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## Muscle strength related to quality of life in breast cancer patients and survivors

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**Objective:** The objective of this study was to evaluate the relationship between muscle strength and quality of life in breast cancer patients and survivors who practice physical exercise vs those who do not. Methodology: We conducted searches using the terms "Muscle Strength," "Breast Cancer," and "Resistance" in the following databases: MEDLINE (by PubMed), Embase (by OvidSP), and Karger. We also searched ClinicalTrials.gov and the WHO International Clinical Trials Registry Platform. This systematic review of the literature was performed using PRISMA and Cochrane Handbook for the Scopus, and six articles were selected for qualitative analysis. Results: The majority of studies found the effectiveness of resistance training (RT) in breast cancer survivors during anticancer treatment, with a positive impact on reducing fatigue levels, less loss of muscle strength, and a lower incidence of joint dysfunction, especially when associated with kinesiotaping (KT). Some of the studies listed showed a higher quality of life post-treatment in the group that practiced physical activity, suggesting that RT is superior in post-therapeutic anti-cancer rehabilitation, compared with sedentary patients. However, none of the studies found consistent correlations between strength exercise and reduced BMD in breast cancer survivors. Another study suggests that RT can reduce chronic inflammation, with the potential to prevent cancer recurrence, but more robust evidence is still lacking. Conclusion: Breast cancer patients face significant challenges related to muscle strength loss and fatigue during and after treatment. The implementation of an exercise protocol emphasizing resistance training has proven beneficial. The inclusion of KT therapy also shows the potential to improve functional performance. When developing treatment strategies for breast cancer patients, it is essential to consider resistance training and possibly KT therapy as integral parts of the care plan to optimize physical outcomes and quality of life for these patients.

Keywords: breast cancer; muscle strength; quality of life.