

CURRICULUM VITAE
Mark J. R. Moulton, M.D.

OFFICE: Orthopaedic Associates of Muskegon
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Joined Orthopaedic Associates of Muskegon in June 2000

PERSONAL DATA: Birthdate: July 28, 1964
Birthplace: Seattle, Washington

SPECIALTY: Orthopaedic Surgery

EDUCATION: North Muskegon High School, North Muskegon, MI, September, 1978-
June, 1982

Adrian College, Adrian, Michigan – B.S. degree, August, 1982-June,
1986

Wayne State University, Detroit, MI – M.S. degree, June, 1986-June,
1987

Georgetown University School of Medicine, Washington, DC – M.D.
degree, September, 1987-June, 1992

PROFESSIONAL TRAINING: *Internship:*
Georgetown University Medical Center, Washington, DC, General
Surgery, 1992-1993

Residency:
The Milton S. Hershey Medical Center, Hershey, PA, Orthopaedic
Surgery, 1993-1999

Fellowships:
Rumble Research Fellowship, Department of Radiation Oncology,
Division of Tumor Biology, Wayne State University, Detroit, MI, 1986-
1988

NIH/Georgetown University Research Fellowship, National Institute of
Allergy and Infectious Disease, Bethesda, MD, 1988-1989

Michael and Myrtle Baker Orthopaedic Research Fellowship, Penn State College of Medicine, The Milton S. Hershey Medical Center, Department of Orthopaedics, Hershey, PA, 1993-1995

Thomas Jefferson University Spinal Surgery Fellowship, Rothman Institute, Philadelphia, PA, 1999-2000

PROFESSIONAL/
SCHOLASTIC
ORGANIZATIONS:

Sigma Xi, 1986
American Medical Student Association, 1988
American Medical Association, 1992
Pennsylvania Orthopaedic Society, 1997
Michigan State Medical Society, 2001
Muskegon County Medical Society, 2001
Michigan Orthopaedic Society, 2001
American Academy of Orthopaedic Surgery, 2001

MEMBERSHIPS:

American Spinal Injury Association, 2012

ACTIVITIES AND
ORGANIZATIONS:

Georgetown University Medical School
Curriculum Committee, 1989-1990
Financial Aide Committee, 1989-1992
Financial Aide Committee – Chairman, 1990-1991
Admissions Committee, 1992-1993

Georgetown University Medical Center
Executive Committee for Education, 1990-1992

HONORS AND
AWARDS:

Adrian College, Departmental Award for Excellence, 1986

Wayne State University, Rumble Fellowship Research Award, 1986-1987

Georgetown University School of Medicine, Georgetown University Medical School Research Award, 1988

The Milton S. Hershey Medical Center, The Pennsylvania Orthopaedic Society 2nd Place Resident Presentation, 1995

Orthopaedic Trauma Association Edwin G. Bovill Award (Co-Authored), 1996

Eastern Orthopaedic Society Founder's Award (Co-Authored), 1997

American Orthopaedic Association Frank Stinchfield Award, (Co-Authored), 1998

AOA-Zimmer Award (Co-Authored), 1998

AOA-Zimmer Award (Co-Authored), 2000

EXAMINATIONS: Georgetown University School of Medicine, September, 1987-June, 1992

NBME I 460

NBME II 202

LICENSURE: *Certifications:*

Advanced Cardiac Life Support, 1997

Advanced Trauma Life Support, 1997

Licenses:

Surgical Internship License, Virginia, 1992

Medical Training License, Pennsylvania, 1993

License to Practice Medicine, Pennsylvania, 1997

License to Practice Medicine, Michigan, 2000

BOARD CERTIFICATION: Board-certified Orthopaedic Surgeon, American Board of Orthopaedic Surgery, September 2002

HOSPITAL PRIVILEGES: Mercy General Health Partners, Muskegon, MI, 2000 to present
Hackley Hospital, Muskegon, MI, 2000 to present

APPOINTMENTS: Vice Chief of Surgery, Mercy General Health Partners, Muskegon, MI 2004 to present

PUBLICATIONS: Moulton, M. and Cotler, J. Application of Halo Traction. Spine
Book Chapters: Surgery: Tricks of the Trade. Theime Publishing.

