

Comment and Questions to Mottola et al. (2018): 2018 Canadian Guideline for Physical Activity Throughout Pregnancy

To the Editor:

We read the 2019 Canadian guideline for physical activity throughout pregnancy by Mottola et al. with interest.¹ The recommendation regarding pelvic floor muscle training (PFMT) was based on systematic review evidence from the same group.² Their results are congruent with the latest Cochrane review on the same topic.³ Although there are some methodological and inclusion differences (e.g., two of the largest PFMT trials [Mørkved 2003 and Stafne 2012] were excluded from the review by Davenport et al.²), the effect size and precision estimates are similar, although odds ratios² and risk ratios³ were used for the summary statistics. Davenport et al. reported that PFMT gave 50% and 35% reduction in odds of prenatal and postnatal urinary incontinence (UI), respectively, but a “weak recommendation” for PFMT was made because UI was not rated as a “critical outcome,” and the evidence was “low quality.”² We find this conclusion at odds with the evidence and the guideline team’s own criteria.

Evidence was graded as strong or weak on the following basis: balancing benefits and harms, overall evidence quality, outcome importance, resource use, impact on health equity, feasibility, and acceptability. A strong recommendation is one where “Most or all pregnant women will be best served by the recommended course of action,” and a weak recommendation is when “Not all pregnant women will be best served by the recommended course of action; there is a need to consider other factors such as the individual’s circumstances, preferences, values, resources available or setting. Consultation with an obstetric care provider may assist in decision-making.”

We disagree with how PFMT was classified in relation to these criteria and would like to raise the following concerns:

1. Balancing benefits and harms: The effect size of antenatal PFMT for prevention of UI is moderate and there are no harms of PFMT, so this would be in favour of a strong recommendation. In addition, many of the studies in the

review by Davenport et al. did not compare PFMT with no exercise controls; rather, the control groups had some advice in PFMT as part of “routine” care.² Such trials are likely to underestimate rather than overestimate the effect of PFMT, thus suggesting that the true effect size may be larger than in the review by Davenport et al.²

2. Overall evidence quality: There are three issues to consider:
 - a. Research design. There are sufficient numbers of randomized controlled trials evaluating the effect of PFMT on UI during pregnancy to do meta-analyses without including cohort studies. The review by Davenport et al. referred to cohort studies and showed that general exercise (not PFMT) may increase the odds of developing UI.² Aerobic exercise usually includes high-impact activities (jumping and running). Studies have shown that high-impact activities are associated with UI; therefore, this combination is likely to be provocative of UI and mask a stand-alone effect of PFMT on reduction of UI.⁴
 - b. Risk of bias. Inability to blind participants and providers in exercise trials should not affect the rating of PFMT more than for any other exercise. Although most studies are small to moderate in size – with consequences for precision – it seems likely that the true underlying effect is within the existing confidence limits of the effect estimate. Both in the Cochrane review³ and the review by Davenport et al.,² the upper limits of the confidence intervals suggest a clinically important reduction in UI.
 - c. Statistical heterogeneity. For PFMT, a plausible explanation for statistical heterogeneity is the different training doses and supervision. We agree that more work is needed to find a cut-off for an effective PFMT dose, yet existing robust trials demonstrating effect have well-described interventions that could be implemented.
3. Outcome importance: The importance of a prevalent (>30%) and bothersome condition that reduces quality of life and participation in physical activity appears to have been underestimated. The Canadian guideline asked 10 pregnant women about the pregnancy outcomes most important to them, and it seems that UI was not among the most important. Research consistently finds that women perceive UI as stigmatizing yet “normal” for parous women, and UI is a topic they are reluctant to discuss. Postpartum, the dominant view of women is that of “I wish someone had told me about UI and taught me

how to do PFMT properly.”⁵ If the 10 pregnant women in the expert group were continent and not aware that they could develop incontinence after birth, were embarrassed to talk about it, or thought nothing could be done about it, they may have underrated its importance. We are surprised that specialized women’s health physiotherapists were not included in the panel or as experts.

4. Resource use: PFMT is already part of antenatal and postnatal health care in most developed countries. PFMT is effectively delivered in group training and can therefore be administered at reduced cost to the health system.
5. Impact of health equity: Failure to prevent UI in pregnancy or postpartum through effective PFMT means that women are potentially set up for many years of UI symptoms with all the consequent effects on self-esteem; withdrawal from physical activity; the cost of buying products; laundry; and the cost of treatment.
6. Feasibility: PFMT has successfully been incorporated into comprehensive exercise classes since 1986.⁶
7. Acceptability: PFMT research is firmly on the side of acceptability. Studies show that women want to do PFMT as first-line treatment, but they must be informed about why and how they should do it.⁵ The long-term effect of PFMT is, as for all exercise interventions, dependent on maintenance of training. There are challenges with long-term adherence to or attrition from all forms of exercise and physical activity programs, and this is *not* a specific or more pronounced problem for PFMT.

In summary, it seems that the weak recommendation is inconsistent with the evidence reviewed by Mottola et al.¹ and the broader research (e.g., of women’s experiences). Concerns about evidence quality appear overemphasized and the importance of UI underestimated. Most, or all, pregnant women would benefit from PFMT during pregnancy to prevent UI for the following reasons: PFMT does prevent UI in late pregnancy and postpartum; it does no harm; women say they would do PFMT if they knew why it was important; women who do leak experience significant bother; and the training can be incorporated with other activity to maximize gains from time spent in exercise.

DISCLOSURES

The authors declare that they have no competing interests.

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