

Sleepless soldiers: Study suggests that military deployment affects sleep patterns

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A study in the Dec. 1 issue of the journal *Sleep* found that deployment to Iraq and Afghanistan significantly influenced sleep quality and quantity in a population of 41,225 military service personnel. The study suggests that the promotion of healthier sleep patterns may be beneficial for military service members.

Results show that participants who completed a follow-up survey during deployment were 28 percent more likely to report having trouble falling asleep or staying asleep than those who had not yet been deployed; participants who completed follow-up after deployment also were 21 percent more likely to have trouble sleeping.

"This is the first large-scale, population-based study of [sleep patterns](#) in the military," said lead author Amber D. Seelig, data analyst for the Department of Deployment Health Research at the Naval Health Research Center in San Diego, Calif. "The primary finding of this study is that deployment does appear to affect sleep patterns in our population."

Participants were more than two times more likely to report trouble sleeping if they had baseline symptoms of [mental health](#) problems such as posttraumatic [stress disorder](#) or depression, or if they rated their general health as only fair/poor. The deployed and postdeployment groups also reported sleeping significantly less than the nondeployed group; however, the association between deployment status and sleep duration was no longer significant after adjustments for follow-up

mental health conditions and combat exposure.

"We identified potential mediators, combat exposures and mental health disorders, for the relationship between deployment and trouble sleeping," said Seelig.

According to the authors, [sleep disturbances](#) commonly co-occur with mental health conditions. They speculated that enhancing the quality and increasing the quantity of sleep during and after deployment may be one way to potentially reduce the occurrence of [mental health problems](#) in military personnel.

The study involved 41,225 personnel on military rosters who completed a baseline survey between 2001 and 2003 as well as a follow-up survey between 2004 and 2006. The study group represented all Service branches and components of the U.S. military, including active duty and Reserve/National Guard personnel. About 27 percent of participants (n = 11,035) completed the follow-up survey during or after deployment in support of the operations in Iraq and Afghanistan.

The American Forces Press Service reports that troop levels in Iraq peaked at nearly 170,000 in 2007, and fewer than 50,000 troops will remain in Iraq until Dec. 31, 2011, to advise and assist Iraqi security forces. According to NATO, the U.S. currently has 90,000 troops in Afghanistan.

Participants who had trouble sleeping at follow-up indicated that during the past month they had moderate or more severe trouble falling asleep or staying asleep, or that the problem occurred several days or more than half the days. Trouble sleeping was reported by 25 percent of participants who had not deployed, 27.1 percent of those in the postdeployment group, and 30.5 percent of people in the deployment group.

Sleep duration was defined as the number of hours that participants reported sleeping during an average 24-hour period over the past month. Adjusted average sleep time was fairly short, with almost every subgroup reporting that they slept about 6.5 hours. According to the authors, this degree of moderate sleep restriction may have lasting effects on performance that cannot be quickly recovered.

In a separate sub-analysis, the authors also found that the adjusted mean sleep duration for mothers of young children and pregnant women in all three deployment groups was less than six hours. They suggested that the normal stressors of pregnancy and motherhood may be multiplied in military women who face the possibility of future deployment and separation from their families.

"We were surprised to see how little sleep pregnant and postpartum women were getting," said Seelig. "Even when we looked at other literature, it seems that the women in our study were reporting much shorter sleep than civilian pregnant women."

Provided by American Academy of Sleep Medicine

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