



PRESS RELEASE

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AEROBIC EXERCISE MAY HELP ADDRESS DIALYSIS-RELATED SYMPTOMS IN PATIENTS WITH KIDNEY FAILURE

Exercise appears to lessen symptoms of restless leg syndrome, depression, muscle cramping, and fatigue.

Highlights

- An analysis of published clinical trials suggests that aerobic exercise lessens several hemodialysis-related symptoms, including restless leg syndrome, symptoms of depression, muscle cramping, and fatigue.
- More research, with more diverse patients, is needed to determine the extent of benefits from aerobic exercise for individuals with kidney failure who are undergoing dialysis.

Washington, DC (March 25, 2021) — Aerobic exercise may lessen several hemodialysis-related symptoms experienced by patients with kidney failure, according to an analysis of published clinical trials. The analysis will appear in an upcoming issue of *CJASN*.

People with kidney failure often experience multiple, troublesome symptoms—such as fatigue, muscle cramping, and difficulty sleeping—that affect their ability to perform everyday activities and enjoy life. Undergoing hemodialysis to treat their kidney failure doesn't always reduce these symptoms, and it can sometimes make some symptoms worse. Importantly, people receiving hemodialysis have noted that finding effective treatments for hemodialysis-related symptoms should be a research priority.

Exercise has recently been identified as a promising potential treatment for dialysis-related symptoms, but research is limited. To provide additional insights, a team led by Clara Bohm, MD, MPH (University of Manitoba, in Canada) searched the medical literature and analyzed all relevant studies investigating the effects of aerobic exercise on dialysis-related symptoms. The search uncovered 15 randomized controlled trials, with different studies looking at restless leg syndrome, sleep disturbance, symptoms of anxiety and depression, muscle cramping, and fatigue.

The team's analysis of these trials suggested that aerobic exercise lessens several hemodialysis-related symptoms, including restless leg syndrome, symptoms of

depression, muscle cramping, and fatigue. “We found that as little as 20 to 30 minutes of aerobic exercise 2 to 3 times per week seemed to improve several common symptoms in people undergoing hemodialysis and make them feel better,” said Dr. Bohm. She noted that much more research is needed, however. “There have been very few rigorous, well-designed studies published that look at the effect of exercise on symptoms in people undergoing hemodialysis, and larger studies that use standardized measurement tools are needed to help us determine the effect of exercise on common symptoms in these patients more clearly.”

Dr. Bohm added that there are many hemodialysis-related symptoms for which the effect of exercise has not been studied, and most people included in published trials were men with relatively high levels of physical function. “Future studies need to include people with diverse characteristics, particularly more women, elderly individuals, and people with low functional status, to see if exercise has similar effects,” she said. “Also, it is still not clear what exercise intensity and duration are required to see benefits, and if there is a different effect with different types and location of exercise, such as exercise performed during dialysis treatment or outside of dialysis.”

An accompanying editorial adds that “it will also be crucial to focus on development of infrastructure for the delivery of effective exercise interventions.”

Study co-authors include Nicholas Hargrove, BSc, MD, Nada El Tobgy, BSc, Olivia Zhou, BSc, Mark Pinder, MSc, Brittany Plant, BSc, Nicole Askin, MLIS, Laura Bieber, MLIS, David Collister, MD, PhD, Reid Whitlock, MSc, and Navdeep Tangri, MD, PhD.

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The article, titled “Effect of Aerobic Exercise on Dialysis-Related Symptoms in Individuals Undergoing Maintenance Hemodialysis: A Systematic Review and Meta-Analysis of Clinical Trials,” will appear online at <http://cjasn.asnjournals.org/> on March 25, 2021, doi: 10.2215/CJN.15080920.

The editorial, titled “The Promise and Challenge of Aerobic Exercise in People Undergoing Long-Term Hemodialysis,” will appear online at <http://cjasn.asnjournals.org/> on March 25, 2021, doi: 10.2215/CJN.01960221.

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