



This report serves to describe incident heat illness (HI) cases among U.S. Armed Forces Service members (SMs) including Active Duty, trainees, Reserve, and Guard members. Non-Service member beneficiaries are excluded. The data for this report are obtained from the Defense Health Agency’s Weather-related Injury Repository (WRIR), which captures a selection of *International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM)* codes in inpatient and outpatient medical encounter records from the Military Health System Data Repository (MDR), as well as medical event reports of heat exhaustion and heat stroke submitted through the Disease Reporting System-internet (DRSi).¹ The medical event reports used to identify HIs are adapted from standard case definitions established by the Armed Forces Health Surveillance Division (AFHSD).² SMs are counted as an incident case if they have an initial encounter for an HI within the calendar year. Consistent with the AFHSD case definition, SMs are considered an incident case only once per calendar year. Denominators used for the rate of any heat illness were obtained from MHS Mart (M2) by service branch and month. Due to late data entry and delayed processing of data in the MDR, values for 2024 may be artificially low.

Beginning in 2024, Coast Guard data were added to the WRIR. Coast Guard data from 2018 to 2023 were included in the WRIR for historical comparisons and new records will be included in the monthly updates to the WRIR moving forward. The completeness of the Coast Guard data is unknown at this time. The data in this report are not comparable to those of previous HI reports due to the addition of Coast Guard data.

In April 2024, 109 HIs (96 heat exhaustion cases, 13 heat stroke cases) were diagnosed among SMs (Figure 1). Of these, 10 cases were hospitalized (6 heat exhaustion cases, 4 heat stroke cases) (data not shown). The incidence rate of any HI in SMs for April 2024 was 1.1 cases of HI per 1,000 person-years. In the month of April during the last 5 years, HI rates were lowest in 2020 (0.5 cases of HI per 1,000 person-years). Between 2021 and 2024, the rate of HIs ranged from 1.1 to 1.5 cases of HI per 1,000 person-years (Figure 1).

