

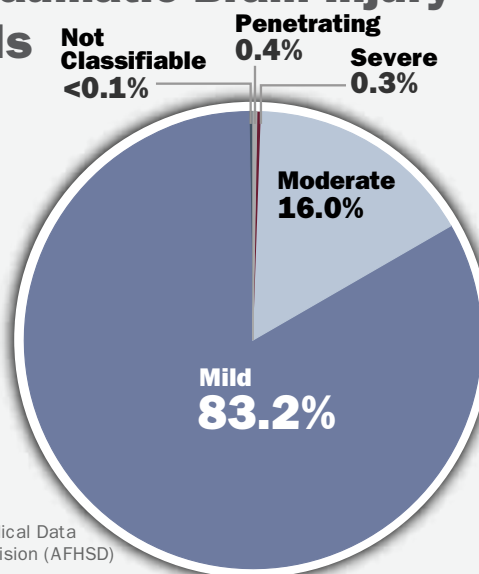


# DOD Numbers for Traumatic Brain Injury Worldwide — Totals

## 2021

Penetrating	78
Severe	64
Moderate	3,009
Mild	15,650
Not Classifiable	2

**Total - All Severities 18,803**



Source: Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Division (AFHSD)

Prepared by the Traumatic Brain Injury Center of Excellence (TBI CoE)

\*Percent may not add to 100% due to rounding

2021, as of November 17, 2022

### Definitions and Revisions

Note: From 2018 (Q2) through 2019 (Q3), AFHSD temporarily halted the distribution of the data used in this report and the Traumatic Brain Injury Center of Excellence (TBI CoE) used the MHS Data Repository to ensure this report was completed on a timely basis. While TBI CoE used a different data source, the approach was consistent with the historical methodology.

Effective October 2015, the International Classification of Diseases was updated. With the improved information, more moderate traumatic brain injuries can be counted. Previously, some cases were categorized as “unclassifiable” severity due to more limited surveillance information. Also in 2015, the Assistant Secretary of Defense clarified the TBI case definition. A subsequent review found that some of the remaining “unclassifiable” cases were likely moderate TBI. This change also will contribute to higher counts of moderate TBI surveillance cases.

Worldwide numbers represent medical diagnoses of TBI that occurred anywhere U.S. forces are located including the continental United States since 2000.

**Concussion/Mild TBI is characterized by the following:** Confused or disoriented state which lasts less than 24 hours; or loss of consciousness for up to 30 minutes; or memory loss lasting less than 24 hours. Excludes penetrating TBI. A CT scan is not indicated for most patients with a Mild TBI. If obtained, it is normal.

**Moderate TBI is characterized by the following:** Confused or disoriented state which lasts more than 24 hours; or loss of consciousness for more than 30 minutes, but less than 24 hours; or memory loss lasting greater than 24 hours but less than seven days; or meets criteria for Mild TBI except an abnormal CT scan is present. Excludes penetrating TBI. A structural brain imaging study may be normal or abnormal.

**Severe TBI is characterized by the following:** Confused or disoriented state which lasts more than 24 hours; or loss of consciousness for more than 24 hours; or memory loss for more than seven days. Excludes penetrating TBI. A structural brain imaging study may be normal but usually is abnormal.

**Penetrating TBI, or open head injury, is characterized by the following:** A head injury in which the scalp, skull and dura mater (the outer layer of the meninges) are penetrated. Penetrating injuries can be caused by high-velocity projectiles or objects of lower velocity such as knives, or home fragments from a skull fracture that are driven into the brain.

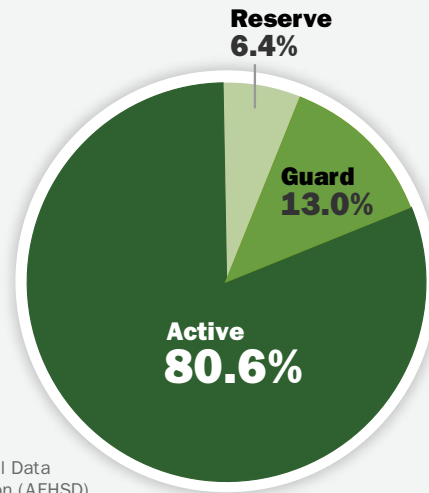


# DOD Numbers for Traumatic Brain Injury Worldwide — Army

**2021**

Active	8,738
Guard	1,407
Reserve	692

**Total - Army 10,837**



Source: Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Division (AFHSD)

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2021, as of November 17, 2022

Service	Component	Severity	Diagnosed
Army	Active	Penetrating	26
		Severe	25
		Moderate	1,340
		Mild	7,347
		Not Classifiable	-
	Guard	Penetrating	8
		Severe	10
		Moderate	244
		Mild	1,145
		Not Classifiable	-
	Reserve	Penetrating	4
		Severe	1
		Moderate	114
		Mild	573
		Not Classifiable	-

