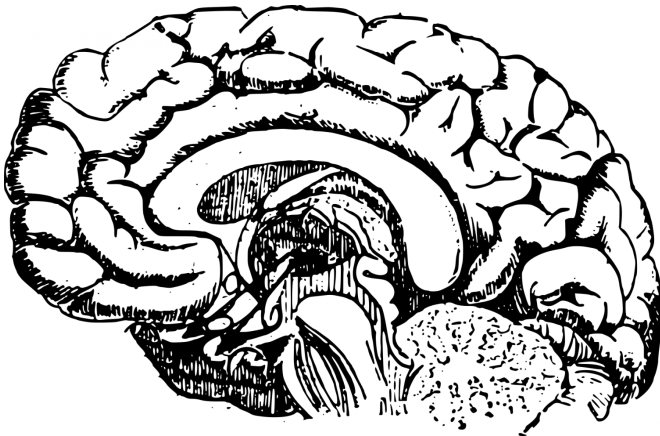


Brain structure linked to symptoms of restless legs syndrome

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People with restless legs syndrome may have changes in a portion of the brain that processes sensory information, according to a study published in the April 25, 2018, online issue of *Neurology*, the medical journal of the American Academy of Neurology.

Restless legs syndrome is a disorder that causes uncomfortable sensations in the legs, accompanied by an irresistible urge to move them. It often occurs in the evening and at night, sometimes affecting a person's ability to sleep. In some cases, exercise may reduce symptoms. Iron supplements may also be prescribed if there is an iron deficiency. For more serious cases, there are also medications, but many have serious side effects if taken too long.

"Our study, which we believe is the first to show changes in the sensory system with restless legs syndrome, found evidence of structural changes in the [brain's somatosensory cortex](#), the area where sensations are processed," said study author Byeong-Yeul Lee, Ph.D., of the University of Minnesota in Minneapolis. "It is likely that

symptoms may be related to the pathological changes in this area of the brain."

The brain's somatosensory cortex is part of the body's somatosensory system, which is made up of nerves and pathways that react to changes either inside or outside the body. This system helps a person perceive touch, temperature, pain, movement and position.

The study involved 28 people with severe restless legs symptoms who had the disorder for an average of 13 years. They were compared to 51 people of the same age without the disorder. Each participant had a brain scan with [magnetic resonance imaging](#) (MRI).

Researchers found that people with [restless legs syndrome](#) had a 7.5 percent decrease in the average thickness of brain tissue in the area of the brain that processes sensations compared to the healthy participants. They also found a substantial decrease in the area of the brain where nerve fibers connect one side of the brain to the other.

Lee said, "These structural changes make it even more convincing that RLS symptoms are stemming from unique changes in the brain and provide a new area of focus to understand the syndrome and possibly develop new therapies."

He said while the study shows a possible link between symptoms and the areas of the brain that process [sensory information](#), it is possible that symptoms may instead be linked to impaired function in other parts of the sensory system.

Provided by American Academy of Neurology

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