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More sports, fewer symptoms: How CKD patients benefit from physical exercise

Symptoms such as fatigue, sleep disorders, muscle weakness, restless legs, itching, bone/joint pain and impotence severely limit the quality of life of patients with chronic kidney disease. A new study [1] shows that supervised aerobic exercise, or a combination of supervised aerobic exercise and resistance training can effectively reduce the symptom burden.

Patients with chronic kidney disease (CKD) experience a high symptom burden. The most commonly reported symptoms in non-dialysis-dependent CKD patients include fatigue, sleep disorders, muscle weakness, restless legs, itching and bone/joint pain. All of them limit the patients' quality of life immensely. It is known that 96% of all CKD patients suffer at least one of these symptoms.

In many cases, a vicious circle begins as soon as one of these symptoms is evident: Due to muscle pain, fatigue or weakness, the patient abstains from physical activity. This results, in turn, in a further reduction of physical function that reinforces itself through a feedback loop. The patient feels too weak to do sports – and feels so weak because he or she does not engage in any sports activities. Breaking this vicious circle is obviously a worthwhile endeavor. Patients benefit in many respects. There is already evidence of positive physiological and psychological changes in CKD patients following exercise, but a study now published in *ckj* [1] has shown for the first time that the high symptom burden of CKD patients can also be effectively reduced.

Thirty-six patients [mean \pm SD 62 \pm 12 years, 22 (61%) females, estimated glomerular filtration rate: 25 \pm 8 mL/min/1.73 m²] not requiring renal replacement therapy underwent 12 weeks (3 times a week) of supervised aerobic exercise, or a combination of aerobic exercise plus resistance training. Exercise reduced the total number of symptoms reported by 17% and had favorable effects on fatigue in both groups. Aerobic exercise reduced the frequency of 'itching', 'impotence' and 'shortness of breath' symptoms, and the intrusiveness for the symptoms 'sleep disturbance', 'loss of muscular strength/power', 'muscle spasm/stiffness' and 'restless legs'.

"Although we have to keep in mind that this was a small study without a control group, and although the authors of the study admit that further research is needed to elucidate the physiological and psychological mechanisms by which exercise influences symptoms, the results are overwhelming", comments Professor Alberto Ortiz, ckj editor-in-chief. "We should motivate our patients to do sports and be physically active. I believe that supervised exercise should be an integral part of nephrological care".

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[1] <https://academic.oup.com/ckj/advance-article/doi/10.1093/ckj/sfy071/5071924>

About ERA-EDTA

With more than 7,500 members, the ERA-EDTA ("European Renal Association – European Dialysis and Transplant Association") is one of the biggest nephrology associations worldwide and one of the most important and prestigious European Medical Associations. It supports basic and clinical research in the fields of clinical nephrology, dialysis, renal transplantation and related subjects. It also supports a number of studies as well as research groups and has founded a special "Fellowship Program" for young investigators as well as grant programs. In order to involve young nephrologists in all its activities, ERA-EDTA has created the "Young Nephrologists' Platform" (YNP), a very active committee whose board includes members who are 40 years old or younger. In addition, it has established various working groups to promote the collaboration of nephrologists with other medical disciplines (e.g. cardiology, immunology). Furthermore, a "European Renal Best Practice" (ERBP) advisory board was established by the ERA-EDTA to draw up and publish guidelines and position statements. Another important goal of the ERA-EDTA is education: The series of CME courses combined with the annual congress offer an attractive scientific program to cover the need for continuous medical education for doctors working in the fields of nephrology, dialysis and transplantation. The association's journals, NDT (Nephrology, Dialysis, Transplantation) and CKJ (Clinical Kidney Journal), are currently the leading nephrology journals in Europe; furthermore NDT-Educational is the online educational journal of the society, with free access for all users, as well as being a very important and useful feature of the NDT-Educational "Literature Review". The ERA-EDTA Registry is a large epidemiologic database comparing countries by assessing nephrology practices throughout Europe. ENP, the European Nephrology Portal, is the latest new initiative of ERA-EDTA, where all those interested in the activities of the Society can find everything that is happening, all in one place. Finally, ERA-EDTA is a member of the European Kidney Health Alliance (EKHA), a consortium of patients, nurses and foundations relating to renal issues that actively interacts with the European Parliament. For more information, please visit www.era-edta.org