

## **CONCUSSION RESEARCH AND PUBLICATION**

Since the program opened in 2000, the faculty has produced several groundbreaking and pioneering studies. The assessment, treatment, rehabilitation and education programs are evidence-based as a result of all the below research found in respected, peer-reviewed journals of medicine.

A nearly complete list of published papers:

**Mucha A, Collins MW, Elbin RJ, Furman JM, Troutman-Enseki C, DeWolf RM, Marchetti GF, Kontos AP.** [A brief vestibular and ocular motor screening \(VOMS\) assessment to evaluate preliminary concussion: Preliminary findings.](#) *American Journal of Sports Medicine*; Fall 2014. Epub ahead of print.

**Reynolds E, Collins MW.** [In-office management of sport-related concussion.](#) *Progress in Neurological Surgery*. 2014; 28:128-38. Epub ahead of print.

Stocker RP, Cieply MA, Paul B, Khan H, **Henry LC, Kontos AP, Germain A.** [Combat-related blast exposure and traumatic brain injury influence brain glucose metabolism during REM sleep in military veterans.](#) *Neuroimage*, Oct. 2014; 99:207-14.

**Henry L.** [Understanding concussive injuries using investigational imaging methods.](#) *Progress in Neurological Surgery*, 2014;28:63-74. Epub ahead of print.

Fakhran S, Yaeger K, **Collins MW**, Alhilali L. [Sex differences in white matter abnormalities after mild traumatic brain injury: Localization and correlation with outcome.](#) *Radiology*, Sept. 2014;272(3):815-23. Epub ahead of print.

Alsalaheen BA, Whitney SL, Marchetti GF, **Furman JM, Kontos AP, Collins MW**, Sparto PJ. [Performance of high school adolescents on functional gait and balance measures.](#) *Pediatric Physical Therapy, Summer 2014*; 26 (2):191-99.

Fakhran S, Yaeger K, **Collins MW**, Alhilali L. [Detection of central white matter injury underlying vestibulopathy after mild traumatic brain injury.](#) *Radiology*, July 2014; 272(1):224-32. Epub ahead of print.

Zuckerbraun NS, Atabaki S, **Collins MW**, Thomas D, Gioia GA. [Use of modified acute concussion evaluation tools in the emergency department.](#) *Pediatrics*. April 2014; 133(4):635-42. Epub ahead of print.

**Kontos AP**, Braithwaite R, Dakan S, Elbin RJ. [Computerized neurocognitive testing and sport-related concussion: Meta-analytic review and analysis of moderating factors within 1 week of injury.](#) *Journal of the International Neuropsychological Society*; March 20, 2014; 20(3):324-332.

Master CL, Balcer L, **Collins MW.** [In the clinic: Concussion.](#) *Annals of Internal Medicine*. 2014;160(3).

Chamard E, Henry LC, Boulanger Y, Lassonde M, Thèoret H. [A follow-up study of neurometabolic alterations in female concussed athletes.](#) *Journal of Neurotrauma*, Feb. 15, 2014;31(4):339-45.

**Collins MW, Kontos AP, Reynolds E, Murawski, CD, Fu FH.** [A comprehensive, targeted approach to the clinical care of athletes following concussion.](#) *Knee Surgery, Sports Traumatology, Arthroscopy*, Feb. 2014; 22(2):235-46. Epub ahead of print.

**Kontos AP, Huppert TJ, Beluk NH, Elbin RJ, Henry LC, French J, Dakan S, Collins MW.** [Brain activation during neurocognitive testing using functional near-infrared spectroscopy in patients following concussion compared to healthy controls.](#) *Brain Imaging and Behavior*; Jan. 30, 2014. Epub ahead of print.

Brown NJ, Mannix RC, O'Brien MJ, Gostine D, **Collins MW**, Meehan WP 3rd. [Effect of cognitive activity level on duration of post-concussion symptoms.](#) *Pediatrics*, Jan. 2014; 133(2):e209-304.

