

# Aerobic exercise found safe for non-dialysis kidney disease patients

July 13 2017

---

A new study finds that moderate exercise does not impair kidney function in some people with chronic kidney disease (CKD). The study—the first to analyze the effects of exercise on kidney disease that does not require dialysis—is published ahead of print in the *American Journal of Physiology—Renal Physiology*. The paper was chosen as an APSselect article for July.

Physical activity causes blood flow to the kidneys and a decrease in [glomerular filtration rate](#) (GFR), which is a measure of kidney function. These physiological functions are temporary in healthy people and allow the body to better meet the needs of the muscles involved with exercise. In people with CKD, these negative changes may be longer lasting and could lead to disease progression.

A research team from Brazil studied 33 volunteers with CKD who were not on dialysis and an age- and gender-matched control group without [kidney disease](#). The volunteers exercised on a treadmill for 30 minutes at moderate intensity. The research team collected blood and urine samples from the participants two hours before, immediately after, and at 30, 60 and 90 minutes post exercise. They measured several markers for kidney function before and after exercise, including GFR, protein in the urine and creatinine levels. Creatinine is a waste product of an amino acid (creatine) that is stored in the muscles and used for energy. Higher creatinine and protein levels in the urine both correspond with lower [kidney function](#).

Although creatinine and protein levels were higher in the CKD group compared to controls, as expected, GFR did not significantly decrease in the CKD participants during exercise or recovery. "These data suggest the notion that moderate-intensity aerobic exercise training can be a safe therapeutic in the management of CKD," the researchers wrote.

**More information:** Davi Alves de Santana et al. Acute Exercise does not Impair Renal Function in Non-Dialysis Chronic Kidney Disease Patients Regardless of Disease Stage, *American Journal of Physiology - Renal Physiology* (2017). [DOI: 10.1152/ajprenal.00131.2017](https://doi.org/10.1152/ajprenal.00131.2017)

Provided by American Physiological Society

Citation: Aerobic exercise found safe for non-dialysis kidney disease patients (2017, July 13) retrieved 3 May 2024 from <https://medicalxpress.com/news/2017-07-aerobic-safe-non-dialysis-kidney-disease.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.
---