

BIOGRAPHICAL SKETCH

NAME Stephen William Marshall		POSITION TITLE	
eRA COMMONS USER NAME Steve_Marshall		Associate Professor of Epidemiology, Orthopedics, and Exercise and Sport Science	
EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
University of Canterbury, Christchurch, NZ	B.Sc.	1987	Mathematics
Lincoln University, Canterbury, NZ	Dip. Ag. Sc.	1989	Biometrics
University of North Carolina, Chapel Hill, NC	Ph.D.	1998	Epidemiology

A. Positions and Honors

Academic Employment

- 1989-1994 Biostatistician, University of Otago, New Zealand. Department of Community Health, Wellington School of Medicine (89-90); Injury Prevention Research Unit, Department of Preventive and Social Medicine, Otago Medical School (91-94).
- 1994-1998 Doctoral Student, Department of Epidemiology; Biostatistician, Injury Prevention Research Center. University of North Carolina at Chapel Hill (UNC-CH), NC.
- 1999-2001 Research Assistant Professor, Department of Epidemiology, UNC-CH, NC
- 1999-present Co-Chief, Biostatistical Core, UNC Injury Prevention Research Center, UNC-CH, NC
- 2002-2005 Assistant Professor, Departments of Epidemiology and Orthopedics, UNC-CH, NC
- 2005-present Associate Professor, Departments of Epidemiology and Orthopedics, UNC-CH, NC
- 2007-present Adjunct Associate Professor, Department of Exercise and Sport Science, UNC-CH, NC

Honors

- 1997 UNC-CH School of Public Health, Delta Omega Student Travel Award.
- 1998 UNC Injury Prevention Research Center, Student Research Paper Award.
- 1999 Admitted to Delta Omega Society, Theta Chapter.
- 1998; 2003 Am. Public Health Association Injury Control and Emergency Health Services Section Service Award
- 2005 UNC-CH Junior Faculty Development Award

Expert Committees

National Academy of Sciences: Committee on Physical and Mental Standards for Military Recruitment (2004-2005); Editorial Boards: Journal of Athletic Training (2002-present); Medicine and Science in Sport and Exercise (2005-present); Journal of Science and Medicine in Sport (2006-present); American Orthopedic Society for Sports Medicine Research Committee (2003-present); National Collegiate Athletic Association: consultant on injury surveillance (2000-present) and Injury Surveillance Oversight Group (2005-present); USA Baseball Medical and Safety Advisory Committee (ad hoc; 1999-present).

B. Selected peer-reviewed publications

(a) Selected Books & Book Chapters

1. **Marshall SW.** Prevalence and incidence. In: Kempf-Leonard K (ed). Encyclopedia of Social Medicine, volume 3. New York NY: Elsevier, 2005:141-147.
2. Saluja G, **Marshall SW**, Gilchrist J, Schroeder T. Chapter 7: Sports and recreational injuries. In: Liller K (ed). Injury Prevention for Children and Adolescents: Integration of Research, Practice, and Advocacy. Washington DC: American Public Health Association, 2005: 233-260.

3. Gilchrist J, Saluja G, **Marshall SW**. Chapter 7: Preventing Sports and Recreational Injury. In: Doll L, Bonzo S, Mercy J, Sleet D. Handbook on Injury and Violence Prevention Interventions. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, 2006: 117-134.
4. National Research Council, Committee on Youth Population and Military Recruitment (Sackett PR, Mavor AS, Armor DJ, Clark NM, Eitelberg MJ, Hansen BJ, Hogan PF, Marras WS, **Marshall SW**, Pate RP, Rapmund G, Schwenk TL, Strickland WJ, Thomas SB, Wagner KD). Assessing Fitness for Military Enlistment. Board on Behavioral, Cognitive, and Sensory Sciences, Division of Behavioral and Social Sciences and Education. Washington DC: National Academy Press, 2006.
5. **Marshall SW**, Padua DP, McGrath M. Chapter 2: Incidence of ACL injury. In: Hewitt TE, Griffin LY, Mandelbaum BR, Schultz SJ (ed). Understanding and Preventing Non-contact ACL Injury. Campaign, IL: Human Kinetics, 2007:5-29.

