# Paced Respiration for Vasomotor and Other Menopausal Symptoms: A Randomized, Controlled Trial

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**Abstract**

**Background**: Paced respiration has been internationally recommended for vasomotor symptoms (e.g., hot flashes, night sweats) despite limited empirical evidence.

**Objective**: To evaluate efficacy of a paced respiration intervention against breathing control and usual care control for vasomotor and other menopausal symptoms.

**Design**: A 16-week, 3-group, partially blinded, controlled trial with 2:2:1 randomization and stratification by group (breast cancer, no cancer) was conducted in a Midwestern city and surrounding area.

**Participants**: 218 randomized women (96 breast cancer survivors, 122 menopausal women without cancer) were recruited through community mailings and registries (29% minority).

**Interventions**: Training, home practice support, and instructions to use the breathing at the time of each hot flash were delivered via compact disc with printed booklet (paced respiration intervention) or digital videodisc with printed booklet (fast shallow breathing control). Usual care control received a letter regarding group assignment.

**Main Measures**: Outcomes included hot flash frequency, severity, and bother (primary), hot flash interference in daily life, perceived control over hot flashes, and mood and sleep disturbances (secondary). Intervention performance, adherence, and adverse events were assessed.

**Key Results**: There were no significant group differences for primary outcomes at 8- or 16-weeks post-randomization. Most intervention participants did not achieve 50% reduction in vasomotor symptoms despite demonstrated ability to correctly do paced respiration and daily practice. Statistically significant differences in secondary outcomes at 8- and 16-weeks were small, not likely to be clinically relevant, and as likely to favor intervention as breathing control.

**Conclusions**: Paced respiration is unlikely to provide clinical benefit for vasomotor or other menopausal symptoms in breast cancer survivors or menopausal women without cancer.