

Effects of Physical Exercise on Shoulder Motion and Upper Limb Function after Surgery of Breast Cancer Patients: A Systematic Review

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ADMINISTRATIVE INFORMATION**Support** - National Social Science Fund of China (22BTY076).**Review Stage at time of this submission** - Data extraction.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY202460058**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 16 June 2024 and was last updated on 16 June 2024.**INTRODUCTION**

Review question / Objective To systematically evaluate the intervention effect of physical exercise on shoulder range of motion and upper limb function in patients with breast cancer after surgery.

Condition being studied Breast cancer is a common disease in women and the leading cause of cancer death in women. In 2020, nearly 685,000 women will die from breast cancer worldwide. More than 1 million people are diagnosed each year worldwide. Breast cancer is a truly global health challenge. Multiple studies have shown that up to 67% of breast cancer patients will have decreased shoulder motion and upper limb dysfunction, and long-term dysfunction will lead to chronic pain, decreased muscle strength, lymphedema, cardiopulmonary dysfunction, etc., and even lifelong disability.

METHODS

Search strategy Search terms include: exercise, aerobic, resistance, strength, physical activity, qigong, tai chi, tai ji, yoga, baduanjin, jog, breast neoplasms, breast cancer, breast tumor, breast carcinoma, upper limb function, upper-extremity function, upper limb;limb, function, shoulder range of mobility;shoulder mobility, range of motion, shoulder Joint, shoulder, randomized controlled trial, randomized;controlled, trail.

Participant or population Postoperative breast cancer patients, regardless of race, country, age ≥ 18 years, no mental abnormalities and cardiopulmonary dysfunction.

Intervention Physical Exercise.

Comparator Conventional therapy.

Study designs to be included Randomized controlled trial.

Eligibility criteria Patients with recurrent or metastatic breast cancer; Non-chinese and English articles; Animal articles; There were other cancer patients in the study; Republished articles with poor quality assessment.

Information sources Web of Science、Pubmed、The Cochrane Library、Embase.

Main outcome(s) Constant and Murley score, Disability of Arm, Shoulder and Hand.

Additional outcome(s) Shoulder range of mobility.

Data management The preliminary screening literature was imported into Endnote X7 for reclassification. The whole screening work was conducted by two researchers in an independent double-blind way according to the inclusion and exclusion criteria. The work process was to read the titles and abstracts first, conduct preliminary screening, read and download the full text of the literature meeting the criteria; After the screening, the screening results were compared, and if there were differences, the third researcher would discuss whether to include them.

Quality assessment / Risk of bias analysis ROB2.

Strategy of data synthesis MD and SMD were selected for calculation, and 95% confidence intervals were calculated.

Subgroup analysis Form, intensity, duration and cycle of physical exercise.

Sensitivity analysis Sensitivity analysis was performed by single study exclusion method, and descriptive analysis was performed if heterogeneity was too large.

Country(ies) involved China.

Keywords physical exercise;breast cancer; shoulder motion; upper limb function; meta-analysis.

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