

Brian G. Burnikel, MD

Office

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Education

Undergraduate

B.S., Microbiology
University of Iowa, Iowa City, Iowa, 1982-1986
Iowa State University, Ames, Iowa, 1984

Medical School

University of Iowa College of Medicine, Iowa City, Iowa, 1986-1990

Internship

Mayo Graduate School of Medicine, Rochester, Minnesota, July 1990-June 1991

Orthopaedic Residency

Mayo Graduate School of Medicine, Rochester, Minnesota, July 1991- June 1995

Specialty Training

Birmingham Hip Resurfacing, Birmingham England, May 2005

Board Certification

Orthopaedic Surgery, May 1997-Present
Recertification 2017

Licensure

South Carolina, 1995-Present
Minnesota 1990-1995

Administrative/Teaching/Committee Positions

- Chairman Bundle Patient Care Initiative Joint Replacement
- Patewood Medical Campus Quality Care Committee
- Surgical Care Infection Prevention Committee
- PMH Antibiotic Stewardship Committee
- PMH Opioid Stewardship Committee
- Medical Staff Performance Improvement Committee 2008-2011, 2015-2018
- Chairman Patewood Memorial Hospital Medical Care Committee

- Division Chief Adult Reconstruction, 2005-Present
- Clinical Value Based Healthcare Committee and Subcommittee
- Clemson Bioengineering Senior Design Team Advisor 2016, 2018
- Care Pathway for Hip and Knee Replacement Committee
- USC School of Medicine Greenville Admissions Committee 2012-2016
- Orthopedic Products Committee 2009-Present
- Orthopedic Resident Clinical Competency Committee
- Director Steadman Hawkins Adult Reconstruction Fellowship, 2008-2016
- Vice Chairman Quality Department of Orthopaedics and Neurosurgery. 2008-2011
- Clemson University Adjunct Assistant Professor of Bioengineering, College of Bioengineering and Science, 2009-Present
- USC School of Medicine Clinical Associate Professor 2016-Present
- Editor of Vital Signs Magazine, 2009
- Physician manager Oakwood Orthopedic Specialists, 2003-2006
- Member of the Musculoskeletal Leadership Council, 2007-2013

Hospital Privileges

- St. Francis Hospital, 1995-2006, Inactive
- Health South Surgery Center, 1995-2006, Inactive
- Greenville Health System, 1995-Present, Active

Memberships

- American Academy Orthopaedic Surgeons
- American Association Hip and Knee Surgeons
- South Carolina Medical Association
- South Carolina Orthopaedic Association
- Southern Orthopaedic Association
- Greenville County Medical Society
- Mayo Clinic Alumni Association

Personal Presentations

- The LEG Symposium.Hip/Knee Arthroplasty Update/Panel 2011
- Distal Cut First Total Knee Arthroplasty Technique,
Copper Mountain, Colorado February 2005
- Implant Removal in Revision Total Knee Arthroplasty,
Santa Barbara, California June 2005
- Wear Performance of Oxinium Femoral Component in Abrasive Conditions
Santa Barbara, CA June 2005
Charleston, SC November 2005
- Demonstration Minimal Invasive Total Knee Arthroplasty Technique
Las Vegas, Nevada November 2005
Charlotte, NC October 2005
Atlanta, GA December 2005
Atlanta, GA December 2006
Greenville, SC February 2007
- Demonstration Minimally Invasive Total Hip Arthroplasty, Posterior Approach
Atlanta, GA December 2005
- Demonstration Hip Resurfacing Arthroplasty
Atlanta, GA December 2006
Greenville, SC February 2007
Charlotte, NC September 2008

Presented Research

- Torres EG, Lindmair-Snell J, Langan J, Burnikel B: Is Preoperative Nasal Povidone-Iodine as Efficient and Cost Effective as Standard MRSA Screening Protocol in Total Joint Arthroplasty. South Carolina Orthopaedic Association, Annual Meeting, Kiawah Island, SC, 2015.
(Erick Torres, MD Presenter)
- Torres EG, Anderson AB, Broome B, Geary SP, Burnikel B: Liposomal Membrane Bound Bupivacaine Versus Femoral Nerve Catheter for TKA. Southern Orthopaedic Association, Annual Meeting, Asheville, NC, 2015. (Erick Torres, MD Presenter)
- Tranexamic Acid vs. Alproic Acid in Total Joint Arthroplasty, Retrospective Review.
 - Presented SCOA Meeting August 2016

Abstracts Submitted for Presentation PT Combined Sections Meeting February 2016

- Brian J. Loyd, Andy Kittelson, Dawn Waugh, Jackie Del Giorno, Brian Burnikel, Thomas Hoogeboom, Jennifer Stevens-Lapsley
Examination of Selection Bias in Arthroplasty Research using Clinically Collected Data.
- Brian Draddy, PT, DPT, Tyler Patrick, PT, DPT, Chuck Thigpen, PT, DPT, PhD, Jacqueline Del Giorno, PT, DPT, Brian Burnikel, MD. The effect of age on perceived level of function before and after a primary total knee arthroplasty.

Publications and Submissions

- Topoluk, N, Steckbeck, K, Siatkowski, S, Burnikel, B. , Tokish, J. , Mecuri, J. : Amniotic mesenchymal stem cells mitigate osteoarthritis progression in a synovial macrophage-mediated in vitro explant coculture model. *Journal of Tissue Engineering and Regenerative Medicine*. 2018 April 29; 12(4): 1097-1110.
- Torres E, Lindmair-Snell J, Langan J, Burnikel B. Is Preoperative Nasal Povidone-Iodine as Efficient and Cost Effective as Standard MRSA Screening Protocol in Total Joint Arthroplasty. Accepted for publication, September 2015 -*The Journal of Arthroplasty*
- Torres EG, Anderson AB, Broome B, Geary SP, Burnikel B: Liposomal Membrane Bound Bupivacaine Versus Femoral Nerve Catheter for TKA. December 2017. *The American Journal of Orthopedics*.
- Broome, C. Burnikel, B. Novel strategies to improve early outcomes following total knee arthroplasty; a case control study of intra articular injection versus femoral nerve block. *International Orthopaedics* 38(10) June 2014.
- Thomas B. Pace, Brad Prather, Brian Burnikel, Brayton Shirley, Stephanie Tanner, and Rebecca Snider, “Comparative Outcomes Assessment: Hip Hemiarthroplasty as an Alternative to THA in Patients with Surgically Pristine Acetabulum—Is There Still a Role?,” *ISRN Orthopedics*, vol. 2013, Article ID 632126, 6 pages, 2013.
doi:10.1155/2013/632126
- DesJardins, JD, Burnikel, B & LaBerge, M 2008, 'UHMWPE wear against roughened oxidized zirconium and CoCr femoral knee components during force-controlled simulation' *Wear*, vol. 264, no. 3-4, pp. 245-256.,
10.1016/j.wear.2007.03.020

Current Research

- Topical Tranexamic Acid in THA, Prospective Randomized, Double-Blinded Study. Enrollment complete (Submitted AAOS and AAHKS) 2018
- Prospective, Randomized, Blinded Study of KneeHab Neuromuscular Stimulation in TKA. Enrollment Completed
- BioD Amniotic Tissue Injection for Osteoarthritis of Knee
- Virtual Reality Modalities for Reduction of Pain/Anxiety in TKA Experience
- Bregg Remote ROM Home Monitoring after Knee Arthroplasty