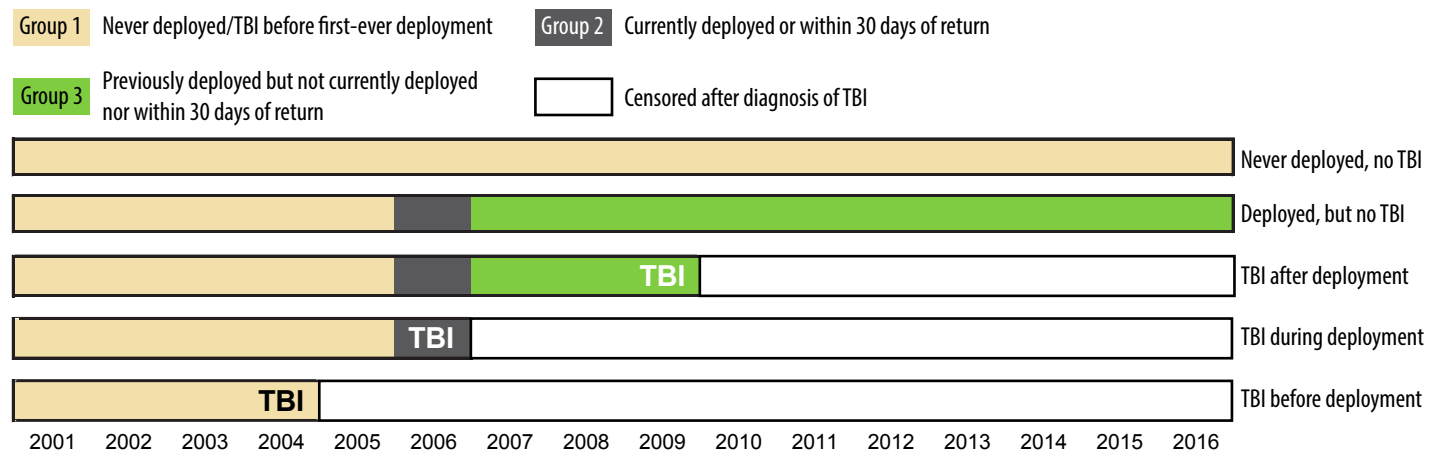


# Diagnoses of traumatic brain injury not clearly associated with deployment, active component, U.S. Armed Forces, 2001–2016

## FACT SHEET – DEMOGRAPHIC AND MILITARY TRAITS OF SERVICE MEMBERS DIAGNOSED AS TBI CASES

During a 16-year surveillance period from 2001 through 2016, a total of 276,858 active component service members received first-time diagnoses of traumatic brain injury (TBI). TBI is structural alteration of the brain or physiological disruption of brain function caused by an external force. TBI, particularly mild TBI or concussion, is the most common traumatic injury in the U.S. military.

### DEMOGRAPHIC AND MILITARY TRAITS OF SERVICE MEMBERS DIAGNOSED AS TBI CASES



- ▶ The incidence rate of TBI among service members in *Group 2* was 1.5 times that of service members in *Group 1* and 1.2 times that of service members in *Group 3*.
- ▶ Among service members in *Group 1*, overall TBI incidence rates were highest among those aged 24 years or younger.
- ▶ Compared to females, males had slightly higher overall incidence rates during the surveillance period.

### HIGH RISK GROUP 1

	TOTAL 2001–2016 GROUP 1 <sup>A</sup>			TOTAL 2001–2016 GROUP 1 <sup>A</sup>	
	COUNT	RATE <sup>C</sup>		COUNT	RATE <sup>C</sup>
Sex			Race/ethnicity		
Male	97,687	1,147.7	White, non-Hispanic	76,675	1,198.2
Female	20,900	1,112.3	Black, non-Hispanic	17,436	1,042.1
Age group			Other	24,476	1,055.8
<20	21,557	1,504.2	Service		
20–24	64,417	1,430.6	Army	50,599	1,481.9
25–29	19,299	933.1	Navy	23,049	871.9
30–34	6,665	659.2	Air Force	22,870	847.7
35–39	3,672	507.1	Marine Corps	22,069	1,350.0
40+	2,977	457.2			

Among Service members in *Group 1*, annual incidence rates of TBI increased from a low of 841.6 cases per 100,000 p-yrs in 2001 to a high of 1,489.1 cases per 100,000 p-yrs in 2014 (a 76.9% increase).

<sup>A</sup>Group 1, never deployed/TBI before first-ever deployment  
<sup>C</sup>Rate per 100,000 person-years

**FACT SHEET – DEMOGRAPHIC AND MILITARY TRAITS OF SERVICE MEMBERS  
DIAGNOSED AS TBI CASES — CONTINUED**

**HIGH RISK GROUP 3**

	TOTAL 2001–2016 GROUP 3 <sup>B</sup>			TOTAL 2001–2016 GROUP 3 <sup>B</sup>	
	COUNT	RATE <sup>C</sup>		COUNT	RATE <sup>C</sup>
Sex			Race/ethnicity		
Male	111,434	1,507.4	White, non-Hispanic	78,426	1,537.3
Female	10,489	1,039.3	Black, non-Hispanic	18,409	1,196.3
			Other	25,088	1,424.5
Age group			Service		
<20	624	2,499.2	Army	73,915	2,378.4
20–24	36,702	2,308.8	Navy	16,368	750.0
25–29	33,388	1,608.1	Air Force	14,155	649.7
30–34	20,496	1,157.0	Marine Corps	17,485	1,874.0
35–39	15,623	1,003.1			
40+	15,090	1,092.1			

From 2001 through 2006, annual incidence rates of TBI among service members in *Group 3* were lower than those of *Group 1* service members. In 2007, the annual incidence rate among service members in *Group 3* exceeded that of *Group 1* service members (1,247.1 cases per 100,000 p-yrs and 1,178.0 cases per 100,000 p-yrs). Non-deployment associated annual incidence rates in *Group 3* peaked in 2012 (2,032.7 cases per 100,000 p-yrs) and then decreased during subsequent 4-year period).

<sup>B</sup>Group 3, previously deployed but not currently deployed nor within 30 days of return  
<sup>C</sup>Rate per 100,000 person-years

More information visit:

[Health.mil/MSMR](http://Health.mil/MSMR)

