and Arthroscopy Review, 1997, 5:243-245

CONTRIBUTIONS TO MEDICAL LITERATURE: (continued)

“Thoracoscopic Anterior Spinal Procedures in Children,” with Steven Rothenberg, MD., Courtney W. Brown, M.D., Mark Erickson, MD., Robert Eilert, MD., Jack Fitzpatrick, MD., Frank Chang, MD., Gerald Glancy, MD., & Gaia Georgopoulos, MD., Pediatric Surgery, Jul.33/7, 1998.

“Anterior Thorascopic and Posterior Hemivertebral Resection for Congenital Scoliosis: Description of the Technique.” with J.M. Gorup, MD., Courtney W. Brown, M.D., D.C. Wong, MD., & S. Rothenberg, MD., Spine: State of the Art Reviews, Vol. 12, No. 3, Sept. 1998.

“PediGuard™: A SOLUTION FOR THE CHALLENGES OF PEDICLE SCREW PLACEMENT” RANDAL R. BETZ, MD,¹ AMER F. SAMDANI, MD,¹ MLADEN DJURASOVIC, MD,² STEWART I. BAILEY, MD,³ COURTNEY BROWN, MD,⁴ JAHANGIR ASGHAR, MD,¹ LINDA P. D’ANDREA, MD,⁵ JOHN DIMAR, MD,⁶ HARRY L. SHUFFLEBARGER, MD,⁷ JOHN GAUGHAN, PHD⁸

“The Relationship Between Pelvic Balance and a Dome-shaped Sacrum in L5-S1 Developmental Spondylolisthesis,” with Roussouly, Pierre¹; Labelle, Hubert²; Berthonnaud, Eric³; Hu, Serena; Brown, Courtney⁴. August 2008.

Chapters:

Courtney W. Brown, MD, David H. Donaldson, MD and Michael R. Moore, MD, "Spinal Deformities in Neurofibromatosis," The Textbook of Spinal Surgery, 1991, Volume 1, Chapter Seventeen, pp. 445-458

Courtney W. Brown, MD, Michael E. Janssen, DO and Linda C. Tiefel, "Skiing," Robert G. Watkins, The Spine in Sports, 1996, Section Six, Chapter Fifty-One, pp. 542-548.

Courtney W. Brown, MD and David H. Donaldson, MD, "Marfan's Spinal Pathology," MD., The Textbook of Spinal Surgery, 1996, Second Edition, Vol. 1, Chapter Twenty-Six, pp. 299-306.

Courtney W. Brown, MD and Gregory H. Chow, MD, "Orthosis for Spinal Trauma and Postoperative Care," Editor, John E. Lonstein, MD, Atlas of Orthotics and Assistive Devices, Third Edition, American Academy of Orthopaedic Surgeons, Mosby, Editor, Robert Hurley, 1997, Chapter Thirteen, pp. 251-258

Courtney W. Brown, MD, John M. Gorup, MD and Gregory H Chow, MD, "Thoracic Burst Fracture," "Surgical Treatment," Todd Albert, MD, Controversies in Spine Surgery, 1999. Chapter. Four, pp. 85-104.

Courtney W. Brown, MD, Douglas C. Wong, MD, "Pedicle Subtraction Osteotomy" "Surgical Procedures," Chapter Fifty, pp.233-236

Courtney W. Brown, MD, Lonnie E. Loutzenhiser, MD, "History and Physical Examination of the Aging Spine", Textbook – The Comprehensive Treatment of the Aging Spine Minimally Invasive and Advanced Techniques – Chapter Five, 1 Ed.

Book:

"Spinal Instrumentation Techniques", **Courtney W. Brown, MD**, Editor, Vol. I, March 1994, Vol. II, 1996.

PRESENTATIONS:

"Orthopaedic Emergencies in Ski Slope; Basic Traction," American Academy of Orthopaedic Surgeons Orthopaedic Nursing Courses, Denver, CO, November 1974.

"A Simplified Operative Approach for the Lateral Meniscus," American Academy of Orthopaedic Surgeons, 42nd Annual Meeting, San Francisco, CA, March 1975.

"Panel Discussion on Spina Bifida," Spina Bifida Hydrocephalus Association, Denver, CO, April 1975.

"Emergency Surgery of the Spine," American Academy of Orthopaedic Surgeons, Orthopaedic Nursing Course, Denver, CO, December 1975.

"Lower Extremity Traction/Emergency Surgery of the Spine," American Academy of Orthopaedic Surgeons, Orthopaedic Nursing Course, Denver, CO, December 1975.

"Hip Dysplasia in Myelodysplasia," Children's Hospital Orthopedic Day, Denver, CO, April, 1976.

