

Background Information

Stephanie Kliethermes, PhD

Department of Orthopedics and Rehabilitation
University of Wisconsin School of Medicine and Public Health
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Madison, WI 53705-2281

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Formal Education

Undergraduate
Lawrence University, Appleton, WI
June 2007, Mathematics & English
Bachelor of Arts
Cum Laude

Graduate/Medical School
University of Iowa, Iowa City, IA
May 2009, Biostatistics
College of Public Health
Masters of Science

University of Iowa, Iowa City, IA
May 2013, Biostatistics
College of Public Health
Doctor of Philosophy

Specialty/Subspecialty Certification
University of Iowa, Iowa City, IA
May 2011, Education
College of Education
Graduate Certificate in College Teaching

Current Positions

2022-present *Associate Research Professor*
University of Wisconsin-Madison, Madison, WI
Division of Sports Medicine
Department of Orthopedics and Rehabilitation

2016-present *Research Director*
The American Medical Society for Sports Medicine (AMSSM)
AMSSM Collaborative Research Network

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Past Positions

Academic Appointments

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|-----------|--|
| 2016-2022 | <i>Clinical Assistant Professor</i>
University of Wisconsin-Madison, Madison, WI
Division of Sports Medicine
Department of Orthopedics and Rehabilitation |
| 2015-2016 | <i>Assistant Professor</i>
Loyola University Medical Center, Maywood, IL
Biostatistics Core in Clinical Research Office |
| 2013-2016 | <i>Director</i>
Loyola University Medical Center, Maywood, IL
Biostatistics Core in Clinical Research Office |
| 2013-2014 | <i>Research Assistant Professor</i>
Loyola University Medical Center, Maywood, IL
Department of Public Health Sciences |
| 2012-2013 | <i>Graduate Research Assistant</i>
University of Iowa, Iowa City, IA
Department of Biostatistics
Department of Statistics |
| 2010-2012 | <i>Graduate Teaching Assistant</i>
University of Iowa, Iowa City, IA
Department of Biostatistics
Department of Statistics |
| 2008-2010 | <i>Graduate Research Assistant</i>
University of Iowa, Iowa City, IA
Center for Public Health Statistics |

Honors and Awards

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|------|---|
| 2021 | Recipient, Hank Chambers Award for Best Scientific Presentation –
ATC/Motion (2021 PRiSM Virtual Annual Meeting)
<i>“The Impact of COVID-19 Related School Closures and Sport Cancellations
on the Health of Adolescent Athletes”</i> |
| 2020 | Recipient, Hank Chambers Award for Best Scientific Paper in Athletic
Training (2020 PRiSM Annual Meeting)
<i>“Ankle brace use and risk of acute lower extremity injury among female high
school volleyball players”</i> |
| 2020 | Co-recipient, American Academy of Sports Physical Therapy (AASPT)
Excellence in Research Award
<i>“Prospective Validation and Responsiveness of the University of Wisconsin</i> |

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*Running Injury and Recovery Index” Authors: Evan O. Nelson, DPT, PhD;
Stephanie Kliethermes, PhD; Bryan Heiderscheit, PT, PhD, FAPTA*

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| 2019 | Co-recipient, Oscar Ortiz Contreras Award
<i>Given to authors of article which most contributed to the IUJ impact factor of previous year</i> |
| 2017 | Marshall B Hulbert Distinguished Young Alumni Award, Lawrence University |
| 2016 | Delta Omega Honorary Society in Public Health |
| 2013 | Iowa Governor’s Volunteer Award, Girls on the Run |
| 2013 | Milford E. Barnes Award
<i>given to most outstanding graduate student in his/her respective area of study</i> |
| 2012 | University of Iowa Graduate College Fellowship |
| 2012 | University of Iowa Outstanding Teaching Assistant Award
<i>honors teaching assistants who have demonstrated outstanding ability as teachers at the University of Iowa</i> |
| 2012 | Iowa N.E.W. Leadership Institute Participant
<i>selected to participate in 5 day intensive residential institute designed to empower women in all sectors of public leadership</i> |
| 2007 | NCAA Woman of the Year – Midwest Conference Winner |
| 2003-2007 | 15 time Letter Winner, Volleyball (Captain 2005-2007; MVP 2005-2006, 2006-2007), Basketball, Indoor & Outdoor Track and Field (Captain 2005-2007; MVP 2003-2004, 2004-2005), Lawrence University |
| 2007 | The Campus Life Award, Lawrence University
<i>for leadership and service to Lawrence University</i> |
| 2007 | Ruth Bateman Award, Lawrence University
<i>recognizes excellence in scholarship, athletic ability and leadership by a woman athlete</i> |
| 2007 | Gervais and Mary K Reed Award, Lawrence University
<i>voted by peers for achievement and service by a senior woman</i> |
| 2007 | Marion Read Award, Lawrence University
<i>for outstanding contributions to Lawrence athletics</i> |

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Professional Society Memberships

2018-present Pediatric Research in Sports Medicine (PRiSM)

2016-present American Medical Society for Sports Medicine (AMSSM); *ex-officio (staff)*

Peer-Reviewed Publications

**Signifies three publications since promotion that I believe represent my most noteworthy scholarly contributions to the field of sports medicine*

1. Pendergast J, **Kliethermes SA**, Freburger JK, Duffy PA. A comparison of health care use for physician-referred and self-referred episodes of outpatient physical therapy. *Health Serv Res.* 2012 Apr;47(2):633-54. doi: 10.1111/j.1475-6773.2011.01324.x.
2. Gfeller K, Turner C, Oleson J, **Kliethermes S**, Driscoll V. Accuracy of cochlear implant recipients in speech reception in the presence of background music. *Ann Otol Rhinol Laryngol.* 2012 Dec;121(12):782-91. doi: 10.1177/000348941212101203.
3. See RL, Driscoll VD, Gfeller K, **Kliethermes S**, Oleson J. Speech Intonation and Melodic Contour Recognition in Children With Cochlear Implants and With Normal Hearing. *Otology & Neurotology* 34(3):p 490-498, April 2013. DOI: 10.1097/MAO.0b013e318287c985.
4. Lutz KL, Holte L, **Kliethermes SA**, Stephan C, Mathews KD. Clinical and genetic features of hearing loss in facioscapulohumeral muscular dystrophy. *Neurology.* 2013 Oct 15;81(16):1374-7. doi: 10.1212/WNL.0b013e3182a84140.
5. Pearce MM, Hilt EE, Rosenfeld AB, Zilliox MJ, Thomas-White K, Fok C, **Kliethermes S**, Schreckenberger PC, Brubaker L, Gai X, Wolfe AJ. The female urinary microbiome: a comparison of women with and without urgency urinary incontinence. *mBio.* 2014 Jul 8;5(4):e01283-14. doi: 10.1128/mBio.01283-14.
6. **Kliethermes S**, Oleson J. A Bayesian approach to functional mixed-effects modeling for longitudinal data with binomial outcomes. *Stat Med.* 2014 Aug 15;33(18):3130-46. doi: 10.1002/sim.6166.
7. Lowery EM, Kuhlmann EA, Mahoney EL, Dilling DF, **Kliethermes SA**, Kovacs EJ. Heavy alcohol use in lung donors increases the risk for primary graft dysfunction. *Alcohol Clin Exp Res.* 2014 Nov;38(11):2853-61. doi: 10.1111/acer.12553.
8. McCroskey Z, **Kliethermes S**, Bahar B, Barkan GA, Pambuccian SE, Wojcik EM. Is a consistent cytologic diagnosis of low-grade urothelial carcinoma in instrumented urinary tract cytologic specimens possible? A comparison between cytomorphologic features of low-grade urothelial carcinoma and non-neoplastic changes shows extensive overlap, making a reliable diagnosis impossible. *J Am Soc Cytopathol.* 2015 Mar-Apr;4(2):90-97. doi: 10.1016/j.jasc.2014.10.006.
9. Layden JE, Phillips RO, Owusu-Ofori S, Sarfo FS, **Kliethermes S**, Mora N, Owusu D, Nelson K, Opare-Sem O, Dugas L, Luke A, Shoham D, Forbi JC, Khudyakov YE, Cooper RS. High frequency of active HCV infection among seropositive cases in west Africa and evidence for multiple transmission pathways. *Clin Infect Dis.* 2015 Apr 1;60(7):1033-41. doi: 10.1093/cid/ciu965.
10. Gunnala V, Guo R, Minutti C, Durazo-Arvizu R, Laporte C, Mathews H, **Kliethermes S**, Bhatia R. Measurement of salivary cortisol level for the diagnosis of critical illness-related corticosteroid insufficiency in children. *Pediatr Crit Care Med.* 2015 May;16(4):e101-6. doi: 10.1097/PCC.0000000000000361.
11. Scaglione S, **Kliethermes S**, Cao G, Shoham D, Durazo R, Luke A, Volk ML. The Epidemiology of Cirrhosis in the United States: A Population-based Study. *J Clin*

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- Gastroenterol. 2015 Sep;49(8):690-6. doi: 10.1097/MCG.0000000000000208.
12. **Kliethermes S**, Cao G, Durazo-Arvizu RA, Cooper RS, Dugas LR. A comparison of indices of glucose metabolism in five black populations: data from modeling the epidemiologic transition study (METS). BMC Public Health. 2015 Sep 15;15:895. doi: 10.1186/s12889-015-2233-0.
 13. Blackwell RH, Ellimoottil C, Bajic P, Kothari A, Zapf M, **Kliethermes S**, Flanigan RC, Quek ML, Kuo PC, Gupta GN. Postoperative Atrial Fibrillation Predicts Long-Term Cardiovascular Events after Radical Cystectomy. J Urol. 2015 Oct;194(4):944-9. doi: 10.1016/j.juro.2015.03.109.
 14. Kothari AN, Liles JL, Holmes CJ, Zapf MA, Blackwell RH, **Kliethermes S**, Kuo PC, Luchette FA. "Right place at the right time" impacts outcomes for acute intestinal obstruction. Surgery. 2015 Oct;158(4):1116-25; discussion 1125-7. doi: 10.1016/j.surg.2015.06.032.
 15. McCroskey Z, Pambuccian SE, **Kliethermes S**, Antic T, Cohen MB, Barkan GA, Wojcik EM. Accuracy and interobserver variability of the cytologic diagnosis of low-grade urothelial carcinoma in instrumented urinary tract cytology specimens. Am J Clin Pathol. 2015 Dec;144(6):902-8. doi: 10.1309/AJCPE1O9YKMRSQKG.
 16. Sobol U, Go A, **Kliethermes S**, Bufalino S, Rodriguez T, Smith S, Parthasarathy M, Stiff P. A prospective investigation of cell dose in single-unit umbilical cord blood transplantation for adults with high-risk hematologic malignancies. Bone Marrow Transplant. 2015 Dec;50(12):1519-25. doi: 10.1038/bmt.2015.194.
 17. Jawahar A, Lu Y, Okur G, **Kliethermes S**, Lomasney L. Gastrocnemius tendinosis--A frequent finding on MRI knee examination. Eur J Radiol. 2015 Dec;84(12):2579-85. doi: 10.1016/j.ejrad.2015.09.018.
 18. Harkenrider MM, Grover S, Erickson BA, Viswanathan AN, Small C, **Kliethermes S**, Small W Jr. Vaginal brachytherapy for postoperative endometrial cancer: 2014 Survey of the American Brachytherapy Society. Brachytherapy. 2016 Jan-Feb;15(1):23-9. doi: 10.1016/j.brachy.2015.09.012.
 19. Atiase Y, Farni K, Plange-Rhule J, Luke A, Bovet P, Forrester TG, Lambert V, Levitt NS, Thomas-White KJ, Hilt EE, Fok C, Pearce MM, Mueller ER, **Kliethermes S**, Jacobs K, Zilliox MJ, Brincat C, Price TK, Kuffel G, Schreckenberger P, Gai X, Brubaker L, Wolfe AJ. Incontinence medication response relates to the female urinary microbiota. Int Urogynecol J. 2016 May;27(5):723-33. doi: 10.1007/s00192-015-2847-x.
 20. Price TK, Dune T, Hilt EE, Thomas-White KJ, **Kliethermes S**, Brincat C, Brubaker L, Wolfe AJ, Mueller ER, Schreckenberger PC. The Clinical Urine Culture: Enhanced Techniques Improve Detection of Clinically Relevant Microorganisms. J Clin Microbiol. 2016 May;54(5):1216-22. doi: 10.1128/JCM.00044-16.
 21. Finkler ES, Fogel HA, Kroin E, **Kliethermes S**, Wu K, Nystrom LM, Schiff AP. Factors influencing the number of applications submitted per applicant to orthopedic residency programs. Med Educ Online. 2016 Jul 21;21:31865. doi: 10.3402/meo.v21.31865.
 22. Bates CR, Bohnert AM, Ward AK, Burdette KA, **Kliethermes SA**, Welch SB, Sifton RL, Dugas LR. Sleep is in for Summer: Patterns of Sleep and Physical Activity in Urban Minority Girls. J Pediatr Psychol. 2016 Jul;41(6):692-700. doi: 10.1093/jpepsy/jsw009.
 23. Shahid R, Vigilante M, Deyro H, Reyes I, Gonzalez B, **Kliethermes S**. Risk Factors for Failed Newborn Otoacoustic Emissions Hearing Screen. Clin Pediatr (Phila). 2016 Oct;55(12):1138-42. doi: 10.1177/0009922815615826.
 24. Snarskis C, Calaway AC, Wang L, Gondim D, Hughes I, Idrees MT, **Kliethermes S**, Maniar V, Picken MM, Boris RS, Gupta GN. Standardized Reporting of Microscopic Renal Tumor Margins: Introduction of the Renal Tumor Capsule Invasion Scoring System. J Urol. 2017

