

Team finds 'exploding head syndrome' more common in young people than thought

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Credit: xiaphias/Wikipedia

Washington State University researchers have found that an unexpectedly high percentage of young people experience "exploding head syndrome," a psychological phenomenon in which they are awakened by abrupt loud noises, even the sensation of an explosion in their head. Brian Sharpless, a Washington State University assistant professor and director of the university psychology clinic, found that

nearly one in five—18 percent—of college students interviewed said they had experienced it at least once. It was so bad for some that it significantly impacted their lives, he said. "Unfortunately for this minority of individuals, no well-articulated or empirically supported treatments are available, and very few clinicians or researchers assess for it," he said.

The study also found that more than one-third of those who had exploding head syndrome also experienced isolated [sleep paralysis](#), a frightening experience in which one cannot move or speak when waking up. People with this condition will literally dream with their eyes wide open. The study is the largest of its kind, with 211 undergraduate students interviewed by psychologists or graduate students trained in recognizing the symptoms of exploding head syndrome and isolated sleep paralysis. The results appear online in the *Journal of Sleep Research*. Based on smaller, less rigorous studies, some researchers have hypothesized that exploding head syndrome is a rare condition found mostly in people older than 50.

"I didn't believe the clinical lore that it would only occur in people in their 50s," said Sharpless. "That didn't make a lot of biological sense to me." He started to think exploding head syndrome was more widespread last year when he reviewed the scientific literature on the disorder for the journal *Sleep Medicine Reviews*. In that report he concluded the disorder was a largely overlooked phenomenon that warranted a deeper look. The disorder tends to come as one is falling asleep. Researchers suspect it stems from problems with the brain shutting down. When the brain goes to sleep, it's like a computer shutting down, with motor, auditory and visual neurons turning off in stages. But instead of shutting down properly, the auditory neurons are thought to fire all at once, Sharpless said.

"That's why you get these crazy-loud noises that you can't explain, and

they're not actual noises in your environment," he said. The same part of the brain, the brainstem's reticular formation, appears to be involved in isolated sleep paralysis as well, which could account for why some people experience both maladies, he said.

They can be extremely frightening. Exploding head syndrome can last just a few seconds but can lead some people to believe that they're having a seizure or a subarachnoid hemorrhage, said Sharpless. "Some people have worked these scary experiences into conspiracy theories and mistakenly believe the episodes are caused by some sort of directed-energy weapon," he said.

In fact, both exploding head syndrome and isolated sleep paralysis have been misinterpreted as unnatural events. The waking dreams of sleep paralysis can make for convincing hallucinations, which might account for why some people in the Middle Ages would be convinced they saw demons or witches. "In 21st century America, you have aliens," said Sharpless. "For this scary noise you hear at night when there's nothing going on in your environment, well, it might be the government messing with you."

Some people are so put off by the experience that they don't even tell their spouse, he said. "They may think they're going crazy and they don't know that a good chunk of the population has had the exact same thing," he said. Neither disorder has a well-established treatment yet, though researchers have tried different drugs that may be promising, said Sharpless, co-author of the upcoming book, "Sleep Paralysis: Historical, Psychological, and Medical Perspectives." "One of the drugs they gave for exploding head syndrome actually didn't make the noises go away," he said. "It just turned the volume down." But many people are at least relieved to get a diagnosis and learn that they aren't alone. "There's the possibility that just being able to recognize it and not be afraid of it can make it better," Sharpless said.

Provided by Washington State University

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