Covassin T, **Elbin RJ**, Bleecker A, Lipchik A, **Kontos AP**. [Are there differences in neurocognitive function and symptoms between male and female soccer players after concussion?](#) *American Journal of Sports Medicine*, Dec. 2013; 41(12):2890-5.

Meehan WP 3rd, Mannix RC, Stracciolini A, **Elbin RJ**, **Collins MW**. [Symptom severity predicts prolonged recovery after sports-related concussion, but age and amnesia do not.](#) *Journal of Pediatrics*, Sep. 2013; 163(3):721-5.

Meehan WP 3rd, Mannix RC, O'Brien MJ, **Collins MW**. [The prevalence of undiagnosed concussions in athletes.](#) *Clinical Journal of Sports Medicine*, Sep. 2013; 23(5):339-42.

**Kontos AP**, **Elbin RJ**, **Fazio-Sumrock VC**, **Burkhart S**, Swindell H, **Maroon J**, **Collins MW**. [Incidence of sports-related concussion among youth football players aged 8-12.](#) *Journal of Pediatrics*, Sep. 2013; 163(3):717-20.

**Elbin RJ**, **Kontos AP**, **Kegel N**, **Johnson E**, **Burkhart S**, Schatz P. [Individual and combined effects of LD and ADHD on computerized neurocognitive concussion test performance: Evidence for separate norms.](#) *Archives of Clinical Neuropsychology*, Aug. 2013; 28(5):476-84.

Covassin T, **Elbin RJ**, Crutcher B, **Burkhart S**. [The management of sports-related concussions: considerations for male and female athletes.](#) *Translational Stroke Res*, Aug. 2013; 4(4):420-4.

**Elbin RJ**, Covassin T, **Henry L**, Whalen DJ, Wedge J, **Kontos AP**. [Sports-related concussion: How many is too many?](#) *Translational Stroke Res*, Aug. 2013; 4(4):425-31.

De Beaumont L, Tremblay S, **Henry LC**, Poirier J, Lassonde M, Thèoret H. [Motor system alterations in retired former athletes: the role of aging and concussion history.](#) *BMC Neurology*. Aug. 26, 2013;13:109.

**Kontos AP**, **Elbin RJ**, **Lau B**, Simensky S, Freund B, **French J**, **Collins MW**. [Post-traumatic migraine as a predictor of recovery and cognitive impairment after sports-related concussion.](#) *American Journal of Sports Medicine*, Jul. 2013; 41(7):1497-504.

Furman G, Lin CC, Roche JL, Marchetti GF, **Collins MW**, Whitney SL. [Comparison of the balance accelerometry measure and balance error scoring system in adolescent concussions in sports.](#) *American Journal of Sports Medicine*, June 2013;41(6):1404-10.

**Kontos A**, **Elbin RJ**, **Lau B**, Simensky S, Freund B, **French J**, **Collins MW**. [Post-traumatic migraine as a predictor of recovery and cognitive impairment after sports-related concussion.](#) *Am J Sports Med*, Jul. 2013;41(7):1497-1504.

**Kontos, A.P.**, **Elbin, R.J.**, Covassin, T., Newcomer-Appaneal, R., **Collins, MW**. [A comparison of coping responses among high school and college athletes with concussion, orthopaedic injuries, and healthy controls.](#) *Research in Sports Medicine*, 2013;21(4):367-79.

**Camiolo Reddy C, Collins MW, Lovell M, Kontos AP.** [Efficacy of Amantadine treatment on symptoms and neurocognitive performance among adolescents following sports-related concussion.](#) *Journal of Head Trauma Rehabilitation*, July-Aug. 2013; 28(4), 260-65.

**Kontos AP, Kotwal RS, Elbin RJ, Lutz RH, Forsten RD, Benson PJ, Guskiewicz KM.** [Residual effects of combat-related mild traumatic brain injury.](#) *Journal of Neurotrauma*, April 15, 2013; 30(8); 680-86.