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- Jan;197(1):23-30. doi: 10.1016/j.juro.2016.07.086.
25. Thomas-White KJ, **Kliethermes S**, Rickey L, Lukacz ES, Richter HE, Moalli P, Zimmern P, Norton P, Kusek JW, Wolfe AJ, Brubaker L; National Institute of Diabetes and Digestive and Kidney Diseases Urinary Incontinence Treatment Network. Evaluation of the urinary microbiota of women with uncomplicated stress urinary incontinence. *Am J Obstet Gynecol*. 2017 Jan;216(1):55.e1-55.e16. doi: 10.1016/j.ajog.2016.07.049.
 26. Dugas LR, **Kliethermes S**, Plange-Rhule J, Tong L, Bovet P, Forrester TE, Lambert EV, Schoeller DA, Durazo-Arvizu RA, Shoham DA, Cao G, Brage S, Ekelund U, Cooper RS, Luke A. Accelerometer-measured physical activity is not associated with two-year weight change in African-origin adults from five diverse populations. *PeerJ*. 2017 Jan 19;5:e2902. doi: 10.7717/peerj.2902.
 27. Schneiderman BA, **Kliethermes SA**, Nystrom LM. Survival in Mesenchymal Chondrosarcoma Varies Based on Age and Tumor Location: A Survival Analysis of the SEER Database. *Clin Orthop Relat Res*. 2017 Mar;475(3):799-805. doi: 10.1007/s11999-016-4779-2.
 28. Harkenrider MM, Adams W, Block AM, **Kliethermes S**, Small W Jr, Grover S. Improved overall survival with adjuvant radiotherapy for high-intermediate and high risk Stage I endometrial cancer. *Radiother Oncol*. 2017 Mar;122(3):452-457. doi: 10.1016/j.radonc.2016.12.003.
 29. Gray A, Grushchak S, Mudaliar K, **Kliethermes S**, Carey K, Hutchens KA. The microenvironment in primary cutaneous melanoma with associated spontaneous tumor regression: evaluation for T-regulatory cells and the presence of an immunosuppressive microenvironment. *Melanoma Res*. 2017 Apr;27(2):104-109. doi: 10.1097/CMR.0000000000000331.
 30. Dugas LR, Forrester TE, Plange-Rhule J, Bovet P, Lambert EV, Durazo-Arvizu RA, Cao G, Cooper RS, Khatib R, Tonino L, Riesen W, Korte W, **Kliethermes S**, Luke A. Cardiovascular risk status of Afro-origin populations across the spectrum of economic development: findings from the Modeling the Epidemiologic Transition Study. *BMC Public Health*. 2017 May 12;17(1):438. doi: 10.1186/s12889-017-4318-4.
 31. Brownlee SA, Blackwell RH, Blanco BA, Zapf MAC, **Kliethermes S**, Gupta GN, Kuo PC, Kothari AN. Impact of Post-Hospital Syndrome on Outcomes Following Elective, Ambulatory Surgery. *Ann Surg*. 2017 Aug;266(2):274-279. doi: 10.1097/SLA.0000000000001965.
 32. Strotman PK, Reif TJ, **Kliethermes SA**, Sandhu JK, Nystrom LM. Dedifferentiated chondrosarcoma: A survival analysis of 159 cases from the SEER database (2001-2011). *J Surg Oncol*. 2017 Aug;116(2):252-257. doi: 10.1002/jso.24650.
 33. **Kliethermes S**, Ma M, Purtell C, Balasubramanian N, Gonzalez B, Layden TJ, Cotler SJ. An assessment of racial differences in the upper limits of normal ALT levels in children and the effect of obesity on elevated values. *Pediatr Obes*. 2017 Oct;12(5):363-372. doi: 10.1111/ijpo.12152.
 34. Scaglione SJ, Metcalfe L, **Kliethermes S**, Vasilyev I, Tsang R, Caines A, Mumtaz S, Goyal V, Khalid A, Shoham D, Markossian T, Luke A, Underwood H, Cotler SJ. Early Hospital Readmissions and Mortality in Patients With Decompensated Cirrhosis Enrolled in a Large National Health Insurance Administrative Database. *J Clin Gastroenterol*. 2017 Oct;51(9):839-844. doi: 10.1097/MCG.0000000000000826.
 35. Dune TJ, Price TK, Hilt EE, Thomas-White KJ, **Kliethermes S**, Brincat C, Brubaker L, Schreckenberger P, Wolfe AJ, Mueller ER. Urinary Symptoms and Their Associations With Urinary Tract Infections in Urogynecologic Patients. *Obstet Gynecol*. 2017 Oct;130(4):718-725. doi: 10.1097/AOG.0000000000002239.

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36. Kliethermes C, Blazek K, Ali K, Nijjar JB, **Kliethermes S**, Guan X. Postoperative Pain After Single-Site Versus Multiport Hysterectomy. *JSLs*. 2017 Oct-Dec;21(4):e2017.00065. doi: 10.4293/JSLs.2017.00065.
37. Afshar M, Netzer G, Mosier MJ, Cooper RS, Adams W, Burnham EL, Kovacs EJ, Durazo-Arvizu R, **Kliethermes S**. The Contributing Risk of Tobacco Use for ARDS Development in Burn-Injured Adults With Inhalation Injury. *Respir Care*. 2017 Nov;62(11):1456-1465. doi: 10.4187/respcare.05560.
38. Hannick JH, Adams W, Sandhu J, **Kliethermes S**, Mazur DJ, Meeks JJ, Sobek S, Coogan CL, Sadaf A, Quek ML, Schulwolf E. Physician Perceptions of Patient Health: A Comparative Analysis between Urologist and Hospitalist Perceptions of Need for Inpatient Hospitalist Comanagement Following Radical Cystectomy. *Curr Urol*. 2017 Nov;11(1):9-15. doi: 10.1159/000447188.
39. Reif TJ, Strotman PK, **Kliethermes SA**, Miller BJ, Nystrom LM. No consensus on implant choice for oligometastatic disease of the femoral head and neck. *J Bone Oncol*. 2018 Feb 27;12:14-18. doi: 10.1016/j.jbo.2018.02.006.
40. Kliethermes C, Blazek K, Ali K, Nijjar JB, **Kliethermes S**, Guan X. A Randomized Controlled Trial for Abdominal Binder Use after Laparoendoscopic Single-Site Surgery. *J Minim Invasive Gynecol*. 2018 Jul-Aug;25(5):842-847. doi: 10.1016/j.jmig.2017.12.021.
41. Dugas LR, Bernabé BP, Priyadarshini M, Fei N, Park SJ, Brown L, Plange-Rhule J, Nelson D, Toh EC, Gao X, Dong Q, Sun J, **Kliethermes S**, Gottel N, Luke A, Gilbert JA, Layden BT. Decreased microbial co-occurrence network stability and SCFA receptor level correlates with obesity in African-origin women. *Sci Rep*. 2018 Nov 20;8(1):17135. doi: 10.1038/s41598-018-35230-9.
42. **Kliethermes SA**, Dugas LR, LaBella CR, Alawad N, Pasulka J, Jayanthi N. Benefits and challenges of serial sports training risk assessment and counselling in kids: the T.R.A.C.K. randomised intervention study. *Br J Sports Med*. 2019 Feb;53(4):243-249. doi: 10.1136/bjsports-2018-099863.
43. Snedden TR, Scerpella J, **Kliethermes SA**, Norman RS, Blyholder L, Sanfilippo J, McGuine TA, Heiderscheit B. Sport and Physical Activity Level Impacts Health-Related Quality of Life Among Collegiate Students. *Am J Health Promot*. 2019 Jun;33(5):675-682. doi: 10.1177/0890117118817715.
44. Stiffler-Joachim MR, Wille CM, **Kliethermes SA**, Johnston W, Heiderscheit BC. Foot Angle and Loading Rate during Running Demonstrate a Nonlinear Relationship. *Med Sci Sports Exerc*. 2019 Oct;51(10):2067-2072. doi: 10.1249/MSS.0000000000002023.
45. McGuine TA, Pfaller A, **Kliethermes S**, Schwarz A, Hetzel S, Hammer E, Broglio S. The Effect of Sport-Related Concussion Injuries on Concussion Symptoms and Health-Related Quality of Life in Male and Female Adolescent Athletes: A Prospective Study. *Am J Sports Med*. 2019 Dec;47(14):3514-3520. doi: 10.1177/0363546519880175.
46. Bidani AK, Polichnowski AJ, Licea-Vargas H, Long J, **Kliethermes S**, Williamson GA, Griffin KA. BP Fluctuations and the Real-Time Dynamics of Renal Blood Flow Responses in Conscious Rats. *J Am Soc Nephrol*. 2020 Feb;31(2):324-336. doi: 10.1681/ASN.2019070718.
47. McGuine T, Post E, Pfaller AY, Hetzel S, Schwarz A, Brooks MA, **Kliethermes SA**. Does soccer headgear reduce the incidence of sport-related concussion? A cluster, randomised controlled trial of adolescent athletes. *Br J Sports Med*. 2020 Apr;54(7):408-413. doi: 10.1136/bjsports-2018-100238.
48. Dune TJ, **Kliethermes S**, Mueller ER, Fitzgerald CM, Brubaker L, Brincat CA. Screening for Microscopic Hematuria in a Urogynecologic Population. *Female Pelvic Med Reconstr Surg*. 2020 Jun;26(6):382-386. doi: 10.1097/SPV.0000000000000733.

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49. Jayanthi N, **Kliethermes S**, Dugas L, Pasulka J, Iqbal S, LaBella C. Risk of Injuries Associated With Sport Specialization and Intense Training Patterns in Young Athletes: A Longitudinal Clinical Case-Control Study. *Orthop J Sports Med.* 2020 Jun 25;8(6):2325967120922764. doi: 10.1177/2325967120922764.
50. Biese KM, McGuine TA, **Kliethermes SA**, Bell DR, Post EG, Watson AM, Brooks MA, Lang PJ. Sport specialization and sport participation opportunities and their association with injury history in female high school volleyball athletes. *Phys Ther Sport.* 2020 Sep;45:86-92. doi: 10.1016/j.ptsp.2020.06.005.
51. Nelson EO, **Kliethermes S**, Heiderscheit B. Construct Validity and Responsiveness of the University of Wisconsin Running Injury and Recovery Index. *J Orthop Sports Phys Ther.* 2020 Dec;50(12):702-710. doi: 10.2519/jospt.2020.9698.
52. Stiffler-Joachim MR, Wille C, **Kliethermes S**, Heiderscheit B. Factors Influencing Base of Gait During Running: Consideration of Sex, Speed, Kinematics, and Anthropometrics. *J Athl Train.* 2020 Dec 1;55(12):1300-1306. doi: 10.4085/1062-6050-565-19.
53. McGuine TA, Biese KM, Petrovska L, Hetzel SJ, Reardon C, **Kliethermes S**, Bell DR, Brooks A, Watson AM. Mental Health, Physical Activity, and Quality of Life of US Adolescent Athletes During COVID-19-Related School Closures and Sport Cancellations: A Study of 13000 Athletes. *J Athl Train.* 2021 Jan 1;56(1):11-19. doi: 10.4085/1062-6050-0478.20.
54. Watson A, Post E, Biese K, **Kliethermes S**, Brooks MA, Bell D. Decreased Physical Activity and Sleep, Not Sport Specialization, Predict Illness in Middle School Athletes. *Sports Health.* 2021 Jan/Feb;13(1):25-30. doi: 10.1177/1941738120927599.
55. Behlmer RJ, Whiting PS, **Kliethermes SA**, Wendt L, Simske NM, Sato EH, Doro CJ, Goodspeed DC, Lang GJ. Reduction techniques for intramedullary nailing of tibial shaft fractures: a comparative study. *OTA Int.* 2021 Feb 2;4(1):e095. doi: 10.1097/OI9.0000000000000095.
56. Biese KM, **Kliethermes SA**, Watson AM, McGuine TA, Lang PJ, Bell DR, Alison Brooks M. Musculoskeletal Injuries and Their Association With Previous Concussion History: A Prospective Study of High School Volleyball and Soccer Players. *Am J Sports Med.* 2021 May;49(6):1634-1641. doi: 10.1177/0363546521997116.
57. Stiffler-Joachim MR, Lukes DH, **Kliethermes SA**, Heiderscheit BC. Lower Extremity Kinematic and Kinetic Asymmetries during Running. *Med Sci Sports Exerc.* 2021 May 1;53(5):945-950. doi: 10.1249/MSS.0000000000002558.
58. Harmon K, de St Maurice AM, Brady AC, Swaminathan S, Aukerman DF, Rueda MA, Terrell K, Cohen RP, Gamradt SC, Henry SD, Huston LM, McAllister DR, McCarty KM, Pass AN, Paul SR, Petron DJ, **Kliethermes SA**. Surveillance testing for SARS-CoV-2 infection in an asymptomatic athlete population: a prospective cohort study with 123 362 tests and 23 463 paired RT-PCR/antigen samples. *BMJ Open Sport Exerc Med.* 2021 Jun 18;7(2):e001137. doi: 10.1136/bmjsem-2021-001137.
59. Moulson N, Petek BJ, Drezner JA, Harmon KG, **Kliethermes SA**, Patel MR, Baggish AL; Outcomes Registry for Cardiac Conditions in Athletes Investigators. SARS-CoV-2 Cardiac Involvement in Young Competitive Athletes. *Circulation.* 2021 Jul 27;144(4):256-266. doi: 10.1161/CIRCULATIONAHA.121.054824.
60. Watson A, Biese K, **Kliethermes SA**, Post E, Brooks MA, Lang PJ, Bell DR, Haraldsdottir K, McGuine T. Impact of in-season injury on quality of life and sleep duration in female youth volleyball athletes: a prospective study of 2073 players. *Br J Sports Med.* 2021 Aug;55(16):912-916. doi: 10.1136/bjsports-2020-103331.
61. Knurr KA, **Kliethermes SA**, Stiffler-Joachim MR, Cobian DG, Baer GS, Heiderscheit BC. Running Biomechanics Before Injury and 1 Year After Anterior Cruciate Ligament

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- Reconstruction in Division I Collegiate Athletes. *Am J Sports Med.* 2021 Aug;49(10):2607-2614. doi: 10.1177/03635465211026665.
62. McGuine TA, Biese KM, Petrovska L, Hetzel SJ, Reardon CL, **Kliethermes S**, Bell DR, Brooks A, Watson AM. Changes in the Health of Adolescent Athletes: A Comparison of Health Measures Collected Before and During the COVID-19 Pandemic. *J Athl Train.* 2021 Aug 1;56(8):836-844. doi: 10.4085/1062-6050-0739.20. Erratum in: *J Athl Train.* 2022 Jan 1;57(1):107. doi: 10.4085/1062-6050-1014.21.
 63. **Kliethermes SA**, Stiffler-Joachim MR, Wille CM, Sanfilippo JL, Zavala P, Heiderscheit BC. Lower step rate is associated with a higher risk of bone stress injury: a prospective study of collegiate cross country runners. *Br J Sports Med.* 2021 Aug;55(15):851-856. doi: 10.1136/bjsports-2020-103833.
 64. Behlmer RJ, Simske NM, Graf RM, **Kliethermes SA**, Lang GJ, Whiting PS. Diagnosing Fractures of the Distal Tibial Articular Surface in Tibia Shaft Fractures: Is Computed Tomography Always Necessary? *J Orthop Trauma.* 2021 Sep 1;35(9):485-489. doi: 10.1097/BOT.0000000000002135.
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Reviews, Case Reports, and Other

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 10. *Rizzone KH, Agnew M, **Kliethermes SA**, Arthur MN, Burton M, Day C, Nicholson C, Ray J, Stern N, Drezner JA, Kroshus E, Blauwet C. Methodology for promoting equity-informed research in sport and exercise medicine: recommendations from the AMSSM Collaborative Research Network. *Br J Sports Med*. 2025 Feb 6;59(4):272-282. doi: 10.1136/bjsports-2024-109286.

