

Can you outrun a poor diet?

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New research has found that high levels of physical activity do not counteract the detrimental effects of a poor diet on mortality risk.

The University of Sydney led study found participants who had both high levels of physical activity and a high-quality diet had the lowest risk of death, showing that you cannot "outrun" a poor diet.

Published today in the *British Journal of Sports Medicine*, the researchers examined the independent and joint effects of diet and physical activity with all-cause, cardiovascular disease and cancer mortality using a large population-based sample (360,600) of British adults from the UK Biobank. The UK Biobank is a large-scale biomedical cohort study containing in-depth biological, behavioral, and health information from participants.

High quality diets included at least five portions of fruit and vegetables every day, two portions of fish per week and lower consumption of red meat, particularly processed meat.

The study revealed that for those who had high levels of physical activity and a high-quality diet, their mortality risk was reduced by 17% from all causes, 19% from cardiovascular disease and 27% from selected cancers, as compared with those with the worst diet who were physically inactive.

Lead author Associate Professor Melody Ding from the Charles Perkins Center and the Faculty of Medicine and Health at the University of Sydney said:

"Both regular physical activity and a healthy diet play an important role in promoting health and longevity.

"Some people may think they could offset the impacts of a poor diet with high levels of exercise or offset the impacts of low physical activity with a high-quality diet, but the data shows that unfortunately this is not the case."

"Adhering to both a quality diet and sufficient physical activity is important for optimally reducing the risk of death from all causes, cardiovascular disease and cancers," says co-author Joe Van Buskirk, from the School of Public Health, Faculty of Medicine and Health.

A small number of studies have previously found that high-intensity exercise may counteract detrimental physiological responses to over-eating.

However, the long-term effects on how diet and physical activity interact with each other remained less explored. The findings from this study confirm the importance of both physical activity and quality diet in all-cause and cause-specific mortality.

"This study reinforces the importance of both physical activity and diet quality for achieving the greatest reduction in mortality risk," said Associate Professor Ding.

"Public health messages and clinical advice should focus on promoting both physical activity and dietary guidelines to promote healthy longevity."