

Suicide and self-harm risk nearly triple in people with restless leg syndrome

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Restless legs syndrome was associated with a nearly tripled risk of suicide and self-harm in a new study led by Penn State researchers.

Using Big Data, the researchers found that people with [restless legs syndrome](#) (RLS) had a 2.7- fold higher risk of suicide or [self-harm](#), even when the researchers controlled for such conditions as depression,

insomnia, diabetes and others.

The study was published today (Aug. 23) in the *Journal of the American Medical Association (JAMA) Network Open*.

Xiang Gao, associate professor of nutritional sciences and director of the Nutritional Epidemiology Lab at Penn State, said that as suicide rates rise in the United States, the findings suggest that physicians should pay special attention to the mental health of patients with RLS.

"Our study suggests that restless legs syndrome isn't just connected to physical conditions, but to mental health, as well," Gao said. "And, with RLS being under-diagnosed and suicide rates rising, this connection is going to be more and more important. Clinicians may want to be careful when they're screening patients both for RLS and suicide risk."

According to the researchers, RLS affects approximately five percent of the U.S. population, causing an uncomfortable feeling in a person's legs resulting in the urge to move them, often during the night. While the exact cause of RLS is unknown, previous research has found an association between RLS and iron deficiency, as well as low levels of dopamine in the brain.

Gao said that while RLS has been linked with a higher chance of mortality in the past, scientists do not know why. Previous research has found associations between RLS and a greater risk for hypertension or heart attack, suggesting a possible cardiovascular component. But, some studies have also found links between RLS and depression and thoughts of suicide.

"I've wanted to explore a potential connection between RLS and suicide for more than 10 years, but because both RLS and [suicide rates](#) are low from a data perspective, it wasn't possible," Gao said. "But, when I

moved here to Penn State, I gained access to a data set with more than 200 million people, so it gave us power to finally test this hypothesis."

The researchers used data from the Truven Health MarketScan national claims from 2006 to 2014, including 24,179 people who had been diagnosed with RLS and 145,194 people who did not have RLS. All participants were free of suicide and self-harm at the baseline of the study.

After analyzing the data, the researchers found that people who had restless leg syndrome had a 270 percent higher chance of suicide or self-harm than people who did not. The risk did not decrease even when the researchers controlled for such factors as depression, sleep disorders and common chronic diseases.

"After controlling for these factors, we still didn't see the association decrease, meaning RLS could still be an independent variable contributing to [suicide](#) and self-harm," said Muzi Na, Broadhurst Career Development Professor for the Study of Health Promotion and Disease Prevention at Penn State. "We still don't know the exact reason, but our results can help shape future research to learn more about the mechanism."

In the future, the researchers said additional studies will need to be done to replicate and confirm the findings.

Provided by Pennsylvania State University

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