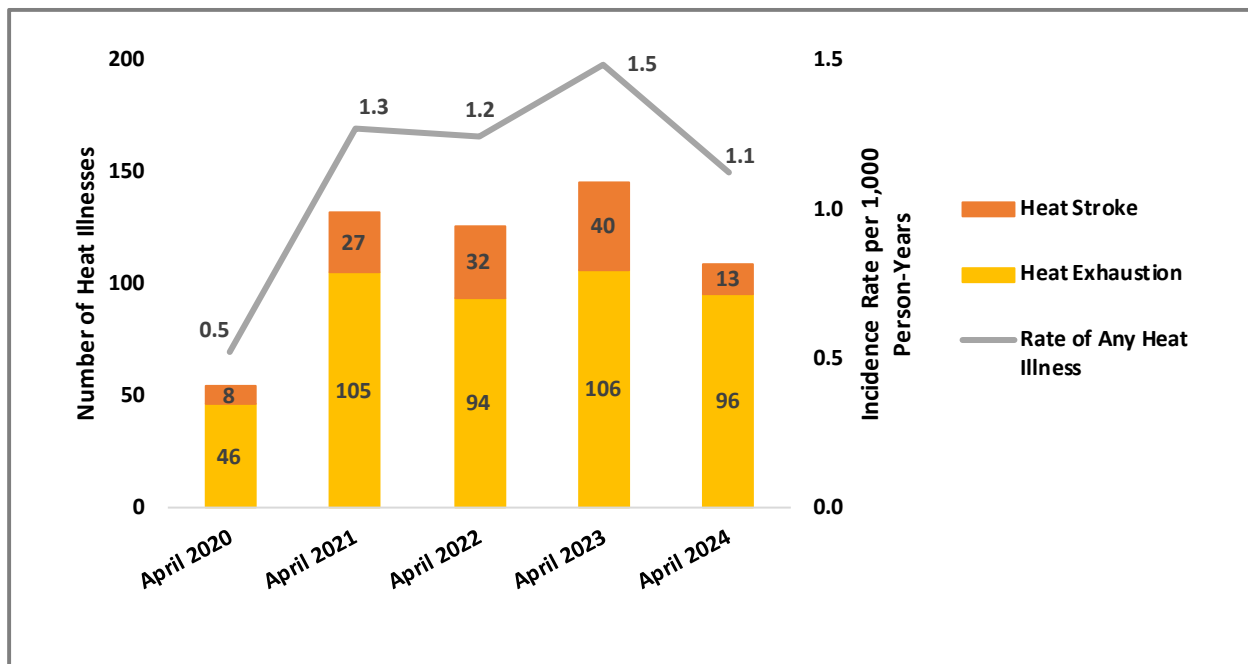


Figure 1. Incident Cases and Rates of Heat Illness for the Month of April, U.S. Armed Forces Service Members, 2020–2024

References

1. Armed Forces Health Surveillance Branch, Defense Health Agency. In collaboration with U.S. AirForce School of Aerospace Medicine, U.S. Army Public Health Center, and Navy and Marine Corps Public Health Center. Armed Forces Reportable Medical Events. Guidelines and Case Definitions, October 2022. Accessed May 20, 2024. <https://www.med.navy.mil/Portals/62/Documents/NMFA/NMCPHC/root/Documents/program-and-policy-support/DRSI/Armed-Forces-Reportable-Medical-Events-Oct-2022.pdf>
2. Armed Force Health Surveillance Branch. Surveillance Case Definition: Heat Illness. Accessed May 6, 2024. <https://health.mil/Reference-Center/Publications/2019/10/01/Heat-Injuries>

During the 2024 heat year, the rate of HIs among SMs increased monthly to a season high in April 2024 (Figure 2).

