

# Physical Activity

## A systematic review to inform nurse recommendations during treatment for colorectal cancer

Rachel Hirschev, PhD, RN, Jennifer Nance, RN, BSN, CPN, Rebecca Hoover, RN, BSN, Tammy Triglianos, ANP-BC, AOCNP®, Erin Coffman, MA, Lindsey N. Horrell, PhD, MPH, RN, Jennifer S. Walker, MSIS, Ashley Leak Bryant, PhD, RN-BC, OCN®, FAAN, and Carmina G. Valle, PhD, MPH



**BACKGROUND:** As treatments improve for colorectal cancer (CRC), interventions to improve quality of life and decrease long-term effects are needed. Physical activity (PA) is particularly important during cancer treatment because it may decrease treatment side effects, allow patients to more easily increase PA after treatment, and integrate with individuals' motivation to make lifestyle changes after a cancer diagnosis.

**OBJECTIVES:** This article aims to synthesize what is known about PA during CRC treatment.

**METHODS:** A systematic literature search was conducted. Data were evaluated across 17 studies with a collective sample size of 1,184. Because of heterogeneity across studies, a narrative synthesis was conducted.

**FINDINGS:** Studies included mostly college educated and married White men and women aged 50–60 years. Promising effects of PA were identified on several types of outcomes. The most common techniques to support PA included goal setting and providing instructions. The benefits of PA and how to best support PA during CRC treatment need to be better understood in future studies of racially and ethnically diverse patients with CRC.

### KEYWORDS

physical activity; colorectal cancer; cancer treatment; quality of life; chemotherapy

### DIGITAL OBJECT IDENTIFIER

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**COLORECTAL CANCER (CRC) IS THE THIRD MOST COMMON CANCER** in the world (American Cancer Society [ACS], 2021). Because of increasing survival rates, there is a need improve survivors' quality of life (QOL), physical functioning, recurrence risk, and comorbidity prevalence (ACS, 2020). Many patients with CRC have poor QOL during and after treatment; other common side effects include fatigue, depression, anxiety, and decreased sleep quality (Bourke et al., 2014; Cramer et al., 2014; Gao et al., 2020). Focusing on the treatment period is important because physical activity (PA) may decrease side effects and prevent PA decline and functional decline, both of which can become significant barriers to PA following treatment. In addition, patients with CRC have a higher rate of comorbidities than patients without cancer, making lifestyle changes pre- and post-treatment particularly important for their continued survival and QOL (ACS, 2020).

PA improves the QOL, fatigue, anxiety, depression, and sleep of patients with CRC and is also associated with decreased recurrence and increased survival (Balhareth et al., 2019; Gao et al., 2020; Turner et al., 2018). Among survivors who were physically active prior to diagnosis, PA levels tend to drop during treatment and do not return after treatment's completion (Hirschev, Nyrop, & Mayer, 2020; National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health, 2017). Because maintaining PA is proven to be beneficial, the *American College of Sports Medicine Roundtable Report on Physical Activity, Sedentary Behavior, and Cancer Prevention and Control* includes updated PA recommendations for all individuals living with cancer to engage in moderate-intensity aerobic exercise for 30 minutes at least three times per week for at least 8–12 weeks and to add resistance/strength training at least two times per week, with a minimum of two sets of 8–15 repetitions at 60% of one repetition maximum (Campbell et al., 2019). Despite these recommendations and research demonstrating that PA interventions are safe, effective, and feasible for patients with CRC, it is estimated that only about 24% of patients with CRC are physically active and follow PA guidelines during and after treatment (Bourke et al., 2014; Turner et al., 2018). The purpose of this article is to synthesize what is known about PA so that nurses may make informed recommendations to promote PA during chemotherapy treatment for CRC.

### Methods

This review follows PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines and is registered with Prospero.