

Insomnia associated with increased risk of suicidality

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People who suffer from insomnia are three times more likely to report thoughts of suicide and death during the past 30 days than those without the condition, reports a new meta-analysis from researchers at the Perelman School of Medicine at the University of Pennsylvania. The study is the first to control for depression and anxiety and evaluate in-depth the relationship between the broadly defined terms of insomnia and suicidality to reveal trends that may inform future targeted treatment for some of the 32 million individuals struggling with insomnia in the United States each year.

The findings (abstracts #0409 and #422) will be presented at SLEEP 2017, the 31st Annual Meeting of the Associated Professional Sleep Societies LLC (APSS).

The researchers evaluated self-report survey data assessing insomnia, depression, and anxiety symptoms among 1,160 U.S. Army servicemembers (84 percent male and average age of 31). Controlling for anxiety and depression, the researchers mapped suicidality into multiple dimensions: thoughts of killing oneself, having a plan to commit suicide, intention to kill oneself, thoughts of death (wishing you were dead), and telling people you want to commit suicide. They separated insomnia sufferers into sub-groups - those who have so-called global insomnia (insomnia as a general term), initial (trouble falling asleep at the beginning of the night), middle (trouble maintaining sleep), and terminal insomnia (waking too early from sleep), and nocturnal awakenings (frequently waking up at night) - and studied the association

between each of those subgroups and dimensions of suicidality.

The team found that 2.3 percent of those in the population without insomnia reported any indices of suicidality, while 13.1 percent of those experiencing insomnia reported at least one type of suicidality. The group also found a significant association between insomnia and suicide (which echoes earlier studies), but the new research parsed out the broad concepts of insomnia and suicide to explain what aspects of these two are related in a population of military personnel. Even after eliminating the established role of depression and anxiety in suicide, People who suffer from insomnia are three times more likely to report thoughts of suicide and death during the past 30 days.

Insomnia was also found to be a significant predictor for suicidality. Although waking up multiple times throughout the night was significantly associated with greater suicidal ideation, the team was surprised that having difficulty maintaining sleep in the middle of the night was actually associated with a lower likelihood of having thoughts of suicide or having a suicidal plan. This does not mean that those at risk for suicide should try keeping themselves up during the middle of the night, however.

The association between awakenings and suicidality follows senior author Michael Perlis' "sleep of reason" hypothesis, such that, risk for suicidality is highest as someone is awake with insomnia at night when their ability to reason, think rationally, and engage in impulse control are lowest. The team's findings suggest that the increased awakenings at night and the decreased executive function associated with it foster dimensions of suicidality in those who are pre-disposed to thinking about committing suicide.

"It's a bad thing to be awake when reason sleeps," said Michael Perlis, PhD, an associate professor of Psychiatry and director of the Behavioral

Sleep Medicine program, and senior author on the research. "Being awake at night, coupled with the decreased frontal lobe function that happens with sleep loss may explain the mechanism for how insomnia relates with [suicide risk](#)."

Frequently waking up throughout the night was the only type of insomnia associated with four of the five dimensions of suicidality. One possible explanation for this finding may be that it is related to other comorbid conditions, such as [obstructive sleep apnea](#) and chronic pain.

"Middle insomnia might give them an external factor to attribute to their distress," said Ivan Vargas, PhD, a postdoctoral fellow and first author of abstract (#0409). "Most of the participants in this study were not presently depressed - so they're less likely to internalize stress and subsequently experience [suicidal ideation](#). Following a [night](#) of insomnia, they may be more likely to attribute any daytime impairment to their poor sleep and not to themselves. In this case, insomnia would buffer their negative attributions about themselves and lower their risk for suicidality. This really speaks to the dynamic relationship between insomnia and depression in predicting suicidality. "

The authors note that further research may benefit from studying this in additional populations, or in a majority female population.

Previous research from the Perlis team has shown that suicides are more likely to occur after midnight than during the daytime or evening and another study showing that more [sleep](#) reduces [suicide](#) risk in those with [insomnia](#).

Provided by Perelman School of Medicine at the University of Pennsylvania

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