

Title of Presentation: Concussion: Putting Evidence into Practice for Better Recovery

- 60 minutes for Amy Sheridan (lecture-based presentation w/ Q&A)
- 60 minutes for Donna Smith (lecture-based presentation w/ Q&A)
- 60 minutes for combined lab experience

Instructional Level: Intermediate

This presentation falls into the following category: Orthopedic, Neurological, Sports Medicine, Vestibular

Course Description:

Concussion is a complex medical condition that is likely underreported and underdiagnosed. Furthermore, there is high variability in clinical management, including patient education and recommendations. Many health care organizations, including the Centers for Disease Control and Prevention and the National Institutes for Health, provide valuable resources for clinicians. However, the pace and volume of research and practice guidelines, as well as the vast array of symptom presentations, can be overwhelming for clinicians who may not routinely see people impacted by concussion. This session will focus on utilizing physiologic testing for diagnosis and management of a concussion. More specifically, we will provide evidence-based guidance and hands-on practice for the in-office evaluation and treatment of the following components of concussion management: vestibular (primarily BPPV), advanced dual task motor function, orthostatic and exertional intolerance and cervical proprioceptive integration.

Learning Objectives:

1. Describe the basic functional anatomy and concussion-associated pathology of the peripheral vestibular system using images and models.
2. Demonstrate vestibular system screening/examination and treatment including vestibulo-oculomotor testing and BPPV assessment.
3. Describe and demonstrate autonomic system screening, examination and treatment.
4. Describe and demonstrate cervical proprioceptive integration examination and treatment techniques.
5. Describe and demonstrate dual task motor function examination and treatment techniques.

Key References: Minimum of 5 current references

1. Gianoli GJ. Post-concussive Dizziness: A Review and Clinical Approach to the Patient. *Front Neurol*. 2022 Jan 4;12:718318. doi: 10.3389/fneur.2021.718318. PMID: 35058868; PMCID: PMC8764304.
2. Campbell KR, Parrington L, Peterka RJ, Martini DN, Hullar TE, Horak FB, Chesnutt JC, Fino PC, King LA. Exploring persistent complaints of imbalance after mTBI: Oculomotor, peripheral vestibular and central sensory integration function. *J Vestib Res*. 2021;31(6):519-530. doi: 10.3233/VES-201590. PMID: 34024798; PMCID: PMC12579460.
3. Wong CK, Ziaks L, Vargas S, DeMattos T, Brown C. Sequencing and Integration of Cervical Manual Therapy and Vestibulo-oculomotor Therapy for Concussion Symptoms: Retrospective Analysis. *Int J Sports Phys Ther*. 2021 Feb 1;16(1):12-20. doi: 10.26603/001c.18825. PMID: 33604130; PMCID: PMC7872443.
4. Van Deventer KA, Seehusen CN, Walker GA, Wilson CW, Howell DR. The diagnostic and prognostic utility of the dual-task tandem gait test for pediatric concussion. *J Sport Health Sci*. 2020 Aug 12;10(2):131–137. doi: 10.1016/j.jshs.2020.08.005. PMCID: PMC7987555 PMID: 32795624.
5. Collins, M.W., Kontos, A.P., Reynolds, E., Murawski, C.D. and Fu, F.H. (2014), A comprehensive, targeted approach to the clinical care of athletes following sport-related concussion. *Knee Surg Sports Traumatol Arthrosc*, 22: 235-246 1795. <https://doi.org/10.1007/s00167-013-2791-6>.

Speaker Bios:

Amy Sheridan is a board-certified Sports Clinical Specialist that has been treating patients with concussions for 20 years. She has worked in outpatient clinical settings in Boston, Vermont and Abu Dhabi, UAE, as well as at a research hospital in Doha, Qatar. Her areas of specialty have included treating athletic populations, rehabilitation of complex knee injuries, gymnastics medicine, tendinopathy and concussion. Amy uses a collaborative approach to treating concussion, working with professionals across the northeast.

Donna Smith is a clinical assistant professor in the University of Vermont Doctor of Physical Therapy program. She is board-certified in neurologic and geriatric physical therapy (emeriti) through the American Board of Physical Therapy. In 25 years of clinical practice, she has primarily served people with neurological conditions such as TBI, CVA, MS, PD, and vestibular disorders in both inpatient and outpatient settings. She

has worked on various national and regional-level professional committees and task forces and presented at conferences such as the APTA Education Leadership Conference and Combined Sections Meeting. She is a member of the Vestibular Disorders Association and is beginning a new line of clinical research related to community vestibular screening in specific populations.