**Reynolds E.** [Concussion or benign paroxysmal torticollis?](#) *Advances in Emergency Nursing Journal*, Oct. - Dec. 2012;34(4):321-4.

Lau B., **Collins MW, Lovell MR.** [Cutoff scores and symptom clusters predict protracted recovery from concussion in high-school athletes.](#) *Neurosurgery*, 2012 Feb.;70:371-379.

Petraglia AL, **Maroon JC**, Bailes JE. [From the field of play to the field of combat: A review of the pharmacological management of concussions.](#) *Neurosurgery* 2012 Jan 27.

Covassin T, **Elbin RJ**, Larson E, **Kontos AP.** [Sex and age differences in depression and baseline sports-related concussion neurocognitive performance and symptoms.](#) *Clinical Journal of Sports Medicine* 2012 Mar;22(2):98-104.

**Kontos AP**, Dolese A, **Elbin RJ**, Covassin T, Warren BL. [Relationship of soccer heading to computerized neurocognitive performance and symptoms among female and male youth soccer.](#) *Brain Injury* 2011;25(12):1234-41. doi: 10.3109/02699052.2011.608209. Epub 2011 Sep 8.

**Elbin RJ**, Schatz P, Covassin T. [One-year test-retest reliability of the online version of IMPACT in high school athletes.](#) *American Journal of Sports Medicine* 2011 Nov;39(11):2319-24. Epub 2011 Aug 12.

Lau B., **Collins MW, Kontos A., Mucha A, Lovell MR.** [Which on-field symptoms predict protracted recovery from sport-related concussion? Dizziness a predictor of a protracted recovery](#) *American Journal of Sports Medicine*, 2011 Nov.;39(11):2311-8. Epub 2011 Jun 28.

Hollis SJ, Stevenson MR, McIntosh AS, Ling L, Heritier S. Shores EA, **Collins MW** and Finch CF. [Mild traumatic brain injury among a cohort of rugby union players: predictors of time to injury.](#) *British Journal of Sports Medicine* 2011; 45(12):997-999.

**Lovell MR**, Solomon GS. [Psychometric data for the NFL neuropsychological test battery](#) *Applied Neuropsychology* 2011 Jul;18(3):197-209.

Lau B., **Collins MW, Lovell MR.** [Sensitivity and specificity of sub-acute neurocognitive testing and symptom evaluation in predicting outcomes following sports-related concussion length of recovery.](#) *American Journal of Sports Medicine*, 2011, 39(6):1209-16.

Thomas D., **Collins MW**, Saladino R., Frank V., Raab J., Suckerbraun N. [Identifying neurocognitive deficits in adolescents following concussion.](#) *Academic Emergency Medicine* 2011 Mar;18(3) 246-54.

**Johnson E., Kegel N., Collins MW.** [Neuropsychological assessment of sports-related concussion.](#) *Clinics in Sports Medicine*, 2011, 30:73-88.

**Pardini JE**, Pardini DA, Becker JT, Dunfee KL, Eddy WF, **Lovell MR**, Welling JS. [Postconcussive symptoms are associated with compensatory cortical recruitment during a working memory task.](#) *Neurosurgery* 2010 Oct;67(4):1020-7; discussion 1027-8.

Alsalasheen BA, **Mucha A.**, Morris LO, Whitney SL, **Furman JM, Camiolo-Reddy CE, Collins MW, Lovell MR**, Sparto PJ. [Vestibular rehabilitation for dizziness and balance disorders after concussion.](#) *Journal of Neurologic Physical Therapy*, 2010 34:87-93.

Sabini RC, **Reddy CC**. [Concussion management and treatment considerations in the adolescent population](#). *The Physician and Sports Medicine* 2010 Apr;38(1):139-46.

Hollis S., Stevenson M., McIntosh A., Shores A., **Collins MW**, Taylor C. [Incidence, risk and protective factors of mild traumatic brain injury in cohort of Australian non-professional male rugby players](#). *American Journal of Sports Medicine*, 2009 Dec;37(10):2328-2333.