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11. Lohse KR, **Kliethermes S**. Approaching Significance: Statistical Guidance for Authors and Reviewers. *J Neurol Phys Ther*. 2025 Oct 1;49(4):240-247. doi: 10.1097/NPT.0000000000000526.
12. Oliveira LP, Lear A, Elphinstone J, Stokes D, Chamberlain R, Tiu T, Price D, Agnew M, **Kliethermes SA**, Sund S, Christensen LA, Shapiro S, Mautner K. Adipose-derived and bone marrow aspirate concentrate injections for osteoarthritis: A scoping review. *PM&R*. 2026;18(Suppl. 2):S6-S19. doi:10.1002/pmrj.70147.

Papers Submitted to Peer- Reviewed Journals

1. Bell DR, Srygler E, Renner M, **Kliethermes SA**, Nelson EO, McGuine T, Brooks MA, Adler S, Chambers J. Factors Associated with Parents' Perceptions of Name, Image, and Likeness in High School Athletes. *Sage Open*. (Under Revision May 2026).
2. Thur L, Wainwright K, Petek BJ, Moulson N, Hsieh PN, Churchill TW, Quinn R, Lewis N, **Kliethermes SA**, Baggish AL, Drezner JA, Harmon KG. Mental Health in Athletes Diagnosed with Cardiovascular Conditions: Initial Results from the Outcomes Registry for Cardiac Conditions in Athletes (ORCCA) Study. *Sports Health*. (Revision Submitted June 2026).
3. Brady D, Egbert JS, Fontana MA, **Kliethermes SA**, Kraus EA, Tenforde AS, Jonson LA, Toresdahl BG. Assessing the Association of Injury and Illness to the Mental Health of Runners: A Runner Health Consortium Study. *BMJOSEM* (Submitted June 2026).
4. Kuik ML, Blomquist MB, **Kliethermes SA**, Knurr KA, Spiker AM. Greater Pre-operative Pain, Positive Leg Roll Test, and Increased Age are Associated with Altered Recovery Trajectories Through 2 Years Following Hip Arthroscopy for Femoracetabular Impingement Syndrome. *Arthroscopy: The Journal of Arthroscopic and Related Surgery*. (Submitted June 2026).
5. Opar D, Lin YC, Timmins RG, **Kliethermes SA**, Blemker SS, Maniar N, Hickey, J, Mortensen B, Hauenstein J, Heiderscheit B, HAMIR Study Group. Hamstring muscle-tendon unit strain and anterior pelvic tilt during maximal speed running are not associated with future hamstring injury: a prospective cohort investigation from the HAMIR Study. *BJSM* (Revision Submitted July 2026).
6. Heiderscheit B, **Kliethermes S**, Blemker SS, Martin JA, Ito N, Mortensen B, Port N, Hauenstein J, Hart J, Opar D, HAMIR Consortium Investigators. Predicting Hamstring Injuries in Collegiate American Football Players: Results of the Primary Analyses from the HAMIR Study on 1073 Athlete-Years of Data from 667 Athletes. *BJSM* (Revision Submitted July 2026).
7. Dowthwaite JN, **Kliethermes SA**, Mosiman SJ, Nicotra AD, Scerpella TA. Longitudinal Patterns of Organized Physical Activity from Childhood to Adulthood in Female Gymnasts vs. Non-gymnasts. *American Journal of Human Biology* (Submitted Aug 2026).
8. Conway J, **Kliethermes S**, Meester S, Brown S, Kenneth-Nwosa K, Nur L, Ruan T, Christensen L, Agnew M, Bowers R, Monseau A. Platelet-Based Therapies in Acute Muscle Injuries: A Scoping Review. *BJSM* (Revision Submitted Aug 2026).
9. Petek BJ, Moulson N, Churchill TW, Weller SL, Mei P, Ray J, Barker H, Phan F, Kim M, **Kliethermes SA**, Drezner JA. Diagnostic Performance of Specific Electrocardiogram Patterns for Conditions Associated with Sudden Cardiac Death in Young Athletes: A Systematic Review. *BJSM* (Under Revision Sept 2026).
10. Petek BJ, Moulson N, Churchill TW, Weller SL, Mei P, Ray J, Barker H, Phan F, Kim M, **Kliethermes SA**, Drezner JA. Diagnostic Accuracy of the 2017 International Criteria for

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Electrocardiogram Interpretation in Youth Athletes: A Systematic Review and Meta-Analysis. BJSM (Under Revision Sept 2026).

11. Martin CL, Naylor JA, Green J, **Kliethermes SA**, Bell DR, Kucera K. Athletic Trainers and Physical Therapists in Outpatient Rehabilitation: Common Conditions Treated, Roles, and Resource Utilization. PLOS One (Submitted Sept 2026).
12. Renner MN, Srygler EC, Biese KM, Keefe MW, **Kliethermes SA**, Nelson EO, McGuine TA, Brooks MA, Bell DR. The association between burnout and lower extremity injury history in high school athletes. Journal of Sport Rehabilitation. (Revision Submitted Sept 2026).
13. Harmon KG, Agnew M, Berrigan W, Christensen L, Ferderber M, Ichinoe D, Kenyon C, Ma C, Pacik D, Poon S, Rifat S, Romero J, Schroeder A, Smith J, Stafford II C, Sund S, Sussman W, Wainwright K, Zak K, **Kliethermes SA**. Use of Platelet-rich Plasma (PRP) for the Management of Chronic Tendinopathy in Sports Medicine: A Scoping Review of 134 Randomized Controlled Trials. BJSM (Revision Submitted Sept 2026).
14. Callahan E, **Kliethermes S**, Egbert J, Mack L, Toresdahl B. Incidence of Race Day Medical Emergencies During Long-Distance Road Races in the United States. Sports Health. (Revision Submitted Sept 2026).
15. Srygler EC, Lamb CF, **Kliethermes SA**, Nelson EO, Renner MN, Smith LM, Biese KM, Brooks MA, McGuine T, Bell DR. Assessing the Relationship Between Sport Specialization and Burnout in High School Athletes Using the Wisconsin Sport Specialization Questionnaire (WISSQ). JAT. (Under Revision Sept 2026).
16. Orchard JJ, **Kliethermes SA**, Baggish AL, Zorzi A, La Gerche A, Pelliccia A, Corcia CG, Phelan D, Corrado D, Kim JH, Harmon KG, Wilson M, Borjesson M, Martinez MW, Papadakis M, Lampert R, Sharma S, Drezner JA, ECG study group. Improving the International Criteria for ECG interpretation in athletes: an international modified Delphi study. BJSM (Revision Submitted Sept 2026).
17. Weller SL, Churchill TW, Moulson N, Mei P, Ray J, Barker H, Phan F, Morris K, **Kliethermes S**, Baggish A, Drezner J, Petek B. Diagnostic Yield of the Addition of a Resting Echocardiogram to Pre-Participation Cardiovascular Screening in Young Competitive Athletes: A Secondary Analysis of a Systematic Review. BJSM (Submitted Sept 2026).
18. Post EG, Anderson T, Triplett A, Ahmed OH, Adams WM, Blauwet C, Derman W, Donaldson A, Emery CA, Howell DR, **Kliethermes SA**, Master C, Mitchell KM, Moran RN, Schneider KJ, Uihlein M, Weiler R, Willick S, Finnoff JT. Development and Validation of the Para Sport Concussion Assessment Tool 6 for Athletes Who Use Wheelchairs (Para SCAT6-WC). BJSM (Submitted Sept 2026).
19. Moulson N, Nelson HP, Petek B, Churchill TW, Thur L, **Kliethermes S**, Lewis N, Quinn R, Ackerman M, Conway J, Day S, Dean P, Edelson JB, Etheridge SP, Friedman E, Kim J, Lampert R, Levine B, Martinez M, Phelan D, Patel M, Wainwright K, Harmon K, Baggish A, Drezner J. Patient Characteristics and Short-term Results from the Outcomes Registry for Cardiac Conditions in Athletes. BJSM (Revision Submitted Sept 2026).
20. Anderson T, Post EG, **Kliethermes SA**. Non-normal does not mean non-parametric: Misconceptions in the Use of Non-Parametric Tests in Sports Medicine Research. JOSPT (Submitted Sept 2026).

Non-Peer Reviewed Articles

1. Miller, E., **Kliethermes, S.**, Beutler, AI. "Can or Should Kids Go the Distance?: Benefits and Risks Associated with Youth Distance Running" *Endurance and Sports Medicine*. 2:2 Summer 2018.

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Conference Publications

1. Schwarz AM, Keene JA, Henderson K, **Kliethermes S**, DeBruin A, Weidman A, Stein E, Pfaller A, McGuine TA. The Association of Sport Related Concussions and Symptoms of Depression in High school Athletes. *National Athletic Trainer's Association Meeting* Houston; TX June 2017.
2. Dowthwaite, J, **Kliethermes, S**, Scerpella, T. In US Females, Adult Proportions of Head to Whole Body Bone Mass Ratio Stabilize Early, Allowing Evaluation of Whole Body BMC from Age 12 years, or Menarche, Onward. *The American Society for Bone and Mineral Research*; September, 2017.
3. **Kliethermes, S**, Niewold, N, Snedden, T, McGuine, T. Health Related Quality of Life and Depression levels in adolescent males and females in the 6-months following a sports related concussion. Oral Presentation. *Pediatric Research in Sports Medicine Society (PRISM) Annual Meeting*, Plantation FL, January 2018.
4. Snedden, T, **Kliethermes S**, Niewold N, Schwarz, A, McGuine TA. Symptom Count and severity over time after sport-related concussion in adolescent male and female athletes. *Pediatric Research in Sports Medicine Society (PRISM) Annual Meeting*, Plantation FL, January 2018.
5. McGuine, TA, **Kliethermes SA**, Schwarz A, Gallanberger M, McDonald C, Pfaller A, DeBruin A, Snedden A. A Prospective Study on the incidence and onset of sport related concussions in female high school soccer players. *Pediatric Research in Sports Medicine Society (PRISM) Annual Meeting*, Plantation FL, January 2018.
6. Dowthwaite J, Kliethermes S, Kanaley J, Scerpella, TA. Organized Physical Activity Participation from Pre-puberty to Adulthood: A Longitudinal Study in U. S. Females. *American College of Sports Medicine National Meeting*, Minneapolis, MN, June 2018.
7. Niewold N, **Kliethermes S.**, McGuine TA. Depression Severity in Adolescent Male and Female Athletes Following Sports-Related Concussion. *American College of Sports Medicine National Meeting*, Minneapolis, MN, June 2018.
8. McGuine TA , Schwarz A, Pfaller A, De Bruin A, Gallenberge M, McDonald C, **Kliethermes S**, Brooks MA. A Prospective Study on the Incidence, Mechanisms and Risk Factors for Sport Related Concussions in High School Soccer Players. *National Athletic Trainer's Association Annual Meeting*. New Orleans, LA; June 2018.
9. McCollough J, **Kliethermes S**, Sanfilippo, J. Higher Odds of Collegiate Lower Extremity Injury in Student Athletes with History of Lower Extremity Surgery Before Entering College Athletics. *National Athletic Trainer's Association Annual Meeting*. New Orleans, LA; June 2018.
10. Roberts EJ, Soyk MG, **Kliethermes SA**, Schwarz AM, Niewold NK, Gallenberger MA, Pfaller AY, McGuine TA. The Impact of Sport-Related Concussions on the Health-Related Quality of Life in High School Athletes. *National Athletic Trainer's Association Annual Meeting*. New Orleans, LA; June 2018.
11. Dowthwaite J, **Kliethermes S**, Scerpella, TA. SITAR Models of Bone and Body Composition Growth: Prospective Longitudinal Data for U. S. White Girls from Childhood to