"Weiss Spring Instrumentation for Fracture Dislocation of the Spine with Associated Neurological Deficit," Scoliosis Research Society, Ottawa, Ontario, Canada, September 1976.

"Posterior Approach to Scoliosis," American Academy of Orthopaedic Surgeons, Pediatric Orthopaedic Nursing, Denver, CO, October 1976.

Clinical Orthopaedic Society, Speaker, Denver, CO, October 1976.

Orthopaedic Nursing Course, Speaker, October 1976.

"Injuries of the Thoracic and Lumbar Spine," Symposium of Children's Orthopaedics, Fitzsimons Army Medical Center, Denver, CO, December 1976.

"Chronic Back Pain After Spinal Fractures," Back Pain Symposium, Fitzsimons Army Medical Center, Denver, CO, April 1977.

"Back Pain Symposium," Speaker, Fitzsimons Army Medical Center, Denver, CO, April, 1977.

"Mechanisms of Injury in Athletics," Denver Postgraduate Institute in Emergency Medicine, Denver General Hospital, Denver, CO, May 1977.

"Mechanisms of Skiing Injuries; Ankle Reconstruction," Orthopaedic Nursing Course, Keystone, CO, December 1977.

PRESENTATIONS (Continued):

Fitzsimmons Army Medical Center, Speaker, Children's Orthopaedic Symposium, Denver, CO, January 1978.

Children's Hospital Workshop, Pediatric Orthopaedic Day, Lecturer, Denver, CO, April 1978.

"An Operative Approach to the Lateral Meniscus," Rocky Mountain Trauma Society, 20th Annual Meeting, Aspen, CO, 1978.

"Spinal Injuries in Winter Sports," Moderator: X-ray Forum Curbstone Consultation Session, American Fracture Association, Denver, CO, September 1978.

"Treatment of Spine Fractures in Paraplegia," American Spinal Injury Association, Monterey, CA, 1978.

"The School Back Screening Program." Fitzsimons Symposium of Children's Orthopaedics, Fitzsimons Army Medical Center, Denver, CO, January 1979.

Fitzsimons Army Medical Center, Speaker, Children's Orthopaedic Symposium, Denver, CO, January 1979.

"Spinal Injuries in Winter Sports," Sierra Cascade Trauma Society, Snowmass, CO, January 1979.

"American Academy of Orthopaedic Surgeons Winter Sports,"
"Spine Injuries in Skiing," Winter Sports Injuries Course, Course Lecturer, Snowmass, CO, March 26-30, 1979.

Children's Hospital Orthopaedic Day, Denver, CO, April 1979.

"Neurofibromatosis of the Spine," Children's Hospital Orthopaedic Day, Denver, CO, April 1979.

"Compression vs. Distraction Treatment of the Spine Fracture," Mid-Central States Orthopaedic Society, Colorado Springs, CO, April 1979.

"Fractures of the Distal Radius & Ulna," Spring Orthopaedic Day, Denver, CO, May 1979.

"Spine Injuries in Winter Sports," American Fracture Association, Denver, CO, September 1979.

"Fractures of the Thoracolumbar and Lumbar Spine" " Indications and Techniques for Traction and Casting," "Posture Assessment and Exercise Programs for Low Back Strain and Spinal

Deformities," American Academy of Orthopaedic Surgeons Continuing Education for Orthopaedic Nurses and Allied Health Personnel, Denver, CO, October 11-13, 1979.

"A Logical Approach to Thoracic and Lumbar Spine Fractures with Spinal Cord Injury," Northridge Hospital Foundation, Los Angeles, CA, November 1979.

"Electrical Stimulation for Scoliosis," Children's Hospital Orthopaedic Day, Denver, CO, April 1980.

PRESENTATIONS: (continued)

"Fractures of the Cervical Spine," Symposium on Spinal, Upper and Lower Extremity Orthotics, Fitzsimons Army Medical Center, Denver, CO, May 1980.

"Management and Treatment of Spine Injuries," American Academy of Orthopaedic Surgeons Courses on Injuries of the Spine and Upper Extremities in Sports, Kiawah Island, SC, May-June 1980.

"Injuries of the Spine and Upper Extremities in Sports," American Academy of Orthopaedic Surgeons, Course Speaker, Kiawah Island, SC, May-June 1980.

"Early Management of Spinal Cord Injuries," Sierra Cascade Trauma Society Annual Meeting, Steamboat Springs, CO, January-February 1981.

"Neurogenic Spine Problems," American Academy of Orthopaedic Surgeons, Continuing Education Course, Keystone, CO, March, 1981.

