

Bad neighbourhoods lead to accelerated ageing

● Research shows how human DNA affected by stress

By SHÂN ROSS

Living in a stressful neighbourhood is related to ageing faster, particularly among women, according to new research from the University of Glasgow.

Scientists used telomeres – part of people's DNA which gets shorter over time – as a measure of "miles on the clock or" biological ageing

The study, combining population health and molecular biology research, found

people reporting problems such as burglaries, litter and vandalism had shorter telomere lengths, and that the effect was more marked among women.

This shorter telomere length existed even after the analysis took into account other known factors such as age, sex, social class, smoking, diet, weight, depression and fitness.

The reported problems in people's environment also included muggings, smells and fumes and disturbances by children or youngsters.

The study, a cross-disciplinary collaboration between social scientist Professor Anne Ellaway from the University of Glasgow social and public health sciences unit

and geroscientist Professor Paul Shiels at the university's Institute of Cancer Sciences.

Prof Ellaway said: "Our research showed that chronic neighbourhood stressors were associated with accelerated ageing – and the effect was more marked on women.

"We think this may be because women spend more time in the local neighbourhood, and/or because men and women process stressful environments differently in ways which might lead to different physiological responses. Therefore, improving run-down areas may combat this acceleration in ageing."

Prof Shiels said improvements to neighbourhoods could help with longevity.

"We already know there is a substantial gap in health and longevity between more affluent and more deprived areas, so more knowledge of the determinants of this health divide is important, as people's local residential environments may affect their health, as our research demonstrates.

"However, the positive news is that neighbourhood environments are potentially modifiable, and future efforts directed towards improving disadvantaged local environments may be useful to lessen the effects how fast people age."

The study, published in Plos One, was funded by the Medical Research Council and the Chief Scientist Office.

