## Did participant have a dual task assessment?

## Yes No Unknown

## If yes, indicate date:

## General Instructions

Important note: None of the data elements on this CRF Module are considered Core (i.e., strongly recommended for all Sports-Related Concussion clinical studies to collect). They are exploratory and should only be collected if the research team considers them appropriate for their study.

## Specific Instructions:

Dual-task paradigms- that combine a cognitive task with a motor performance task- may offer a unique approach to assessing concussion that negate compensatory strategies used to perform single task paradigms. In so doing, dual-task paradigms may help elicit deficits/impairment in athletes with concussion who might otherwise escape detection using single task approaches. Preliminary evidence suggests that dual-task paradigms can detect deficits in concussed athletes at acute, sub-acute and chronic time points. Typically, the motor performance component for dual-task paradigms include static/dynamic balance or gait. Common cognitive tasks in these paradigms include serial 7s (counting backwards by 7s), word memory tasks, and visual reaction time. Initial evidence for dual-tasks is promising, but further study using larger samples is needed.

References:

[**Dual**-**task** gait differences in female and male adolescents following sport-related **concussion**.](https://www.ncbi.nlm.nih.gov/pubmed/28384609)

Howell DR, Stracciolini A, Geminiani E, Meehan WP 3rd.

Gait Posture. 2017 Apr 1;54:284-289. doi: 10.1016/j.gaitpost.2017.03.034. [Epub ahead of print]

PMID: 28384609

[Single-**task** and **dual**-**task** tandem gait test performance after **concussion**.](https://www.ncbi.nlm.nih.gov/pubmed/28169147)

Howell DR, Osternig LR, Chou LS.

J Sci Med Sport. 2017 Jan 24. pii: S1440-2440(17)30256-6. doi: 10.1016/j.jsams.2016.11.020. [Epub ahead of print]

PMID: 28169147

[Executive dysfunction following a mild traumatic **brain** injury revealed in early adolescence with locomotor-cognitive **dual**-tasks.](https://www.ncbi.nlm.nih.gov/pubmed/27740859)

Cossette I, Gagné MÈ, Ouellet MC, Fait P, Gagnon I, Sirois K, Blanchet S, Le Sage N, McFadyen BJ.

**Brain** Inj. 2016;30(13-14):1648-1655. Epub 2016 Oct 14.

PMID: 27740859

[ingle-**Task** and **Dual**-**Task** Gait Among Collegiate Athletes of Different Sport Classifications: Implications for **Concussion** Management.](https://www.ncbi.nlm.nih.gov/pubmed/27705076)

Howell DR, Oldham JR, DiFabio M, Vallabhajosula S, Hall EE, Ketcham CJ, Meehan WP 3rd, Buckley TA.

J Appl Biomech. 2017 Feb;33(1):24-31. doi: 10.1123/jab.2015-0323. Epub 2016 Oct 5.

PMID: 27705076

[Locomotor deficits in recently concussed athletes and matched controls during single and **dual**-**task**turning gait: preliminary results.](https://www.ncbi.nlm.nih.gov/pubmed/27456969)

Fino PC, Nussbaum MA, Brolinson PG.J Neuroeng Rehabil. 2016 Jul 25;13(1):65. doi: 10.1186/s12984-016-0177-y.

PMID: 27456969

[A preliminary study of longitudinal differences in local dynamic stability between recently concussed and healthy athletes during single and **dual**-**task** gait.](https://www.ncbi.nlm.nih.gov/pubmed/27207386)

Fino PC.

J Biomech. 2016 Jun 14;49(9):1983-8. doi: 10.1016/j.jbiomech.2016.05.004. Epub 2016 May 10.

PMID: 27207386

[Adolescents demonstrate greater gait balance control deficits after **concussion** than young adults.](https://www.ncbi.nlm.nih.gov/pubmed/25540297)

Howell DR, Osternig LR, Chou LS.

Am J Sports Med. 2015 Mar;43(3):625-32. doi: 10.1177/0363546514560994. Epub 2014 Dec 24.

PMID: 25540297