"Spinal Cord Monitoring," Eleventh Annual Denver General Hospital Orthopaedic Day, Denver, CO, March 1981.

"Paralytic Scoliosis (Spina Bifida, Cerebral Palsy)," American Academy of Orthopaedic Surgeons Course on Advances in Children's Orthopaedics, Keystone, CO, March-April 1981.

"Advances in Children's Orthopaedics," Children's Hospital Orthopaedic Day, Lecturer, American Academy of Orthopaedic Surgeons, Course Lecturer, Keystone, CO, March-April 1981.

"Neurogenic Spine Problems," Children's Hospital Annual Orthopaedic Day, Denver, CO, April 1981.

"Early Management of Spinal Cord Injuries," Mercy Hospital Grand Rounds, Denver, CO, June 1981.

"Orthotic Intervention and the Post Spinal Surgery Patient: How Effective Is It?" American Orthotic and Prosthetic Association Regional Meeting, Colorado Springs, CO, June 1981.

"The Use of Spinal Evoked Potentials During Surgery," International Medical Society of Paraplegia, London, England, July 1981.

"Limited Immobilization Following Spine Surgery for Fracture Dislocations with Paraplegia," Scoliosis Research Society, Montreal, Quebec, Canada, September 1981.

"Intraoperative Monitoring of Spinal Evoked Potentials in Scoliosis and Spinal Fractures," Clinical Applications of Evoked Potentials Symposium, sponsored by University of California, Berkeley, CA, November 1981.

"Clinical Applications of Evoked Potentials," University of California, Lecturer, Berkeley, CA, November 1981.

PRESENTATIONS: (continued)

"Establishing Spinal Cord Monitoring System in a Community Hospital," Scoliosis Research Society Annual Meeting, Montreal, Quebec, Canada, 1981.

"New Periosteal Elevator to Facilitate Spine Exposure," Scoliosis Research Society Annual Meeting, Montreal, Quebec, Canada, 1981.

Symposium on Low Back Pain, Lecturer, Sponsored by Swedish Hospital, Denver, CO, April 1982.

"The Crow Bar Procedure," Children's Hospital Orthopaedic Day, Denver, CO, April 1982.

"Critical Care and Surgery Applications of Evoked Potentials," Lecturer, Sponsored by the University of Wisconsin and Nicolet Biomedical, Denver, CO, June 1982.

"The Kieffer Procedure, or Notch Arthroplasty of the Knee," Rocky Mountain Chapter of the Western Orthopaedic Association Meeting, Steamboat Springs, CO, June 1982.

"Acute Neurological Monitoring with Somatosensory Evoked Potentials," Critical Care & Surgery Application of Evoked Potentials Seminar, sponsored by the University of WI and Nicolet Biomedical, Denver, CO, June 1982.

"Musculoskeletal Disorders," Symposium on Orthopaedics and Rehabilitation, sponsored by American Academy of Orthopaedic Surgeons, Arlington, VA, June 1982.

"Preliminary Results of the Treatment of Scoliosis with an Electrospondyl Orthosis," Scoliosis Research Society Meeting, Denver, CO, September 1982.

"E.O.S.: An Effective Alternative Method of Treatment for Scoliosis," Scoliosis Research Society meeting, Denver, CO, 1982.

"Limited Immobilization Following Spinal Surgery for Fracture Dislocations with Paraplegia," American Spinal Injury Association Meeting, New York, NY, 1982.

Eleventh Annual Symposium on Children's Orthopaedics, "The Crowbar Procedure," Eleventh Annual Symposium of Children's Orthopaedics, sponsored by Fitzsimons Army Medical Center, Denver, CO, February 1983.

"Treatment of Scoliosis with Electrospondyl Orthosis," American Academy of Orthopaedic Surgeons Annual Meeting, Anaheim, CA, March 1983.

American Academy of Orthopaedic Surgeons, Lecturer, Sports for Handicapped Children Workshop, Winter Park, CO, April 1983.

"Humerus Fracture-Medial and Lateral Epicondyle" " Scoliosis/Spinal Stimulation: A New Direction," American Osteopathic Academy Annual Meeting, Nashville, TN, April 1983.

PRESENTATIONS: (continued)

"Spondylolisthesis," Rocky Mountain Chapter of the Western Orthopaedic Society, "Diagnosis and Management of Acute Spine Injuries," Ninth Annual Primary Care Orthopaedics Clinic, sponsored by University of Colorado School of Medicine, Given Institute, Aspen, CO, August 1983.

"A New Method of Reduction and Fusion of Symptomatic Spondylolisthesis: The Crowbar Procedure," Scoliosis Research Society Annual Meeting, New Orleans, LA, September-October 1983.