2021, as of November 17, 2022

Source: Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Division (AFHSD)

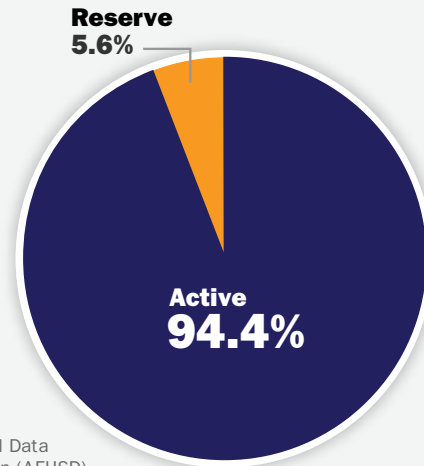
Prepared by the Traumatic Brain Injury Center of Excellence (TBI CoE)



## DOD Numbers for Traumatic Brain Injury Worldwide — Navy

**2021**

Active	2,601
Reserve	155
<b>Total - Navy</b>	<b>2,756</b>



Source: Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Division (AFHSD)  
 Prepared by the Traumatic Brain Injury Center of Excellence (TBICoE)

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2021, as of November 17, 2022

Service	Component	Severity	Diagnosed
Navy	Active	Penetrating	13
		Severe	9
		Moderate	463
		Mild	2,114
		Not Classifiable	2
	Reserve	Penetrating	1
		Severe	-
		Moderate	25
		Mild	129
		Not Classifiable	-

2021, as of November 17, 2022

Source: Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Division (AFHSD)

Prepared by the Traumatic Brain Injury Center of Excellence (TBICoE)

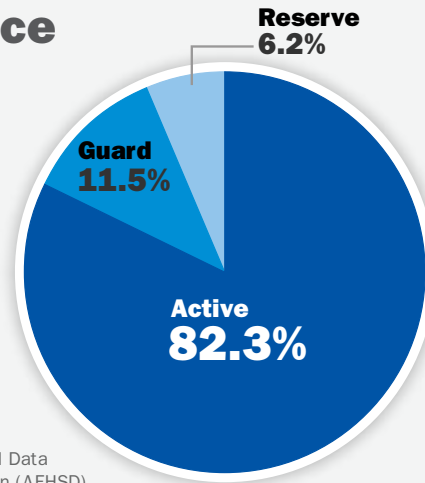


# DOD Numbers for Traumatic Brain Injury Worldwide — Air Force

**2021**

Active	2,194
Guard	308
Reserve	165

**Total - Air Force 2,667**



Source: Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Division (AFHSD)  
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2021, as of November 17, 2022

Service	Component	Severity	Diagnosed
Air Force	Active	Penetrating	4
		Severe	4
		Moderate	329
		Mild	1,857
		Not Classifiable	-
	Guard	Penetrating	1
		Severe	3
		Moderate	65
		Mild	239
		Not Classifiable	-
	Reserve	Penetrating	-
		Severe	-
		Moderate	36
		Mild	129
		Not Classifiable	-

2021, as of November 17, 2022

Source: Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Division (AFHSD)

Prepared by the Traumatic Brain Injury Center of Excellence (TBICoE)



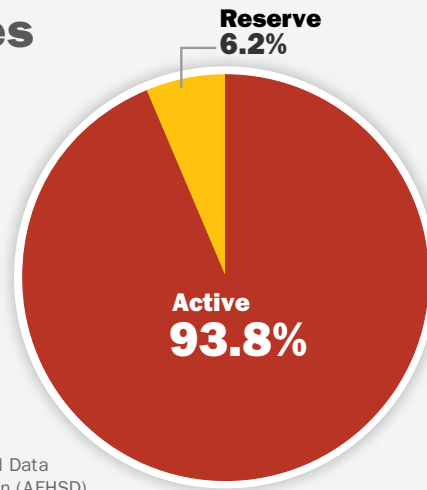
## DOD Numbers for Traumatic Brain Injury Worldwide — Marines

**2021**

<span style="color: red;">■</span> Active	2,386
<span style="color: yellow;">■</span> Reserve	157

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**Total - Marines** **2,543**



**Source:** Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Division (AFHSD)  
 Prepared by the Traumatic Brain Injury Center of Excellence (TBI CoE)

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2021, as of November 17, 2022

Service	Component	Severity	Diagnosed
Marines	Active	Penetrating	20
		Severe	12
		Moderate	361
		Mild	1,993
		Not Classifiable	-
	Reserve	Penetrating	1
		Severe	-
		Moderate	32
		Mild	124
		Not Classifiable	-

2021, as of November 17, 2022

*Source: Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Division (AFHSD)*

*Prepared by the Traumatic Brain Injury Center of Excellence (TBI CoE)*