Date Published: April 6, 2011 Thursday   
Word Count Title: 17

Word Count Body: 324

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DAILY MAIL ONLINE

Why too much stress makes your memory worse as you age (but a little can be helpful)  
  
By Daily Mail Reporter

Scientists claim to have solved the mystery of how stress contributes to memory loss in old age.

Researchers at Edinburgh University have shown how two receptors in older brains react to the stress hormone cortisol, which has been linked to memory loss in the elderly.

The study found that one receptor was activated by low levels of cortisol, which helped memory.

However, once levels of the hormone were too high they spilled over on to a second receptor, activating brain processes which contribute to memory impairment.

When the receptor linked to poor memory was blocked, the memory recall problem was reversed.

The experiment based on older mice navigating a maze, was published in the Journal of Neuroscience.

The research helps explain why too much stress over a prolonged period interferes with the normal processes in storing everyday memories.

This is despite the fact that a little bit of stress can help us better remember emotional memories.

Dr Joyce Yau said: 'While we know that stress hormones affect memory, this research explains how the receptors they engage with can switch good memory to poorly-functioning memory in old age.'

She added that understanding the mechanisms in the brain, which affect memory as we age, will help find ways to combat conditions linked to memory loss.

The study was funded by the Medical Research Council.

Professor Chris Kennard, of the MRC, said: 'This research highlights some interesting, original concepts relating to why memory loss occurs in old age.

'With people living ever longer, the MRC is really focussing on research which allows elderly people not just to survive, but also to stay healthy.'

The researchers are looking at a new chemical compound which blocks an enzyme, known as 11beta-HSD1, which helps produce stress hormones within cells.

They hope this could be used to develop a drug treatment to slow the normal decline in memory associated with ageing, or even improve memory in people who are very old.

Read more: [http://www.dailymail.co.uk/health/article-1374016/Memory-loss-Why-stress-makes-memory-worse-youre-older-little-helpful.html#ixzz25Up53xwv](http://www.dailymail.co.uk/health/article-1374016/Memory-loss-Why-stress-makes-memory-worse-youre-older-little-helpful.html" \l "ixzz25Up53xwv)

Date Published: April 7, 2011 Thursday   
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Sentence count: 7

The Express

April 7, 2011 Thursday   
Scottish Edition

**Hormone** clue to **memory** loss  
  
**SECTION:** NEWS; 02  
  
**LENGTH:** 143 words

**STRESS** could lead to **memory** loss in old age.

University of Edinburgh researchers have shown how two **receptors** in older brains react to the **stress** **hormone** cortisol, which is linked to increasing forgetfulness.

They found that high levels in older mice made them less able to remember how to navigate a maze.

The study found that one **receptor** was activated by low levels of cortisol, which helped **memory.**

It is hoped the breakthrough could lead to treatment for conditions such as early Alzheimer's.

Dr Joyce Yau, who led the study at the university's Centre for Cardiovascular Science, said: "Understanding the mechanisms in the brain that affect **memory** as we age will help us find ways to combat conditions linked to **memory** loss."

Professor Chris Kennard said: "We are focusing on research which allows elderly people not just to survive but also to stay healthy."

Date Published: 6 April 2011

Word Count Title: 8

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Sentence count: 19

BBC

Stress 'contributes' to memory loss in old age

Experts claim to have found how stress can lead to memory loss in old age.

Edinburgh University researchers have shown how two receptors in older brains react to the stress hormone cortisol linked to forgetfulness as people age.

The study on older mice found one receptor was activated by low levels of cortisol, which helped memory.

But once levels of the hormone were too high they spilled over on to a second receptor, activating brain processes which contribute to memory loss.

When the receptor linked to poor memory was blocked, the memory recall problem was reversed.

Scientists say the discovery could lead to treatment for conditions such as early Alzheimer's.

Dr Joyce Yau, who led the study at Edinburgh University's centre for cardiovascular science, said: "While we know that stress hormones affect memory, this research explains how the receptors they engage with can switch good memory to poorly functioning memory in old age.

"We now know that lowering the levels of these stress hormones will prevent them from activating a receptor in the brain that is bad for memory.

"Understanding the mechanisms in the brain which affect memory as we age will help us to find ways to combat conditions linked to memory loss."

The scientists said the research helps explain why too much stress over a prolonged period interferes with the normal processes in storing everyday memories, despite the fact that a little bit of stress can help people better remember emotional memories.

Scientists found that high levels of cortisol in aged mice made them less able to remember how to navigate a maze.

The study was published in the Journal of Neuroscience and was funded by the Medical Research Council (MRC).

**Wellcome Trust**

Professor Chris Kennard, chairman of the MRC's neuroscience and mental health board, said: "This research highlights some interesting, original concepts relating to why memory loss occurs in old age.

"With people living ever longer, the MRC is really focusing on research which allows elderly people not just to survive but also to stay healthy."

The researchers are looking at a new chemical compound which blocks an enzyme, known as 11beta-HSD1, which helps produce stress hormones within cells.

The study is supported by a Seeding Drug Discovery award from the Wellcome Trust charity.

It is hoped this could be used to develop a drug treatment to slow the normal decline in memory associated with ageing, or even improve memory in people who are very old.

Date Published: 6 April 2011

Word Count Title: 7

Word Count Body: 409

Sentence count: 18

# INDEPENDENT

# Scientists reveal how stress exacerbates memory loss

Scientists claim to have discovered how stress can contribute to memory loss in old age.

University of Edinburgh researchers have shown how two receptors in older brains react to the stress hormone cortisol which has been linked to increasing forgetfulness as people age.

The study on older mice found that one receptor was activated by low levels of cortisol, which helped memory.

However, once levels of the hormone were too high they spilled over on to a second receptor, activating brain processes which contribute to memory impairment.

When the receptor linked to poor memory was blocked, the memory recall problem was reversed.

Scientists say the discovery could lead to treatment for conditions such as early Alzheimer's.

Dr Joyce Yau, who led the study at the university's Centre for Cardiovascular Science, said: "While we know that stress hormones affect memory, this research explains how the receptors they engage with can switch good memory to poorly functioning memory in old age.

"We now know that lowering the levels of these stress hormones will prevent them from activating a receptor in the brain that is bad for memory.

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The research helps explain why too much stress over a prolonged period interferes with the normal processes in storing everyday memories, despite the fact that a little bit of stress can help people better remember emotional memories.

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The study was published in the Journal of Neuroscience and was funded by the Medical Research Council (MRC).

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"With people living ever longer, the MRC is really focusing on research which allows elderly people not just to survive but also to stay healthy."

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This study is supported by a Seeding Drug Discovery award from the Wellcome Trust charity.

They hope this could be used to develop a drug treatment to slow the normal decline in memory associated with ageing, or even improve memory in people who are very old.

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The Sun (England)

April 7, 2011 Thursday   
Edition 1;   
Scotland

**Memory** loss hope  
  
**SECTION:** NEWS; Pg. 35  
  
**LENGTH:** 96 words

SCIENTISTS claim they have discovered how **stress** can contribute to forgetfulness in old age.

Researchers at Edinburgh Uni showed how two **receptors** in older brains react to the **stress** **hormone** cortisol - which is linked to **memory** loss.

The study on mice found one **receptor** was activated by low levels of cortisol, helping recall.

But high levels of the **hormone** spilled over to a second **receptor**, causing the mice to forget.

Study leader Dr Joyce Yau thinks the findings may help treatment of dementia.

He said "Lowering **stress** **hormone** levels will prevent them being bad for **memory.**"