

# Effects of Physical Exercise Interventions for Individuals With Gynecologic Cancer: A Systematic Review and Meta-Analysis

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**PROBLEM IDENTIFICATION:** Data on the efficacy of physical exercise interventions for individuals with gynecologic cancer are limited and discordant. The purpose of this review was to determine the benefits of exercise interventions in this population.

**LITERATURE SEARCH:** The PubMed®, Web of Science, Embase® (Ovid), and Cochrane Central Register of Controlled Trials databases were searched for studies published from January 1, 2010, to November 9, 2022.

**DATA EVALUATION:** 12 randomized controlled trials were included. A quantitative synthesis method was used to investigate the effects of exercise interventions on individuals with gynecologic cancer.

**SYNTHESIS:** The findings indicate that physical exercise interventions may have beneficial effects on the fatigue, depression, and health-related quality of life of this patient population. However, because of the small group of studies available, the evidence must be regarded as preliminary.

**IMPLICATIONS FOR PRACTICE:** Clinicians and oncology nurses should recommend and refer individuals with gynecologic cancer to clinic- or community-based physical exercise programs.

**KEYWORDS** physical exercise; gynecologic cancer; systematic review; meta-analysis

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**G**ynecologic cancer, which refers to a malignant condition of the female reproductive system, has become a major public health concern (Uwins et al., 2020). The incidence of various gynecologic cancers is 6.6–13.1 per 100,000 women globally, and the morbidity and mortality rates of gynecologic cancer have been steadily increasing (Ferlay et al., 2019; Jiang et al., 2018). The diagnosis of cancer and a wide range of treatment (e.g., chemotherapy, radiation therapy, surgery) side effects have profound impacts on patients, and they may experience physical and psychological symptom distress such as fatigue, pain, sexual problems, reduced cardiorespiratory fitness (CRF), malnutrition, and depression, which have significant impacts on their health-related quality of life (HRQOL) (Do et al., 2017; Maurer et al., 2022; Pin et al., 2018). The survival rates of gynecologic cancer gradually increase with the improvement of treatment techniques, and healthcare providers should implement some evidence-based interventions to manage these symptoms in clinical practice.

Exercise is a well-planned physical activity that can include aerobic exercise or resistance exercise, both of which aim to improve physical fitness (Campbell et al., 2019). The American College of Sports Medicine recommends that cancer survivors should achieve 150 minutes of moderate-intensity physical exercise or 75 minutes of high-intensity physical exercise per week (Piercy et al., 2018). Based on a number of supporting systematic reviews, exercise and physical activity interventions have the potential to decrease physical and psychological disorders and improve symptom management as well as HRQOL of patients with cancer (Buffart et al., 2017; Michael et al., 2021; Morishita et al., 2020;