"Surgical Treatment of the Spine in the Neuromuscular Patient," Twelfth Annual Symposium of Children's Orthopaedics, sponsored by Fitzsimons Army Medical Center, Denver, CO, January 1984.

"Spinal Cord Injuries in Sports," American Orthopaedic Society of Sports Medicine, Incline Village, NV, 1984.

"A New Method of Reduction and Fusion of Symptomatic Spondylolisthesis," American Academy of Orthopaedic Surgeons Annual Meeting, Atlanta, GA, February 1984.

"Advances in Spinal Fixation," Thirteenth Annual Midwinter Conference, sponsored by Colorado Society of Osteopathic Medicine, Keystone, CO, February 1984.

"Surgical Treatment of Spondylolisthesis," American Academy of Orthopaedic Surgeons Continuing Education Course, Denver, CO, May, 1984.

"Optimizing Your Surgical Results Symposium," American Academy of Orthopaedic Surgeons, Co-Moderator with Jacquelin Percy, Las Vegas, NV, January 1985.

"Electrical Stimulation Treatment of Scoliosis," Thirteenth Annual Symposium of Children's Orthopaedics, sponsored by Fitzsimons Army Medical Center, Denver, CO, February 1985.

"Special Problems Associated with L4 and L5 Fractures; The Spinal Man: The Management of Spinal Cord Injuries," American Academy of Orthopaedic Surgeons, Keystone, CO, March 1985.

"Surgical Treatment of Heterotopic Ossification; The Spinal Man: The Management of Spinal Cord Injuries," American Academy of Orthopaedic Surgeons, Keystone, CO, March 1985.

"Ultrasound of the Spine; Microdiscectomy," American Academy of Orthopaedic Surgeons; Faculty, Summer Institute, September 1985.

"Evoked Potential Monitoring During Orthopaedic Surgery," Intraoperative Evoked Potential and EEG Seminar, Nicolet Biomedical Instruments, San Francisco, CA, January 1986.

"Electrical Stimulations in Scoliosis," Centennial Pediatric Society, Loveland, CO, March 1986.

"Fixed Rotary Subluxation of C1-2 and Its Operative Reduction," Children's Hospital Orthopaedic Day, Denver, CO, April 1986.

PRESENTATIONS: (continued)

"Use of Ultrasound in Spine Surgery" " Luque Segmental Peduncular Fixation System," Danek Medical, Indianapolis, IN, August 1986.

"Eggshell Decompression of the Spine Fracture," American Bone & Joint Society, Vancouver, British Columbia, Canada, September 1986.

"PLIF: New Methods of Internal Fixation," University of Colorado School of Medicine, Denver, CO, October 1986.

"Orthopaedic Problems in High Performance Athletes," Spring Orthopaedic Day, Denver, CO, May 1987.

"Adult Back Injuries," American Orthopaedic Society for Sports Medicine, Evaluation and Treatment of Back Injuries; Summer Instructional Course, Orlando, FL, July 1987.

"Surface Stimulation for Scoliosis: Importance of Electrode Placement," IEEE-EMBS Conference, Boston, MA, October 1987.

"Treatment of Subtrochanteric Fractures of the Femur," American Academy of Orthopaedic Surgeons, Winter Sports Injuries Meeting, Vail, CO, March 1988.

"Spine Injuries in Winter Sports," American Academy of Orthopaedic Surgeons, Winter Sports Injuries Meeting, Vail, CO, March 1988.

"Indications for Percutaneous Discectomy," course on Percutaneous Discectomy, Instructor and Lecturer, Las Vegas, NV, March 1988.

"Percutaneous Discectomy," 15th Annual Spring Orthopaedic Day, Denver, CO, May 1988.

"Scoliosis and Cerebral Palsy," The Children's Hospital Pediatric Rehabilitation Conference, Denver, CO, January 1989.

"Anatomy of the Pedicle," "Indications for Pedicle Fixation," Luque I.S.F. Workshop, Denver, CO, February 1989.

"Scoliosis Research Society-North American Spine Society Pedicle Fixation Workshop," Faculty, Chicago, IL, September 1989, Dallas, TX, April 1989.

"Spondylolisthesis: A History," 16th Annual Spring Orthopaedic Day, St. Anthony Hospital, Lakewood Orthopaedic Clinic, Denver, CO, May 1989.

"Common Spine Injuries in Athletics," American Orthopaedic Society for Sports Medicine Annual Meeting, Traverse City, MI, June 1989.

"Spinal Fixation with CD/Edward's," University of Colorado Orthopaedic Department, Denver, CO, June, 1989.

