

Babies' blood 'could restore memory lost to dementia'

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DEMENTIA patients have been offered hope that their memory could be repaired after scientists showed that injecting blood from the umbilical cords of babies restored brain function.

Researchers at Stanford University School of Medicine in the US discovered that cord blood contained an important protein which vanishes as we get older. It is believed the protein en-

courages neuroplasticity in the brain, allowing neurons to adapt and communicate more effectively.

When human cord blood was injected into elderly mice they performed far better in learning and memory tests and even started nesting again, an instinctive behaviour that is largely forgotten in old age.

Dr James Pickett, head of research at the Alzheimer's Society, said: "Everyone experiences some decline in memory as they get older. The possibility

that this process can be reversed by an infusion of young blood sounds like the stuff of science fiction, but this is what the study is beginning to show."

The researchers think the cord blood repairs the hippocampus, a part of the brain which in both mice and humans is critical for converting experiences into long-term memories.

In particular, the hippocampus is essential for helping people remember spatial information, such as how to find your way back to your car or informa-

tion about autobiographical events, such as what you ate for breakfast.

Dr Tony Wyss-Coray, the study's senior author, said: "With advancing age, the hippocampus degenerates, loses nerve cells and shrinks.

"Hippocampal deterioration is also an early manifestation of Alzheimer's disease.

"Our results argue that systemic factors present early in life may be beneficial for revitalisation of aged tissue."

The Stanford team had already

proved that young blood can reverse some of the signs of ageing in mice but had never shown it could restore learning and memory.

Dr David Reynolds, chief scientific officer at Alzheimer's Research UK, said: "Although the treatments tested here boosted some aspects of learning and memory in mice, we don't know how relevant the findings might be to people.

"This research, while interesting, only looked at memory and thinking

changes caused by ageing, and not those involved in dementia."

Dr Pickett added: "As we age, cells in the brain's memory centre - the hippocampus - become less able to form strong connections with one another.

"These findings are interesting, but do not shed any light on whether the blood could help in dementia, which is caused by diseases of the brain, not a normal part of the ageing process."

The study was published in the journal *Nature*.