Filling in the Gaps Before Clients Fall Through the Cracks: Physiotherapists Have the Skills to Help Clients Preserve Bone and Prevent Falls

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Osteoporosis imposes an enormous personal and societal burden. In clinical practice, most clients with low bone density or osteoporosis are mid-life adults or seniors, and therefore they typically present with other comorbidities or chronic conditions that may influence their bone health and their risk of falls and fractures.

Consider the 55-year-old postmenopausal woman who presents to the physiotherapist for recommendations on exercise for bone health. The physiotherapist recognizes that this woman needs exercise aimed at bone preservation, and gives her options including a jumping routine, a walk-jog programme, and recommendations on appropriate fitness classes. But what the physiotherapist does not know is that this woman also has frequent stress urinary incontinence; the client did not mention it, and the physiotherapist did not ask. The client leaves knowing that she won't be able to comply with the exercise prescription without the undesirable consequence of leaking urine. Incontinence is a deterrent to this woman's being physically active.

She is not alone. A recent study conducted in the Osteoporosis Clinic at the BC Women's Health Centre found that almost 40% of all new female patients seen in 1 year (163/412) reported leakage one time per week or more, and 10% reported urgency without any leakage.¹ These data suggest that the prevalence of at least weekly urinary incontinence (UI) in this population is much higher than that reported in studies of other older adult female populations. We know that physical activity is an important part of osteoporosis treatment aimed at preserving bone mass and preventing falls, and we aim to prescribe appropriate exercise for all individuals presenting with osteoporosis or low bone density. But UI can significantly limit a woman's ability to be physically active² and is an independent risk factor for falls and low-trauma fractures in older women.^{3,4} The presence of UI should therefore influence our exercise prescription for women with osteoporosis—yet it is not routine

for physicians⁵ or other health care professionals to ask about incontinence,⁶ and it is typically only after symptoms have been present for 6 to 10 years that women mention UI to a health care professional.⁷ So when we don't ask, they don't tell, and we prescribe and hope for compliance.

In this case, hope is not enough. We can do better. Knowing that UI is prevalent in our osteoporosis clinic population should lead to changes in our clinical practice. By routinely asking if UI is present, then following up with more detailed questions as necessary, the physiotherapist can provide more useful exercise prescription for bone health while at the same time helping to guide the client toward conservative treatment options for UI that have been shown to be effective.^{8–11}

While the majority of Canadian physiotherapists do not have the full arsenal of skills to comprehensively assess and treat incontinence and pelvic-floor disorders, we do have physiotherapy colleagues with just that specific skill set. Notably, there is strong (Level A) evidence for the use of supervised individual pelvic floor muscle (PFM) training as a primary treatment of UI in women,^{8–11} and clinical practice guidelines recommend conservative management for UI in older women.⁹ More specific to this population, our research group recently completed a randomized controlled trial (RCT) of physiotherapy for UI in women with osteoporosis. The results are convincing with respect to the effectiveness of physiotherapy in this population and may suggest a new standard of care.¹²

The relationship between osteoporosis and UI is not clear, but a previous study found that self-reported osteoporosis was associated with use of disposable pads (OR = 2.01).¹³ Spinal curvature may play a role; one study found that spinal curvature was related to prolapse of pelvic organs.¹⁴ Individuals with osteoporotic spinal compression fractures may also present with impaired pulmonary function,¹⁵ which in turn may influence PFM activity.

Thus, UI screening is relevant for fall prevention and exercise prescription in individuals with osteoporosis, but it is also part of providing comprehensive care for women's health issues. In a large-population survey, women identified "being seen as a whole person" as their highest

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psychosocial-related health priority.⁶ Women with UI are more likely to suffer from depression and low self-esteem than women without UI,¹⁶ and UI can result in isolation from family and friends.¹⁷ Given the high prevalence of UI in women with osteoporosis, helping them to regain continence will be important if they are to optimally manage their bone health.

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