

# Slow reaction time linked with early death

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Having a slow reaction time in midlife increases risk of having died 15 years later, according to new research published in the journal *PLOS ONE*.

Researchers from UCL and the University of Edinburgh looked at data from more than 5,000 [participants](#) (age 20 to 59) collected from the Third National Health and Nutrition Examination Survey (NHANES-III) in the US. At the start of the study in 1990s, participants visited an examination centre and had their reaction times measured. The task was very simple – they had to press a button when they saw an image appear on a computer screen. Over the next 15 years, they were followed to record who had died and who survived.

A total of 378 (7.4%) people in the sample died, but those with slower reaction times were 25% more likely to have died (from any cause) compared to those with average reaction times. This remained the case after the researchers had accounted for the participants' age, sex, ethnic group, socio-economic background and lifestyle factors into account. There was no relationship between reaction time and death from cancer or respiratory problems.

Lead researcher Dr Gareth Hagger-Johnson, from the UCL Department of Epidemiology and Public Health, said: "Reaction time is thought to reflect a basic aspect of the central nervous system and speed of information processing is considered a basic cognitive ability (mental skill). Our research shows that a simple test of [reaction time](#) in adulthood can predict survival, independently of age, sex, ethnic group

and socio-economic background. Reaction time may indicate how well our central nervous and other systems in the body are working. People who are consistently slow to respond to new information may go on to experience problems that increase their risk of early death. In the future, we may be able to use reaction times to monitor health and survival. For now, a healthy lifestyle is the best thing people can do in order to live longer"

**More information:** For example of a reaction time test, see:  
[www.bbc.co.uk/science/humanbod...eaction\\_version5.swf](http://www.bbc.co.uk/science/humanbod...eaction_version5.swf)

Provided by University College London

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