"Anatomy of the Pedicle," ISF Workshop, Puerto Villarta, Mexico, June 1989.

PRESENTATIONS: (continued)

"Pedicule Screw Fixation of the Spine: Types, Techniques and Indications," The Association of Surgical Technologists, Inc., 20th Anniversary Conference, Denver, CO, July 1989.

"Percutaneous Discectomy," Poster Exhibit, North American Spine Society Meeting, Quebec City, Quebec, Canada, July 1989.

"Edwards Instrumentation: A New Method of Spondylolisthesis Reduction," Rocky Mountain Chapter of the Western Orthopaedic Association Annual Meeting, Breckenridge, CO, July 1989.

"Percutaneous Discectomy," Western Orthopaedic Annual Meeting, Los Angeles, CA, October 1989.

"Spine Injuries to the Athlete," 3rd Annual Fall Orthopaedic Day, Denver, CO, November 1989.

"Indications for Pedicle Screws," "Anatomy of the Pedicle," ISF Workshop, Denver, CO, November 1989.

"Indications for Pedicle Screw Fixation; Percutaneous Discectomy," Pan Pacific Surgical Association Meeting, Kona, HI, February 1990.

"Advanced Pedicle Fixation of the Lumbar Spine," Scoliosis Research Society and North American Spine Society, Dallas, TX, March 1990.

"Ankle Fractures and Their Sequelae," 17th Annual Spring Orthopaedic Day, May 1990.

"The Spine in Sports," "Athletic Injury of the Spine," Courses I and II, Instructor, American Orthopaedic Society for Sports Medicine, Sun Valley Summer Meeting, Sun Valley, ID, July 1990.

"Elevated Intraosseous Pressure and Signal Inhomogeneity in Vertebral Bodies of Patients with Back Pain: An In Vivo Study," North American Spine Society Meeting, August 1990.

"The Elbow," "Angle Fractures," 4th Annual Fall Orthopaedic Day, Denver, CO, November 1990

"Relation of Intraosseous Pressure, pH, pO₂, and pCO₂ to MRI Signal Inhomogeneity in Patients with Back Pain: An In Vivo Study," Scoliosis Research Society Meeting, 1990.

"The Importance of Core Muscles in Extremity Rehabilitation," Colorado Sports Medicine Specialists, May 1991

"The Spine in Sports," "Athletic Injury of the Spine," Courses I and II, Instructor, Orlando, FL, July 1991.

"The Importance of Core Muscles in Extremity Rehabilitation," 5th Annual Fall Orthopaedic Day, Denver, CO, October 1991

PRESENTATIONS: (continued)

"Relation of Intraosseous Pressure, pH, pO₂, pCO₂, and lactate to MRI Signal Inhomogeneity in Patients with Back Pain: An In Vivo Study," American Academy of Orthopaedic Surgeons Meeting, 1991.

"Necrosis-Producing Pressures Caused by Retractors Used in Posterior Spine Surgery," American Academy of Orthopaedic Surgeons Meeting, 1991.

"Technique of Lumbar Disc Discectomy (LDD)," Laser Discectomy Conference, San Diego, CA, May 1992.

"The Spine in Sports," "Athletic Injury of the Spine," Courses I and II, Instructor,, AOSSM, Course 102 and 202, Sun Valley, ID, July 4-5, 1992.

"Surgical Treatment of Thoracolumbar Spine Fractures," Colorado Trauma Association, Denver, CO, July 1992.

"Surgical Treatment of Thoracolumbar Spine Fractures," Western Orthopaedic Association Meeting, Aspen, CO, August 1992.

"Intensive Surgical Skills," American Academy of Orthopaedic Surgeons Summer Institute, September 1992.

"Patterns of Tibial Fracture Healing," co-authored with Frierhood, Thomas G., M.D., presented as a paper at OTA annual meeting, Toronto, Ontario, Canada, October 1992.

"Save the Trees," co-authored with Frierhood, Thomas G., M.D., presented as a poster at OTA annual meeting, Toronto, Ontario, Canada, October 1992.

"Treatment of Spinal Fractures," 6th Annual Fall Orthopaedic Day, Englewood, CO, October 1992.

"Laser Disc Decompression with the KTP/532 Surgical Laser System LDD Hands on Training," Faculty, San Jose, CA, 1992.

"Thoracolumbar Fracture: Conservative vs. Surgical Treatment," The 20th Annual Spring Orthopaedic Day, Denver, CO, April 1993.

"Pedicle Fixation of the Lumbar Spine and Other Advanced Techniques," Scoliosis Research Society/North American Spine Society, Faculty, Orlando, FL, May 13-15, 1993.

