

Higher amounts of lithium in tap water could keep dementia at bay

By Sarah Knapton SCIENCE EDITOR

THOUSANDS of cases of dementia could be prevented by increasing levels of lithium in tap water, a study has suggested.

Scientists at the University of Copenhagen compared dementia rates to the natural quantities of lithium in water for more than 800,000 people in Denmark, nearly half of the population.

They found that in places where lithium was highest, the dementia rate fell by 17 per cent compared to those with the lowest levels of the element.

Although researchers warn that the link could be due to other environmental factors, they say that it is worth investigating whether adding lithium to tap water could be a cheap way of protecting large numbers of people from dementia.

Lithium is a metallic element which is found in varying quantities in water in Britain, from about one microgram per litre to around 21 micrograms per litre. The researchers found benefits after 15 micrograms per litre.

Lithium is known to have neuroprotective effects and is a standard treatment for bipolar disorder. Previous experiments on rats have shown it also boosts memory.

It is known to reduce the activity of an enzyme called GSK-3, which scientists believe is involved in Alzheimer's disease.

Allan Young, professor of mood disorders at King's College London's Institute of Psychiatry, said: "This study fits well with previous evidence, which shows that environmental lithium may have health benefits and lithium may prevent dementia. At a population level

the effects would be considerable as even if lithium only delayed the onset of dementia by months for each person, over the nation that would amount to a lot of healthier months.

"Although some may say that lithium should be 'added to the water', the first step might be to conduct clinical trials to examine the preventive effects of lithium first."

Around 800,000 people in Britain are living with dementia and the numbers diagnosed are expected to raise significantly in the next few decades as the population continues to age. How-

'Lithium is a standard treatment for bipolar disorder. Experiments show it also boosts memory'

ever there is currently no cure for the condition.

About 220,000 people are diagnosed with dementia each year.

If even 17 per cent of cases could be prevented, it would account for 37,400 fewer diagnoses overall, although it is not clear how many people already live in areas of high lithium.

However, researchers noted that between 5.1 micrograms and 10 micrograms per litre, the dementia rate rose by 22 per cent, suggesting that there is a sweet spot.

Professor David Smith, a pharmacologist from the University of Oxford, said: "This is a high-quality study in a large population. The association between the levels of lithium in drinking water and a diagnosis of dementia was significant."

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