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

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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

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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

demonstration of the technique and provision of an illustrated guide. Subsequent sessions were self-administered and remotely supervised.
Results: Thirty-five participants were included in the study (GSS = 18; GCB = 17). After 4 weeks of intervention, both stretches promoted pain reduction (GSS: MD = -2.17 points; 95% CI = -3.13 to -1.21; GCB: MD = -1.54 points; 95% CI = -2.53 to -0.55), but there was no difference between the groups (MD = 0.14; 95% CI = -1.21 to 1.48). The IR deficit was reduced in both groups. The GSS showed a reduction of -14.69° (95% CI = -19.48 to -9.89), and the GCB showed a reduction of -14.77° (95% CI = -19.70 to -9.84). There was no significant difference between the groups (MD = 3.08°; 95% CI = -1.74 to 7.89).
Conclusion: For competitive-level overhead athletes with IR deficit and shoulder pain, both the sleeper stretch and the cross-body stretch are effective in improving pain and mobility after four weeks of intervention, with no superiority between the techniques.
Implications: In addition to improving the established outcomes, no athlete experienced adverse effects from the techniques throughout the protocols. Therefore, both can be appropriate strategies for reducing pain and improving glenohumeral mobility in overhead athletes.
Keywords: Overhead athletes, shoulder pain, glenohumeral internal rotation deficit

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IMMEDIATE AND SHORT-TERM EFFECTS OF LOW-LEVEL LASER ON ATHLETE'S FUNCTIONAL PERFORMANCE: A DOUBLE BLINDED RANDOMIZED CLINICAL TRIAL

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Background: Recovery from exercise-induced muscle fatigue is crucial for optimizing athletic performance, as maintaining appropriate functional capacity helps prevent injuries. Low-level laser therapy (LLLT) has shown potential benefits in muscle tissue recovery. However, its immediate and short-term effects on functional performance remain largely unexplored.
Objectives: This study aimed to evaluate the immediate and short-term effects of LLLT on the functional performance of athletes experiencing exercise-induced muscle fatigue.
Methods: This study is a double-blind, randomized, placebo-controlled clinical trial. A total of 24 athletes were included based on the following criteria: they were handball or volleyball players, aged 18 to 35 years, with a consistent training routine of at least two sessions per week. Participants were randomly assigned to either the Intervention Group (IG, n = 12) or the Control Group (CG, n = 12). The study involved a daily fatigue protocol targeting the quadriceps muscles, consisting of 30 repetitions of jump squats, followed by either laser therapy or a placebo treatment for five consecutive days. The physiotherapist administering the laser therapy and the evaluator assessing the outcomes were both blinded to the participants' group assignments. Functional performance was assessed using the horizontal jump test, immediately after the laser or placebo therapy, using a modified hop test. Immediate effects and short-term effects were evaluated by comparing functional performance between groups after laser therapy or a placebo treatment on the first and fifth day, respectively.
Results: No significant differences were observed between groups regarding the immediate or short-term effects of LLLT on functional performance [p = 0.099, 95% CI (130 ± 34.2 to 146 ± 32.0)]; [p = 0.996, 95% CI (145 ± 31.9 to 165 ± 37.3)], respectively.
Conclusion: This study found that LLLT, when applied immediately after exercise-induced muscle fatigue and over five consecutive days, did not significantly improve functional performance compared to placebo.
Implications: In this study, LLLT was applied post-fatigue based on the hypothesis that it could enhance functional performance. However, the findings do not support this premise, as current evidence remains insufficient to confirm that immediate post-fatigue LLLT application enhances functional outcomes. Further research is needed to establish its efficacy in this context.
Keywords: Laser Therapy, muscle fatigue, functional performance

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PREVALENCE AND ASSOCIATED FACTORS OF URINARY INCONTINENCE IN BRAZILIAN FEMALE RUNNERS: PRELIMINARY RESULTS FROM THE STATE OF AMAPÁ, AMAZON

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Background: Urinary Incontinence (UI) is the most prevalent pelvic floor dysfunction. High-impact sports, such as running, increase in intra-abdominal pressure, which can lead to UI. The prevalence of UI among female runners ranges from 19.6% to 44%. Despite its health benefits, UI may negatively impact on running performance. In northern Brazil, particularly in Amapá, there is a lack of epidemiological data on UI in female runners. This underscores the need for further research to assess risk factors, population characteristics, and the impact on runners' Quality of Life (QoL), ultimately guiding prevention and treatment strategies.
Objectives: This study aims to identify UI prevalence in female runners, analyzing sociodemographic, anthropometric and urogynecological profiles, and UI subtypes: Stress Urinary Incontinence (SUI), Urgency Urinary Incontinence (UUI), and Mixed Urinary Incontinence (MUI). Additionally, we sought to identify risk factors for UI (age, number of pregnancies, obesity, among others). This analysis aims to establish correlations between running, UI and QoL.
Methods: This observational, cross-sectional study followed CHERRIES guidelines. Conducted online in Brazil (2024—2025), it included female runners aged 18—59 who had been running for = 6 months, = 2 times/week. Exclusion criteria included pregnancy, postpartum < 12 months, recent pelvic surgery, and neurological diseases. Data collection was conducted via Google Forms, with participants recruited through social media and running groups. Validated questionnaires (ICIQ-SF, QUID-Br, and 3IQ-Br) were used. Statistical analysis was performed using SPSS and Poisson regression ($p < 0.05$, CI 95%).
Results: From January 2024 to March 2025, 72 women from the metropolitan region of Amapá were contacted. Of these, 7 (13.20%) reported UI. The mean age was 34.38 years (± 13.21), mean weight