

Concussion Guidelines Step 1: Systematic Review of Prevalent Indicators

Supplemental Content 13

Table. Prevalence of Cognitive Deficits

	Event	1 day	36 h	2 d	3 d	4 d	5 d	7 d
Reaction Time								
HeadMinder Simple Reaction Time		71.4% RCI ^{1b}						
ImPACT Reaction Time		41.7% RCI ^{1c}		SD p < 0.05 ² +RCI ³				No SD ²
Headminder Complex Reaction Time		71.4% RCI ^{1b}						
Attention/Processing Speed/Working Memory								
HeadMinder Processing Speed		50% RCI ^{1b}						
Trails A		52.2% RCI ^{1a}			No Diff RCI ⁴		No Diff RCI ⁴	No Diff RCI ⁴
		No Diff RCI ⁴						
Symbol Digit		52.2% RCI ^{1a}		RC-Yes ⁵	No Diff RCI ⁴		No Diff RCI ⁴	No Diff RCI ⁴
		No Diff RCI ⁴						RC-Yes ⁵
Digit Span		30.4% RCI ^{1a}						
SAC Concentration	SD p < 0.0001 ⁶							
Memory								
HVL Total		39.1% RCI ^{1a}			1/2-1 sd RCI ⁴		1/2 sd RCI ⁴	No Diff RCI ⁴
		1 sd RCI ⁴			No SD ^{7a}		No SD ^{7a}	SD P < 0.005 ^{7a}
		SD p < 0.003 ^{7a}			No SD ^{7b}		No SD ^{7b}	No SD ^{7b}
		SD p < 0.002 ^{7b}						

	Event	1 day	36 h	2 d	3 d	4 d	5 d	7 d
HVLT Recognition				RC-No ⁵				RC-No ⁵
HVLT Delayed Recall		1 sd RCI ⁴		RC-No ⁵	1/2-1 sd RCI ⁴		1/2 sd RCI ⁴	No Diff RCI ⁴
		No SD ^{7a}			No SD ^{7a}		No SD ^{7a}	No SD ^{7a}
		SD P < 0.002 ^{7b}			No SD ^{7b}		No SD ^{7b}	No SD ^{7b}
								RC-Yes ⁵
HVLT Immediate Memory				RC-No ⁵				RC-No ⁵
ImPACT Verbal Memory		41.7% RCI ^{1c}		SD p < 0.05 ² +RCI ³				No SD ²
ImPACT Visual Memory		20.8% RCI ^{1c}		SD p < 0.05 ² -RCI ³				No SD ²
ImPACT Memory Composite			SD p = 0.017 ⁸			SD p = 0.004 ⁸		SD p = 0.037 ⁸
SAC Orientation	SD p < 0.006 ⁶							
SAC Immediate Memory	SD p < 0.0001 ⁶							
SAC Delayed Recall	SD p < 0.001 ⁶							
BVMT-R Total		SD p < 0.002 ^{7a}			SD p < 0.002 ^{7a}		SD p < 0.008 ^{7a}	No SD ^{7a}
BVMT-R Delayed		SD p < 0.002 ^{7a}			SD p < 0.02 ^{7a}		No SD ^{7a}	No SD ^{7a}
Executive Function								
Trails B		52.2% RCI ^{1a}		RC-No ⁵	No Diff RCI ⁴		No Diff RCI ⁴	No Diff RCI ⁴
		No Diff RCI ⁴						RC-Yes ⁵
COWAT		34.8% RCI ^{1a}		RC-No ⁵	No Diff RCI ⁴		No Diff RCI ⁴	No Diff RCI ⁴

	Event	1 day	36 h	2 d	3 d	4 d	5 d	7 d
		No Diff RCI ⁴						RC-No ⁵
Stroop				RC-No ⁵				RC-No ⁵
Motor/Sensory								
ImPACT Motor Processing Speed		20.8% RCI ^{1c}		SD p < 0.05 ² -RCI ³				No SD ²
Grooved Pegboard		No Diff RCI ⁴			No Diff RCI ⁴		No Diff RCI ⁴	No Diff RCI ⁴
Global Measures								
SAC Total Score	SD p < 0.0001 ⁶							

SD. Statistically Significant Difference

RCI. Reliable Change Index

sd. Standard Deviation

+RCI. Group mean exceeded normed RCI value

-RCI. Group mean did not exceed normed RCI value

RC. Recovery Curve

Bright Yellow – Evidence for group differences

Pale Yellow – Equivocal evidence

Black – Evidence for no group differences

Dark Green – No included studies

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