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- Adulthood. *American Society of Bone and Mineral Research Annual Meeting*. Quebec, Canada; September 2018.
12. Liu C, Sanfilippo J, Stiffler-Joachim M, **Kliethermes S**, Thein-Nissenbaum J, Heiderscheit BC. Influence of running mechanics on annual changes in leg bone mineral density of collegiate cross-country runners. *American Physical Therapy Association Combined Sections Meeting*. Washington DC; Jan 2019.
 13. Wittman K, Ball M, Chumanov E, **Kliethermes S**, Heiderscheit BC. Asymmetries in quadriceps strength and ground reaction force during countermovement jumps are related after ACL reconstruction. *American Physical Therapy Association Combined Sections Meeting*, Washington DC; Jan 2019.
 14. Ball M, Wittman K, Chumanov E, **Kliethermes S**, Heiderscheit BC. Association between functional hop test performance and quadriceps strength in patients recovering from ACL reconstruction. *American Physical Therapy Association Combined Sections Meeting*. Washington DC; Jan 2019.
 15. Bell DR, McGuine TA, Biese KM, Hernandez MI, Schaefer DA, **Kliethermes S**, Brooks MA, Watson A, Lang P. Injury History is Associated with Sport Specialization Level in High School Volleyball Athletes. *Great Lakes Athletic Training Association Annual Meeting*. Wheeling, IL; March, 2019.
 16. Spiker A, Graf R, Duminie S, **Kliethermes S**, Goodspeed D. "Differences in Radiographic Measurements on Standing versus Supine Pelvic Radiographs" *AANA Annual Meeting*. Orlando, FL; May 2-4, 2019.
 17. Biese KM, McGuine TA, Hernandez MI, Schaefer DA, **Kliethermes S**, Brooks MA, Watson A, Lang P, Bell DR. Injury History is Associated with Sport Specialization Level in High School Volleyball Athletes. *National Athletic Trainer's Association Meeting*. Las Vegas, Nevada; June 2019.
 18. Whiting P, Bernatz J, Brooks A, Graf R, Siy A, **Kliethermes S**, Doro C, Goodspeed D, Lang G. Length of Stay Following Geriatric Hip Fracture Surgery: Do Physical Therapy Availability and Day of Surgery Matter? *OTA Annual Meeting*; June 2019.
 19. Spiker A, Graf R, Duminie S, **Kliethermes S**, Goodspeed D. Differences in Radiographic Measurements on Standing versus Supine Pelvic Radiographs. *AOA Annual Meeting*. San Diego, CA; June 25-28, 2019.
 20. Sanfilippo J, Lund B, **Kliethermes SA**, Moll M, Heiderscheit B, Lower Extremity Injury Following a Hamstring Strain in Division 1 Collegiate Football Athletes. *National Athletic Trainer's Association Meeting*. Las Vegas, Nevada; June 2019.
 21. Thien-Nissenbaum J, **Kliethermes S**, Scerpella TA. Improvements in adolescent bone persist three years after resistance training intervention. *ASBMR Annual Meeting*. Orlando, Florida; September 2019.
 22. Dowthwaite J, **Kliethermes S**, Cole T, Scerpella TA. Longitudinal Development of Peak Bone Mass in White US Females: A View through 3 maturational lenses. *ASBMR Annual Meeting*. Orlando, Florida; September 2019.
 23. Spiker A, Graf R, Duminie S, Watchmaker LE, **Kliethermes S**, Goodspeed D. Differences in radiographic measurements on standing versus supine pelvic radiographs. Poster

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- presentation. *Pediatric Research in Sports Medicine Annual Meeting*. Glendale, AZ; Jan 23-25, 2020.
24. McGuine T, **Kliethermes S**, Biese K, Bell D, Watson A, Brooks MA, Post E, Lang P. A prospective study of time loss and non-time loss injuries sustained by female high school volleyball players. Poster presentation. *Pediatric Research in Sports Medicine Annual Meeting*. Glendale, AZ; Jan 23-25, 2020.
25. Lang P, McGuine T, Mack L, Biese K, Bell D, Watson A, Brooks MA, Post E, **Kliethermes S**. "Prevalence of over the counter pain medication use among high school volleyball players. Poster presentation. *Pediatric Research in Sports Medicine Annual Meeting*. Glendale, AZ; Jan 23-25, 2020.
26. Biese K, McGuine T, **Kliethermes S**, Bell D, Watson A, Brooks MA, Post E, Lang P. Association between injury and sports specialization among female high school volleyball players. Poster presentation. *Pediatric Research in Sports Medicine Annual Meeting*. Glendale, AZ; Jan 23-25, 2020.
27. **Kliethermes S**, McGuine T, Biese K, Bell D, Watson A, Brooks MA, Post E, Lang P. Ankle brace use and risk of acute lower extremity injury among female high school volleyball players. Podium presentation. *Pediatric Research in Sports Medicine Annual Meeting*. Glendale, AZ; Jan 23-25, 2020.
28. Hernandez MI, Biese KM, McGuine TA, Schaefer DA, Brooks MA, Watson AM, Lang PJ, **Kliethermes SA**, Bell DR. The association between high school cutting policy and school size with sport specialization status and multisport participation. *National Athletic Trainers' Annual Clinical Symposia and Training Exposition*. Atlanta, GA; June 2020.
29. Spiker A, Graf R, Duminie S, Watchmaker LE, **Kliethermes S**, Goodspeed D. Differences in Radiographic Measurements on Standing versus Supine Pelvic Radiographs. *ISHA Annual Meeting*. Madrid, Spain; Oct 17-19, 2019.
30. Knurr K, **Kliethermes SA**, Thomas G, Binkley N, Baer G, Heiderscheit, B. Distal Femur Bone Mineral Density Deficits Persist 2 Years after ACL Reconstruction in Collegiate Athletes. Platform Presentation. *APTA Combined Sections Meeting*, Denver, CO; February 2020.
31. Cobian DG, Gamillo SA, Stiffler-Joachim M, Sanfilippo J, **Kliethermes S**, Heiderscheit BC. Rate of torque development, not strength or time, is associated with running knee loads post-ACLR. *American Physical Therapy Association Combined Sections Meeting*. Denver, CO; Feb 2020.
32. Nelson EO, **Kliethermes S**, Heiderscheit BC. Prospective validation and responsiveness of the University of Wisconsin Running Injury and Recovery Index. American Physical Therapy Association Combined Sections Meeting. Denver, CO; Feb 2020.
33. Kipp J, Will CM, Stiffler-Joachim M, **Kliethermes S**, Wilson J, Lee K, Heiderscheit BC. Muscle stiffness changes in athletes following acute hamstring injury with and without edema on MRI. American Physical Therapy Association Combined Sections Meeting. Denver, CO; Feb 2020.
34. Stiffler-Joachim MR, Wille CM, **Kliethermes S**, Heiderscheit BC. Returning in-season after acute hamstring strain injury is associated with greater re-injury despite normal clinical assessment. APTA Combined Sections Meeting. Denver, CO; February 2020.

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35. Spiker A, Graf R, Duminie S, Watchmaker LE, **Kliethermes S**, Goodspeed D. Differences in Radiographic Measurements on Standing versus Supine Pelvic Radiographs. Poster Presentation. *AAOS Annual Meeting*. Orlando, FL, March 24-28, 2020.
36. McGuine T, Biese K, Hetzel S, **Kliethermes S**, Reardon C, Bell D, Brooks MA, Watson A. The impact of Covid-19 related school closures and sport cancellations on the health of adolescent athletes. Virtual Presentation. *Pediatric Research in Sports Medicine (PRiSM) Annual Meeting*. Jan 29, 2021.
37. Lang P, McGuine T, Mack L, Biese K, Bell D, Waston A, Brooks MA, Post E, **Kliethermes S**. Prevalence of Over the Counter Pain Medication Use Among High School Volleyball Players. Virtual Poster. *Pediatric Research in Sports Medicine (PRiSM) Annual Meeting* :Virtual; Jan 28-30, 2021.
38. Lukes DH, Stiffler-Joachim MR, **Kliethermes SA**, Heiderscheit BC. Biomechanical Asymmetries during Running and Sidedness of Subsequent Bone Stress Injury. *APTA Combined Sections Meeting*. Orlando, FL; February 2021.
39. Knurr, K, **Kliethermes S**, Stiffler-Joachim M, Cobian D, Baer G, Heiderscheit B. Pre-Injury Running Biomechanics Are Not Restored 12-Months Post Anterior Cruciate Ligament Reconstruction in Collegiate Athletes. Platform Presentation. *APTA Combined Sections Meeting*. Virtual; February 2021.
40. Rowland ON, Stiffler-Joachim MR, Wille CM, Chumanov ES, **Kliethermes SA**, Heiderscheit BC. Injury location and prevalence among injured recreational runners based on age and foot strike pattern. *American Physical Therapy Association Combined Sections Meeting*. Virtual; Feb 2021.
41. Schmida EA, Wille CM, Stiffler-Joachim MR, **Kliethermes SA**, Heiderscheit BC. Loading Rate is not Associated with Running Injury Regardless of Calculation Method. Virtual Presentation. *ACSM Annual Meeting*. Virtual; May 2021.
42. Whiting P, Bernatz J, Brooks A, Graf R, **Kliethermes S**, Siy S, Simske N, Doro C, Goodspeed D, Lang G. Length of Stay Following Geriatric Hip Fracture Surgery: Do Physical Therapy Availability and Day of Surgery Matter? Poster Presentation. *AAOS Annual Meeting*. Virtual; March 26 2021.
43. Graf R, Duminie S, Watchmaker LE, **Kliethermes SA**, Goodspeed DC, Spiker, AM. Differences In Radiographic Measurements on Standing versus Supine Pelvic Radiographs. Podium Presentation. *MAOA Annual Meeting*. Ameila Island, FL; September 29-October 3, 2021.
44. Graf RM, Shaw JT, Simske NM, Siy PN, Siy AB, **Kliethermes SA**, Whiting PS. Risk Factors for Nonunion Following Locked Plating of Distal Femur Fractures. Poster Presentation. *OTA Annual Meeting*. Fort Worth Texas; October 20-23, 2021.
45. Crawford SK, **Kliethermes SA**, Bashford, G, Heiderscheit BC. Influence of Ultrasound Machine Settings on Spatial Frequency Parameters in Skeletal Muscle. Oral Presentation. *BMES 2021 Annual Meeting*. Orlando, Florida; October 2021.
46. Dowthwaite J, **Kliethermes S**, Cole T, Scerpella TA. Biological and Chronological Age-Based Longitudinal Assessments of Peak Bone Mineral Density in Female Athletes and Non-athletes: Does BMD Decrease Before Perimenopause? Oral Presentation. *ASBMR 2021 Annual Meeting*. San Diego, California, USA; October 1-4, 2021.

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47. Knurr KA, Cobian DG, **Kliethermes S**, Stiffler-Joachim MR, Heiderscheit BC. Effect of Speed on Running Knee Biomechanics Symmetry 9 Months Following ACL-Reconstruction in Collegiate Athletes. *American Physical Therapy Association Combined Sections Meeting*. San Antonio, TX; February 2022.
48. Cobian DG, Knurr KA, Smith AW, Stiffler-Joachim, MR, **Kliethermes SA**, Heiderscheit BC. Knee Extensor Rate Of Torque Development Assessment Post-acl Reconstruction: Does Sampling Rate Matter? *American College of Sports Medicine 2022 Annual Meeting*. San Diego, California, USA; May 31-June 4, 2022.
49. Stiffler-Joachim, MR, Heiderscheit, BC, **Kliethermes SA**. Sport Specialization is Not Associated with Relative Energy Deficiency Risk Factors in High School Runners. *ACSM 2022 Annual Meeting*. San Diego, California, USA; May 31-June 4, 2022.
50. Biese KM, Hernandez HI, Winans M, Rudek G, McGuine TA, **Kliethermes SA**, Cadmus-Bertram L, Andreae SJ, Brooks MA, Bell DR. Secondary School Athletic Trainers' Strategies and Barriers to Treating Overuse Injuries in Adolescent Athletes. *NATA 2022 Annual Meeting*. Philadelphia, Pennsylvania, USA; June 28-July 1, 2022.
51. Chen, K, Lee E, **Kliethermes SA**, Scerpella, TA. Increased TT-TG and Tibial Slope are Independent Predictors of ACLR Failure. Poster Presentation. *AOSSM 2022 Annual Meeting*. Colorado Springs, CO; July 13 - 17, 2022.
52. Benkert, RE, Stiffler-Joachim MR, Heiderscheit, BC, **Kliethermes SA**. Associations between Pre-Season Training and In-Season Running-Related Injuries in High School Cross Country Runners. *AASPT Annual Meeting and Scientific Conference*. Indianapolis, IN; Sept. 2022. *Research Report Award Winner.
53. Biese KM, Winans M, McGuine TA, **Kliethermes SA**, Cadmus-Bertram LA, Andreae SJ, Brooks MA, Bell DR. Association Between Sport Motivation and Sport Specialization in Middle School-Aged Athletes. *Great Lakes Athletic Trainers' Association Annual Symposium*. Chicago, IL; November 2022.
54. Stiffler-Joachim MR, Rauh MJ, **Kliethermes SA**, Heiderscheit BC. Associations between Menstrual Dysfunction, Body Mass Index, and Running-Related Injury Among Female High School Runners. *The American Physical Therapy Association Combined Sections Meeting*. San Diego, CA ; February 2023. *Nominated for the Best Research Abstract in Sports Physical Therapy Award.
55. Stiffler-Joachim MR, **Kliethermes SA**, Heiderscheit BC. Total and Change in Weekly Running Distance were not Associated with Running-Related Injuries among High School Cross Country Runners. *Pediatric Research in Sports Medicine Society Annual Meeting*. Denver, CO; February 2023.
56. Luedke LE, Stiffler-Joachim MR, Benkert R, **Kliethermes S**, Heiderscheit BC. Perfectionism and Injury, Weight Worry, and Quality of Life Among High School Cross Country Runners. *The American Physical Therapy Association Combined Sections Meeting*. San Diego, CA; February 2023.
57. Nelson EO, Joachim M, Benkert R, **Kliethermes S**, Heiderscheit BC. The University of Wisconsin Running Injury and Recovery Index is Associated with Running Distance. *The American Physical Therapy Association Combined Sections Meeting*. San Diego, CA; February 2023.

