



THE MILLENNIUM COHORT STUDY: A RESEARCH BRIEF

Dear Participants,

Your dedication and participation in this study play a crucial role in helping us gather essential data and insights, and we are thrilled to have you as part of our study.

Many participants like yourself have expressed an interest in knowing the results of the study, and we truly appreciate your curiosity and eagerness to learn more about these findings.

We are delighted to provide you with this research brief, which summarizes key findings on specific topics. Researchers' main discoveries are included without delving into technical jargon.

Once again, we extend our heartfelt appreciation to you for your time, effort, and enthusiasm throughout this study. Your commitment has made a significant impact on the research, and we couldn't have achieved such success without your support.

Very respectfully,
The Millennium Cohort Study Team

Please keep us updated

- ❓ Have you recently moved or changed your email address?
- ❓ Has your name changed?

Please visit our website at www.millenniumcohort.org to update your contact information.

WWW.MILLENNIUMCOHORT.ORG

Questions? Please feel free to contact us at our toll free number 1-888-942-5222 or DSN 553-7465 or email at usn.nhrc-MilcohortInfo@health.mil

Alcohol Misuse among U.S. Service Members and Veterans

A summary of alcohol-related research by the Millennium Cohort Study

KEY POINTS

Military service members may be prone to alcohol misuse due to a culture of drinking as a coping mechanism for stressors related to their duties. The Millennium Cohort Study team conducted several studies exploring this issue, including: the connection between combat deployment and alcohol use, risk factors for problem drinking relapse, the influence of specific PTSD symptoms on starting unhealthy alcohol use, and the impact of military factors on continued alcohol misuse. These studies found that there are differences between active-duty members and Reserve/Guard personnel and individuals with PTSD. Understanding and addressing unhealthy alcohol use in the military is important for promoting the health and well-being of service members and ensuring operational readiness.

Risk Factors

- Reserve/National Guard members who deployed with combat exposures had a higher risk of heavy drinking and alcohol-related problems when compared with nondeployed Reserve/National Guard members.¹
- Military personnel deployed with combat exposure were 30% more likely to relapse to problem drinking than those not deployed.²
- Reserve/National Guard members had a 67% higher risk of relapse to problem drinking when compared with active-duty members.²
- Some PTSD symptoms like anger and numbing were linked to the start of risky drinking.³

Impact

- Problem drinking among service members can have significant consequences, including decreased work performance, increased risk of injury, sleep deprivation, and fatigue.²
- The research highlights specific risk factors for unhealthy alcohol use in individuals with PTSD. This information can aid in targeted interventions and treatment strategies.³
- The research suggests that veterans are more likely to continue engaging in unhealthy alcohol use when compared to actively serving military members. This can be very concerning given the challenges veterans face during and after transitioning out of military service.⁴

IMPLICATIONS AND RECOMMENDATIONS

- Support programming should be specific to different military personnel based on age, service, deployment history, and combat exposure.
- Continued support is needed for those returning from deployment and those in remission from problem drinking.
- Focusing on behaviors (personality, situation, environment) and mental health can help prevent relapse and unhealthy alcohol use.

These findings highlight the need for targeted interventions, understanding the long-term effects of deployment, reducing barriers to care, and implementing strategies to address alcohol misuse among military personnel during and after deployment.

Smoking Risk Factors and Patterns among U.S. Service Members and Veterans

A summary of smoking-related research by the Millennium Cohort Study

KEY POINTS

Smoking claims the lives of over 400,000 Americans annually and is the leading preventable cause of death in the U.S. In comparison to the general population, smoking rates are notably higher among service members; as military service comes with its own set of challenging stressors, smoking can be a common and unhealthy way of coping. Service members who smoke tend to have lower fitness levels and are at greater risk for physical injury. This research explored various aspects of smoking within the military to understand and address the issues of smoking in the military to protect the health and well-being of our military community.

Risk Factors

- Those who deployed and experienced combat were 63% more likely to start smoking among never-smokers and 27% more likely to resume smoking among past smokers when compared to those who did not experience combat.⁵
- Smokeless tobacco (vaping) use is linked to deployment, combat experience, smoking, and certain mental health symptoms.⁶
- Having certain PTSD symptoms, like irritability and feeling a shortened future, increase the chance of starting to smoke.⁸
- Transitioning out of service, high alcohol use, and certain mental health conditions increase the risk of smoking.¹⁰

Impact

- In this research, physical exercise and interest-stimulating activities were highlighted as potential strategies to reduce cigarette cravings and prevent relapse.⁵
- One study indicated deployment with combat experience made beginning to smoke or resume smoking more likely. Existing mental health disorders and life stressors were also associated with starting to smoke and resuming smoking.⁷
- One study showed that veterans were 20% less likely to be a smoker than service members. However, service members transitioning out of the military may have an increased risk of smoking prior to their separation date (as early as 2 years before their separation date).¹⁰

IMPLICATIONS AND RECOMMENDATIONS

- The transition period from military to veteran status is a critical time to address quitting smoking as there is a higher risk of smoking during this period.
- Approaches that focus on both mental health and quitting smoking should be developed to support service members.
- Efforts to prevent smoking and resuming smoking should be stressed during and after deployments to support the overall well-being of service members.

