The Express

July 28, 2011 Thursday   
Scottish Edition

Scientists find low income link to ageing  
  
**BYLINE:** By David Scott  
  
**SECTION:** NEWS; 15  
  
**LENGTH:** 245 words

PEOPLE age more quickly if they have a bad diet and low income, according to scientists.

Researchers looked at the DNA of a group of adults in Glasgow.

The scientists measured the length of telomeres, found at the end of chromosomes, which shorten as people get older.

Over a 10-year period the telomeres shortened by an average of 7.7 per cent in people whose household income was below GBP 25,000.

For those on higher incomes telomeres shortened by an average of 0.6 per cent.

Dr Paul Shiels, of the Institute of Cancer Sciences at the University of Glasgow, said: "Telomeres act like the plastic caps on the end of your shoelaces: they protect the chromosomes and stop them fraying.

Their ability to protect the chromosomes decreases as the body ages, with the length of the telomere gradually shortening.

"The rate at which the shortening occurs can be increased in disease and can be increased by other stresses.

"We show that accelerated ageing is associated with deprivation and poor diet in Glasgow.

This is most prevalent in the over-55s and those with household incomes under GBP 25,000.

This effect is exacerbated by diet - simply not eating your five portions of fruit and veg a day."

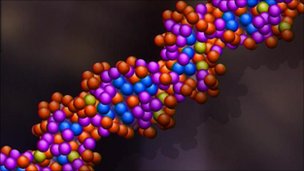
The group looked at 382 telomere measurements from adults in Glasgow aged 35-65.

The research, conducted by 17 scientists, clinicians and statisticians for the Glasgow Centre for Population Health and the University of Glasgow, is published in the journal Public Library of Science One.

27 July 2011 Last updated at 00:16

**BBC**

**DNA test developed in Glasgow links ageing and poverty**



Scientists in Glasgow have developed a new test of the ageing process based on DNA evidence.

They have said it could provide faster feedback on public health measures.

Until now, evidence of health improvement has involved waiting a generation or more to measure how many people become ill.

Work by the Glasgow Centre for Population Health has confirmed the link between social factors and the rate at which people age.

Their findings have been published in the Public Library of Science.

The scientists measured the length of telomeres, the tails on the ends of chromosomes, in sample groups in the Glasgow area.

The Telomeres tend to become shorter over a person's lifetime, indicating the speed of the ageing process.

The Glasgow researchers found that, over a 10-year period, telomeres shortened by an average of 7.7% in people whose household income was below £25,000.

For those on higher incomes, the shortening averaged 0.6%.

Changes in diet

A similar trend in telomere lengths was found in comparisons of those in rented housing with home owners, and of those with the poorest diets and those who ate well.

Dr Paul Shiels, of the Institute of Cancer Studies at Glasgow University, said: "We show that accelerated ageing is associated with social status and deprivation in Glasgow.

"This is most prevalent in the over-55s and those with household incomes under £25,000.

"This effect is exacerbated by diet - simply not eating your five portions of fruit and veg a day."

The test gives an indication of ageing within population groups, but does not accurately measure the life expectancy of an individual, because of natural differences in telomere length.

Dr Shiels said: "Its value is at a population level, where large numbers of subjects allow us to observe trends over a period of time.

"It is a tool for looking at the impact of changes in diet, for example.

"This study is a first for Glasgow and indicates that socio-economic conditions do affect the rate at which you age.

The Daily Telegraph (London)

July 28, 2011 Thursday   
Edition 1;   
Scotland

**Glasgow study shows bad diet and low income speeds ageing**  
**SECTION:** NEWS; Pg. 12  
  
**LENGTH:** 210 words

People age more quickly if they have a bad diet and a low income, according to scientists who studied adults in Glasgow.

Their investigation is the first of its kind to show the impact of diet, disease and income on the ageing process.

The researchers looked at telomeres, a region of DNA sequences found at the end of chromosomes that shorten as people get older, in a group of adults aged between 35 and 65.

Over ten years they shortened by an average of 7.7 per cent in people whose income was below £25,000.

For those on higher incomes telomeres shortened by an average of 0.6 per cent.

Dr Paul Shiels, of the Institute of Cancer Sciences at Glasgow University, said: "Telomeres act like the plastic caps on the end of your shoelaces: they protect the chromosomes and stop them fraying.

"Their ability to protect the chromosomes decreases as the body ages, with the length of the telomere gradually shortening.

The rate at which the shortening occurs can be increased in disease and can be increased by other stresses.

"We show that accelerated ageing is associated with deprivation and poor diet in Glasgow.

"This is most prevalent in the over-55s and those with household incomes under £25,000. "

The findings were published in the journal Public Library of Science.

The Times (London)

July 28, 2011 Thursday   
Edition 1;   
Scotland

**Low-earners with bad diets die younger, say scientists**  
**BYLINE:** Scotland Staff  
  
**SECTION:** NEWS; Pg. 23  
  
**LENGTH:** 210 words

People age more quickly if they have grown up with a bad diet and low income, according to scientists.

Researchers looked at the DNA of adults in Glasgow.

They measured the length of telomeres, found at the end of chromosomes, which shorten as people get older.

Over a 10-year period the telomeres shortened by an average of 7.7 per cent in people whose household income was below £25,000.

For those on higher incomes telomeres shortened by an average of 0.6 per cent.

Dr Paul Shiels, of the Institute of Cancer Sciences, at the University of Glasgow, said: "We show that accelerated ageing is associated with deprivation and poor diet in Glasgow.

This is most prevalent in the over-55s and those with household incomes under £25,000.

This effect is exacerbated by diet: simply not eating your five portions of fruit and veg a day."

The group looked at 382 telomere measurements from adults in Glasgow aged 35-65.

Dr Shiels added: "This is the first study to show, on a biological level, the impact of diet, disease and income on the ageing process.

The findings also suggest potential associations between measures known to predict cardiovascular disease and diabetes with biological ageing."

The findings have been published in the journal Public Library of Science.