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58. Knurr KA, Lyon J, Haack C, **Kliethermes S**, Cobian DG, Stiffler-Joachim MR, Binkley N, Scerpella T, Heiderscheit B. The Influence of Quadriceps Performance and Running Biomechanics on Longitudinal Changes in Distal Femur Bone Mineral Density After Anterior Cruciate Ligament Reconstruction in Division I Collegiate Athletes. Poster presentation. *OARSI World Congress*. Denver, CO; March, 2023.
59. McCray K, **Kliethermes S**, Kynn J, McCauley H, Smith-Darden J. "I can make a difference": Assessing the impact of Fair Play: Sexual Violence Prevention for Athletes. *North American Society for Sport Management Annual Conference*. Montreal, Quebec, Canada; May 2023.
60. Stiffler-Joachim MR, Tanaka CS, Cousins MK, DuCharme OA, Blemker SS, **Kliethermes SA**, Opar D, Heiderscheit BC. Prior Hamstring Injuries Are Not Associated With Hamstring Fat Infiltration In Division 1 Football Athletes. *The American College of Sports Medicine Annual Meeting*. Denver, CO; May 2023.
61. Benkert RE, Stiffler-Joachim MR, Luedke LE, Heiderscheit BC, **Kliethermes SA**. Performance Perfectionism and Sport Specialization in High School Cross Country Runners. American College of Sports Medicine Annual Meeting; Denver, CO; May 2023.
62. Feller IV HJ, Martin JA, Merrill EA, Mortensen B, Cousins MK, DuCharme OJ, **Kliethermes SA**, Blemker SS, Opar DA, Heiderscheit BC. Associations Between Lower-limb Muscle Volumes And Maximum Sprinting Speed In Collegiate Football Players. American College of Sports Medicine Annual Meeting; Denver, CO; May 2023.
63. Tanaka CS, Stiffler-Joachim MR, Merrill EA, Mortensen B, **Kliethermes SA**, Blemker SS, Opar D, Heiderscheit BC. Eccentric Hamstring Strength by Position for Division 1 Football Athletes. American College of Sports Medicine Annual Meeting; Denver, CO; May 2023.
64. Dowthwaite J, **Kliethermes S**, Cole T, Scerpella T. Longitudinal Evaluation of Female Distal Radius Bone Properties Viewed through 3 Maturational Lenses: Implications for Adolescent Fracture Risk and Site-specific Peak Bone Mass. Poster Presentation. *ASBMR 2023 Annual Meeting*. Vancouver, BC, Canada; October 2023.
65. Dowthwaite J, **Kliethermes S**, Cole T, Scerpella T. Childhood growth patterns set the stage for adolescent fracture risk: Insight from decades of longitudinal growth data. *APHA 2023 Annual Meeting and Expo*. Atlanta, GA; November 2023.
66. Joachim MR, **Kliethermes SA**, Heiderscheit BC. Pre-Season Differences in Running Biomechanics among Runners who Develop Proximal versus Distal Bone Stress Injuries. *The American Physical Therapy Association Combined Sections Meeting*. Boston, MA; February 2024. *Nominated for Best Research Abstract in Sports Physical Therapy.
67. Luedke L, Joachim MR, **Kliethermes SA**, Heiderscheit BC. Performance Perfectionism in Sport and Injury Risk in High School Cross Country Runners. *The American Physical Therapy Association Combined Sections Meeting*. Boston, MA; February 2024.
68. Ito N, Lin Y, Martin J, **Kliethermes S**, Blemker S, Opar D, Heiderscheit B, HAMIR Consortium Investigators. Sprint Biomechanics in Collegiate American Football Athletes after ACL Reconstruction. Poster presentation. *Annual Meeting of the American Society of Biomechanics (ASB)*. Madison, WI; August 2024.

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69. Sweeney EA, Petersen S, Agnew M, **Kliethermes S**, McHorse K, Rizzone K. Diagnosis and Management of Adolescent Isthmic Spondylolysis: A Delphi Study. Poster presentation. *Pediatric Research in Sports Medicine*. Austin, TX; January 29-31, 2025.
70. Ito N, Martin J, Joachim M, Blemker S, Opar D, **Kliethermes S**, Heiderscheit BC. Time for Heel Raises? Gastrocnemii Muscle Volume Deficits 2-Years Post-ACL Reconstruction in Collegiate Football Athletes. Oral presentation. *American Physical Therapy Association Combined Sections Meeting*. Houston, TX; February 2025.
71. Petek BJ, Churchill TW, Moulson N, Delong R, Minnig MC, **Kliethermes SA**, Baggish AL, Maleszewski JJ, Kucera KL, Harmon KG, Drezner JA. Survival Outcomes After Sudden Cardiac Arrest in Young Competitive Athletes From the United States. Oral presentation. ACC Late-Breaking Clinical Trial Oral Presentation. *American College of Cardiology Annual Meeting*. Chicago, Illinois; March 29-31, 2025.
72. Katz N, Tenforde A, Schroeder A, Kraus E, **Kliethermes S**, Fontana MA, Toresdahl BG. History of Bone Stress Injuries and Associated Factors Among Runners Training for a Marathon: An RHC Study. Oral presentation. *AMSSM Annual Meeting*. Kansas City, MO; April 2025.
73. Kraus E, **Kliethermes S**, Fontana M, Johnson L, Tenforde A, Toresdahl BG. Identifying Prevalence and Associations with Urinary Incontinence in Female Endurance Runners: An RHC Study. Oral presentation. *AMSSM Annual Meeting*. Kansas City, MO; April 2025.
74. Campbell-Potter M, McGrath T, Stueck S, Fontana M, **Kliethermes S**, Tenforde A, Toresdahl BG. The Association of Carbon-plated Shoes with Running-related Injuries During New York City Marathon Training: An RHC Study. Oral presentation. Oral presentation. *AMSSM Annual Meeting*. Kansas City, MO; April 2025.
75. Brady D, Egbert J, Fontana MA, **Kliethermes S**, Kraus E, Kroshus E, Tenforde A, Toresdahl BG. "Assessing the Association of Injury and Illness on the Mental Health of Runners: An RHC Study. Poster presentation. *AMSSM Annual Meeting*. Kansas City, MO; April 2025.
76. Roux E, Sirls E, Gaudette L, Bruneau M, Fontana M, **Kliethermes S**, Kraus E, Tenforde A, Toresdahl BG. "Use of Carbon Fiber Plate Shoes in Marathon Runners: An RHC Study. Poster presentation. *AMSSM Annual Meeting*. Kansas City, MO; April 2025.
77. Nguyen BK, Sinnott AM, Hollaway A, Arbogast, K, **Kliethermes S**, Mihalik J, Clugston J. Kinematic Magnitudes of Drill-Specific Head Impacts in Collegiate Football Practices Using Instrumented Mouthguard Data. Poster presentation. *2025 Concussion in Sport Group Symposium*. Milwaukee, WI; April 30-May 1, 2025.
78. Bell DR, Nelson E, **Kliethermes S**, Renner M, Srygler E, Biese K, McGuine T, Brooks A, Brown R. Adler S. Sport Specialization and Injury History: Insights from a Novel Measurement Tool. Oral presentation. Isokinetic Conference, Madrid, Spain; May 3-5, 2025.
79. Joachim MR, Martin JA, **Kliethermes SA**, Heiderscheit BC. The Association Between Running Biomechanics and Lower Extremity Muscle Volumes In Collegiate Cross Country Runners. Poster presentation. *The American College of Sports Medicine Annual Meeting*. Atlanta, GA; May 2025.

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80. Sanfilippo JL, Haraldsdottir K, **Kliethermes SA**, Anderson SA, Watson AM. Comparing Frequentist Statistics versus Machine Learning Modeling Approaches to Assess Injury Risk Among Elite Athletes. Poster presentation. *The American College of Sports Medicine Annual Meeting*. Atlanta, GA; May 2025.
81. Srygler, EC, Renner MN, Nelson EO, **Kliethermes SA**, Brooks MA, Snedden T, Watson A, Adler SN, Bell DR. Sex Differences in Athlete Burnout Scores Based on Sport Participation Volume in High School Athletes. Oral presentation. *GLATA Annual Meeting & Symposium* (Wheeling, IL) and the *76th NATA Clinical Symposia & AT Expo* (Orlando, FL); June 2025.
82. Martin C, Greene J, Bell D, **Kliethermes S**, Naylor J, Kucera K. Athletic Trainers as Outpatient Rehabilitation Providers: An Analysis of Role, Value, and Insurance Reimbursement in a Large Academic Healthcare System. Oral presentation. *76th NATA Clinical Symposia & AT Expo*. Orlando, FL; June 2025.
83. LaBotz M, **Kliethermes S**, Agnew M, Follo E, Tuakli-Wosornu Y. Female students' physical activity by race and ethnicity: Maine perspectives. Oral presentation. *North American Society for the Sociology of Sport Annual Meeting*. Vancouver, British Columbia, Canada; Nov. 2025.
84. **Kliethermes SA**, Nelson EO, Biese KM, Brooks A, Brown R, McGuine T, Renner MN, Snedden TR, Srygler E, Watson A, Bell D. Development and Validation of the Wisconsin Sport Specialization Questionnaire (WISSQ-JR) for Youth Athletes Aged 10-13 Years. Oral presentation. *Pediatric Research in Sports Medicine*. Austin, Tx; January 29-31, 2026.
85. Wexler A, **Kliethermes SA**, Bell DR, Beise KM, Brooks MA, McGuine TM, Renner MN, Srygler E, Watson A, Nelson EO. Contemporary Evaluation of Sport Specialization in High School Track and Field Athletes. Oral presentation. *The American Physical Therapy Association Combined Sections Meeting*. Anaheim, CA; February 2026.
86. Bell DR, Lamb C, Srygler E, Smith L, Nelson E, **Kliethermes S**, Adler S, Biese, K. Exploring Burnout and Sport Specialization in Youth Athletes. Oral presentation. *Isokinetic Conference*. Athens, Greece; April 2026.
87. Chang C, Golden D, **Kliethermes S**. NWSL Menstrual Cycle- Awareness and Support Survey. Poster presentation. *AMSSM Annual Meeting*. Seattle, WA; April 23-27, 2026.
88. Drezner, JA, Moulson N, Hsieh, P, Petek BJ, Churchill TW, Quinn R, Lewis N, Thur L, **Kliethermes SA**, Wainwright K, Harmon KG, Baggish AL. Patient Characteristics and Short-term Outcomes from the ORCCA Study. Oral Presentation. *AMSSM Annual Meeting*. Seattle, WA; April 23-27, 2026.
89. Witt, D. Gee C, Teramoto M, Fontana M, **Kliethermes S**, Kraus E, Tenforde A, Johnson L, Toresdahl B. Associating Inadequate Sleep and Morning Rested Rating with Injury During Marathon Training: An RHC Study. Oral presentation. *AMSSM Annual Meeting*. Seattle, WA; April 23-27, 2026.
90. Coss JP, Austin AV, Egbert J, Fontana M, **Kliethermes S**, Kraus E, Tenforde A, Johnson L, Toresdahl B. Cadence and the Association with Injury During Marathon Training: An RHC Study. Oral presentation. *AMSSM Annual Meeting*. Seattle, WA; April 23-27, 2026.
91. Feiertag JH, Chiampas GT, Egbert J, Fontana J, **Kliethermes S**, Kraus E, Tenforde A, Johnson L, Toresdahl B. Cross-Training and the Association with Injury During Marathon Training: An RHC. Oral poster. *AMSSM Annual Meeting*. Seattle, WA; April 23-27, 2026.

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92. Grewal L, Gee CA, Teramoto M, Fontanta M, **Kliethermes S**, Kraus E, Tenforde A, Johnson L, Toresdahl BJ. Training Surface and Injury Risk in Marathon Runners: An RHC Study. Oral presentation. *AMSSM Annual Meeting*. Seattle, WA; April 23-27, 2026.
93. Leibold, C. Bigosinski KW, Teramoto, M. Fontana M, **Kliethermes S**, Kraus E, Tenforde A, Johnson L, Toresdahl BG. Timing of Training Injuries Among Marathon Runners and Effect on Race Participation: An RHC Study. Oral Presentation. *AMSSM Annual Meeting*. Seattle, WA; April 23-27, 2026.
94. Srygler EC, **Kliethermes SA**, Renner MN, Smith LM, Nelson EO, Brooks MA, Biese KM, McGuine T, Bell DR. Assessing Lower Extremity Injury and Level of Sport Specialization in Early Adolescent Athletes Using a Novel Measurement Tool. Oral presentation. *GLATA Annual Meeting & Symposium* (Wheeling, IL) and Poster Presentation at the *77th NATA Clinical Symposia* (Philadelphia, PA); June 2026.
95. Wexler A, **Kliethermes SA**, Bell DR, Beise KM, Brooks MA, McGuine TM, Renner MN, Srygler E, Watson A, Nelson EO. Contemporary Evaluation of Sport Specialization in High School Track and Field Athletes. *American Physical Therapy Association Combined Sections Meeting*. Anaheim, CA; February 12-14, 2026.

Visual scholarship

1. Afifi T, Barrack MT, Casey E, Huddle M, **Kliethermes SA**, Kraus E, Toresdahl BG, Wasfy MM, Tenforde AS. Infographic. Head to toe considerations for the postpartum endurance athlete. *Br J Sports Med*. 2024 Mar 6;bjsports-2023-107624. doi: 10.1136/bjsports-2023-107624.

Invited Editorials, Technical Reports, and Other Publications

1. **Kliethermes, S.**, Beutler, AI. "Clinical Research and The AMSSM Collaborative Research Network" *British J Sports Medicine* 2018 Nov 27.
2. Jayanthi, N., **Kliethermes, SA.**, Cote, J. "Youth sport specialisation: the need for an evidence-based definition" *British J Sports Medicine* Dec 2019.

Invited Research Presentations

Local/UW

1. Heads, Footprints, and Statistics? Oh My! Open Doors, Open Minds Conference; Cedar Rapids Iowa; October 2009.
2. Who has heard of Biostatistics... anyone? Open Doors, Open Minds Conference; Cedar Rapids, IA; October 2010, October 2011.
3. Study Design and Analysis in Clinical Research. Midwestern University Seminar; Downers Grove, IL; January 2012.
4. Hypothesis Testing; Loyola University Research Honors Seminar; Loyola University Medical Center, Maywood, IL; September 2013.
5. A Roadmap to Clinical Research; Loyola University Fellows Lecture Series. Loyola

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University Medical Center; October 2013.

6. Potential Pathways in Biostatistics. Summer Institute for Biostatistics; University of Iowa, Iowa City, IA; June 2017.
7. The True Value of a p-value. Badger Athletic Performance Seminar, University of Wisconsin-Madison, Madison, WI; September 2017.
8. The Use and Misuse of Matching in Study Design and Analysis. Badger Athletic Performance Seminar, University of Wisconsin-Madison, Madison, WI; March 13, 2018.
9. Biostatistics in Sports Medicine. Summer Institute for Biostatistics; University of Iowa, Iowa City, IA; June 2018.
10. The AMSSM Collaborative Research Network. Badger Athletic Performance Seminar, University of Wisconsin-Madison, Madison, WI; May 14, 2019.
11. Understanding the Impact of Youth Early Sport Specialization – Issues in Study Design and Selecting Appropriate Outcome Measures. Departmental Seminar Series; Department of Biostatistics, University of Iowa, Iowa City, IA; January 2019.
12. Best Practices for Handling Missing Data in Clinical Research. Badger Athletic Performance Seminar, University of Wisconsin-Madison, Madison, WI; May 11, 2020.
13. Demystifying Mixed Effects Models for Sports Medicine Research. Badger Athletic Performance Seminar, University of Wisconsin-Madison, Madison, WI; January 12, 2021.
14. Biostatistics in Sports Medicine. Summer Institute for Biostatistics; University of Iowa, Iowa City, IA; June 2021, June 2022, June 2023 (Virtual).