Colvin A., **Lovell MR**, West R., **Collins MW**, Groh M. [The role of concussion history and gender in recovery from soccer](#). *American Journal of Sports Medicine*, 2009 Sep;37(9):1699-704

Lau B., **Lovell MR**, **Collins MW**, **Pardini J**. [Neurocognitive and symptom predictors of recovery in high-school athletes following sports concussion](#). *Clinical Journal of Sports Medicine* 2009 May; 19(3):216-21

Peterson SE, Stull MJ, **Collins MW**, Wang HE. [Neurocognitive function in Emergency Department patients with mild traumatic brain injury](#). *Annals of Emergency Medicine* 2009 Jun;53(6):796-803.e1. Epub 2009 Jan 24.

Nance M., Wiebe D., **Collins MW**. [Neurocognitive evaluation of Mild Traumatic Brain Injury in a hospitalized pediatric population](#). *Annals of Surgery*, 2009 May: 249(5);9=849-63.

**Lovell, MR**. [The neurophysiology and assessment of sports-related head injuries](#). *Physical Medicine and Rehabilitation Clinics of America* 2009 Feb;20(1):39-53, vii-viii.

**Reddy CC, Collins MW**. [Sports concussion: management and predictors of outcome](#). *Current Sports Medicine Reports* 2009 Jan-Feb;8(1):10-5.

**Lovell MR**. [The management of sports-related concussion: Current status and future trends](#). *Clinical Sports Medicine* 2009 Jan;28(1):95-111.

Majerske CW, Mihalik JP, Red D, **Collins MW, Reddy CC, Lovell MR**, Wagner AK. [Concussion in sports: postconcussive activity levels, symptoms and neurocognitive performance](#). *Journal of Athletic Training* 2008 May-Jun;43(3):265-74.

**Reddy CC, Collins MW**, Gioia GA. [Adolescent sports concussion](#). *Physical Medicine and Rehabilitation Clinics of North America* 2008 May;19(2):247-69, viii.

**Lovell MR, Fazio V**. [Concussion management in the child and adolescent athlete](#). *Current Sports Medicine Reports* 2008 Feb;7(1):12-5.

**Fazio VC, Lovell MR, Pardini JE, Collins MW**. [The relation between post-concussion symptoms and neurocognitive performance in concussed athletes](#). *NeuroRehabilitation* 2007;22(3):207-16.

**Lovell MR, Pardini JE**, Welling J, **Collins MW**, Bakal J, Lazar N, Roush R, Eddy WF, Becker JT. [Functional brain abnormalities are related to clinical recovery and time to return-to-play in athletes](#). *Neurosurgery*, 2007 Aug;61(2):352-9; discussion 359-60.

Mihalik JP, McCaffrey MA, Rivera EM, **Pardini JE**, Guskiewicz KM, **Collins MW, Lovell MR**. [Effectiveness of mouthguards in reducing neurocognitive deficits following sports-related cerebral concussion](#). *Dental Traumatology* 2007 Feb;23(1):14-20.

**Lovell MR**, Iverson GL, **Collins MW**, Podell K, Johnston KM, Pardini D, **Pardini J**, Norwig J, **Maroon JC**. [Measurement of symptoms following sports-related concussion: reliability and normative data for the post-concussion scale](#). *Applied Neuropsychology* 2006;13(3):166-74.

Cantu RC, Aubry M, Dvorak J, Graf-Baumann T, Johnston K, Kelly J, **Lovell M**, McCrory P, Meeuwisse W, Schamasch P, Kevin M, Bruce SL, Ferrara MS, Kelly JP, McCrea M, Putukian M, McLeod TC. [Overview of concussion consensus statements since 2000](#). *Neurosurgical Focus* 2006 Oct 15;21(4):E3.

Van Kampen DA, **Lovell MR**, Pardini JE, **Collins MW**, Fu FH. [The "value added" of neurocognitive testing after sports-related concussion](#). *American Journal of Sports Medicine* 2006 Oct;34(10):1630-5.

