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Letters to the Editor

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Dog walk: a simple way to improve chronic kidney disease patients' inactivity

Sir,

Physical inactivity in patients with chronic kidney disease (CKD) has been described in many reports. Kidney disease *per se*, side effects of maintenance dialysis, inflammation and worsening comorbidities combine to discourage physical activity [1, 2].

Even though physical activity was first introduced in maintenance dialysis three decades ago and was showed to improve muscle strength, mental and physical function, exercise training is still not a routine practice and is only offered in a minority of dialysis facilities around the world [1]. In dialysis patients, both aerobic and resistance to exercise have demonstrable effects [3].

Although previous recommendations emphasized vigorous exercise [4], it is now accepted that even small doses of exercise may be beneficial and because there is a dose–response relationship between physical activity and health, it has been suggested that some activity is better than none, even if the vigor and/or duration do not meet optimal targets [5]. In fact, lifestyle approaches, e.g. increasing energy expenditure by the amount of physical activity performed such as climbing stairs, walking instead of taking the bus, may improve the adoption and facilitate the maintenance of a physically active lifestyle [6].

We prospectively assessed total energy expenditure in hemodialysis patients over a 7-day period, using the SenseWear Pro2 armband portable device (BodyMedia Inc., Pittsburgh, PA), and observed that physical activity was lower on dialysis days when compared with nondialysis days, this decrease being caused by the lack of activity during the 4-h hemodialysis procedure and the commuting time to and from the dialysis facility. However, it was interesting to note that one patient was an outlier: he indeed walked his dog three times daily and spent much more energy than other patients (Figure 1), showing that small repeated doses of exercise are effective and beneficial.

Despite a limited number of studies, a growing body of evidence demonstrates improvement in aerobic fitness and physical function with exercise therapy in CKD [7]. However, there are currently no specific exercise guidelines for CKD patients and as a consequence, renal units offer virtually no exercise therapy. In addition, due to financial constraints, healthcare providers are reluctant to start new activities, which are not enforced by official recommendations. Kosmadakis *et al.* [1] suggested a combination of encouraging strategies for behavioral change from the healthcare providers focused on nutrition and exercise, with some coaching from staff. The aims were to develop an individualized exercise program to be performed during the hemodialysis sessions, while encouraging increased participation in activities of daily living. Walking a dog, twice daily, every day of the year may be one possibility to motivate patients. Other meditative exercise, such as Tai Chi, recently showed improved quality of life, mood and exercise self-efficacy in heart failure patients [8]. Finally, strategies are needed to increase healthcare provider confidence in exercise training, to enhance exercise adherence from patients and stimulate exercise guidelines production by scientific bodies.

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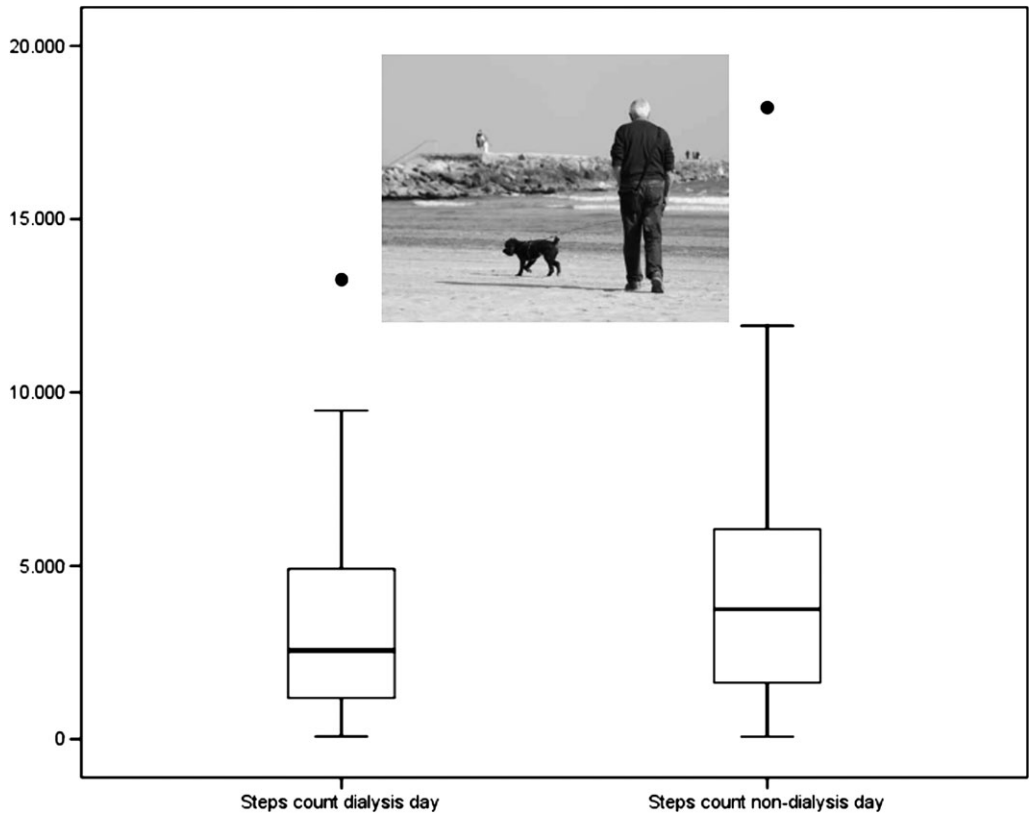

Fig. 1. The average daily steps count in 35 maintenance hemodialysis patients on dialysis and nondialysis days. Average healthy adults walk ~8000 to 10 000 steps daily [4]. The full dots represent the 'dog walking' hemodialysis patient.