Regional

1. The Risks and Effects of Youth Single-Sport Specialization: An Expert Panel Discussion for Coaches, Athletic Directors and Parents. Orthopaedic Rehab Specialists; Webinar; June 15, 2020.
2. Youth Sport Specialization: An Update on Current Evidence. Twin Cities Sports Medicine Conference; Virtual. December 13, 2024.

National

1. Claims-based Resource Utilization in Physical Therapy Care; A Comparison of Physician-Referred and Direct Access; Direct Access and Advanced Scope of Practice in Physical Therapy International Summit; National Harbor, MD; October 2009.
2. Bayesian Functional Mixed Effect Modeling for Longitudinal Growth Curves with Binomial Outcomes. Joint Statistical Meetings; San Diego, CA; August 2012.
3. Functional Mixed Effects Models for Multiple Outcomes. Spring Meeting of the International Biometrics Society (ENAR). Washington D.C.; April 2012.
4. The AMSSM Collaborative Research Network. AMSSM Annual Meeting Mainstage Lecture; San Diego, CA; May 2017.
5. How not to displease a statistical reviewer. AMSSM Annual Meeting Instructional Course Lecture. San Diego, CA; May 2017.
6. Biostatistics in Sports Medicine: What you really need to know. AMSSM Fellows Research & Leadership Conference; Boulder, CO; July 2017.
7. A prospective study on the incidence and onset of sport related concussions in female high school soccer players; Pediatric Research in Sports Medicine (PRISM) Annual Meeting; Fort Lauderdale, FL; January 2018.
8. Health Related Quality of Life and Depression in Adolescents following a Sports Related Concussion: A 6-month follow-up; Pediatric Research in Sports Medicine (PRISM)

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- Annual Meeting; Fort Lauderdale, FL; January 2018.
9. AMSSM Collaborative Research Network: High Priority Initiatives. AMSSM Annual Meeting Mainstage Lecture; Orlando, FL; April 2018.
 10. AMSSM Collaborative Research Network. AMSSM Fellows Research & Leadership Conference; Philadelphia, PA; July 2018.
 11. Beyond the Numbers: Biostatistics for Sports Medicine. AMSSM Fellows Research & Leadership Conference; Philadelphia, PA; July 2018.
 12. Predicting Road Race Injury at the Point of Registration. IIRM Sports Medicine Conference Series; Washington, D.C; October 26, 2018.
 13. Impact of Youth Sport Specialization on Athlete Performance. Youth Early Sport Specialization Summit; Houston, Texas; April 12, 2019.
 14. AMSSM Collaborative Research Network. AMSSM Annual Meeting Mainstage Lecture; Houston, TX; April 13, 2019.
 15. Getting Started in Sports Medicine Research for Early Career Physician-Scientists. AMSSM Webinar. September 23, 2019.
 16. Ankle brace use and risk of acute lower extremity injury among female high school volleyball players. Pediatric Research in Sports Medicine (PRiSM) Annual Meeting; Glendale, AZ; January 24, 2020.
 17. Impact of Youth Sport Specialization on Athlete Performance. AMSSM Webinar. January 27, 2020.
 18. Coach Education & Development Post COVID-19: A Medical Perspective. USCCE Virtual Summit; June 2nd, 2020.
 19. Evidence Based Medicine. AMSSM Fellows Research & Leadership Virtual Conference; July 2020.
 20. AMSSM Collaborative Research Network. AMSSM Fellows Research & Leadership Virtual Conference; July 2020.
 21. Beyond the Numbers: Biostatistics for Sports Medicine. AMSSM Fellows Research & Leadership Virtual Conference; July 2020.
 22. The impact of Covid-19 related school closures and sport cancellations on the health of adolescent athletes. Pediatric Research in Sports Medicine (PRiSM) Annual Meeting; Virtual; January 29, 2021.
 23. Beyond the Numbers: Biostatistics for Sports Medicine. AMSSM Fellows Research & Leadership Conference; Denver, CO; July 24, 2021.
 24. Introduction to the Delphi Method. AMSSM Fellows Research & Leadership Conference; Denver, CO; July 24, 2021.
 25. Stats Overview: Different Types of Stats for Different Types of Studies. AMSSM Annual Meeting; Austin, TX; April 9, 2022.
 26. AMSSM CRN Updates. AMSSM Annual Meeting; Austin, TX; April 12, 2022.
 27. Introduction to AMSSM, Leveraging Tools for Research and Professional Development Including the Collaborative Research Network; AMSSM Fellows Research & Leadership Conference; Seattle, WA; July 22, 2022.
 28. Beyond the Numbers: Biostatistics for Sports Medicine. AMSSM Fellows Research & Leadership Conference; Seattle, WA; July 22, 2022.
 29. Focus Areas and Methodological Characteristics of Health Disparity Research in Sports Medicine: A Scoping Review; AMSSM CRN Health Disparities Research Summit; Phoenix, AZ April 28, 2023.
 30. Stats Overview: What do you really need to know? AMSSM Annual Meeting; Phoenix, AZ; April 29, 2023.
 31. CRN Updates- Health Equity Session; AMSSM Annual Meeting; Phoenix, AZ; April 29,

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- 2023.
32. Introduction to AMSSM, Leveraging Tools for Research and Professional Development; AMSSM Fellows Research & Leadership Conference; Baltimore, MD; July 21, 2023.
 33. Beyond the Numbers: Biostatistics for Sports Medicine. AMSSM Fellows Research & Leadership Conference; Baltimore, MD; July 22, 2023.
 34. Development and Validation of the Wisconsin Sport Specialization Questionnaire. Pediatric Research in Sports Medicine RIG Webinar; Virtual February 7, 2024.
 35. Demystifying Statistical Inference: Hypothesis Test, Confidence Intervals, Effect Sizes, and Writing a Discussion. APTA Combined Sections Meeting; Boston, MA; February 16, 2024.
 36. Key Issues for the Professional/Elite Team Physician. Panelist, AMSSM Annual Meeting. Baltimore, MD; April 14, 2024.
 37. CRN Spotlight: Recent Advances in Research Related to Youth Early Sport Specialization. AMSSM Annual Meeting. Baltimore, MD; April 16, 2024.
 38. Sports Specialization and the Youth Runner: Preventing Injury and Burnout. Mountain Land Running Summit, Park City, UT; September 27, 2024.
 39. The Year in Youth Sport Specialization- Emerging Trends & Recap in Research: A total Body Health Approach. NATA. Virtual Panel Discussion; October 23, 2024.
 40. Introduction to AMSSM, Leveraging Tools for Research and Professional Development; AMSSM Fellows Research & Leadership Conference. Denver, CO; July 18, 2025.
 41. Beyond the Numbers: Biostatistics for Sports Medicine. AMSSM Fellows Research & Leadership Conference. Denver, CO; July 18, 2025.
 42. Development and Validation of the Wisconsin Sport Specialization Questionnaire (WISSQ-JR) for Youth Athletes Aged 10-13 Years. Pediatric Research in Sports Medicine. Austin, TX.; January 29-31, 2026.
 43. Orthobiologics and AMSSM: Setting the Stage. Orthobiologics for Sports Medicine Physicians: Bridging the Gaps Research Summit. Seattle, WA; April 23, 2026.
 44. AMSSM Consensus-Based Priority Setting Using the Nominal Group Technique. Orthobiologics for Sports Medicine Physicians: Bridging the Gaps Research Summit. Seattle, WA; April 24, 2026.
 45. Statistical Pearls for Sports Medicine Researchers. AMSSM Annual Meeting. Seattle, WA; April 25, 2026.
 46. Improving Care for Athletes Diagnosed with Cardiac Conditions: Updates from the ORCCA Study. AMSSM Annual Meeting. Seattle, WA; April 25, 2026.
 47. Patient Characteristics and Short-term Outcomes from the ORCCA Study. AMSSM Annual Meeting. Seattle, WA; April 27, 2026.
 48. A Decade of Discovery: 10 Years of the AMSSM Collaborative Research Network. AMSSM Annual Meeting. Seattle, WA; April 28, 2026.
 49. Planning for hypothesis generating versus hypothesis confirming research. Statistically Speaking Webinar hosted by the Data Science and Analytics for Precision Rehabilitation (DAPR) Center. Virtual; September 16, 2026.

International

1. Cohort study planning, conducting and data sharing for future IPD meta-analyses – is it possible?; Young Athlete's Hip Research Collaboration: Oxford, UK (Virtual Webinar); Sept 23, 2021.

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2. Three top tips for planning and conducting high-quality cohort studies. Young Athlete's Hip Symposium: Oxford, UK; Sept 24, 2022.
3. Development and Validation of a Sport Specialization Index Focused on Physical, Motivational and Social Characteristics of Youth Sport Participation: International Olympic Committee World Conference on Prevention of Injury and Illness in Sport, Monaco; March 2, 2024.

Research Support

Current

Title: NCAA-NFL ACL Injury Mitigation Program

Source: Football Research Incorporated (FRI)

PI: Kliethermes

Role: PI Data Coordination Center

Years: 7/1/2026-6/30/2027

Amount: \$63,573

Effort: 8%

This study aims to quantify movement mechanics in NCAA Football Players who do and do not participate in an ACL Injury Mitigation Program before and after a competitive football season and evaluate relationships between pre-season biomechanical profiles and in-season injury incidence.

Title: Outcomes Registry for Cardiac Conditions in Athletes

Source: University of Washington-Seattle

PI: Kliethermes (Data Coordinating Center PI)

Years: 11/2025-10/2026

Amount: \$10,000 (provided to UW-Madison for coordination services)

Effort: 5%, In-Kind

This grant is to support retention efforts of this international registry that enrolls a diverse group of athletes with diagnosed cardiac conditions across the country and monitors them prospectively to assess medical and mental health outcomes.

Title: Orthobiologics for Sports Medicine Physicians: Bridging the Gaps

Source: National Institutes of Health - NIAMS (R13AR087318-01)

PI: Kliethermes

Years: 04/2026-03/2027

Amount: \$15,000

Effort: 10%, In-Kind

This research conference grant supports a national research conference aiming to provide sports medicine physicians and the sports medicine community more broadly with a strong foundation to understand current orthobiologics research for the treatment of commonly treated conditions in SEM, including tendinopathy, muscle injuries, and osteoarthritis. The conference also aims to identify consensus-based research priorities in orthobiologics for the field of sports and exercise medicine.

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Title: Development and Validation of an Adapted SCAT6 Tool for Use Among Athletes Who Use Wheelchairs

Source: AMSSM Collaborative Research Network

PI: Finnoff/Post

Role: Co-Investigator/Biostatistician

Years: 1/2025 – 1/2027

Amount: \$296,374

Effort: 2%

Develop and validate a Para SCAT6-WC tool for use with adaptive sport athletes who use wheelchairs as their primary means of mobility and assess reliability and clinical utility of the para SCAT6-WC in the same population.

Title: Advancing Rehabilitation of Patellar Tendon Injuries using Innovative Wearable Technology and Quantitative Magnetic Resonance Imaging Techniques (K99/R00 Pathway to Independence Award)

Source: National Institutes of Health (NIH) – National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)

PI: Ito

Role: Co-Mentor (K99), Co-I (R00, pending)

Years: 9/2025-8/2030

Amount: \$945,460

Effort: 5% R00

This is a K99/R00 award where I am providing mentorship (K99) and collaboration (R00) on the development and implementation of a clinical trial aimed at improving rehabilitation of patellar tendon injuries. The R00 is pending successful completion of the K99.

Title: Characterization of strength training habits and their influence on injury and race outcomes in endurance runners

Source: AMSSM Foundation

PI: Kulpins/Wichman

Role: Co-Investigator

Years: 10/2025 – 9/2027

Amount: \$7,499

Effort: 1%

This study aims to define factors associated with strength training in marathon runners and the association of strength training with race performance and completion. Specifically, we aim to (1) identify characteristics of regular strength training marathon runners, (2) determine whether strength training is associated with better race times, and (3) determine whether strength training is associated with a reduced risk of not starting and/or completing a race due to injury.

Title: Modeling the Impact of Youth Sport Specialization on Youth Athlete Health Throughout the Year

Source: National Athletic Training Research & Education Foundation

PI: Biese

Role: Co-investigator

Years: 9/2025-8/2028

Amount: \$20,000

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Effort: 1%

This study aims to model the impact of external training load and sport specialization on musculoskeletal injuries and athlete wellbeing in youth girls' volleyball athletes.

Major Past Awards

Title: Quantifying Patellar Tendon Microstructure Using Diffusion Tensor Imaging (DTI)

Source: UW-Madison Department of Orthopedics and Rehabilitation Freedom of Movement Fund

PI: Cobian/Heiderscheit

Role: Co-I

Years: 2/2024-9/2026

Amount: \$50,000

Effort: 2%, in-kind

This study aims to establish the reliability of measuring DTI parameters in pathological patellar tendons, and then investigate the relationship between tendon pathology identified at the macrostructural level and DTI estimates of tendon microstructure. Lastly, an exploratory goal will be to quantify the relationship of patellar tendon micro- and macro-structure measurements with knee function.

Title: Quantitative Ultrasound and MRI for the Assessment of Patellar Tendon Lesions

Source: Radiology Research and Development Fund (University of Wisconsin-Madison Department of Radiology and Medical Physics)

PI: Ito

Role: Co-I

Years: 8/2024-8/2026

Amount: \$40,522

Effort: 2%, in-kind

This project aims to assess the reliability and utility of using quantitative ultrasound and MRI for the assessment of patellar tendon lesions.