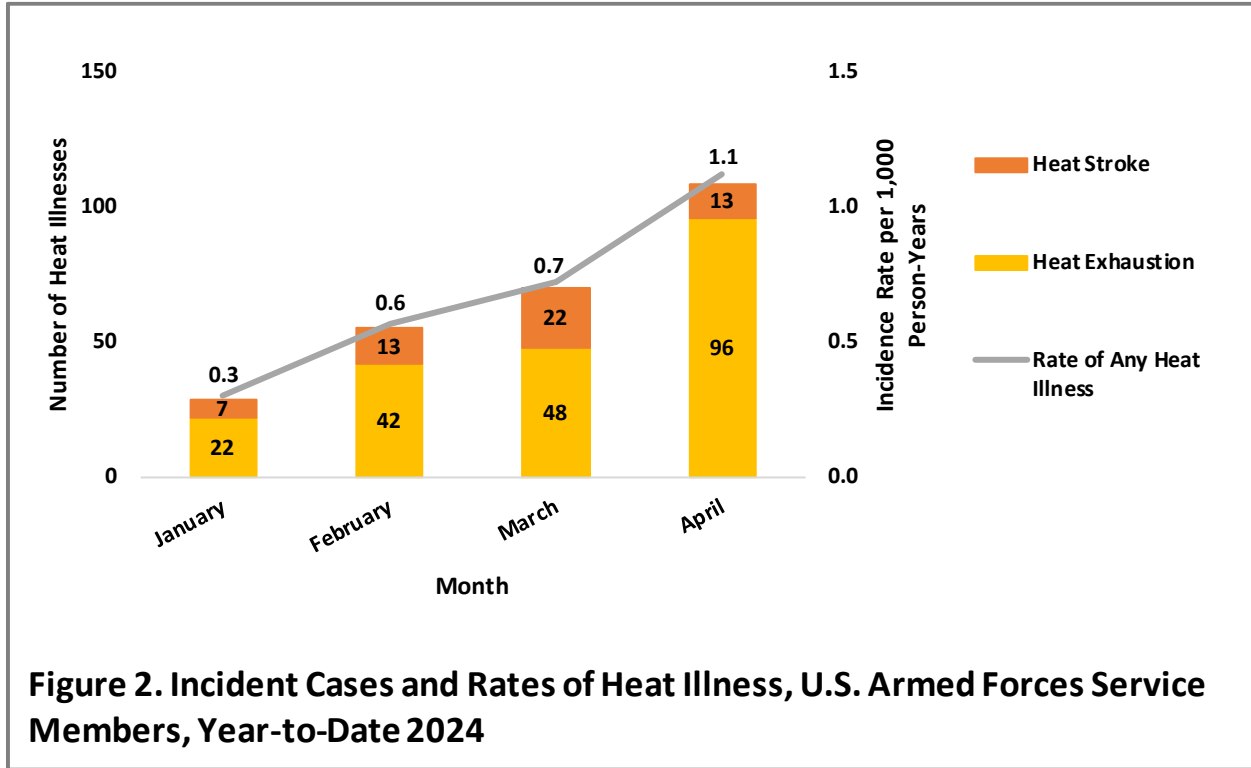


Figure 2. Incident Cases and Rates of Heat Illness, U.S. Armed Forces Service Members, Year-to-Date 2024

This section of the report contains additional figures and tables. Figures 3—7 present the number of HIs by service branch. Table 1 provides a summary of HI cases by service branch, type of HI, hospitalizations, rank, sex, and age group. Figures 8 and 9 present HIs by installation for the month and the year, when 10 or more HIs occurred at the installation.

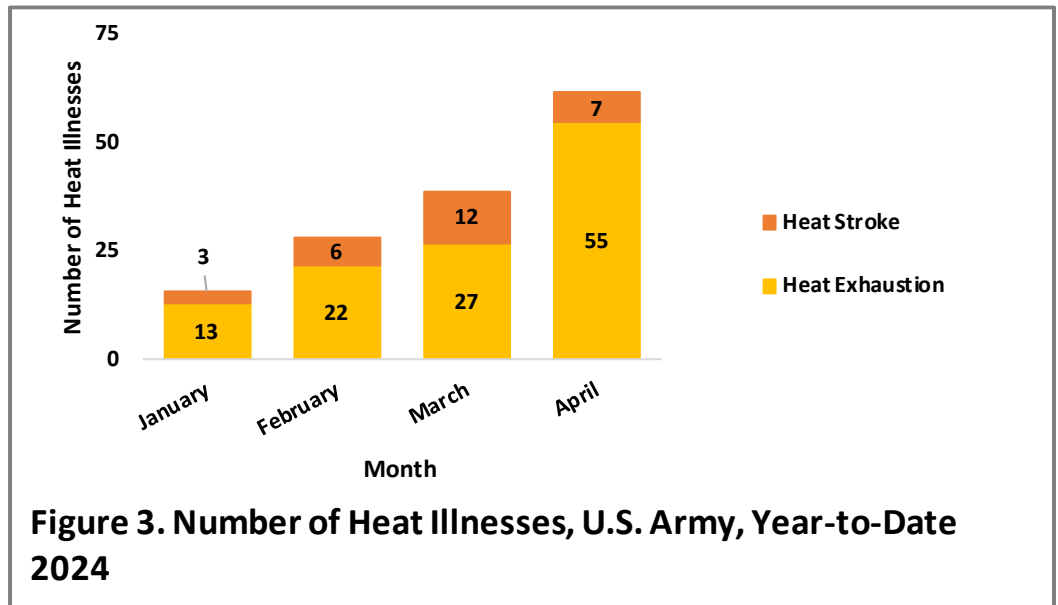
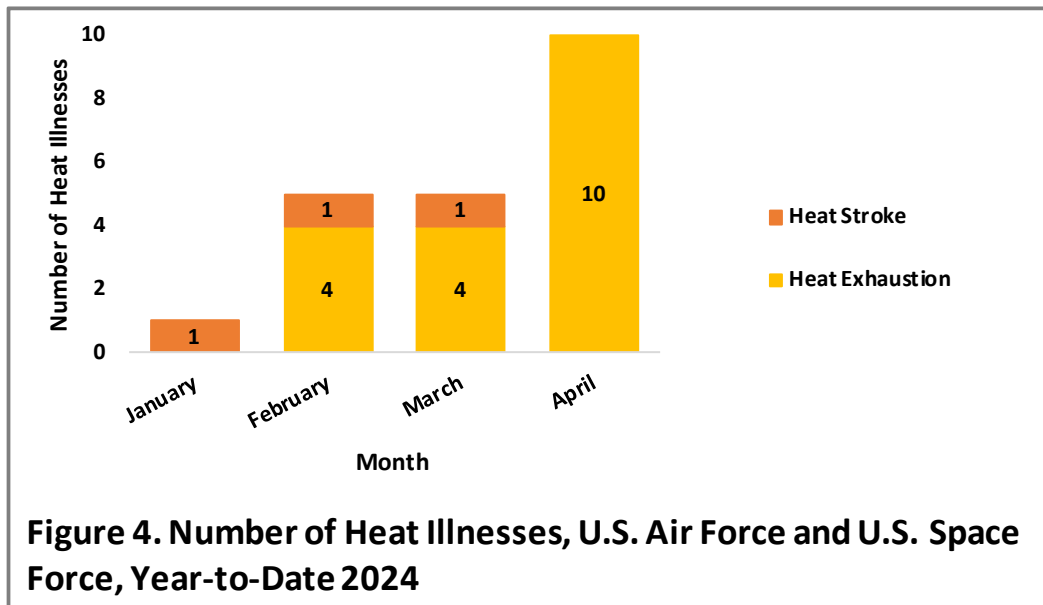