Moulton, M. and Cotler, J. Open Reduction Techniques for Unilateral and Bilateral Facet Dislocations of the Cervical Spine. Spine Surgery: Tricks of the Trade. Theime Publishing.

Moulton, M. and Vaccaro, A. Lateral Mass Screw Placement. Spine Surgery: Tricks of the Trade. Theime Publishing.

Moulton, M. and Vaccaro, A. Cervical Pedicle Screw Placement. Spine Surgery: Tricks of the Trade. Theime Publishing.

Moulton, M., Vaccaro, A. and Cotler, J. Posterior Cervical Approach: Decompression – Open Reduction of Unilateral and Bilateral Facet Dislocations. Spine Surgery: Tricks of the Trade, Theime Publishing, London, England, 2001.

Moulton, M. and Vaccaro, A. Posterior Cervical Approach: Arthrodesis/Instrumentation. Anterior Bone Graft Placement in the Cervical Spine. Spine Surgery: Tricks of the Trade. Theime Publishing, London, England, 2001.

Moulton, M. and Vaccaro, A. Posterior Cervical Approach: Arthrodesis/Instrumentation. Cervical Pedicle Screw Placement. Spine Surgery: Tricks of the Trade. Theime Publishing, London, England, 2001.

Moulton, M. and Vaccaro, A. Posterior Cervical Approach: Arthrodesis/Instrumentation. Cervical Lateral Mass Screw Placement (C3-C7). Spine Surgery: Tricks of the Trade. Theime Publishing, London, England, 2001.

Moulton, M. and Vaccaro, A. Anterior Cervical Approach: Decompression. Application of Halo Orthosis. Spine Surgery: Tricks of the Trade, Theime Publishing, London, England, 2001.

ABSTRACTS:

Shaw, J. and Moulton, M. Proximal Tibial Osteotomy: An Operation Based on a Bogus Mechanical Concept. The Knee Society, Baltimore, MD, October 6, 1994.

Vrahas, M. and Moulton, M. The Accuracy of Iliac and Obturator Views for the Predication of Articular Cartilage Incongruency in Both Column Acetabular Fractures. Acetabular Trauma Update, Pittsburgh, PA, November 1994.

Reid, S., VanSlyke, M., Moulton, M and Mann, T. Safe Placement of Proximal Tibial Transfixion Wires with Respect to Intracapsular Penetration. Pennsylvania Orthopaedic Society, Philadelphia, PA, November 1994.

Moulton, M., Wilson, S., Paul, E. and Allen, L. Iontophoresis of Dexamethasone into Skin and Subcutaneous Tissues: A Controlled Human Trail. 62nd Annual Meeting of the American Academy of Orthopaedic Surgeons, Orlando, FL, February 1995.

Wilson, S., Moulton, M., Paul, E. and Allen, L. Iontophoresis of Dexamethasone into Skin and Subcutaneous Tissues. Orthopaedic Research Society Meeting, Orlando, FL, February 1995.

Stube, K., Black, K. and Moulton, M. The Effects of Interference Screw Length on Distal Fixation for Anterior Cruciate Ligament Reconstruction. 62nd Annual Meeting of the American Academy of

Orthopaedic Surgeons, Orlando, FL, February 1995.

Reid, J., VanSlyke, M., Moulton, M. and Mann, T. Safe Placement of Proximal Tibial Transfixion Wires with Respect to Intracapsular Penetration. 62nd Annual Meeting of the American Academy of Orthopaedic Surgeons, Orlando, FL, February 1995.

Wilson, S., Moulton, M. and Shaw, J. The Effect of Cast Splitting on Relieving Compartment Pressures in the Lower Extremity. 28th American Orthopaedic Association's Annual Residents' Conference, Pittsburgh, PA, March 29 – April 1, 1995.

Moulton, M. and Reid, J. Proximal Tibial Safe Zones for the Placement of Transfixion Wires with Respect to Prevention of the Intracapsular Penetration. 28th American Orthopaedic Association's Annual Residents' Conference, Pittsburgh, PA, March 29-April 1, 1995.

Wall, T., Moulton, M. and Boal, D. The Use of Ultrasound in Diagnosing Ulnar Collateral Ligament Injuries of the Metacarpophalangeal (MP) Joint of the Thumb. 28th American Orthopaedic Association's Annual Residents' Conference, Pittsburgh, PA, March 29-April, 1995.

