

**Systematic review of the effects of exercise and nutrition interventions on body composition in women with metastatic breast cancer**

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# SYSTEMATIC REVIEW OF THE EFFECTS OF EXERCISE AND NUTRITION INTERVENTIONS ON BODY COMPOSITION IN WOMEN WITH METASTATIC BREAST CANCER

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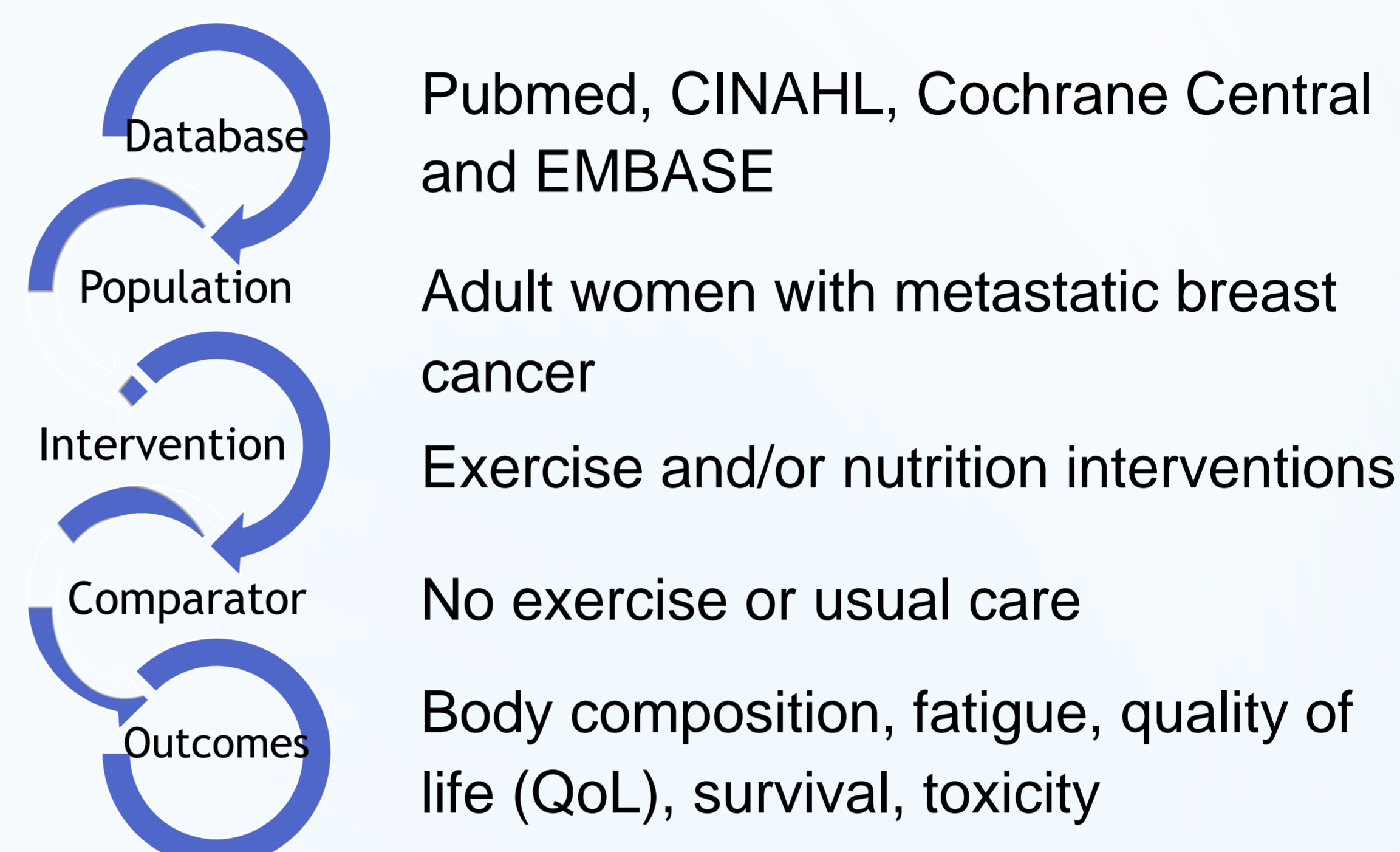
## Background

Metastatic breast cancer (MBC) affects approximately 20-30 percent of women with breast cancer#. Current treatment options improve survival, however disease- or treatment related symptoms and muscle wasting are increasingly common and significantly decrease patients' quality of life. Because of the significant advances in treatment, survivorship has increased in the population with metastatic disease. As treatments are mainly palliative in nature, gaining quality of life becomes a most significant target.

