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## Cup of coffee a day can save your life

**By editor**

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A cup of coffee a day could keep Alzheimer's disease at bay, research suggests.

Scientists have shown a daily dose of caffeine helps protect the brain from the harmful effects of cholesterol, which is linked to the disease.

The most common cause of dementia, Alzheimer's affects 500,000 Britons - and 500 new cases are diagnosed each day.

Daily dose of caffeine 'can fend off brain damage caused by fatty food'

Doctors can do little to stop the disease from taking its devastating course, so techniques which stop or delay its development could be of major benefit.

Researchers from the University of North Dakota in the U.S. looked at the effect of caffeine on the blood-brain barrier, a natural mechanism which prevents harmful substances passing from the blood into the brain.

Previous studies have suggested that high levels of cholesterol - present in fatty foods - cause leaks in the barrier. This leads to the destruction of brain cells seen in Alzheimer's.

In this study, rabbits fed a cholesterol-rich diet were given 3mg of caffeine a day, the equivalent of a daily cup of coffee for an average-sized person.

After 12 weeks, a number of tests showed that the blood-brain barrier was significantly more intact

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in rabbits receiving the caffeine.

Professor Jonathan Geiger, a pharmacologist and one of the authors of the study, said: "Caffeine appears to block several of the disruptive-effects of cholesterol that make the blood-brain barrier leaky.

"High levels of cholesterol are a risk factor for Alzheimer's disease, perhaps by compromising the protective nature of the blood-brain barrier. For the first time we have shown that chronic ingestion of caffeine protects the blood-brain barrier from cholesterol-induced leakage."

Caffeine appears to maintain levels of proteins key in keeping the barrier strong, the Journal of Neuroinflammation reports.

The findings add to other studies showing that caffeine protects against memory loss in elderly people. Dr Geiger said: "Caffeine is a safe and readily available drug and its ability to stabilise the blood-brain barrier means it could have an important part to play in therapies against neurological disorders."

The Alzheimer's Society said the study shed "important light on why previous research has shown drinking coffee may reducing the risk of dementia".

Dr Susanne Sorensen, the charity's head of research, added: "More research is needed to determine whether coffee has the same impact on the blood-brain barrier in people."

The study is not the first to flag up the health benefits of coffee. Caffeine can reduce the risk of asthma attacks and help improve circulation in the heart.

Coffee drinkers have a lower risk of developing certain cancers, as well as Parkinson's disease and type 2 diabetes.

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The drink can keep gall stones and kidney stones at bay and has a mild anti-depressant effect which could reduce the risk of suicide.

Source: F. Macrae, Daily Mail website, 31 IV 2008;