Stube, K., Black, K. and Moulton, M. Shorter Interference Fit Screws During ACL Reconstruction. 1995 AOSSM Annual Meeting, London, Ontario, Canada, July 16-19, 1995.

Bixler, B., Naidu, S., Capo, J. and Moulton, M. Percutaneous Pin Fixation of Proximal Humerus Fractures: A Biomechanical Study. 63rd Annual Meeting of the American Academy of Orthopaedic Surgeons, Atlanta, GA, February 1996.

Moulton, M., Schneider, D., Kranitzky, G. and Pelligrini, V. The Effects of Femoral Reaming and Gluteal Myonecrosis on Heterotopic Ossification. 65th Annual Meeting of the American Academy of Orthopaedic Surgeons, New Orleans, LA, February 1998.

Segal, L., Schneider, D., Moulton, M. and Schwentker, E. Injury to the Capital Femoral Epiphysis in Growing Rabbits: An Animal Model for the Protective Role of the Ossific Nucleus in DDH. 65th Annual Meeting of the American Academy of Orthopaedic Surgeons, New Orleans, LA, February 1998.

- MANUSCRIPTS: Reid, J., VanSlyke, M., Moulton, M. and Mann, T. Safe Placement of Proximal Tibial Transfixion Wires with Respect to Intracapsular Penetration. Submitted to JBJS.
- Shaw, J. and Moulton, M. High Tibial Osteotomy: An Operation Based on a Spurious Mechanical Concept, A Theoretical Threatise. American Journal of Orthopaedics, Volume 25 (6), June 1996.
- Naidu, S., Bixler, B. and Moulton, M. Radiation Induced Physical Changes in Ultra High Molecular Weight Polyethylene (UHMWPE) Implant Components. Orthopaedics, Vol. 20 (2), February 1997.
- Naidu, S., Cuckler, J., Ducheyne, P. and Moulton, M. Orderly Oriented Wire Mesh: A Novel Porous Coating. Orthopaedics, Vol. 20 (5), May 1997.
- Naidu, S., Capo, J., Moulton, M., Ciccone, W. and Radin, A. Percutaneous Pinning of Distal Radius Fractures: A Biomechanical Study. Journal of Hand Surgery, Vol. 22A (2), March 1997.
- Stube, K., Black, K. and Moulton, M. The Effects of Interference Screw Length on Tibial Tunnel Fixation for Anterior Cruciate Ligament Reconstruction. Submitted to the American Journal of Sports Medicine.
- Naidu, S., Bixler, B., Capo, J. and Moulton, M. Biomechanical Evaluation of Proximal Humerous Pinning Techniques. Orthopaedics, Vol. 20 (11), November 1997.
- Schneider, D., Moulton, M., Singapuri, K., Chinchilli, V., Deol, G. and Pelligrini, V. Inhibition of Heterotopic Ossification with Radiation Therapy in an Animal Model. Clinical Orthopaedics and Related Research, Vol. 355, October 1998.
- Segal, L., Berlin, J., Schnieder, D., Moulton, M. and Frauenhoffer, E. Chondronecrosis of the Hip. The Protective Role of the Ossific Nulceus in an Animal Model. Submitted for publication to Journal of Pediatric Orthopaedics.
- NON-PEER REVIEWED PUBLICATIONS: Moulton, M., Nachwalter, R., Hilibrand, T., Vaccaro, A. and Albert, T. Management of Cervical Kyphosis in Patients with Ankylosing Spondylitis. Orthopaedic Tech. Review, May 2000.
- PRESENTATIONS: Poster Presentations: "Iontophoresis of Dexamenthasone into Skin and Subcutaneous Tissues: A Controlled Human Trail". Moulton, M., Wilson, S., Paul, E. and Allen, L. 62nd Annual Meeting of the American Academy of

Orthopaedic Surgeons, Orlando, FL, February 1995.

"Iontophoresis of Dexamethasone into Skin and Subcutaneous Tissues". Wilson, S., Moulton, M., Paul, E. and Allen, L. Orthopaedic Research Society Meeting, Orlando, FL, February 1995.