(b) Selected Articles in Journals (from a total of 130+)

1. **Marshall SW**, Waller AE, Dick RW, Pugh CB, Loomis DP, Chalmers DJ. An ecologic study of protective equipment and injury in two full contact sports. *International Journal of Epidemiology* 2002;31:587-592.
2. Loomis D, **Marshall SW**, Wolf S, Runyan CW, Butts JD. Recommended safety measures and prevention of workplace homicide. *JAMA* 2002;287(8):1011-1017.
3. Weaver NL, **Marshall SW**, Miller MD. Preventing Sports Injuries: Opportunities for intervention in youth athletics. *Patient Education and Counseling* 2002;46:3:199-204.
4. Guskiewicz KM, **Marshall SW**, Broglio SP, Cantu RC, Kirkendell DT. No evidence of impaired neurocognitive performance in collegiate soccer players. *American Journal of Sports Medicine* 2002;30(2):157-162.
5. **Marshall SW**, Loomis D, Gurka K. Environmental and administrative controls to prevent workplace violence. *Clinics in Occupational and Environmental Medicine* 2003;3(4):751-762.
6. Clingenpeel J, **Marshall SW**. Prevalence of ski helmet rental at U.S. ski areas. *Injury Prevention* 2003;9:317-321.
7. **Marshall SW**, Guskiewicz KM. Sports and recreational injury: The hidden cost of healthy lifestyle (editorial). *Injury Prevention* 2003;9(2):100-102.
8. Keenan H, Runyan DK, **Marshall SW**, Nocera MA, Merten DF, Sinal SH. Epidemiology of inflicted traumatic brain injury in young children. *JAMA* 2003;290(5):621-626.
9. **Marshall SW**, Mueller FO, Kirby DT, Yang J. Evaluation of safety balls and face guards to prevent injury in youth baseball. *JAMA* 2003; 289:568-574.
10. Keenan H, **Marshall SW**, Runyan DK, Nocera MA, Merten DF, Sinal SH. Increased incidence of inflicted traumatic brain injury following a natural disaster. *American Journal of Preventive Medicine* 2004;26(3):189-193.
11. Schulz MR, **Marshall SW**, Yang J, Mueller FO, Weaver NL, Bowling JM. A prospective cohort study of injury incidence and risk factors in North Carolina high school competitive cheerleaders. *American Journal of Sports Medicine* 2004;32(2):396-405
12. **Marshall SW**, Kucera K, Loomis DP, McDonald MA, Lipscomb H. Traumatic injuries in commercial fishers in North Carolina. *Injury Prevention* 2004;10:217-221.
13. Schulz MR, **Marshall SW**, Mueller FO, Yang J, Weaver NL, Guskiewicz KM, Bowling JM, Kalsbeek WK. Incidence of, and risk factors for, concussion in North Carolina high school athletics. *American Journal of Epidemiology* 2004;160:937-944.
14. **Marshall SW**. Testing with confidence: the use and misuse of confidence intervals in biomedical research (editorial). *Journal of Science and Medicine in Sport* 2004;7(2):135-137.
15. Runyan CW, **Marshall SW**, Coyne-Beasley T. Commentary: A future for home safety research and intervention. *American Journal of Preventive Medicine*, 2005;28:95-101.
16. Yang JZ, **Marshall SW**, Bowling JM, Runyan CW, Mueller FO, Lewis MA. Use of discretionary protective equipment and rate of lower extremity injury in high school athletes. *American Journal of Epidemiology*, 2005: 161(6):511-519.
17. Loomis DP, **Marshall SW**, Ta M. Employer policy towards guns in the workplace and risk of homicide on the job. *American Journal of Public Health*, 2005;95:830-832.

