

How hormone linked to sleep could be key in battle against Alzheimer's disease

By [Daily Mail Reporter](#)

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A hormone linked to the human sleep cycle has been identified as a new weapon against Alzheimer's disease.

A new study has shown that a combination of exercise and a daily intake of melatonin, the natural hormone which causes drowsiness at night, had a positive effect on rodents suffering from the illness.

The research was conducted by the Barcelona Biomedical Research Institute (IIBB), in collaboration with the University of Granada and the Autonomous University of Barcelona.

'For years we have known that the combination of different anti-ageing therapies such as physical exercise, a Mediterranean diet, and not smoking adds years to one's life,' said Dr Coral Sanfeliu, from the IIBB.



Sleep hormone, melatonin could help in the fight against Alzheimer's (stock image)

'Now it seems that melatonin, the sleep hormone, also has important anti-ageing effects'.

In the experiment, mice who had the disease were divided into one control group and three other groups which underwent the treatments of exercising on a running wheel, a dose of melatonin and a combination of the two.

In addition, a reference group of mice were included which presented no mutations of the disease.

'After six months, the state of the mice undergoing treatment was closer to that of the mice with no mutations than to their own initial pathological state. From this we can say that the disease has significantly regressed,' Dr Sanfeliu said.

The results, published in the journal *Neurobiology of Ageing*, showed a general improvement in behaviour, learning, and memory with the three treatments.

But the researchers warned that the treatment could not be easily transferred to humans.

'Transferring treatments which are effective in animals to human patients is not always consistent, given that in humans the disease develops over several years, so that when memory loss begins to surface, the brain is already very deteriorated,' Dr Sanfeliu explained.

Melatonin was approved as a medication by the European Union in 2007, and its use in clinical testing has been increasing.

According to the Natural Medicines Comprehensive Database, the molecule is probably effective in sleeping disorders in children with autism and mental retardation and in blind people, and possibly effective in case of jet-lag, sunburns and preoperative anxiety.

Darmo Acuña-Castroviejo, who has been studying melatonin for several years at the University of Granada, said: 'Even though many more studies and clinical tests are still required to assess the doses of melatonin which will be effective for a wide range of diseases, the antioxidant and anti-inflammatory properties of melatonin mean that its use is highly recommended for diseases which feature oxidative stress and inflammation (such as Parkinson's disease and Alzheimer's disease).'

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