

Simple score predicts risk of death for middle-aged adults in the UK

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Researchers have developed a score that predicts an individual's risk of dying within 5 years for people aged between 40 and 70 years old in the UK, according to new research published in *The Lancet*.

The [score](#), which uses measures that can be obtained by simple questionnaires without any need for [physical examination](#), such as self-rated health and usual walking speed, could be used by [individuals](#) to improve awareness of their health status, and by doctors to identify high-risk individuals for further treatment, say the authors.

Individuals can calculate their personalised 5-year [mortality risk](#) and what the study authors call an 'Ubble age'—the age where the average mortality risk in the population is most similar to the estimated risk of the individual?through an online questionnaire, using the dedicated interactive [website](#). The site was developed with Sense About Science, a UK charity that that equips people to make sense of scientific and medical claims in public discussion.

"The Ubble website allows anybody in the UK between forty and seventy years old to calculate their 'Ubble age' and their risk of dying within the next five years compared to the general population, using a simple set of a dozen or so questions," says study co-author Professor Erik Ingelsson from Uppsala University, Sweden. "This is the first study of its kind which is based on a very large study sample, and is not limited to specific populations, single types of risk, or requiring laboratory testing."

To create the score, Professor Ingelsson and Dr Andrea Ganna, from the Karolinska Institutet in Sweden, analysed data collected between 2006 and 2010 from nearly half a million adults aged between 40 and 70 years from the UK Biobank. They used a statistical survival model to assess the probability that 655 specific demographic, lifestyle, and health measurements could predict death from any cause and six specific causes, in men and women separately.

The results allow researchers to compare the predictive ability of a large number of health-related risk factors which were formerly studied separately and using different populations, although the predictive ability of risk factors does not necessarily imply they are causally related to the risk of dying.

For example, the research shows that self-reported information, such as usual walking pace and illness and injuries in the past 2 years, is generally a stronger predictor of death and survival than biological measurements, such as pulse rate and blood pressure. Surprisingly, self-reported walking pace is a stronger predictor of death risk in both men and women than smoking habits and other lifestyle measurements.

Self-rated overall health [6] emerged as the single most powerful predictor of death in men, and previous cancer diagnosis the strongest predictor in women (see figure 1 of the Article). When excluding individuals with serious diseases or disorders, smoking habits were the strongest predictors of mortality from any cause (figure 3).

Using these findings, the researchers then developed an easy-to-calculate risk score for an individual's risk of dying in the next 5 years, based on the most predictive self-reported information, including 13 questions for men and 11 for women. The performance of the score was validated in 35810 participants enrolled at two Scottish centres which were not used to develop the score, and was found to have around 80% accuracy in

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