

# Study links higher level of exercise to 25% to 32% lower risk of all-cause mortality in people with type 2 diabetes

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New research presented at this year's Annual Meeting of the European Association for the Study of Diabetes (EASD), held online this year,

shows that having a greater exercise capacity is associated with a significantly decreased all-cause mortality risk of between 25-33% in people with type 2 diabetes (T2D). The study was conducted by Dr. Yun-Ju Lai and colleagues at Puli branch, Taichung Veterans General Hospital, Nantou, Taiwan.

Exercise improves [insulin sensitivity](#), reduces the risk of cardiovascular disease, and inhibits [inflammatory cytokines](#): types of signalling proteins which trigger an inflammatory response. These cytokines are produced by cells of the immune system and are a vital part of how the body responds to the presence of potential disease-causing agents, but excessive chronic production can contribute to inflammatory diseases (which include diabetes). Despite this, the effect of exercise on all-cause mortality in people with T2D has not been fully explored.

The research was based on data drawn from the National Health Interview Survey (NHIS) and the National Health Insurance research database in Taiwan. The NHIS has taken place every four years from 2001 onwards, and details of individuals participating were obtained at baseline through face to face interviews.

The study used information about the characteristics of each participant, including their [socioeconomic status](#), health behaviours, and exercise habits obtained from surveys performed in 2001, 2005, 2009, and 2013. Comorbidities among individuals taking part in the surveys were confirmed by referencing National Health Insurance research database records from 2000-2016, and their health status was followed-up until 31 December 2016. Finally, the team performed statistical analyses to evaluate the relationship between exercise capacity and all-cause mortality, the latter having been determined by referencing the National Registration of Death System in Taiwan.

The details of 4,859 adult Survey participants with T2D were used in the

study; 2,389 (49%) were male, and the mean age was 59.5 years. The authors found that those with a higher exercise capacity had a significantly [lower risk](#) of all-cause mortality compared with those who reported no exercise habits. Individuals who performed a moderate amount of exercise (defined as 0-800 kcal/week energy expenditure) had a 25% lower all-cause mortality rate, while participants who were classed as having a high exercise level (more than 800 kcal/week energy expenditure) had a 32% lower all-cause mortality risk.

The team conclude: "Among people with type 2 diabetes, those with increased exercise capacity had a significantly decreased risk of all-cause [mortality](#). Further studies should investigate the type and dose of [exercise](#) that is most helpful to promote health and prolong life expectancy."

Provided by Diabetologia

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