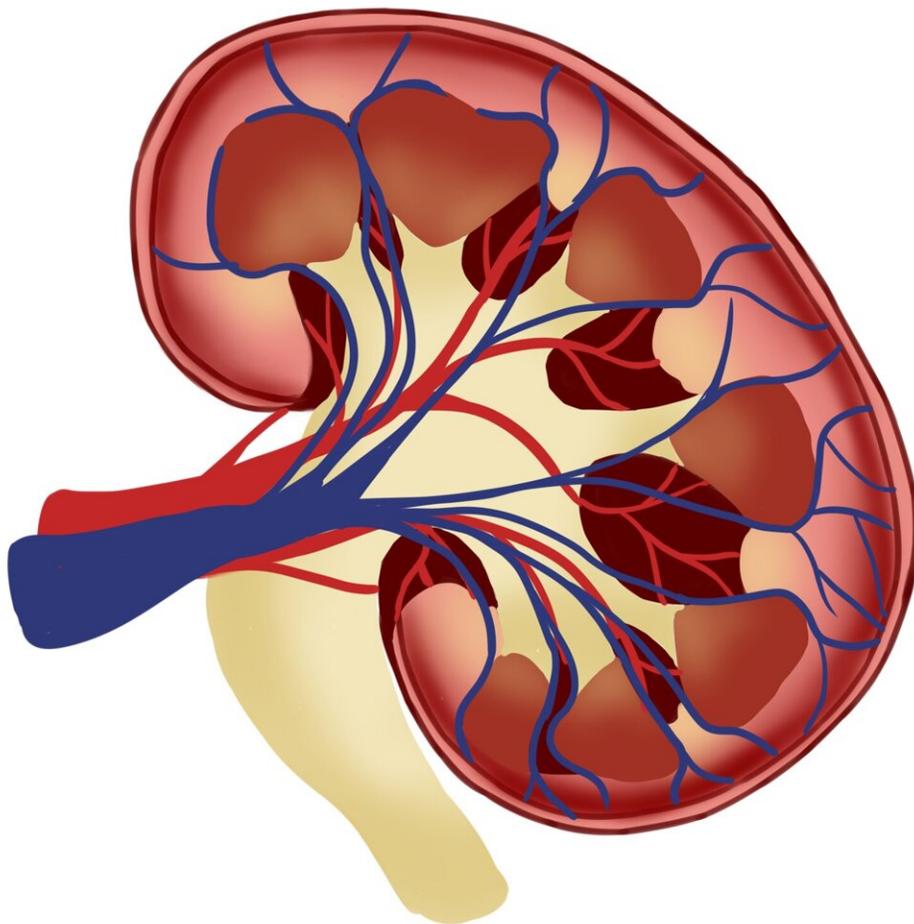


# People from low socioeconomic backgrounds could reduce chronic kidney disease risk with regular exercise, study suggests

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New research has found people from lower socioeconomic backgrounds who regularly exercise could substantially reduce their risk of chronic kidney disease. Chronic kidney disease is linked to poor quality of life and an increased risk of death. Its treatment is also associated with high healthcare costs, with diabetes and high blood pressure major factors that contribute to the disease.

Though people from lower socioeconomic backgrounds are at a greater risk of chronic kidney disease it is not known if high levels of [physical fitness](#) can reduce the impact of [low socioeconomic status](#) on chronic kidney disease. The study, led by the University of Bristol and published in the *The American Journal of Medicine*, sought to answer three questions.

1. Is low [socioeconomic status](#) associated with an increased risk of chronic kidney disease?
2. Are high levels of physical fitness associated with a reduced risk of chronic kidney disease?
3. Can high levels of physical fitness counteract the effects of low socioeconomic status on chronic kidney disease?

The research team recruited 2,099 men aged 42-61 years old without a history of kidney disease and assessed their socioeconomic status using self-administered questionnaires based on income, education, occupation, standard of living and housing conditions. Physical fitness was assessed using an exercise test on a bicycle ergometer, which measures the work and energy of an individual during [physical exercise](#).

The participants were then followed over a 20-year period for the development of chronic kidney disease. Analysis of the results showed that men with low socioeconomic status had an increased risk of chronic kidney disease and those with high levels of physical fitness had a reduced risk of chronic kidney disease. The risk of chronic kidney

disease was substantially increased in those with both low socioeconomic status and low levels of physical fitness. However, the risk did not seem to exist in those with low socioeconomic status and high levels of physical [fitness](#).

There is substantial evidence that regular [physical activity](#) and/or exercise can reduce the risk of disease. The study's results suggest that people from lower socioeconomic backgrounds who regularly exercise can substantially reduce their risk of chronic kidney disease. Physical activity can give protection for many [health outcomes](#), but it is widely reported that most people do not meet the recommended physical activity guidelines.

Dr. Setor Kunutsor, Senior Lecturer in Evidence Synthesis in the Bristol Medical School: Translational Health Sciences (THS) and lead author, says that "[regular physical activity](#) is a powerful strategy than can reduce the risk of disease across all organ systems in the human body including the kidneys. Despite the benefits of physical activity being widely promoted, regular exercise is still low across the world. More needs to be done to promote physical activity participation across all populations regardless of age, gender, disability, and socioeconomic status."

People from low socioeconomic background are more likely not to have access to physical activity resources. The research team suggest there is an urgent need for policymakers/stakeholders to invest in resources that promote physical activity across all sectors and that tackle the inequalities in being able to participate in physical activity.

The team's findings do not prove cause and effect and further studies are needed to show if the associations demonstrated in the study are causal. There are no current published physical activity guidelines for the prevention of chronic kidney disease, but they do exist for people at high risk of diabetes and/or [high blood pressure](#). Further research is needed to

find out the amount and intensity of physical activity for the prevention of [chronic kidney disease](#).

**More information:** Setor K. Kunutsor et al, High fitness levels offset the increased risk of chronic kidney disease due to low socioeconomic status: a prospective study, *The American Journal of Medicine* (2022). DOI: [10.1016/j.amjmed.2022.06.010](https://doi.org/10.1016/j.amjmed.2022.06.010)

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