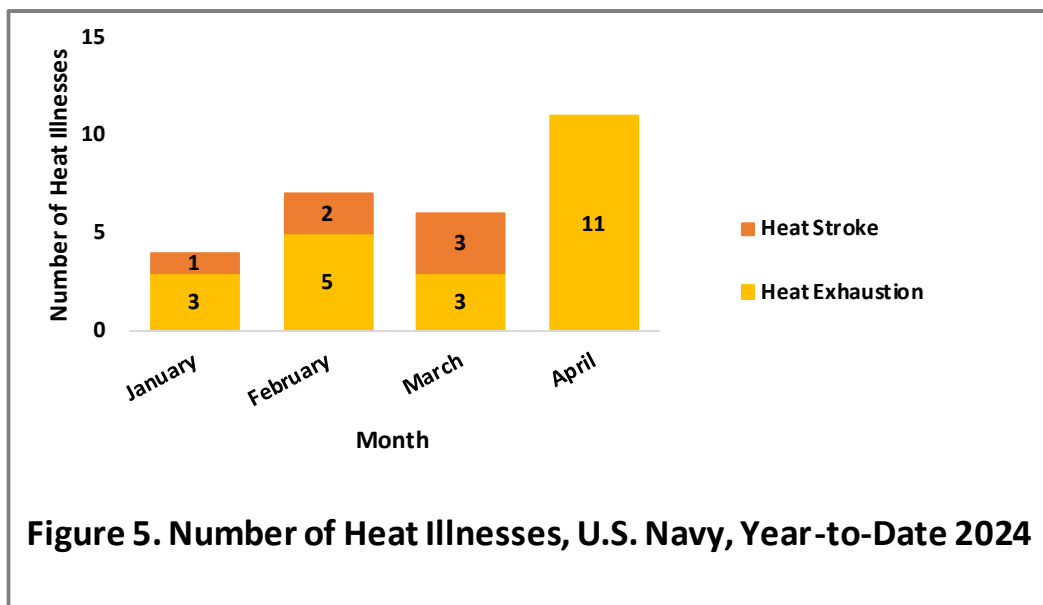
Figure 3. Number of Heat Illnesses, U.S. Army, Year-to-Date 2024

Note: Due to small numbers, rates are not calculated for each service.