The results of this research provide important information about the complex relationship between military experiences and smoking behavior, indicating a need for targeted interventions and a deeper understanding of the issues influencing smoking habits among military service members.

REFERENCES

1. Jacobson IG, Ryan MA, Hooper TI, Smith TC, Amoroso PJ, Boyko EJ, Gackstetter GD, Wells TS, Bell NS. Alcohol use and alcohol-related problems before and after military combat deployment. *JAMA*. 2008 Aug 13;300(6):663-75. PMID: 18698065; PMCID: PMC2680184.
2. Williams EC, Frasco MA, Jacobson IG, Maynard C, Littman AJ, Seelig AD, Crum-Cianflone NF, Nagel A, Boyko EJ. Risk factors for relapse to problem drinking among current and former US military personnel: a prospective study of the Millennium Cohort. *Drug Alcohol Depend*. 2015 Mar 1;148:93-101. PMID: 25599962.
3. Bensley KM, Seelig AD, Armenta RF, Rivera AC, Peterson AV, Jacobson IG, Littman AJ, Maynard C, Bricker JB, Boyko EJ, Rull RP, Williams EC. Posttraumatic Stress Disorder Symptom Association With Subsequent Risky and Problem Drinking Initiation. *J Addict Med*. 2018 Sep/Oct;12(5):353-362. PMID: 29870423; PMCID: PMC6167171.
4. Jacobson IG, Williams EC, Seelig AD, Littman AJ, Maynard CC, Bricker JB, Rull RP, Boyko EJ; Millennium Cohort Study Team. Longitudinal Investigation of Military-specific Factors Associated With Continued Unhealthy Alcohol Use Among a Large US Military Cohort. *J Addict Med*. 2020 Jul/Aug;14(4):e53-e63. PMID: 31821191; PMCID: PMC7280069.
5. Smith B, Ryan MA, Wingard DL, Patterson TL, Slymen DJ, Macera CA; Millennium Cohort Study Team. Cigarette smoking and military deployment: a prospective evaluation. *Am J Prev Med*. 2008 Dec;35(6):539-46. PMID: 18842388.
6. Hermes ED, Wells TS, Smith B, Boyko EJ, Gackstetter GG, Miller SC, Smith TC; Millennium Cohort Study Team. Smokeless tobacco use related to military deployment, cigarettes and mental health symptoms in a large, prospective cohort study among US service members. *Addiction*. 2012 May;107(5):983-94. PMID: 22126651.
7. Boyko EJ, Trone DW, Peterson AV, Jacobson IG, Littman AJ, Maynard C, Seelig AD, Crum-Cianflone NF, Bricker JB. Longitudinal Investigation of Smoking Initiation and Relapse Among Younger and Older US Military Personnel. *Am J Public Health*. 2015 Jun;105(6):1220-9. PMID: 25880953; PMCID: PMC4431101.
8. Seelig AD, Bensley KM, Williams EC, Armenta RF, Rivera AC, Peterson AV, Jacobson IG, Littman AJ, Maynard C, Bricker JB, Rull RP, Boyko EJ; Millennium Cohort Study Team. Longitudinal Examination of the Influence of Individual Posttraumatic Stress Disorder Symptoms and Clusters of Symptoms on the Initiation of Cigarette Smoking. *J Addict Med*. 2018 Sep/Oct;12(5):363-372. PMID: 29864086; PMCID: PMC6167135.
9. Nieh C, Powell TM, Gackstetter GD, Hooper TI. Smoking Among U.S. Service Members Following Transition From Military to Veteran Status. *Health Promot Pract*. 2020 Jan;21(1_suppl):165S-175S. PMID: 31908197.
10. Nieh C, Mancuso JD, Powell TM, Welsh MM, Gackstetter GD, Hooper TI. Cigarette smoking patterns among U.S. military service members before and after separation from the military. *PLoS One*. 2021 Oct 4;16(10):e0257539. PMID: 34606513; PMCID: PMC8489722. Combat exposure and being a Reserve/National Guard member are risk factors for heavy drinking, binge drinking, and alcohol-related problems.