"AMS Innovation in Spine Amset R-F Reduction - Fixation System," Orlando, FL, May 1993.

"The Spine in Sports," "Athletic Injury of the Spine," Courses I and II, Instructor, Lumbar Spine Course 202, San Diego, CA, May 29, 1993.

"Thoroscopic Spine Surgery," 23rd Annual Spring Orthopaedic Day, Denver, CO, April 1996.

PRESENTATIONS: (continued)

"Esophageal Perforations Following Anterior Cervical Surgery," 64th Annual Meeting AAOS, San Francisco, CA, February 13-17, 1997.

"Stereotactic Imaging Systems (STEALTH)," 24th Annual Spring Orthopaedic Day, Denver, CO, April 2, 1997.

"Long Term Follow Up of Septic Arthritis of the Hip," Children's Orthopaedic Day, Denver, CO, April 25, 1997.

"Stealth Surgery of the Spine," Irish American Orthopaedic Society, 10th Biannual Meeting, Adare, Ireland, May 21-25, 1997.

"What Progress Have We Made In Treating Spinal Deformities in the Last Ten Years?" 32nd Annual Meeting of the Scoliosis Research Society, St. Louis, Missouri, September 24-27, 1997.

"Treatment Neurogenic Spine Disorders," AAOS FOSA, New Orleans, LA, February 1998.

"In-Office Caudal Epidural Steroid Injections for Low Back Pain," 66th Annual Meeting AAOS, Anaheim, CA, February 4-8, 1999.

"Current & Future Concepts of Scoliosis Surgery," Challenges to Spine Surgery Symposium, La Jolla, CA, February 18, 2000.

"The Pathomechanism and Surgical Treatment of Degenerative Spondylolisthesis: Insitu vs Internal Fixation, High Grade Spondylolisthesis in the Pediatric and Adult," Colorado Springs, CO, June 23-24, 2000.

"Kyphoplasty Treatment of Osteoporotic Compress Fracture," 11th Annual Colorado Spine Symposium, Denver, CO, November 10, 2000.

"Pedicle Subtraction Osteotomy for Flat Back Syndrome," The 28th Annual Spring Orthopedic Day, Golden, CO, April 6, 2001.

"Pedicle Subtraction Osteotomy for Flat Back Syndrome," 43 Packard Memorial Lectureship, Aurora, CO, May 31 – June 1, 2001.

"Global Spinal Balance-Natural History & its Importance," 12th Annual Colorado Spine Symposium, Golden, CO, November 9, 2001.

"Aging Spine, Degenerative Lumbar Scoliosis, Osteoporosis," Moderator
"Adult Sagittal Plane Deformity," Leader

"Sagittal Obliquity," Poster
9th International Meeting on Advanced Spine Techniques, Montreux, Switzerland,
May 23-25, 2002.

"Sacral Obliquity," 13th Annual Colorado Spine Symposium,
Westminster, CO, November 8, 2002.

PRESENTATIONS: (continued)

“Pedicle Subtraction Osteotomy,” Spine Surgery and Practice, Snowbird Ski & Summer Resort, Snowbird, Utah, March 14 – 15, 2003.

“Fusion for Degenerative Disc Disease,” Chinese Speaking Orthopaedic Society, Beijing, China September 22-24, 2004

“Global Imbalance and It’s Evaluation” – Musculoskeletal Education and Research Center (MERC) Managing Thoracolumbar Trauma, Degenerative Disease & Deformity, Focus on Minimally Invasive Spine Surgery January 25-28, 2007

“Posterior Motion Preservation System – Facet Replacement” May 1, 2007 “Motion Preservation”

“Thoracolumbar Fractures: Classifications and Indications for Surgery” 26th Annual University of New Mexico Orthopaedic Alumni Conference June 1, 2007

“Global Imbalance, Natural History, Evaluation and Treatment” 26th Annual University of New Mexico Orthopaedic Alumni Conference June 1, 2007

“Closing Osteotomies without Stress on the Fixation Using Hyperextension Balloon” 14th International Meeting on Advanced Spine Techniques (IMAST), Paradise Island, The Bahamas, July 11 – 14, 2007

POSTERS:

“A Unique Method for Intraoperatively Accessing Thoracic Pedicles For Screw Instrumentation”

“Accuracy of Cervical Pedicle Screw Placement Using a New Fluoroscopic and Computer-aided Technique”

SRS 38th Annual Meeting, Quebec City Canada, September 10 – 13, 2003.

MEETINGS:

American Academy of Orthopaedic Surgery. Annual Meeting
1970 to 1979
1981 to present

University of Maryland, Spinal Fixation Study Group, Baltimore, MD, November, 1989.

