

mean adherence. Both groups showed a decrease in the phase angle, but this decrease was significant only in the CG (TG = Baseline: 4.96 ± 0.68 ; Final: 4.72 ± 0.69 ; $p = 0.060$) (CG = Baseline: 5.05 ± 0.96 ; Final: 4.59 ± 0.82 ; $p = 0.001$), but there was no difference between the groups ($p = 0.210$). When stratifying the sample, a significant decrease in the CG was also observed in men ($p = 0.005$), people with lung cancer ($p = 0.045$), head and neck cancer ($p = 0.016$) and advanced stage cancer ($p = 0.003$). However, there was no statistical difference between groups. In addition, the linear regression demonstrated that greater adherence to home training ($> 60\%$) was associated with a smaller reduction or better maintenance of the cell integrity.

Conclusion: People with lung or head and neck cancer who underwent home physical training during cancer treatment appear to have maintenance of cellular integrity, especially in individuals with greater adherence to physical training.

Implications: These findings highlight the potential of home exercise programs as a strategy to complement oncological care. Additionally, these results reinforce the need for healthcare policies that promote physical activity as an adjunct therapy in cancer care. **Keywords:** Bioelectrical Impedance, Physical Training, Lung Neoplasms

Conflict of interest: The authors declare no conflict of interest.

Funding: CAPES - Finance Code 001, FAPESP.

Ethics committee approval: CAAE: 79033024.8.0000.0068.

Registration: Not applicable.

<https://doi.org/10.1016/j.bjpt.2025.101320>

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SLEEP QUALITY AND MUSCLE STRENGTH IN CANCER PATIENTS: A NARRATIVE REVIEW

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Background: Sleep disorders are prevalent among cancer patients. Reduced nighttime sleep, as a type of sleep disorder, diminishes quality of life and is associated with depression, anxiety disorders, fatigue and irritability. This directly impacts the musculoskeletal quality, leading to muscle weakness. Both shorter or longer sleep durations are significant factors influencing changes in body composition. These changes increase the risk of obesity and sarcopenia—a musculoskeletal disorder characterized by a generalized loss of muscle strength and mass. Cascades of anabolic and catabolic hormones, mediated by growth hormone, insulin-like growth factor I, cortisol, testosterone, and insulin—critical to the improvement and restoring muscle fibers, functionality, and strength—are influenced by sleep quality. Chronic insomnia can also disrupt the hypothalamic-pituitary-adrenal axis, leading to endocrine changes.

Objectives: This narrative review aimed to analyze the influence of sleep quality on muscle strength in cancer patients.

Methods: This descriptive review focused on studies conducted between 2021 and 2025. A total of 25 studies were selected from databases including LILACS, MEDLINE via PubMed, SciELO, and PEDro. The search utilized a combination of terms and keywords with Boolean operators OR and AND. The selected descriptors were derived from the MeSH platform: Sleep Quality, Sleep Wake Disorders, Muscle Strength, and Cancer Survivors.

Results: The results showed that sleep quality issues, such as insomnia, obstructive sleep apnea syndrome (OSAS), and excessive daytime sleepiness, are common and significant complaints among cancer patients. These issues may be related to pre-existing sleep disorders, psychological conditions associated with cancer, or side effects of cancer treatment. Reduced sleep duration and quality

disrupt cellular functions by inhibiting protein synthesis pathways and activating muscle degradation pathways. Physiotherapists also face challenges in effectively screening and identifying these contributing factors.

Conclusion: Poor sleep quality is a significant public health concern, as it is both widespread and associated with numerous adverse effects on the quality of life of cancer patients. The use of validated assessment tools is essential to guide physiotherapeutic interventions and promote health.

Implications: This review has the potential to significantly advance oncology physiotherapy research by addressing an underexplored yet highly relevant area. Nonetheless, additional research is needed to better understand the relationship between sleep quality and muscle strength in cancer patients, and to enhance clinical practices. This review underscores the importance of evaluating these connections to identify the underlying causes of patient conditions, ultimately aiming to deliver holistic and comprehensive care.

Keywords: Sleep Quality, Muscle Strength, Cancer Survivors

Conflict of interest: The authors declare no conflict of interest.

Funding: PIBIC-UFPA.

Ethics committee approval: No. 3.401.241.

Registration: Not applicable.

<https://doi.org/10.1016/j.bjpt.2025.101321>

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EFFECT OF SLEEPER STRETCH AND CROSSBODY STRETCH ON PAIN AND GLENOHUMERAL MOBILITY IN SYMPTOMATIC OVERHEAD ATHLETES: A RANDOMIZED CLINICAL TRIAL

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Background: Various techniques for stretching the posterior shoulder capsule have been incorporated into rehabilitation and injury prevention programs for overhead athletes. The Cross-body Stretch and Sleeper Stretch techniques are discussed in literature with the aim of relieving pain and increasing internal rotation (IR) range of motion. However, there are still no studies comparing the effects of these stretches on overhead athletes with pain and glenohumeral movement limitations.

Objectives: To compare two techniques for stretching the posterior capsule in terms of pain relief and glenohumeral range of motion in overhead athletes.

Methods: This is a randomized, controlled clinical trial with two parallel arms. The sample consisted of competitive-level overhead athletes who exhibited a minimum difference of 20° in IR limitation compared to the non-dominant side and reported pain during daily or sports activities of at least 2/10 on the Numeric Visual Scale (NVS). Participants underwent the following steps: (a) eligibility screening; (b) outcome assessment (pain, IR range of motion) by blind evaluators; and (c) intervention. All participants were evaluated twice during the study (baseline and after four weeks). After evaluation and randomization (1:1), participants were allocated to either the Cross-body Stretch group (GCB) or the Sleeper Stretch group (GSS). The exercises were performed three times a week, in 5 sets of 30 seconds each, with a 30-second rest between sets, for 4 weeks. The first session was conducted in person, with a