18. Kucera K, **Marshall SW**, Kirkendall DT, Marchek PM, Garrett WE. Injury history as a risk factor for incident injury in youth soccer. *British Journal of Sports Medicine* 2005;39(7):462-466.
19. **Marshall SW**, Runyan CW, Yang J, Coyne-Beasley T, Johnson RM, Waller AE. Prevalence of selected risk and protective factors for falls in the home. *American Journal of Preventive Medicine*, 2005;28:95-101.
20. Guskiewicz KM, **Marshall SW**, Bailes J, McCrea M, Cantu RC, Randolph C, Jordan BD. Association between recurrent concussion, mild cognitive impairment, and Alzheimer's disease in retired professional football players. *Neurosurgery* 2005: 57(4):719-26
21. **Marshall SW**, Loomis DP, Waller AE, Bird YN, Chalmers DJ, Feehan M, Quarrie KL. Limited effectiveness of protective equipment in Rugby Union. *International Journal of Epidemiology*, 2005: 34:113-118.
22. Padua DA, **Marshall SW**. Evidence Supporting ACL Injury Prevention Exercise Interventions: A Systematic Review of the Literature. *Athletic Therapy Today* 2006;11(2):11-23.
23. Knowles S, **Marshall SW**, Guskiewicz KM. Estimating rates and risks in sports injury research. *Journal of Athletic Training*. 2006: 41(2):201-215.
24. Knowles SB, **Marshall SW**, Loomis DP, Weaver N, Yang J, Bowling JM, Kalsbeek W, Mueller FO. Risk factors for high school sports injury. *American Journal of Epidemiology* 2006;164(12):1209-1221
25. **Marshall SW**, Covassin T, Dick R, Nassar LG, Agel J. Descriptive epidemiology of collegiate women's gymnastics injuries: National Collegiate Athletic Association Injury Surveillance System, 1988–1989 Through 2003–2004. *Journal of Athletic Training* 2007;42(2):240-246.
26. **Marshall SW**, Hamstra-Wright K, Dick R, Grove KA, Agel J. Descriptive epidemiology of collegiate women's softball injuries: National Collegiate Athletic Association Injury Surveillance System, 1988–1989 Through 2003–2004. *Journal of Athletic Training* 2007;42(2):191-199.
27. Knapik J, **Marshall SW**, Lee R, Darakjy S, Jones SB, dela Cruz GC, Mitchner TA, Jones BH. Injury prevention effectiveness and physical properties of mouthguards in sports and recreational exercise. *Sports Medicine* 2007;37(2):117-144.
28. Rentz D, **Marshall SW**, Loomis D, Martin SL, Casteel C, Gibbs D. Effect of deployment on the occurrence of child maltreatment in military and non-military families. *American Journal of Epidemiology* 2007;165(10):1199-1206.
29. **Marshall SW**. Power for tests of interaction: Effect of raising the Type I error rate. *Epidemiologic Perspectives and Innovation* 2007;4:4.
30. Guskiewicz KM, **Marshall SW**, Bailes J, McCrea M, Harding HP, Matthews A, Mihalik JR, Cantu RC. Recurrent concussion and risk of depression in retired professional football players. *Medicine and Science in Sport and Exercise* 2007: 39(6):903-909.
31. Hopkins W, **Marshall SW**, Quarrie K, Hume P. Risk factors and risk statistics for sports injuries. *Clinical Journal of Sports Medicine*. 2007: 17(3):208-210
32. Knowles S, **Marshall SW**, Miller T, Spicer R, Bowling JM, Loomis DP, Yang J, Millikan RW, Mueller FO. Cost and severity of injuries from a prospective cohort study of North Carolina high school athletes. *Injury Prevention* 2007: 13(6):416-21.
33. **Marshall SW**, Golightly YM. Sports injury and arthritis. *North Carolina Medical Journal* 2007;68:430-433.
34. Guskiewicz KM, Mihalik JP, Shankar V, **Marshall SW**, Crowell DH, Oliaro SM, Ciocca MF, Hooker DN. Measurement of head impacts in collegiate football players: Relationship between head impact biomechanics and acute clinical outcome following concussion. *Neurosurgery* 2007: 61:1244–1253.
35. Mihalik JP, Bell DR, **Marshall SW**, Guskiewicz KM. Measurement of head impacts in collegiate football players: An investigation of positional and event type differences. *Neurosurgery* 2007: 61:1229–1235.
36. **Marshall SW**. Injury case-control studies using other injuries as controls. *Epidemiology* 2008 (March; in press).

