

# Restless sleep may be an early sign of Parkinson's disease

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Restless sleep could be a sign of a disorder associated with diseases of the brain. Researchers from Aarhus University conducted a case-control study on the condition of the dopamine-producing nerve cells in the brain and cells that participate in the brain's immune system in people suffering from rapid eye movement sleep behaviour disorder (RBD). The study shows that patients suffering from RBD have a risk of developing Parkinson's disease or dementia in the future, because they already suffer from a lack of dopamine in the brain. Parkinson's disease occurs because dopamine-producing brain cells stop working. The findings have just been published in the neurological journal *The Lancet Neurology*.

The RBD sleep disorder is characterised by disturbances in the part of sleep where dreams take place. Healthy people are relaxed and still during dream sleep, while people suffering from RBD live out their dreams so that while sleeping, they flail, kick and shout.

"These patients have an inflammation of the brain in the area where the [dopamine-producing nerve cells](#) are found," says one of the researchers behind the study, Morten Gersel Stokholm from Aarhus University and the PET Centre at Aarhus University Hospital.

This is completely new knowledge, as researchers have not previously demonstrated that there is a form of inflammation of the brain in patients who are at risk of developing Parkinson's [disease](#). "With this study, we have gained new knowledge about the disease processes in the

brain in the early initial stages of the disease development. The idea is for this knowledge to be used to determine which patients with the sleep disorder will later develop Parkinson's disease. At the same time, this is also knowledge that can help to develop drugs which can stop or slow the development of the diseases," explains Morten Gersel Stokholm about the sleep disorder which most often affects persons aged 50 to 70, and more frequently men than women.

There are 7,300 Parkinson's disease [patients](#) in Denmark. Symptoms are slow movements, often with shaking, together with muscular rigidity. Parkinson's disease is a chronic condition that continues to worsen over time. The disease is somewhat more common in men than in women. Parkinson's disease is caused by a lack of dopamine in the [brain](#). It is primarily affects adults, and the first signs most often appear between the ages of 50 to 70.

**More information:** Morten Gersel Stokholm et al. Assessment of neuroinflammation in patients with idiopathic rapid-eye-movement sleep behaviour disorder: a case-control study, *The Lancet Neurology* (2017). [DOI: 10.1016/S1474-4422\(17\)30173-4](https://doi.org/10.1016/S1474-4422(17)30173-4)

Provided by Aarhus University

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