Clinician's Commentary on Parsons et al.¹

What are the barriers to and facilitators of physical activity (PA) for adults living with chronic kidney disease (CKD) in Ontario? To answer this question, Parsons and colleagues¹ asked persons with CKD across the province to complete a survey investigating their current PA behaviours, determinants of PA, and PA programme delivery preferences. The authors' results provide Ontarian support for the existing literature detailing the complex factors influencing PA participation in this population.

It is no surprise that Parsons and colleagues¹ found that the majority of their respondents were not meeting Canadian PA guidelines given only one in five Canadian adults are currently completing the recommended minimum of 150 minutes of moderate PA per week.² Although more than 70% of participants in this study indicated a willingness to participate in a programme designed to promote PA, this figure decreased significantly as the expected travel time increased. This drop was anticipated given the correlation between CKD severity and poor physical performance and frailty,³ which can both prolong and complicate travel.

Parsons and colleagues¹ found that the majority of participants reported that they had received very little or no information about PA from their renal team. This finding was expected, although it is especially concerning considering that the majority of their participants were in-centre hemodialysis patients, who, among patients with CKD, often have the greatest access to the centres' medical and nursing teams. Despite a consensus that PA is beneficial for patients with CKD, its encouragement is not often part of their routine medical management.⁴

Regarding education, of the 13 topics proposed, Parsons and colleagues¹ found that their participants were most interested in information on balancing PA and fatigue. Luckily, research already supports PA's effect of reducing the often-high levels of fatigue experienced by persons with CKD.⁵ Providing this education alone may encourage greater participation in PA, particularly because Parsons and colleagues found that fatigue was the most commonly reported barrier and the second most commonly reported drawback to PA. Furthermore, low self-efficacy and fear of movement have been found to be especially prevalent among persons with kidney transplantation, and they act as barriers to PA.⁶ It is incumbent on physiotherapists and other health professionals to counter these concerns by better informing and motivating their patients. Research has already demonstrated the ability of transplant recipients to perform intense exercise as well as their healthy counterparts, which has even been demonstrated by a climb of Mount Kilimanjaro.⁷

Parsons and colleagues¹ recommend that PA programmes will be best supported by an inter-professional team, and I could not agree more. The benefits of exercise among persons with CKD during and off of hemodialysis are numerous. They include improved heart rate variability, physical fitness, depression scores, and health-related quality of life.⁸ However, anyone prescribing a safe and appropriate PA plan must consider the whole patient. Adults with CKD often have several comorbidities and poor physical performance, and they may also have population-specific precautions to consider, including dialysis timing and access. These barriers can be navigated by a physiotherapist

alone, but better care is likely to be provided by an inter-professional team.

One member of a comprehensive inter-professional team supporting PA programming among persons with CKD is the dietitian. Adequate protein intake is essential to meeting the most commonly reported PA goals in this study: improving muscle strength and cardiorespiratory endurance. Unfortunately, once dialysis is started, protein intake requirements increase dramatically—information that does not always reach this population.⁹ This inadequate protein intake can contribute to low levels of skeletal muscle mass and subsequently reduced PA levels.¹⁰ Registered dietitians can provide nutritional information that takes into account the complexities of renal diets, including recommendations for intake and sources of protein, which will facilitate PA goal completion.

Parsons and colleagues¹ findings highlight many of the challenges facing the Kidney Foundation of Canada and other organizations that want to improve the rates of participation in PA among adults with CKD. Moving forward, these organizations should support a variety of initiatives that employ inter-professional teams who can provide PA education and design and deliver exercise programmes tailored to this population's goals and needs.

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