

Supplementary Appendix

This appendix has been provided by the authors to give readers additional information about their work.

Supplement to: Hoge CW, McGurk D, Thomas JL, Cox AL, Engel CC, Castro CA. Mild traumatic brain injury in U.S. soldiers returning from Iraq. *N Engl J Med* 2008;358:453-63. DOI: 10.1056/NEJMoa072972.

Appendix 1 to 07-2972 for Online Version.

Logistic Regression Models with PTSD and Depression as Dependent Variables

	Analyses Including Loss of Consciousness vs. Other Non-TBI Injuries		Analyses Including Altered Mental Status vs. Other Non-TBI Injuries	
	Adjusted OR (95% CI) for PTSD*	Adjusted OR (95% CI) for Depression†	Adjusted OR (95% CI) for PTSD*	Adjusted OR (95% CI) for Depression†
Type of Injury				
LOC or Altered MS	2.98 (1.70-5.24)	3.67 (1.65-8.16)	1.78 (1.13-2.81)	1.62 (0.79-3.34)
Other Injuries	1.00	1.00	1.00	1.00
Gender				
Male	0.66 (.17-2.59)	0.98 (0.12-8.36)	0.50 (0.16-1.53)	0.63 (0.13-3.04)
Female	1.00	1.00	1.00	1.00
Age				
< 30 Years	0.75 (0.45-1.25)	0.80 (0.40-1.62)	0.93 (0.59-1.47)	1.24 (0.61-2.51)
≥ 30 Years	1.00	1.00	1.00	1.00
Rank				
Junior Enlisted (E1-E4)	1.65 (0.99-2.74)	1.35 (0.67-2.73)	1.66 (1.05-2.63)	0.95 (0.47-1.90)
All Higher Ranks	1.00	1.00	1.00	1.00
Combat Intensity Score‡				
1 st Quartile	1.00	1.00	1.00	1.00
2 nd Quartile	5.09 (1.36-19.11)	2.57 (0.50-13.19)	3.59 (1.22-10.59)	2.81 (0.70-11.31)
3 rd Quartile	5.92 (1.51-23.31)	1.40 (0.23-8.44)	3.18 (1.04-9.76)	1.84 (0.41-8.22)
4 th Quartile	11.58 (2.99-44.83)	3.87 (0.72-20.83)	6.63 (2.23-19.76)	2.84 (0.67-11.97)
Mechanism of Injury				
Blast	0.96 (0.56-1.63)	0.47 (0.21-1.03)	0.94 (0.60-1.49)	0.45 (0.21-0.97)
All Other Mechanisms	1.00	1.00	1.00	1.00
Improvised explosive device exploded near soldier				
2 or more occasions	0.55 (0.30-1.00)	1.13 (0.45-2.83)	0.63 (0.36-1.10)	0.82 (0.35-1.89)
0-1 occasion	1.00	1.00	1.00	1.00
Hospitalization during deployment, Yes	1.31 (.77-2.23)	1.87 (0.95-3.69)	0.97 (0.56-1.69)	1.09 (0.47-2.55)
No	1.00	1.00	1.00	1.00

Abbreviations: LOC= Loss of consciousness, MS = mental status

* PTSD was measured with the Post-Traumatic Stress Disorder Checklist (PCL) which has a range from 17-85 (higher score indicates greater number and severity of symptoms). The “PTSD” label was used for all individuals who met the psychiatric symptom criteria according to DSM-4 and who had a total PCL score of ≥50.

† Major depression was measured with the Patient Health Questionnaire (PHQ). Subjects had to meet psychiatric criteria according to DSM-4 and report functional impairment at the “very difficult” level.

‡ Combat intensity was measured with a 17 question combat experiences scale with a score range from 0-17 (higher value indicates greater number of different combat experiences).

Appendix 2 to 07-2972 for Online Version.

Logistic Regression Models with High PHQ-15 Score as Dependent Variable

	OR (95% CI) for high PHQ-15* Physical Symptom Score	OR (95% CI) for high PHQ-15* Physical Symptom Score
	Loss of Consciousness vs. Other Injuries	Altered Mental Status vs. Other Injuries
Univariate Analysis (Unadjusted)		
Type of Injury†	2.60 (1.56-4.33)	1.52 (0.97-2.38)
Multivariate, Model 1 (Adjusted ORs and CIs)		
Type of Injury†	0.92 (0.46-1.82)	1.13 (0.69-1.87)
PTSD‡	7.86 (4.09-15.10)	11.32 (6.88-18.63)
Depression§	7.47 (3.53-15.78)	NA
Multivariate, Full Model (Adjusted ORs and CIs)		
Type of Injury†	0.76 (0.31-1.84)	1.31 (0.71-2.41)
PTSD‡	8.82 (4.29-18.11)	10.20 (6.00-17.34)
Depression§	5.81 (2.62-12.90)	NA
Combat Intensity, 2 nd Quartile	2.54 (0.60-10.79)	2.19 (0.63-7.62)
Combat Intensity, 3 rd Quartile	1.16 (0.24-5.48)	0.81 (0.21-3.18)
Combat Intensity, 4 th Quartile	0.97 (0.21-4.55)	1.77 (0.50-6.30)
Age <30	1.11 (0.55-2.23)	1.21 (0.66-2.20)
Rank, Junior Enlisted	1.04 (0.51-2.10)	1.16 (0.64-2.11)
Male Gender	0.79 (0.14-4.47)	0.90 (0.21-3.82)
Blast Mechanism of Injury	0.95 (0.43-2.08)	0.46 (0.25-0.87)
Improvised Explosive Device exploded near soldier on two or more occasions	1.98 (0.82-4.73)	1.52 (0.70-3.28)
Hospitalization	1.33 (0.62-2.84)	1.38 (0.69-2.77)

Note all variables were dichotomized, except for combat intensity, in a manner similar to Appendix 1 table.

* The PHQ-15 refers to the Patient Health Questionnaire somatic symptom scale (range 0-28 in this study, with higher numbers indicating a greater number and severity of symptoms).

† 2nd column of this row shows odds ratio (95% CI) of high PHQ-15 for loss of consciousness vs. other non-TBI injuries, 3rd column of this row shows odds ratio (95% CI) of high PHQ-15 for altered mental status vs. other non-TBI injuries

‡ PTSD was measured with the Post-Traumatic Stress Disorder Checklist (PCL) which has a range from 17-85 (higher score indicates greater number of symptoms and severity). The “PTSD” label was used for all individuals who met the psychiatric symptom criteria according to DSM-4 and who had a total PCL score of ≥ 50 .

§ Major depression was measured with the Patient Health Questionnaire (PHQ). Subjects had to meet psychiatric criteria according to DSM-4 and report functional impairment at the “very difficult” level.

|| Combat intensity was measured with a 17 question combat experiences scale with a score range from 0-17 (higher value indicates greater number of different combat experiences). The 1st (Lowest) Quartile was the reference group.