"Comparison of Techniques for Evaluating the Postoperative Reductions of Acetabular Fractures". Vrahas, M., Bixler, B., Freudigman, P., Hospodar, P., Johnson, E. and Moulton, M. Orthopaedic Trauma Association, Los Angeles, CA, September 22-25, 1994.

"The Effects of Interference Screw Length on Distal Fixation for Anterior Cruciate Ligament Reconstruction". Stube, K., Black, K. and Moulton M. 62nd Annual Meeting of the American Academy of Orthopaedic Surgeons, Orlando, FL, February 1995.

"Orthopaedic MRI Beyond Basic Spin Echo". Parris, W., VanSlyke, M. and Moulton, M. 62nd Annual Meeting of the American Academy of Orthopaedic Surgeons, Orlando, FL, February 1995.

"The Relationship of Upper Extremity Compressive Dressings to Forearm Compartment Pressures and Effect of Univalve and Bivalve Release". Capo, J., Moulton, M. and Reid, J. 63rd Annual Meeting of the American Academy of Orthopaedic Surgeons, Atlanta, GA, February 1996.

"The Influence of Metacarpophalangeal Joint Position on Thumb Basal Joint Loading". Moulton, M., Parentis, M., Kelley, M. and Pellegrini, V. The American Orthopaedic Association's 30th Annual Residents' Meeting, New York, NY, March 1997.

"Inhibition of Heterotopic Ossification with Radiation Therapy in an Animal Model". Moulton, M., Schneider, D., Deol, G. and Pellegrini, V. The American Orthopaedic Association's 31st Annual Residents' Meeting, Sacramento, CA, February 20-22, 1998.

**NATIONAL
PRESENTATIONS:**

"Iontophoresis of Dexamethasone into Skin and Subcutaneous Tissues: A Controlled Human Trail". Moulton, M. and Wilson, S. American College of Surgeons, Central Pennsylvania Chapter Annual Meeting, Harrisburg, PA, March 1994.

"Proximal Tibial Osteotomy: An Operation Based on a Bogus Mechanical Concept". Shaw, J. and Moulton, M. The Knee Society, Baltimore, MD, October 6, 1994.

“Safe Placement of Proximal Tibial Transfixion Wires with Respect to Intracapsular Penetration: Trauma Update”. Pennsylvania Orthopaedic Society Annual Meeting, Pittsburgh, PA, November 16-19, 1994.

“The Effects of Interference Screw Length on Distal Fixation for Anterior Cruciate Ligament Reconstruction”. Stube, K., Black, K. and Moulton, M. 62nd Annual Meeting of the American Academy of Orthopaedic Surgeons, Orlando, FL, February 1995.

“Safe Placement of Proximal Tibial Transfixion Wires with Respect to Intracapsular Penetration”. Reid, J., Moulton M. and Wall, T. 62nd Annual Meeting of the American Academy of Orthopaedic Surgeons, Orlando, FL, February 1995.

“Proximal Tibial Osteotomy: An Operation Based on a Bogus Mechanical Concept”. Shaw, J. and Moulton, M. 62nd Annual Meeting of the American Academy of Orthopaedic Surgeons, Orlando, FL, February 1995.

“Percutaneous Pin Fixation of Proximal Humerus Fractures”. Naidu, S., Bixler, B., Capo, J. and Moulton, M. 63rd Annual Meeting of the American Academy of Orthopaedic Surgeons, Atlanta, GA, February 1996.

“Percutaneous Pin Fixation of Proximal Humerus Fractures: A Biomechanical Study”. Bixler, B., Naidu, S., Capo, J. and Moulton, M. 63rd Annual Meeting of the American Academy of Orthopaedic Surgeons, Atlanta, GA, February 1996.

“The Influence of Metacarpophalangeal Joint Position on Thumb Basal Joint Loading”. Moulton, M., Kelly, M., Parentis, M. and Pelligrini, B. 51st Annual Meeting of the American Society for Surgery of the Hand, Nashville, TN, October 1996.

“Percutaneous Pin Fixation of Unstable Extra-Articular Distal Radius Fractures: A Biomechanical Study”. Naidu, S., Capo, J., Ciccone, W. and Moulton, M. 64th Annual Meeting of the American Academy of Orthopaedic Surgeons, San Francisco, CA, February 1997.