Title: NCAA-NFL Instrumented Mouth Guard Program (IMP)

Source: National Football League (NFL) Charities

PI: Kliethermes

Role: PI Data Coordination Center

Years: 09/2023-06/2026

Amount: \$197,503

Effort: 5%

This study characterized head accelerations of collegiate football players during on-field training and competition to improve our understanding of factors contributing to sport related concussion. The primary goal of this collaboration is to establish AMSSM as the Data Coordinating Center (DCC) for the ongoing NFL instrumented mouth guard study

Title: A Mixed Methods Study to Understand Sports Medicine Care in Underserved Communities

Source: AMSSM Foundation

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PI: Wichman
Role: Co-Investigator
Years: 1/2025 – 6/2026
Amount: \$7,425
Effort: 1%

The purpose of our study is to understand the existing landscape of SEM care in underserved populations in the United States. Aim 1: Through a focus group, we aim to identify key characteristics representing the diverse experiences of SEM physicians providing care to underserved communities. Aim 2: Using a survey of the American Medical Society for Sports Medicine (AMSSM) membership, we seek to gain a deeper understanding of the current epidemiology and practices of SEM care for the underserved.

Title: Hamstring Injury (HAMIR) Index: A Framework for Injury Mitigation through Innovative Imaging, Biomechanics and Data Analytics Approaches
Source: National Football League Player Health and Safety
PI: Heiderscheit/Opar/Blemker
Years: 7/01/2021-03/2026
Role: Co-Investigator
Amount: \$3,999,974 total
Effort: 5%-10%

The project proposed to develop innovative magnetic resonance imaging (MRI) techniques and wearable sensor technologies to better predict athletes at risk for hamstring strain injury recurrence and validate the technologies using a prospective, longitudinal, multisite investigation among elite football athletes.

Title: Launching the AMSSM Runner Health Consortium
Source: AMSSM Collaborative Research Network
PI: Toresdahl
Role: Co-Investigator; PI of Data Coordination Center
Years: 01/2023-01/2026
Amount: \$197,503
Effort: 5%

The project aimed to establish the Running Health Consortium (RHC) with the ultimate goal of evaluating the association between training patterns and development of running-related injuries.

Title: Identification, Prevention and Management of Adverse Reactions Associated with the Intra-articular Hyaluronic Acid Therapeutic Class: A Delphi Approach
Source: American Medical Society for Sports Medicine (Educational Grant released via Sanofi)
PI: Kliethermes/Cushman
Role: Co-PI
Years: 12/2024- 12/2025
Amount: \$80,000
Effort: 5%

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The primary purpose of this project was to utilize a Delphi approach to establish expert consensus on (1) possible adverse events, including their prevalence and severity, associated with the use of intra-articular hyaluronic acid (HA, viscosupplementation), (2) appropriate management strategies to prevent adverse events, and (3) guidance on the most appropriate treatment options for adverse events when they do occur.

Title: National Women's Soccer League Injury Surveillance Program

Source: National Women's Soccer League

PI: Kliethermes

Role: PI Data Coordination Center

Years: 01/2024-12/2025

Amount: \$45,000

Effort: 5%

This project aimed to provide expertise and support to the National Women's Soccer League in setting up the appropriate infrastructure for a league-wide injury surveillance program and to conduct a pilot research study with league players.

Title: Deficits in Running Mechanics and Quadriceps Function during Initial Year following ACL Reconstruction

Source: American Academy of Sports Physical Therapy

PI: Knurr/Heiderscheit

Role: Co-investigator

Years: 01/01/2024-12/31/2024

Amount: \$10,000

Effort: 1%

This funding provided 3-yr of K-funding to Keith Knurr, under the mentorship of Dr. Heiderscheit. The overall goal of the proposed study is to assess long-term knee joint health in former collegiate athletes post-ACLR. Quantitative MRI imaging of knee cartilage will be paired with comprehensive biomechanical and neuromuscular performance assessments to identify modifiable factors worth further investigating in an attempt to reduce the OA cascade.

Title: Health Disparities in Sports and Exercise Medicine

Source: NIH-NIMHD

PI: Kliethermes

Role: PI

Application ID: 1 R13 AR074878-01

Years: 9/27/2022-8/31/2023

Amount: \$50,000

Effort: 10%

This R13 grant helped fund a research summit to be held in April 2023 on health disparities in sports medicine. The summit aims to identify knowledge gaps in this space and to develop research priorities to address these gaps. Additionally, the summit will provide methodological recommendations for conducting sports medicine research through an equitable lens.

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Title: Identifying Factors Associated with Early Signs of Osteoarthritis in Former Collegiate Athletes after Anterior Cruciate Ligament Reconstruction

Sources: UW Orthopedics Freedom of Movement Fund

PI: Day & Nickel (Co-PI)

Role: Consultant

Years: 01/01/2023-12/31/2023

Amount: \$49,990 total

Effort: 1%

This project aimed to assess the impact ACLR has on long-term outcomes in former collegiate athletes and identify which variables are associated with cartilage health.

Title: Evaluating the Impact of Training Volume, Sleep, and Well-Being on Injury Risk in Adolescent Cross Country Runners

Source: Virginia Horne Henry Fund for Women's Physical Education Issues

PI: Kliethermes

Years: 5/1/2021-8/31/2023

Amount: \$32,283

Effort: 5%

The primary goals of this project were to assess the impact of changes in training volume, average sleep and athlete well-being (e.g. stress and psychosocial well-being) on injury risk in a population of high school cross-country runners.

Title: Evaluating the Impact of Training Volume, Sleep, and Well-Being on Injury Risk in Youth Runners

Source: UW-Madison Department of Orthopedics & Rehabilitation Freedom of Movement Fund

PI: Kliethermes

Role: Principal Investigator

Years: 6/1/2021-5/31/2022

Amount: \$49,910

Effort: 5%

The primary goals of this project were to assess the impact of changes in training volume, average sleep and athlete well-being (e.g. stress and psychosocial well-being) on injury risk in a population of high school cross-country runners.

Title: Prospective Evaluation of Running-Related Injury Disability in High School Cross Country Runners

Source: American Academy of Sports Physical Therapy Legacy Fund

P.I. Nelson

Role: Co-Investigator

Amount: \$10,000

Years: 01/01/2021-12/31/2021

Effort: 5%

This project evaluated the validity and responsiveness of the University of Wisconsin Recovery Index (UWRI) in high school cross country runners in the state of Wisconsin.

Title: Using Machine Learning to Predict Bone Stress Injury Risk in Women

Source: Virginia Horne Henry Fund for Women's Physical Education and Movement

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Amount:

Years: 5/1/2020-4/30/2022

P.I.: Heiderscheit

Role: Co-Investigator

Amount: \$34,680

Effort: 1%

The goals of this project were to use machine learning to divide runners into similar groups based on BSI risk factors and to predict BSI in collegiate cross-country runners based on various risk factors.

Title: Gut microbiota, short chain fatty acids, and adiposity across the epidemiologic transition

Source: NIH R01

Amount: \$3,428,596

Year(s): 4/01/17-03/31/22

PI: Dugas

Role: Co-Investigator

Effort: 5% (years 3-5)

Gut microbiota, short chain fatty acids, and adiposity across the epidemiologic transition. The objective of this grant was to define associations between gut microbiota, short chain fatty acids, and obesity in populations spanning the epidemiologic transition, and explore mechanisms by which these factors may independently and collectively influence the development of obesity.

Title: Clinical, Biomechanical and Novel Imaging Biomarkers of Hamstring Strain Injury Potential in Elite Athletes

Source: NBA/GE Collaboration

Amount: \$299,886

Year(s): 03/15/17-03/14/20

PI: Heiderscheit

Role: Co-Investigator

Effort: 2%

The goals of this project were to identify risk factors for hamstring injury, evaluate novel imaging methods that could improve post-injury prognosis, and determine if more detailed assessments of movement mechanics and sports performance provide important information that helps us to better understand the causes and effects of hamstring strain injuries.

Title: Research Summit on Youth Sports Specialization and Athlete Health and Development

Source: NIH NIAMS R13 Conference Grant

Amount: \$15,000

Year(s): 12/01/2018-11/30/2019

Role: PI

Effort: 0%

This NIH conference grant supported the main objectives of the proposed conference: 1) conduct and present a rigorous review of the current scientific knowledge and 2) develop a "research roadmap" to drive future research efforts based on existing evidence in the field of youth athlete training and development

SMPH Curriculum Vitae

Title: Identifying Risk Factors for Injuries in Female High School Volleyball Players
Source: National Federation of State High School Associations; UW Department of Orthopedics & Rehabilitation
Year(s): 9/30/2018-9/29/2019
Amount: \$79,466
PI: McGuine
Role: Co-Investigator
Effort: 2.5%

Objectives: 1) Identify primary risk factors for injury that predispose female volleyball players to SRI such as their level of sport specialization (low, medium or high) and total volume of volleyball participation within the past year, and 2) Identify secondary (contributing) risk factors such as BMI and previous history of injury that will contribute to SRI susceptibility.

Title: Driving after Concussion: Association between Concussion Symptoms Severity, Neurocognitive Tests, and a Computer-based Risk Awareness Program
Source: AMSSM Foundation
Amount: \$4111
Year(s): 1/5/2017-1/5/2018
PI: Hammer
Role: Co-Investigator
Effort: 1%

The goal of this study was to assess the correlation between the subacute effect of concussion on drivers' hazard perception

Title: The Impact of Sport Specialization on Injury and Illness in Youth Athletes
Source: AMSSM Foundation
Amount: \$20,761
Year(s): 2/15/2017-2/15/2018
PI: Watson
Role: Co-Investigator
Effort: 2%

The goal of this study was to determine if sport specialization is an independent risk factor for injury and illness among middle school children while controlling for the effects of previous injury history, volume of sport participation, age, gender, and sleep.

Title: Transcutaneous oxygen as a predictor of wound healing complications in preoperatively radiated soft tissue sarcoma
Source: Orthopaedic Research and Education Foundation (OREF)
Amount: \$50,000
Year(s): 7/1/2015-6/30/2016
PI: Nystrom
Role: Co-Investigator
Effort: no salary support - changed institutions and declined to stay on grant

The aim of this study was to evaluate the relationship between preoperative skin oxygenation and wound outcomes. Specifically, we will Correlate the level of transcutaneous oxygen measurement immediately prior to surgery with surgical outcomes and compare wound healing outcomes between those treated with and without a vacuum assisted closure device.

SMPH Curriculum Vitae

Title: Host Response to pessaries in microbial communities of the postmenopausal vagina

Source: NIH

Year(s): 8/1/2016-4/30/2018

PI: Brincat

Role: Co-Investigator

Effort: changed institutions and declined to stay on grant

This grant aimed to identify barriers to effective non-surgical management of pelvic floor disorders in the elderly. Specifically we aim to determine the predominant vaginal microorganisms and vaginal AMP profile of older women with and without a pessary. We will also assess longitudinal changes in the vaginal microbiome and AMP profile between women who choose to continue pessary use and those who do not.

Title: The Female Urinary Microbiome and Urinary Incontinence

Source: NIH – 5R01DK104718-02

Year(s): 4/1/2016-3/31/2021

PI: Wolfe and Brincat

Role: Co-Investigator

Effort: no salary support - changed institutions and declined to stay on grant

This grant determined whether key characteristics of the newly discovered female urinary microbiome, the bacterial community living in the bladder of many adult women, associate strongly with two common forms of urinary incontinence (stress urinary incontinence [SUI] and urgency urinary incontinence [UUI]).

Title: The Female Urinary Microbiome: Adjacent Microbiomes and Clinical Associations

Source: NIH – P20: 5P20DK108268-02

Year(s): 9/15/2015-8/01/2017

PI: Wolfe

Role: Co-Investigator

Effort: 5% ; funded for 1 year on grant but then changed institutions and declined to stay on grant

The major scientific focus of this P20 application was the relationship of the FUM to the adjacent vaginal and perineal microbiomes, associations of these pelvic floor microbiomes with urinary symptoms and clinical outcomes, and initiation of a urologic microbiome database designed to benefit the entire urologic research community. The educational focus is to cross-train undergraduates, medical and graduate students, clinicians, basic scientists, bioinformaticians and biostatisticians in the emerging field of urinary microbiomics.

Title: Predicting Infection-related Mortality in Cirrhosis Using Blood and Ascitic Fluid

Biologic and Clinical Markers

Source: Loyola University Research Funding Committee Grant

Year(s): June 2015-May 2016

PI: Megan Fitzpatrick

Role: Co-I/Biostatistician

The overall goal of this prospective, longitudinal study was to identify surrogate markers of gut bacterial translocation (BT), better understand the immune changes prompted by gut BT and correlate both to clinical outcomes. This study assessed chronic exposure to bacteria and/or bacterial products via heightened gut BT and the corresponding immune response in outpatient cirrhotics.

SMPH Curriculum Vitae

Title: Diastolic Dysfunction of South Asians
Source: Loyola University Research Funding Committee Grant
Year(s): June 2015-May 2016
Amount: \$30,000
PI: Sadayappan, Sakthivel
Role: Co-I/Biostatistician
Effort: 2.5%

This study aimed to determine the prevalence of a specific gene defect in one of the heart's functioning genes, MYBPC3. This gene has been found to be more prevalent among south Asians alongside a higher incidence of heart disease.

Title: Alcohol Exposure and Acute Respiratory Distress Syndrome in Burn Patients
Source: Loyola University Research Funding Committee Grant
Years: January 2015 – December 2015
Amount: \$35,790
PI: Afshar, Majid
Role: Co-I/Biostatistician
Effort: 5%

The goal of this project was to identify the association of acute alcohol exposure with acute respiratory distress syndrome (ARDS) development in burn patients and identify the phenotype of burn-ARDS with previously validated key biomarkers from ARDS Network studies

Title: The Longitudinal Assessment of Metabolic Syndrome in Liver Transplant Recipients and the Investigation of Sarcopenia as a Novel Risk Factor
Source: Loyola University Research Funding Committee Grant
Years: October 2014- September 2015
PI: Eric Kallwitz, MD
Role: Co-I/Biostatistician

This study aimed to detect whether sarcopenia was an independent risk factor for the development of post liver transplant metabolic syndrome. It followed a cohort of individuals post-liver transplant to define the temporal development of the metabolic syndrome.

Title: The Inter-relationship of Non-Alcoholic Fatty Liver Disease and Atherosclerosis in the Pediatric Obese Population
Source: Loyola University Research Funding Committee Grant
Year(s): February 2014-January 2015
PI: Marsha Ma, MD
Role: Co-I/Biostatistician

The aim of this grant was to study pediatric obese patients to determine the early impact of obesity, without concomitant high blood pressure or diabetes, on carotid intima-media thickness (cIMT) and whether NAFLD is an early predictor of premature cardiovascular events. The study additionally assessed the influence of gender, race, and ethnicity on this relationship.

