Chapter 7
Physical Exercise and Pelvic Floor Muscle Training:
A Vital Tool in Mitigating Pelvic Floor Dysfunction During Pregnancy and Postpartum

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ABSTRACT

Pelvic floor dysfunction (PFD) significantly impacts women's quality of life (QoL),

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affecting social, professional, and mental well-being. Pregnancy and childbirth, particularly vaginal delivery, are major risk factors for PFD. This chapter reviews pelvic floor anatomy, function and changes during pregnancy and childbirth. It explores the prevalence, risk factors, diagnosis, and management of PFD, emphasizing conservative treatments like physical exercise and pelvic floor muscle training (PFMT). PFMT strengthens pelvic floor muscles, improves muscle tone, and enhances neuromuscular control, effectively preventing and treating PFD. Regular physical exercise during pregnancy without complications maintains physical and cardiorespiratory functions and reduces sedentary lifestyle-related risks. Therefore, PFMT and regular physical exercise are essential for preventing and managing PFD during pregnancy and postpartum. Moreover, education on pelvic floor health for healthcare providers and women is essential to promote lifelong adherence to physical exercise and improve women's QoL.

INTRODUCTION

Pelvic floor dysfunction (PFD) has an enormous impact on women's quality of life (QoL), implicating work, social life, relationships, and inevitably, mental health (RCOG, 2022). Despite being physiological, pregnancy and childbirth are the main risk factors for PFD, particularly the first vaginal delivery and deliveries involving prolonged labor, instrumental delivery, and fetus in occiput-posterior (Cattani et al., 2021; Caudwell-Hall et al., 2017; Soave et al., 2019). The prevalence of PFD is not clear, ranging from 24% to 50%, and is possibly underdiagnosed (DeLancey et al., 2024; Peinado Molina et al., 2023). The pelvic floor is complex and encompasses many functions simultaneously, thus when dysfunctions occur, different organs and functions are concurrently affected (Messelink et al., 2005). The diagnosis of PFD typically involves a comprehensive assessment, including a detailed medical history, physical examination, and often additional investigations.

Pelvic examination, including speculum examination and evaluation of pelvic organ support, is essential for identifying pelvic organ prolapse and assessing pelvic floor muscles (PFM) tone and strength (Bo et al., 2017). The management of PFD varies according to the symptoms experienced by the patient, the degree of injury, and the patient's characteristics. Conservative management options include lifestyle modifications, PFM exercise, dietary modifications, and pelvic floor physical therapy (PFPT). Pelvic floor muscle exercises, or pelvic floor muscle training (PFMT) are the most accepted as a first-line treatment for PFD due to their non-invasive nature and efficacy. Numerous studies have investigated the effectiveness of PFMT in the management of PFD, with promising results (Leon-Larios et al., 2017). The PFMT aims to strengthen the PFM, improve muscle tone and relaxation, and enhance neu-