**Lovell MR, Collins MW, Pardini J, Fu FH**. fMRI and sports concussion: the new window into the brain. *Orthopaedic Technology Review* June 2006 (Unavailable)

Iverson GL, Brooks BL, **Collins MW, Lovell MR**. [Tracking neuropsychological recovery following concussion in sport](#). *Brain Injury* 2006 Mar;20(3):245-52.

**Collins MW, Lovell MR**, Iverson GL, Ide T., **Maroon J**. [Examining concussion rates and return to play in high school football players wearing newer helmet technology: a three-year prospective cohort study. \(But merits further study.\)](#) *Neurosurgery*. 2006 Feb;58(2):275-86; discussion 275-86.

Biasca N, **Lovell MR, Collins MW**, Jordan BD, Matser E, Weber J, Slemmer JE, Piccininni P, Maxwell W, Agosti R, Wirth S, Schneider TO. [The undetected brain lesion in sports. Minor traumatic brain injury and its sequelae](#). *Der Unfallchirurg* 2006 Feb;109(2):101-11.

McClincy MP, **Lovell MR**, Pardini J, **Collins MW**, Spore MK. [Recovery from sports concussion in high school and collegiate athletes](#). *Brain Injury* 2006 Jan;20(1):33-9.

Schatz P, Pardini JE, **Lovell MR, Collins MW**, Podell K. [Sensitivity and specificity of the ImPACT Test Battery for concussion in athletes](#). *Archives of Clinical Neuropsychology* 2006 Jan;21(1):91-9.

Iverson GL, Brooks BL, **Lovell MR, Collins MW**. [No cumulative effects for one or two concussions](#). *British Journal of Sports Medicine*. 2006 Jan;40(1):72-5.

Iverson GL, **Lovell MR, Collins MW**. [Validity of ImPACT for examining processing speed following sports-related concussion](#). *Journal of Experimental and Clinical Neuropsychology*, 2005 Aug;27(6):683-9.

**Lovell M, Collins MW**, Pardini JE, Parodi A, Yates A. [Management of Cerebral Concussion in Military Personnel: Lessons Learned From Sports Medicine](#). *Operative Techniques in Sports Medicine* 2005 October; 13(4):212–221

**Lovell MR, Collins MW**, Norwig J, Grove R, Iso A, **Maroon J**. Spinal cord and cerebral concussion in a professional athlete: A case report. (Unavailable) *Journal of Athletic Training*, NATA News: July 2005 (Volume 57)  
Collins, Maroon, Lovell

Mihalik JP, Stump JE, **Collins MW, Lovell MR**, Field M, **Maroon JC**. [Posttraumatic migraine characteristics in athletes following sports-related concussion](#). *Journal of Neurosurgery* 2005 May;102(5):850-5.

McCrory P, Johnston K, Meeuwisse W, Aubry M, Cantu R, Dvorak J, Graf-Baumann T, Kelly J, **Lovell M**, Schamasch P. [Summary and agreement statement of the 2nd International Conference on Concussion in Sport](#), Prague 2004. *British Journal of Sports Medicine* 2005 Apr;39(4):196-204.

Iverson GL, Gaetz M, **Lovell MR, Collins MW**. [Relation between subjective foggiess and neuropsychological testing following concussion](#). *Journal of International Neuropsychological Society* 2004 Oct;10(6):904-6.

**Lovell M**, Collins M, Bradley J. [Return to play following sports-related concussion](#). *Clinics in Sports Medicine* 2004 Jul;23(3):421-41, ix.

Iverson GL, Gaetz M, **Lovell MR**, **Collins MW**. [Cumulative effects of concussion in amateur athletes](#). *Brain Injury* 2004 May;18(5):433-43.

Lovell MR, **Collins MW**, Fu F, Stump J. Athlete concussion management guidelines using Functional Magnetic Resonance Imaging. *Orthopaedic Technology Review* 2004;6(4) (unavailable).