ADDITIONAL MEETINGS: Continued

American Academy of Orthopaedic Surgery, serving as faculty on the CME course, summer institute, Seattle, WA, Sept. 19-23, 1992.

Scoliosis Research Society. Annual Meeting
1972 to 1977
1979 to present

Western Orthopaedic Association. Annual Meeting.
1975 to 1988
1992
1996 to 1997

AOSSM. Annual Meeting
1977 to 1994 2006
1996 2007
1998 2008
2001
2005

Moderator, Lumbar Spine Problems in Athletes, Nineteenth Annual Meeting AOSSM, Sun Valley, ID, July 12-15, 1993.

Association of Bone and Joint Surgeons. Annual Meeting
1986 to present

North American Spine Society. Annual Meeting
1987 to present

GICD-USA An Introduction to Compact-CD, Saddlebrook Resort, Tampa, FL, October, 1993.
12th Annual Meeting, New York, NY October 22-25, 1997.

Scoliosis Research Society, Dedicated to Education, Research and Treatment of Spinal Deformity, Chicago, IL, November, 1993.

Steerable Endoscopic Discectomy Workshop, Phoenix, AZ, April 30, 1994.

1st American-European Meeting on Pedicle Fixation of the Spine & Other Advanced Techniques, Faculty, Munich, Germany, July 1-2, 1994.

2nd International Meeting on Advanced Spine Techniques, Faculty, April 26-29, 1995.

North American Spine Society 10th Annual Conference, Washington, DC, October 18-21, 1995.

3rd International Meeting on Advanced Spine Techniques, Faculty, June 20-22, 1996.

Orthopaedic Rehabilitation Association Specialty Day, San Francisco, CA, February 16, 1997.

ADDITIONAL MEETINGS: Continued

American Orthopaedic Society for Sports Medicine Specialty Day, San Francisco, CA, February 16, 1997.

Federation of Spine Associations Specialty Day, San Francisco, CA, February 16, 1997.

64th AAOS Annual Meeting, San Francisco, CA, February 13-17, 1997.

Clinical Management in Managed Care: Acute Low Back Pain & Sciatica, Philadelphia, PA, April 8, 1997.

American Association of Neurological Surgeons, General Sessions & Spinal Deformity/Scoliosis, April 12-17, 1997.

32nd Annual Meeting of the Scoliosis Research Society, What Progress Have We Make in Treating Spinal Deformities in the Last Ten Years? Moderator, Complications, Results, Outcomes, St. Louis, MO, September 25-27, 1997.

The Doctors Company/Denver Medical Society Risk Management Seminar, Embassy Suites, Denver, CO, November 6, 1997.

Scoliosis Research Society, 33rd Annual Meeting of the Scoliosis Research Society, New Orleans, LA, March 17-22, 1998.

AAOS 65th Annual Meeting, New Orleans, LA, March 19-23, 1998.

Orthopaedic Rehabilitation Association, New Orleans, LA, March 22, 1998.

American Orthopaedic Society for Sports Medicine, New Orleans, LA, March 22, 1998.

Federation of Spine Associations, New Orleans, LA, March 22, 1998.

10th Phillips Zorab Symposium, Etiology of Adolescent Idiopathic Scoliosis, Oxford, England, March 28 to April 1, 1998.

ABJS 50th Annual Meeting, Aspen, CO, June 24-28, 1998.

33rd Annual Meeting of the Scoliosis Research Society, New York, NY, September 16-20, 1998.

Scoliosis Research Society Sagittal Plane Spinal Deformity Instructional Course, New York, NY, September 18, 1998.

CSRS 26th Annual Meeting, Atlantis, GA, December 3-5, 1998.

Medical Education Resources, Inc. seminar on "Anterior Treatment of Scoliosis," Rush Medical College, Chicago, ILL, December 4, 1998.

ADDITIONAL MEETINGS: Continued

Medical Education Resources, Inc. seminar on "The Management of Vertebral Intercorporeal Disorders," Hotel Inter-Continental, Chicago, ILL, December 5-6, 1998.

66th AAOS Annual Meeting, Anaheim, CA, February 4-8, 1999.

American Orthopaedic Society for Sports Medicine, Anaheim, CA, February 7, 1999.

Federation of Spine Associations, Anaheim, CA, February 7, 1999.

Orthopaedic Rehabilitation Association, Anaheim, CA, February 7, 1999.

Eurospine '99, Munich, Germany, September 7 – 11, 1999.