C. Research Support

Ongoing Research Support

Guskiewicz (PI)

2/1/08-1/31/10

National Operating Committee on Standards for Athletic Equipment
Prospective Evaluation of Head Impacts in Youth Ice Hockey: Part II
Using a head impact telemetry system, this study will evaluate head injuries in youth ice hockey.
Role: co-I (2%)

----- Mueller (PI) 3/1/06 - 2/28/10

Yawkey Foundation.

Injuries to Youth Pitchers in Baseball

Describe the incidence of, and risk factors for, acute arm injury in Little League, High School, and Collegiate baseball pitchers. Role: co-I

----- Mueller (PI) 3/1/05 - 2/29/08

Sporting Goods Manufacturer's Association.

Use of Metal Bats and Risk of Injury to the Pitcher from Batted Balls in Baseball Games

Quantify the incidence of injury to pitchers from batted balls and the describe whether the risk of injury is associated with bat materials (wood vs. metal). Role: Co-I

1 R01 AR050461-01 Marshall (PI) 3/1/05-2/28/2010

NIH/NIAMS

Epidemiology of Jump-Landing Movements and ACL Injury (JUMP-ACL)

This large-scale cohort study addresses neuromuscular risk factors for ACL injury using a prospective cohort design. The cohort is based in the three military service academies and involves approximately 5,000 subjects. Role: PI

----- Guskiewicz (PI) 10/1/04-9/30/09

NCIPC, CDC

Prospective Investigation Of Sport-Related Concussion: Relationship Between Biomechanical, Neuroanatomical, and Clinical Factors –

This study is a core project within UNC Injury Prevention Research Center uses accelerometers to quantify the magnitude and directionality of impacts associated with concussion, coupled with MRI imaging of the brain pre- and post- concussion. The goal is to identify the causal mechanisms by which concussions arise within the brain.

Role: co-I

Completed Research Support

----- Lipscomb (PI) 7/104 – 6/30/07

CDC/NIOSH

Back Disorders in Union Carpenters

This study extends long-term follow-up of an established cohort of 16,215 unionized carpenters in Washington State. Quantifies risk factors, incidence, and long-term cost of work-related back disorders in the cohort. Role: Consultant

---- Nelson (PI) 1/1/05 – 12/31/06

Orthopedic Research and Education Foundation

Effect of a Military Movement Training Program on Lower Extremity Muscle Function

The goal of this study is to investigate the ability of an intervention program (training in military movements) at the United States Military Academy to influence neuromuscular control about the knee and lower extremity.

Role: Co-Investigator

1-RO1ES11359-01 Wing (PI) 9/29/01 – 7/30/06

NIH/NIEHS

Community Health Effects of Industrial Hog Operations.

This study examines the community health effect of industrial hog operations in eastern North Carolina, using environmental monitoring data and health status information on local community residents.

Role: Co-Investigator

2 R01 OH003897-04A1 Marshall (PI) 8/1/03 – 7/31/06

CDC/NIOSH

Homicide during Robbery: A Case-Control Study (Geographical Modeling)

This project builds on a previous case-control study and examines neighborhood determinants of the risk of homicide during workplace robbery. Role: PI