**Kontos A**, **Collins MW**, Russo S. An introduction to sports concussion for the sport psychology consultant. *Journal of Applied Sport Psychology*. 2004;16;220-235 (unavailable).

**Collins MW**, McClincey M, Lovell MR, Stump j, Lowe A, Maroon J. Cognitive recovery patterns following sports-related concussion. *British Journal of Sports Medicine* 2004; 38:654-664 (unavailable).

Majerske C, **Collins MW**, Mihalik J, Lovell MR, Wagner C. Concussion in sports: Relationship of activity level after concussion to post-concussive symptoms and neurocognitive performance. *British Journal of Sports Medicine* 2004;38:654-664 (unavailable).

Lovell MR, **Collins MW**, Bradley J, Van Kampen D, Moritz K, McClincey M. Differential sensitivity of symptoms and neuropsychological testing following sports related concussion. *British Journal of Sports Medicine* 2004;38:654-664 (unavailable).

Stump J, Lovell MR, Eddy W, Roush J, Welling J, Bakal J, Becker J, **Collins MW**, Lowe A. Functional neuroimaging and neurocognitive recovery after sports-related concussion. *British Journal of Sports Medicine* 2004;38:654-664 (unavailable).

Pardini D, Stump J, Lovell MR, **Collins MW**, Moritz K, Fu F. The post-concussion symptom scale (PCSS): A factor analysis. *British Journal of Sports Medicine* 2004;38:654-664 (unavailable).

Shatz P, Lovell MR, **Collins MW**, Moritz K, Bradley J. Sensitivity and specificity of the ImpACT test battery in athletes' concussion status. *British Journal of Sports Medicine* 2004;38:654-664 (unavailable).

Mihalik J, Stump J, Lovell MR, **Collins MW**, Norwig J, Hagan T, Fu F. Sex differences in acute recovery following concussion in athletes. *British Journal of Sports Medicine* 2004;38:654-664 (unavailable).

Stump J, **Collins MW**, Lovell MR, Norwig J, Lowe M, McClincey M. Symptom recovery following concussion: Implications for return to play. *British Journal of Sports Medicine* 2004;38:654-664 (unavailable).

Iverson GL, Lange T, Lovell MR, **Collins MW**. No cumulative effects for one or two prior concussions. *British Journal of Sports Medicine* 2004;38:654-664 (unavailable).

Iverson GL, **Collins MW**, Gaetz M, Lovell MR. Tracking neuropsychological recovery following concussion. *British Journal of Sports Medicine* 2004;38:654-664 (unavailable).

Iverson GL, Lovell MR, **Collins MW**. Validity of ImpACT for measuring attention and processing speed following sports-related concussion. *British Journal of Sports Medicine* 2004;38:654-664 (unavailable).

**Collins MW, Stump J, Lovell MR.** New developments in the management of sports concussion. *Current Opinion in Orthopaedics* 2004 April; 15(2): 100-107.

**Lovell MR, Collins MW,** Iverson GL, Johnston KM, Bradley, JP. [Grade 1 or "ding" in high-school athletes](#) *American Journal of Sports Medicine* 2004 Jan-Feb; 32(1):47-54.

Pellman EJ, Powell JW, Viano DC, Casson IR, Tucker AM, Feuer H, **Lovell M,** Waeckerle JF, Robertson DW. [Concussion in professional football: epidemiological features of game injuries and review of the literature](#) --part 3. *Neurosurgery* 2004 Jan;54(1):81-94; discussion 94-6.

Iverson GL, **Lovell MR, Collins MW.** Reliable change in ImPACT version 2.0 following sports concussion. *Archives of Clinical Neuropsychology*, 2003:18, 744 (unavailable).

Iverson GL, **Lovell MR, Collins MW.** [Interpreting change via ImPACT.](#) *The Clinical Neuropsychologist* 2003 Nov;17(4):460-7.

**Collins MW,** Iverson GL, **Lovell MR,** McKeag DB, Norwig J, **Maroon J.** [On-field predictors of neuropsychological and symptom deficit following sports-related concussion.](#) *Clinical Journal of Sports Medicine* 2003 Jul;13(4):222-9.

