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Middle-aged people who sleep six hours or less at greater risk of dementia, study finds

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People who regularly sleep for six hours or less each night in middle age are more likely to develop dementia than those who routinely manage seven hours, according to a major study into the disease.

Researchers found a 30% greater risk of dementia in those who during their 50s, 60s and 70s consistently had a short night's sleep, regardless of other risk factors such as heart and metabolic conditions and poor mental health.

The study does not prove that sleeping too little causes dementia, since sleep loss itself may be one of the earliest symptoms of the disease. But some scientists believe the results bolster evidence that persistent poor sleep may at least contribute to the neurodegenerative disease.

Researchers do not know whether improving sleep can reduce the risk of dementia, but sleep is known to clear toxic waste from the brain. One hypothesis is that when people sleep less, this process becomes impaired.

“These findings suggest that sleep duration might be a risk factor for dementia in later life,” said Dr Séverine Sabia, an author of the study at the University of Paris. “I cannot tell you that sleep duration is a cause of dementia but it may contribute to its development.”

Sabia and her colleagues analysed survey data from University College London's Whitehall II study, which launched in 1985 and followed the health and lifestyles of more than 10,000 British volunteers. The French team focused on nearly 8,000 participants who self-reported their sleep patterns, although some wore watchlike devices to confirm how long they slept.

During 25 years of follow-up, 521 participants developed dementia, with most diagnosed in their late 70s.

Writing in *Nature Communications*, the scientists described how those who routinely got six hours of sleep or less each night in their 50s and 60s were 30% more likely to develop dementia than those who typically managed seven hours.

The findings came after an international team reported on Monday that severely disrupted sleep could nearly double women's risk of dying from heart disease, when compared with the general female population.

The study, in the *European Heart Journal*, found the risk for men increased by about a quarter. Body mass index and sleep apnoea, which disrupted breathing, both contributed to “unconscious wakefulness”, while disrupting the body's natural circadian rhythms could drive the buildup of fat in arteries that could lead to cardiovascular problems.

While smoking, heavy drinking and obesity are risk factors for dementia, the chances of developing the disease rise steeply with age. Dementia is estimated to affect one in 14 over-65s and one in six people aged over 80. The risk of developing Alzheimer's or vascular dementia doubles roughly every five years above the age of 65.

The first pathological changes that lead to dementia occur one to two decades before the disease becomes obvious, as sticky proteins called amyloid and tau build up in the brain. When the 1985 Whitehall II study first assessed the sleep of volunteers who later developed dementia, this process had probably not started. This meant that if they were sleeping too little, it was unlikely to have been caused by dementia-related brain changes.

“It strengthens the evidence that poor sleep in middle age could cause or worsen dementia in later life,” said Dr Liz Coulthard, a consultant senior lecturer in dementia neurology at Bristol University, who was not involved in the study. “It makes sense to take measures to improve sleep such as going outside during daylight

hours to help maintain the natural rhythms that promote good sleep, avoiding excess alcohol or caffeine, particularly before bed, and finding a bedtime routine that works for you.”

Robert Howard, professor of old age psychiatry at UCL, said: “We know that the first signs of Alzheimer’s disease appear in the brain 20 years before detectable cognitive impairment, so it is always possible that poor sleep might be a very early symptom of the condition, rather than a treatable risk factor.

“Insomniacs – who probably don’t need something else to ruminate about in bed – shouldn’t worry that they are heading for dementia unless they get off to sleep immediately. ”