34th Annual Meeting of the Scoliosis Research Society, San Diego, CA, September 23-25, 1999

Scoliosis Research Society Complications in Management of Spinal Disorders Instructional Course, San Diego, CA, September 22, 1999.

North American Spine Society, Chicago, IL, October 20-23, 1999

Osteoporosis and Vertebral Body Compression Fractures: Medical Management and a New Minimally Invasive Surgical Procedure, Golden, CO April 25, 2000

Spinal Deformity Surgical Challenges and Solutions, El Conquistador Resort & Country Club, Puerto Rico, May 12-13, 2000.

7th International Meeting on Advanced Spine Techniques (IMAST), Faculty, Barcelona, Spain, July 6 – 8, 2000.

35th Scoliosis Research Society Annual Meeting, Cairns, Australia, October 18 – 21, 2000.

North American Spine Society, New Orleans, LA, October 24 - 25, 2000.

2nd Annual Spine Fellows Course, Faculty, Naples, Florida, December 7 – 8, 2000.

The First Annual Internal Course on Current Spine, Faculty, Langkawi, Malaysia, February 2 – 4, 2001.

ABJS Annual Meeting, New Orleans, LA, April 25, 2001.

Spinal Deformity Challenges and Solutions, Faculty, Amelia Island, FL, May 11-12, 2001.

The American Orthopaedic Association, Palm Beach, Florida, June 13 – 16, 2001.

Medical Education Resources, The Surgical Management of Adult Spinal Deformity with Degeneration, Paradise Island, Bahamas, July 11, 2001.

ADDITIONAL MEETINGS: Continued

Scoliosis Research Society, American Academy of Orthopaedic Surgeons, 36th Annual Meeting, Cleveland, Ohio, September 19 – 22, 2001

North American Spine Society, 16th Annual Meeting Pre-Course: Techniques of Vertebral Augmentation, Faculty, Seattle, WA, October 31, 2001.

Medical Education Resources, Spinal Sagittal Balance: Treating Segmental, Regional, and Global Malalignment, Chicago, IL, December 7 – 8, 2001.

HealthStream Education Design, Clinical Challenges and Advancements in Spine Surgery, Carlsbad, California, July 26 – 27, 2002.

Scoliosis Research Society 37th Annual Meeting, Seattle, WA, September 18/21, 2002.

AO Reconstructive Spine Seminar using the USS Method, Nottingham, United Kingdom, June 30 – July 1, 2003.

Scoliosis Research Society 38th Annual Meeting, Quebec City, Canada, September 11/13, 2003.

11th Annual IMAST meeting, Bermuda, July 8-10, 2004

Colorado Spine Symposium, Chairman, November 14, 2004

Emerging Technologies Spine Education Summit, Telluride, CO March 3-5, 2005

7th Annual International Spine Conference, Guest Speaker, Antalya, Turkey April 13-16, 2005

Irish/American Orthopaedic Society Meeting Cork, Ireland May 18-2, 2005

Association of Bone & Joint Surgeons, Carmel, CA June 8-12, 2005

American Orthopaedic Association, 118th Annual Meeting, June 22-25, 2005

12th Annual IMAST Meeting, Banff, Alberta, Canada July 6-9, 2005

16th Annual Colorado Spine Symposium, Westminster, CO, November 4, 2005

13th Annual International Meeting on Advanced Spine Techniques (IMAST)
Athens, Greece July 12-15, 2006

University of Colorado Health Sciences, The Spine Center, Intraoperative C-Arm Based Multiplanar Myelography, Immediate Assessment of Decompression. Vikas V. Patel, Susan Estes, Courtney Brown

ADDITIONAL MEETINGS: Continued

The 12th Advanced Techniques in Cervical Spine Decompression & Stabilization, April 7-8, 2006, St. Louis, MO USA

Speaker "Posterior Osteotomies in the Management of Kyphotic Deformities in Adults. Tips and Pitfalls" May 25, 2006 Swissotel, Istanbul

The First International Congress of Chinese Orthopaedic Association, November 12-15, 2006 Beijing, China – Chinese Orthopaedic Association

Chairman, MERC Managing Thoracolumbar Trauma, Degenerative Disease and Deformity, January 25-27, 2007, Vail, CO

NASS 22nd Annual Meeting Abstract, Intra and inter-observer reliability of determining radiographic sagittal parameters using manual and computer-assisted methods, Austin Convention Center Tuesday October 23-27, 2007

X-Stop Interspinous Process Decompression Roundtable Discussion, Saturday November 11, 2007, The Westin St. Francis, San Francisco, CA

Lecturer/attendee HealthONE Emerging Technologies Spine Education Summit February 6-9, 2008, Jackson Hole, WY