Field M, **Collins MW, Lovell MR, Maroon JC.** [Evaluating symptoms in college and high-school athletes.](#) *Journal of Pediatrics* 2003 May; 142 (5):546-53.

**Collins MW,** Field M, **Lovell MR,** Iverson G, Johnston KM, **Maroon J, Fu FH.** [Relationship between post-concussion headache and neuropsychological test performance in high-school athletes.](#) *American Journal of Sports Medicine* 2003 Mar-Apr;31(2):168-73.

**Lovell MR, Collins MW,** Iverson GL, Field M, **Maroon JC,** Cantu R, Podell K, Powell JW, Belza M, **Fu FH.** [Recovery from "mild" concussion in high-school athletes.](#) *Journal of Neurosurgery* 2003 Feb;98(2):296-301.

Iverson GL, **Lovell MR,** Podell K, **Collins MW.** Computerized neuropsychological testing in sports-related concussion: Reliability and validity of ImPACT. *Journal of International Neuropsychological Society*, 2003:9, 156 (unavailable).

Iverson G, **Lovell MR, Collins, MW,** Norwig J. Tracking recovery from concussion using ImPACT: Applying reliable change methodology. *Archives of Clinical Neuropsychology* 2002:17(8);770 (unavailable).

**Collins MW,** Lovell MR, Iverson GL, Cantu RC, Maroon JC, Field M. [Cumulative effects of concussion in high-school athletes.](#) *Neurosurgery* 2002 Nov;51(5):1175-9; discussion 1180-1.

**Lovell MR, Collins MW.** [New developments in the evaluation of sports-related concussion.](#) *Current Sports Medicine Report* 2002 Oct;1(5):287-92.

**Collins MW,** Hawn KL. [The clinical management of sports concussion.](#) *Current Sports Medicine Report* 2002 Feb; 1(1):12-22.

Aubry M, Cantu R, Dvorak J, Graf-Baumann T, Johnston K, Kelly J, **Lovell M,** McCrory P, Meeuwisse W, Schamasch P; Concussion in Sport Group. [Summary and agreement statement of the First International Conference on Concussion in Sport, Vienna 2001. Recommendations for the improvement of safety and health of athletes who may suffer concussive injuries.](#) *British Journal of Sports Medicine* 2002 Feb;36(1):6-10.

**Collins MW, Lovell MR.** Tracking Recovery from concussion using ImPACT: Applying reliable change methodology... Validity of ImPACT for measuring the effects of sports-related concussion... & Relation between foginess and outcome following concussion. *Archives of Clinical Neuropsychology* 2002 (unavailable).

**Collins MW, Maroon JC, Lovell MR.** Memory dysfunction eight days post-injury in high-school athletes. *Medicine and Science in Sports and Exercise* 2002 (unavailable).

**Collins MW, Maroon JC, Lovell MR.** Recovery patterns following concussion: Implications for return to play... Important markers of concussion severity: retrograde and anterograde amnesia. *Journal of Athletic Training* 2002 (unavailable).

**Maroon JC, Field M, Lovell M, Collins M, Bost J.** The evaluation of athletes with cerebral concussion. *Clinical Neurosurgery* 2002; 49:319-32.

Grindel SH, Lovell MR, Collins MW. [The assessment of sport-related concussion: the evidence behind neuropsychological testing and management.](#) *Clinical Journal of Sports Medicine* 2001 Jul;11(3):134-43.

**Collins MW, Lovell MR, Fu F, Burke C.** Neuropsychological testing in sports: past, present and future. *British Journal of Sports Medicine* 2001 (unavailable).

**Maroon JC, Lovell MR, Norwig J, Podell K, Powell JW, Hartl R.** [Cerebral concussion in athletes: evaluation and neuropsychological testing.](#) *Neurosurgery* 2000 Sep; 47(3):659-69; discussion 669-72.