“Effects of Interference Screw Length on Distal Fixation for ACL Reconstruction”. Moulton, M., Stube, K. and Black, K. The American Orthopaedic Association’s 30th Annual Residents’ Meeting, New York, NY, March 1997.

“Biomechanical Effects of the Ossific Nucleus on the Femoral

Epiphysis". Segal, L., Schneider, D., Moulton, M. and Schwentker, E. Pediatric Orthopaedic Society of North America, Vancouver, Canada, May 13-18, 1997.

"The Effects of Perioperative Radiation on the Inhibition of Heterotopic Ossification in Rabbits: An Animal Model". Schneider, D., Moulton, M., Deol, G. and Pellegrini, V. 31st Annual Meeting of the American Orthopaedic Association Residents' Conference, February 20-22, 1998.

"Inhibition of Heterotopic Ossification with Radiation Therapy in an Animal Model". Moulton, M., Schneider, D., Deol, G. and Pellegrini, V. 65th Annual Meeting of the Academy of Orthopaedic Surgeons, Specialty Day/Hip Society, New Orleans, LA, March 19-23, 1998.

"Inhibition of Heterotopic Ossification with Radiation Therapy in an Animal Model". Moulton, M., Schneider, D., Deol, G. and Pellegrini, V. The American Orthopaedic Association, Asheville, NC, June 6, 1998.

"The Effects of Perioperative Radiation on the Inhibition of Heterotopic Ossification in Rabbits: An Animal Model". Deol, G., Schneider, D., Moulton, M., Singapuri, K., Chinchilli, V. and Pellegrini, V. 66th Annual Meeting of the American Academy of Orthopaedic Surgeons, Anaheim, CA, February 5, 1999.

"Injury to the Capital Femoral Epiphysis in Growing Rabbits: An Animal Model for the Protective Role of the Ossific Nucleus in DDH". Segal, L., Berlin, J., Schneider, D., Moulton, M. and Frauenthoffer, E. 66th Annual Meeting of the American Academy of Orthopaedic Surgeons, Anaheim, CA, February 5, 1999.

"Management of Cervical Trauma, Posterior Approach". AO/ASIF Clinical Instructor, Philadelphia, PA, February 2000.

"Presentation at the 12th Annual Thomas Jefferson Spine Fellows Alumni Symposium, Newport, RI, July 10-21, 2012.

REGIONAL
PRESENTATIONS:

"The Effects of Metacarpophalangeal Joint Position on the Contact Forces Across the Trapeziometacarpal Joint". Moulton, M., Kelly, M., Parentis, M. and Pellegrini, V. The Annual Meeting of the Pennsylvania Orthopaedic Society, Philadelphia, PA, November 1995.

LOCAL
PRESENTATIONS:

"Adenocarcinoma, Unknown Primary with Distant Metastasis". Moulton, M. and Crawford, M. Mercy General Health Partners Tumor Board, Muskegon, MI, November 6, 2001.