## Aim

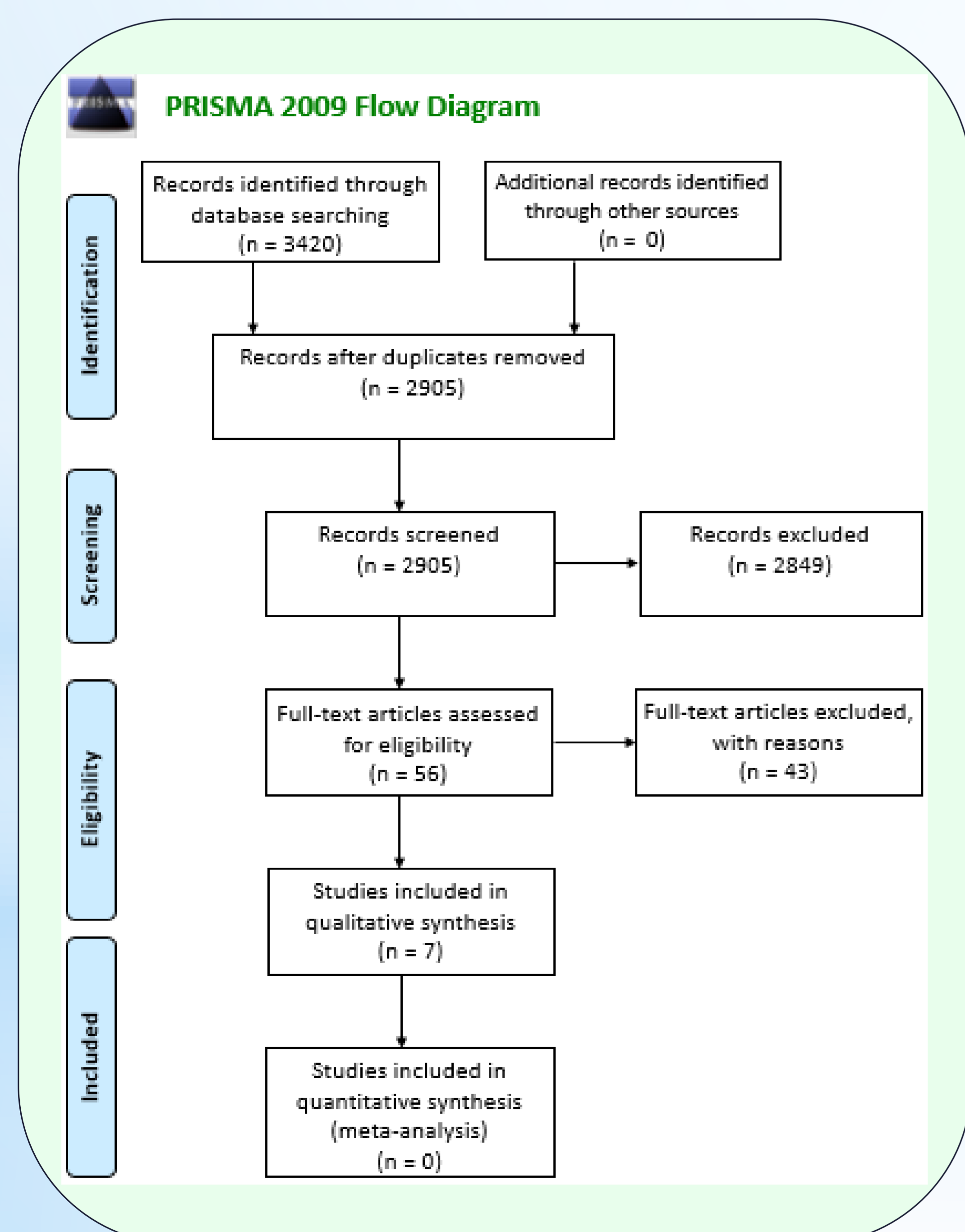
This systematic review aimed to evaluate the evidence for lifestyle interventions on body composition in women with MBC to inform future research.

## Methods



## Results

In total, only 7 studies were eligible for review, of which 3 were randomised controlled trials. No studies were identified that investigated the effects of lifestyle interventions on body composition in this population. Seven studies reported that exercise interventions, over a minimum duration of 4 weeks, found lower patient-reported fatigue, improved QoL and longer survival. All included studies were judged of low quality (low statistical power, small sample sizes, diverse study designs, and reliance on patient-reported data).



There was high heterogeneity regarding study designs and outcomes

No study reported any adverse events due to exercise

2 studies found decreased fatigue resulting from Yoga practice

Yoga was the most popular form of physical exercise intervention.

Only one study had an exercise and nutrition intervention

### Body Composition

0 studies

### Dietary management of MBC

0 studies

### Fatigue

5 studies

*Overall, the studies indicated physical exercise had a positive impact on fatigue*

### Quality of Life

3 Studies

*General observations of improvement in QoL in patients who participated in a physical exercise intervention*

### Survival

1 study

*Holistic treatment approach indicative of more favourable survival outcomes for MBC patients*

## Conclusions

To date, there is insufficient evidence to draw reliable conclusions regarding the impact of lifestyle interventions in MBC. Clinical practice is largely based on studies that have been performed in patients receiving curative treatment for breast cancer. Further work is needed regarding conducting high-quality RCTs with robust study designs that encompass larger sample sizes with high statistical power. Future research demands innovative, high-quality, large sample, randomised controlled trials to inform evidence-based guidelines on diet, mode, frequency and intensity of exercise for optimal body composition and QoL.