



## Abstract

# Australian Women's Experiences of Returning to Physical Activity in the Year After Birth <sup>†</sup>

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**Abstract:** While the health advantages of postpartum physical activity are clear, fewer than 25% of Australian women engage in physical activity in the year after giving birth. Physical activity may promote weight loss and a healthier body composition in the months after birth; however, evidence of this is limited. An understanding of identified facilitators and barriers to postpartum physical activity and knowledge of changes in body composition after birth will assist healthcare providers in guiding women on their return to physical activity. The primary aim of this study was to examine Australian women's identified facilitators and barriers to physical activity in the first 12 months postpartum. The secondary aim was to investigate maternal body composition changes between 6–8 weeks and 3–3.5 months postpartum. This study comprised an anonymous online mixed-methods questionnaire and a body composition sub-study. Participants completed an anonymous questionnaire about their pregnancy and birth and their physical activity before and during pregnancy and after birth. Qualitative responses to questions about facilitators and barriers to postpartum physical activity were analysed using content analysis. Sub-study: Women that had given birth within the last 6 weeks were invited to attend study sessions at 6–8 weeks postpartum and then 6 weeks later (3–3.5 months) for anthropometric (weight, height, BMI) and body composition measurements (fat mass, fat-free mass) using a bioelectrical impedance analyser ImpediMed SFB7 (ImpediMed, Brisbane, Queensland, Australia). Participation in physical activity in the previous 7 days and the infant feeding method were recorded at each visit. Survey data of  $n = 469$  women were available for analysis. Content analysis of the qualitative data identified the main barriers to physical activity as infant care, timing, and physical limitations. Most survey participants (72%) were active at the time of participation, yet only 23% ( $n = 110$ ) met the postpartum exercise recommendations of 150 minutes/week. The sub-study involving 30 women showed no significant changes in weight ( $p = 0.46$ ), BMI ( $p = 0.45$ ), fat mass ( $p = 0.36$ ), or fat-free mass ( $p = 0.23$ ) between 6–8 weeks and 3–3.5 months postpartum. When compared by breastfeeding status, partially breastfeeding women had a larger magnitude of change in weight ( $-1.15 \pm 1.6$  vs.  $0.24 \pm 1.3$  kg, respectively,  $p = 0.015$ ) and BMI ( $-0.43 \pm 0.62$  vs.  $0.09 \pm 0.50$  kg/m<sup>2</sup>, respectively,  $p = 0.016$ ) than fully breastfeeding women, which may be partly explained by the fat-free mass increase in the latter group ( $-0.19 \pm 2.4$



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vs.  $2.67 \pm 5.7$  kg, respectively,  $p = 0.089$ ). At 6–8 weeks postpartum, 45% of participants ( $n = 14$ ) engaged in at least 150 minutes/week of exercise, with no significant differences in changes in maternal body composition at 3–3.5 months between those meeting the recommendations and those who were not. These findings provide valuable insights that can inform the guidance, support, and education of postpartum women when planning their return to physical activity and form the basis of future studies of exercise and body composition changes in breastfeeding women.

**Keywords:** physical activity; postpartum; body composition; barriers and facilitators

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