- RESEARCH GRANTS:**
- The Effects of Perioperative Radiation on the Inhibition of Heterotopic Ossification in Rabbits: An Animal Model. Moulton, M. and Pellegrini, V. Orthopaedic Research and Education Foundation, \$97,000, July 1, 1995-June 31, 1997.
- The Effects of Perioperative Radiation on the Inhibition of Heterotopic Ossification in Rabbits: An Animal Model. Moulton, M., Paul, E. and Pelligrini, V. Orthopaedic Research Initiation Grant (Institutional Seed Grant) Accepted Award \$12,500, August 1, 1993-July 1, 1994.
- The Trapeziometacarpal Joint as an In Vivo Model for Primary Idiopathic Osteoarthritis: The Association of Estrogen Receptors with Attrition of the Palmar Beak Ligament. Pellgegrini, V. and Moulton, M. The American Society for Surgery of the Hand, Seed Grant \$7,500.
- The Protective Influence of the Ossific Nucleus: An Animal and Biomechanical Model. Segal, L., Moulton, M., VanSlyke, M., Bruno, A. and Jacobs, C. Children's Miracle Network, \$9,736.
- FACULTY:**
- Synthes Spine Advanced Cervical Solutions with ProDisc-C Forum, Orthopaedic Learning Center, Rosemont, IL, November 9, 2008.
- TRAINING INTERNS/ RESIDENTS IN ORTHOPAEDICS:**
- Mercy General Health Partners training program, Muskegon, MI, 6 weeks total training time from July 2001 to June 2002.
- CONTINUING MEDICAL EDUCATION:**
- 12th Annual Thomas Jefferson Spine Fellows Alumni Symposium, Newport, RI, July 20-21, 2012
 - 10th Annual Global Symposium on Motion Preservation Technology, Medical Education Resources, Inc., New Orleans, LA, April 27-30, 2010 (24 CME)
 - Preservation of Motion in the Spine, Fore Foundation for Orthopaedic Research and Education, Duck Key, FL, April 7-10, 2010 (18 CME)
 - 2010 Annual Symposium of the American Society of Spine Radiology, Educational Symposia, Las Vegas, NV, February 18-21, 2010 (21 CME)
 - Medtronic VIP Visit, Research and Development, Sunnyvale, CA, September 18, 2009
 - 9th Annual Thomas Jefferson Meeting, Orlando, FL, July 24-26, 2009
 - Michigan Orthopaedic Society Meeting, Mackinac Island, MI, June 19-21, 2009 (12 CME)

- Kyphoplasty Workshop, Michigan Orthopaedic Society, Mackinac Island, MI, June 19-21, 2009 (4 CME)
- Federation of Spine Associations Meeting, Las Vegas, NV, February 28, 2009 (8.5 CME)
- 2009 AAOS Annual Meeting, Las Vegas, NV, February 25-28, 2009 (27 CME)
- North American Spine Society 23rd Annual Meeting, Toronto, ON, Canada, October 14-16, 2008 (16.5 CME)
- Synthes ProDisc-C Surgeon Training Forum, Las Vegas, NV, February 1-2, 2008
- Advanced Deformity Hands-On Practical Lab, Advanced Techniques in Spinal Deformity Surgery, DePuy Spine, Las Vegas, NV, March 22-23, 2007
- Orthopaedics Hyperguide, Vindico Medical Education, November 2006 (33.25 CME)
- Britspine 2006, The Fourth Combined Meeting of British Scoliosis Society, British Cervical Spine Society and Society for Back Pain Research, Cardiff International Arena, April 26-28, 2006 (25 CME)
- 2005 Orthopaedic Self-Assessment Examination, American Academy of Orthopaedic Surgeons (50 CME)
- North American Spine Society 20th Annual Meeting, Philadelphia, PA, September 27-October 1, 2005 (24.75 CME)
- Charité Artificial Disc Training, Cincinnati, OH, November 22-24, 2004.
- Spinal Deformity Study Group, St. Louis, MO, November 3-6, 2004 (12 CME)
- Surgeon Visit/Surgery Professor Jürgen Harms, Klinikum Karlsbad Teaching Hospital/University of Heidelberg, Karlsbad, Germany, September 27-October 1, 2003 (24 CME)
- Thomas Jefferson Spine Fellows Symposium, Lake Placid, NY, August 1-2, 2003.
- Thomas Jefferson Spine Fellow Symposium/Presenter, Cambridge, Maryland, July 23-24, 2004 (16 CME)
- Kyphon Course: Inflatable Bone Tamp Technology, Surgical Learning Center, Celebrations Hospital, Orlando, FL, June 12-13, 2003 (16 CME)
- Controversies in Lumbar Spine Surgery, Las Vegas, NV, April 9-12, 2003 (16 CME)
- Risk Management Self-Study Course: Top 5 Causes of Malpractice Claims, American Physicians Assurance Corporation, December 11, 2002 (2 CME)
- North American Spine Society meeting, Montreal, Canada, October 29-November 1, 2002 (30.25 CME)
- Board Certification Self-Study, American Medical Association, July 1-December 31, 2002 (25 CME)
- Spinal Deformity Challenges and Solutions, sponsor: Medtronic

- Sofamor Danek, Amelia Island, FL, May 11-12, 2001
- Office Risk Analysis Self-Assessment Survey, Mutual Insurance Corporation of America, Muskegon, MI, October 2, 2000 (3 CME)

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