Air Force and Space Force



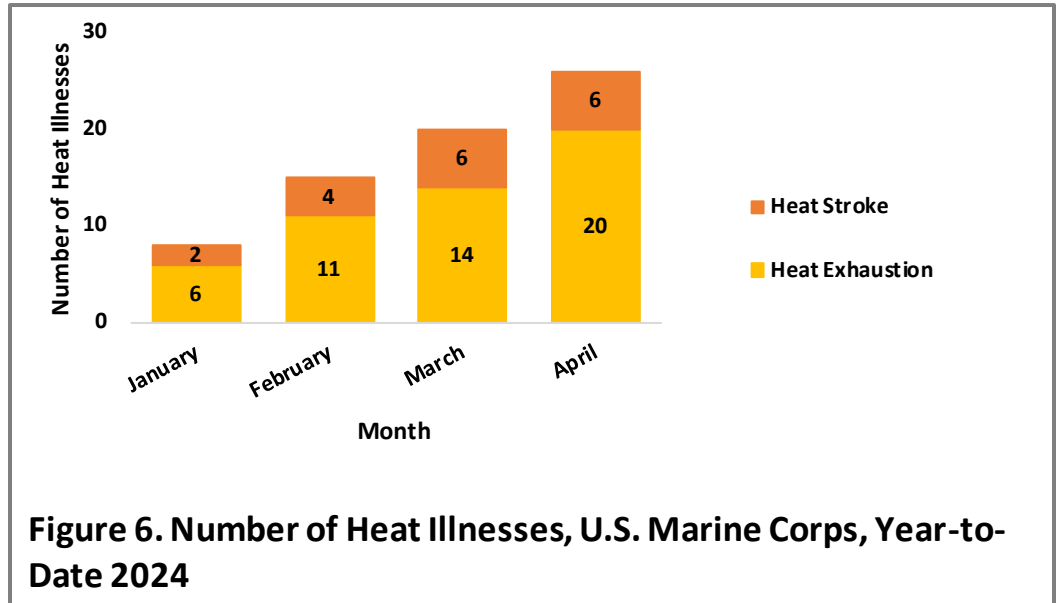
Navy



Note: Due to small numbers, rates are not calculated for each service.



Marine Corps



Coast Guard



No Heat Illness cases have been reported in 2024 for Coast Guard Service members.

Note: Due to small numbers, rates are not calculated for each service.



Table 1. Heat Illnesses by Service, Year-To-Date 2024

| | Number of Cases by Service Branch | | | | |
|--------------------------------------|-----------------------------------|---------------------------|-----------|--------------|-------------|
| | Army | Air Force and Space Force | Navy | Marine Corps | Coast Guard |
| Total Heat Illness Cases | 145 | 21 | 28 | 69 | 0 |
| Heat Exhaustion | 117 | 18 | 22 | 51 | 0 |
| Heat Stroke | 28 | 3 | 6 | 18 | 0 |
| Heat Illness Hospitalizations | | | | | |
| Heat Exhaustion | 13 | 0 | 1 | 3 | 0 |
| Heat Stroke | 8 | 1 | 0 | 6 | 0 |
| Rank | | | | | |
| Junior Enlisted (E1–E4) | 26 | 4 | 14 | 13 | 0 |
| Senior Enlisted (E5–E9) | 7 | 3 | 6 | 2 | 0 |
| Officer (O1–O10) | 6 | 0 | 1 | 0 | 0 |
| Warrant Officer (W1–W5) | 0 | 0 | 0 | 0 | 0 |
| Unknown | 106 | 14 | 7 | 54 | 0 |
| Sex | | | | | |
| Female | 19 | 7 | 6 | 10 | 0 |
| Male | 126 | 11 | 16 | 57 | 0 |
| Unknown | 0 | 3 | 6 | 2 | 0 |
| Age Group (Years) | | | | | |
| <25 | 87 | 15 | 15 | 55 | 0 |
| 25–34 | 46 | 4 | 8 | 11 | 0 |
| 35–44 | 9 | 2 | 5 | 3 | 0 |
| 45+ | 3 | 0 | 0 | 0 | 0 |



Figure 8. Heat Illnesses by Installation, April 2024

Installations where the total number of diagnosed cases were less than 10 are not shown.

Ft.=Fort



Figure 9. Heat Illnesses by Installation, Year-to-Date 2024

Installations where the total number of diagnosed cases were less than 10 are not shown.

Ft.=Fort

JB=Joint Base

MCB=Marine Corps Base

NHC=Naval Health Clinic

NMC=Naval Medical Center