

# Dementia, sleeping problems and depression are interrelated

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People with dementia suffer more from sleep disorders and depression than other people. The highest incidence is found among patients with Lewy body dementia (LBD).

A comprehensive study carried out by Stavanger University Hospital indicates that seven out of ten dementia patients have some form of [sleep](#) disturbance. Among patients with LBD, however, the ratio rises to nine out of ten.

## **Analysis as a basis for treatment**

The study found that dementia patients are more prone to [depression](#) as well. Again, depression is more common and more long-term in patients with LBD than with other forms of dementia.

“Analysis of the study data may enhance understanding of the progression of LBD, Alzheimer’s and other dementia diseases, and of the neurological changes that are significant for various symptoms and how they develop. This is critical knowledge for finding new and improved forms of treatment,” emphasises Dag Aarsland, Head of Research at the Centre for Age-Related Medicine at the Stavanger facility.

## **Common, but little-known**

Despite being a common form of dementia, relatively little is known about Lewy body dementia.

“LBD is the third most frequently occurring form of dementia, behind Alzheimer’s disease and vascular dementia. LBD is particularly widespread in men.”

There have been few large-scale studies on dementia in Norway – and virtually nothing on LBD. Even internationally, little research has been conducted on this type of dementia.

“In our study we have shown that LBD has an especially poor prognosis

in several areas,” says Professor Aarsland.

The research project he is heading has received funding from the Research Program on Health and Care Services (HELSEOMSORG) at the Research Council of Norway. The project focuses on patients’ quality of life, and the researchers have thus been taking a closer look at the frequency of depression and sleep disturbance.

## **Cross between Alzheimer’s and Parkinson’s**

Of the study’s subjects, 18 per cent had been diagnosed with LBD, while roughly 60 per cent had Alzheimer’s.

“Lewy body dementia is something of a cross between Alzheimer’s and Parkinson’s,” explains Professor Aarsland. “It is characterized by the classic symptoms of dementia as well as the shaking and rigidity (muscle stiffness) typical of Parkinson’s disease. Hallucinations are another common symptom among LBD patients.”

According to the professor, neurological changes in patients with LBD are different from those seen in other forms of dementia. LBD is caused by the build-up of abnormal protein deposits inside the brain cells. These deposits are called Lewy bodies, after the psychiatrist who discovered them.

## **May act out dreams violently**

The most common sleep disorder among dementia patients in general is insomnia (difficulty falling asleep). But in addition to insomnia, LBD patients also suffer from a far higher rate of other forms of sleep disturbances, or parasomnias.

One such parasomnia makes people feel the need to sleep several hours in the daytime. Another sleep disturbance is REM behavior disorder, which is often the first symptom to appear in LBD patients.

“This is a dramatic sleep disturbance in which the patient may thrash about, scream and shout during REM sleep,” explains Professor Aarsland. “Normally our muscles are deactivated during the REM phase.”

Roughly four in ten patients with LBD experience this type of sleep disturbance. Its incidence among Alzheimer’s patients, by contrast, is no higher than in control groups – less than 10 per cent.

Arvid Rongve is investigating this sleep disorder as part of his doctoral thesis at the University of Bergen.

## **More anxiety and depression**

Professor Aarsland points out that sleep disturbances affect patients’ mental functioning, which both undermines their ability to deal with their disease and puts significant extra strain on family members.

The study also found that patients with sleep disturbances suffered more from depression and anxiety than patients with no sleeping problems, even though the severity of their dementia was equal.

“This underlines the importance of taking sleep disturbances seriously,” adds Professor Aarsland.

## **Following patients over time**

Little is known about the underlying mechanisms of [sleep disturbances](#)

among [dementia patients](#). In all likelihood there are several contributing factors, including various neurological changes in connection with the different forms of dementia.

The [dementia](#) study at Stavanger University Hospital is longitudinal, meaning it follows the same [patients](#) over time.

Provided by The Research Council of Norway

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