SMPH Curriculum Vitae

Pending Proposals

Title: Is Rest Necessary or Beneficial for the Treatment of Active Lumbar Spondylolysis

Source: National Institutes of Health, National Institute of Aging

PI: Selhorst

Role: Co-I

Amount: \$3,640,785

Years: 04/01/2027-03/31/2032

Effort: 10%

The objective of this study is to determine whether Immediate PT improves pain-related function without compromising bony healing in adolescents with active lumbar spondylolysis. We will conduct a prospective, multisite randomized controlled trial across four pediatric sports medicine centers enrolling 236 adolescents aged 10–19 years with MRI-confirmed active lumbar spondylolysis. Participants will be randomized to either Immediate PT, initiated within 7 days of diagnosis, or Rest Before PT, consisting of activity restriction until pain with daily activities resolves, followed by the same standardized rehabilitation program.

Title: Automated MRI-Based Musculoskeletal and Body Composition Assessment for Healthy Aging

Source: National Institutes of Health, National Institute of Aging

PI: Blemker/Riem

Role: Biostatistics Consultant

Amount: \$2,029,649

Years: 12/2026-11/2028

Effort: 2%

Develop and validate MAPS (Musculoskeletal and Adipose Profiling Scan), an automated MRI-based platform for 3D assessment of muscle, bone, and adipose tissue to support healthy aging. Aims include expanding a normative database across ages 25 to 85, validating body composition metrics against DXA, and refining a cloud-based reporting interface toward 510(k) clearance.

Title: The Impact of Sport Specialization on Injury Risk, Sedentary Behavior, and Health Trajectories in Youth

Source: NIH-NIAMS

PI: Bell/Capin

Role: Co-I

Amount: \$6,903,372

Years: 1/01/2027-12/31/2031

Effort: 15%

This study will determine the impact of sport specialization on injury risk, lifestyle behaviors, and health trajectories in male and female youth athletes. Findings will yield rigorous evidence to develop actionable guidelines to improve youth sport safety and long-term health.

Title: Determining the Role of Patient Psychology on Functional Outcomes After Anterior Cruciate Ligament Reconstruction: A Multidisciplinary Approach

Source: NIH-NIAMS (GRANT14476761)

PI: Sheean

SMPH Curriculum Vitae

Role: Co-I

Amount: \$252,194 (UW-Madison portion)

Years: 1/01/2027-12/31/2031

Effort: 3.5%

The proposed work will leverage the capabilities of an established infrastructure and a mature prospective observational cohort study to determine if patients' baseline psychological characteristics affect objective measures of patients' physical function and psychological readiness to return to activity after ACLR. The overarching study goal is to identify which patients undergoing ACLR are less likely to return to their pre-injury level of activity, leading to the development and evaluation of interventions intended to improve outcomes.

Educational Activities & Presentations

Classroom Teaching (graduate & undergraduate)						
Years	Course Title	Credits	Students	Grade Distribution	Contact Hours	Format
2021	Linear Mixed Effects Models		1	A	1h/wk x 8 wks	Independent Study
2021	Methods in Survival Analysis		1	A	1h/wk x 8 wks	Independent Study
2020	Linear Mixed Effects Models		1	A	1h/wk x 8 wks	Independent Study
2016	<i>Biostatistical Computing</i>	3 s.h.	20	Not retrievable	3h/wk x 15 wks	Lecture/lab
2015	<i>Bayesian Data Analysis</i>	2 s.h.	4	Not retrievable	2h/wk x 8 wks	Tutorial/Independent Study
2010-2012	<i>Design and Analysis of Biomedical Studies</i>	3 s.h.	20	Not retrievable	7h/wk x 6 weeks (summer)	Lecture
2011	<i>Research Data Management</i>	3 s.h.	18	Not retrievable	3h/wk x15 weeks	Lecture/Lab
2011	<i>Applied Longitudinal Data Analysis</i>	3 s.h.	20	Not retrievable	3h/wk x15 weeks	Lecture/Lab
2010	<i>Introduction to Statistics</i>	3 s.h.	100 (20 lab)	Not retrievable	3h/wk x15 weeks	Lecture/Lab
2010	<i>Biostatistics Methods I</i>	4 s.h.	20	Not retrievable	4h/wk x 15 weeks	Lecture/Lab
2007-2008	<i>Introduction to Biostatistics</i>	3 s.h.	100	Not retrievable	3h/wk x15 weeks	Lecture/Lab

Medical School Teaching						
Years	Course Title	Credits	Students	Grade Distribution	Contact Hours	Format
2014,2015, 2016	<i>Critical Analytic Skills</i>	N/A	150	N/A	3 x 90 min/yr	Lecture Series

SMPH Curriculum Vitae

Clinical Teaching (postgraduate trainees/clinical trainees, including fellows and residents)			
Years	Trainee Name	Face-to-Face Contact Hours	Teaching Context
2018, 2019, 2021	Department of Rehabilitation Residents & Fellows	3 hrs per year	Evidence Based Practice Lecture Series

Local Continuing Medical Education Courses				
Years	Course Title	Students	Hours	Sponsor - Venue
2020	Playing in Others' Backyards: Updates on current sports medicine projects from a biostatistician's desk		1 hour	Department of Orthopedics and Rehabilitation Grand Rounds

Mentoring Summary

Postdoctoral Mentees		
Years	Mentee Name	Current Position
2023-2026	Mary Dubon, MD	Attending Physician, Boston Children's Hospital; Instructor, Harvard Medical School
2023-2026	Karin VanBaak, MD	Research Scientist, King's College (London, UK)
2024-present	Nailah Adams Morancie, MD, MS	Assistant Professor, The University of North Carolina-Chapel Hill
2024-present	Sherilyn DeStefano, MD	Assistant Professor, Oregon Health & Science University
2025-present	Derek Stokes, MD	Assistant Professor, University of Colorado
2025-present	James Gardner, MD	Assistant Professor, Medical University of South Carolina
2025-present	Jessica Knapp, MD	MAHEC Family Health Center – Asheville, NC

Graduate Student Mentees			
Years	Mentee Name	Degree Program	Current Position
2014-2015	Megan McCullough	PhD	Regional Vice President of Operations, HealthPro Heritage
2015-2017	William Adams	PhD	Assistant Professor, Loyola University Chicago
2019	Evan Nelson	PhD	Assistant Professor, UW-Madison
2019-2023	Mikel Joachim	PhD	Research Program Manager, UW-Madison
2019-2023	Christa Wille	PhD	Research Analyst, Center for Innovation in Engineering Education, UW Madison
2020-2023	Keith Knurr	PhD	Assistant Professor, UW-Madison

SMPH Curriculum Vitae

2021-2023	Kevin Biese	PhD	Assistant Professor, UW-Oshkosh
2019-2024	Jennifer Sanfillipo	PhD	Assistant Director of Sports Medicine, UW-Madison
2025-present	Matthew Kuik	PhD	In Progress, defense anticipated Spring 2029
2025-present	Alli Faber	PhD	In Progress, defense anticipated Spring 2029

Capstone/Practicum				
Years	Project Title	Student Name	Degree Program	Sponsor - Venue
2015	Hepatitis C Virus Infection in Ghana	Jason Gatenberg	MPH	Loyola University
2015-2016	Internship with Clinical Research Office – Biostatistics Core	Kyle Carey	MPH	Loyola University
Summer 2018	Summer Research Internship	Linder Wendt	B.S.	Lawrence University
Summer 2019	Capturing Medical Events at Endurance Races	Lianna Mack	M.D.	University of Wisconsin-Madison, SPH – Shapiro Student
Summer 2020	Developing a consensus definition	Cole McDonald	M.D.	University of Wisconsin-Madison, SPH – Shapiro Student
Summer 2022	Summer Research Internship	Althea Foster	B.S.	Lawrence University

Service Activities

Departmental

UW SMPH, Department of Orthopedics and Rehabilitation

2016-2018 UW Orthopedic Freedom of Movement Fund Scientific Advisory Committee

UW SMPH, Department of Orthopedics and Rehabilitation, Division of Sports Medicine

2016-2019, 2022-present Research Committee

UW-Madison

University of Wisconsin Division of Intercollegiate Athletics

2016-present Badger Athletic Performance

SMPH Curriculum Vitae

Professional Service

Local

Regional/State

National

2023	Chair Board of Directors, Datalys Center for Sports Injury Research and Prevention
2022-present	Member, AMSSM Sexual Violence Sub-Committee
2021	Abstract reviewer, for Pediatric Research in Sports Medicine Annual Meeting 2022
2021	member, scientific review committee for AMSSM Collaborative Research Network 2021 Bridge to R34 RFP
2021-present	National Council for Youth Sports (NCYS) Advisory Council
2020	Reviewer, British Journal of Sports Medicine
2020	member, scientific review committee for AMSSM Collaborative Research Network 2020 RFP
2020	COVID-19 Collaboration for Youth Sport– AMSSM, AAP, NATA
2020-2022	Steering Committee, Cardiac Findings in Collegiate Athletes with COVID-19 National Registry
2019, 2024	AMSSM Representative, National Center for Catastrophic Sport Injury Research Leadership Meeting, Charlotte, NC
2019-2022	Member, AMSSM Youth Sport Advocacy Team
2019	Reviewer, American Journal of Health Promotion
2019	member, scientific review committee for AMSSM Collaborative Research Network “Avanos Cooled Radiofrequency Ablation” RFP
2019	member, scientific review committee for AMSSM Collaborative Research Network “Bridge to R34”
2019	Reviewer, Sports Health Journal
2019-2026	Board Member, Datalys Center for Sports Injury Research and Prevention; AMSSM representative
2019	AMSSM Representative, US Center for Coaching Excellence Summit; Colorado Springs, CO
2019	AMSSM Representative, National Federation for High Schools Injury Epidemiology Summit, Indianapolis, IN
2018-2019	Member, Data Safety Monitoring Board (DSMB), ASTRO-APS; PI: Scott Woller, MD Title: Apixaban for the Secondary prevention of Thromboembolism: a prospective Randomized Outcome pilot study among patients with the Antiphospholipid Syndrome [Study closed early]
2018	Co-Chair, Shark Tank Research Grant Award Scientific Review Committee, American Medical Society for Sports Medicine
2018	AMSSM Representative, Physician Roundtable – Patient Centered Outcomes Research Institute

SMPH Curriculum Vitae

2017-2019	Member, Planning and Writing Committee, Research Summit on Youth Sports Specialization and Athlete Performance, American Medical Society for Sports Medicine
2017	Reviewer, AMSSM Collaborative Research Network Research Award
2016-present	Member, Leadership Team, Collaborative Research Network, American Medical Society for Sports Medicine
2017-2020	Associate Editor, BMC Public Health
2016-2021	Member, Abstract and Young Investigator Grant Reviewer, Research Committee, American Medical Society for Sports Medicine
2016	AMSSM Representative, NIH Pediatric Concussion Workshop
2015-2018	Member, Data Safety Monitoring Board (DSMB), National Institute of Health; PI: Prendergast. Title: A Hypertension Emergency Department Intervention Aimed at Decreasing Disparities
2013-2018	Chairperson, Data Safety Monitoring Board (DSMB), National Institute of Nursing Research; PI: Penckofer; Title: Can the Sunshine Vitamin Improve Mood and Self-Management in Women with Diabetes?
International	
2026-present	Methods Co-Lead, International Olympic Committee (IOC) Consensus Statement on Periodic Health Evaluation of Elite Athletes (2027 Update)
2023-present	Scientific Reviewer, Global Minority Grant Program, British Journal of Sports Medicine
2021-present	Associate Editor, British Journal of Sports Medicine (BJSM)
2020-present	Associate Editor, Journal of Orthopaedics and Sports Physical Therapy (JOSPT)
2020-present	Statistical Editor, Methods Matter Series, Journal of Orthopaedics and Sports Physical Therapy (JOSPT)
2017-2020	Statistical Advisor, Journal of Sports Physical Therapy (JOSPT)

Community Outreach/Service

2021-2022	Member, Lawrence University Anti-Racism Task Force, LUAA
2020-present	Member, Lawrence University Athletic Hall of Fame Selection Committee
2019-2020	Member, Lawrence University Viking Bench Golf Outing Committee
2017-2021	Board of Directors, Lawrence University Alumni Association, Appleton, WI
2017	Volunteer, USATF Para Youth Championships
2016-2017	Chair, Lawrence University 10-year Reunion, Appleton, WI
2016-2022	Volunteer Coach, Girls on the Run, Madison WI
2016-2017	Member, College of Public Health Alumni Advisory Council, Iowa City, IA
2016	Medical Trip, Arcahaie, Haiti, Community Health Initiative
2015-2017	Board of Directors, University of Iowa Alumni Association, Iowa City, IA
2015-2016	Volunteer Youth Basketball Coach, Oak Park Park District, Oak Park, IL
2014-present	Lawrence University Alumni Ambassador, Appleton, WI
2014-2016	Oak Park Runner's Club Race Committee, Oak Park, IL
2014	Volunteer Track Coach, Queen of Peace High School, Burbank IL
2014	Strategic Planning Committee for CPH Alumni Relations, Iowa City, IA
2012-2013	Vice President, Biostatistics Student Organization, Iowa City, IA
2010-2013	Board of Directors, Girls on the Run of Eastern Iowa, Iowa City, IA

SMPH Curriculum Vitae

2010-2011	Co-Chair, Lawrence University 5-year Reunion, Appleton, WI
2008-2009	Vice President, Biostatistics Student Organization, Iowa City, IA
2008-2013	Volunteer Coach, Girls on the Run of Eastern Iowa, Iowa City, IA
2008-2012	Volunteer Youth Basketball Coach, Iowa City Park District, Iowa City, IA
2007-2011	Big Sister, Big Brothers Big Sisters, Iowa City, IA
2006-2007	Vice President, Lawrence University Student Body, Appleton, WI

Consulting

2010-2012	Statistical Consultant for College of Nursing, University of Iowa, Iowa City, IA
2009-2013	Statistical Consultation for College of Pharmacy, Midwestern University, Downers Grove, IL
2021-2022	Research Consultant, Women's Tennis Association
2023-present	Statistical Consultant, Springbok Analytics, Inc