



# Nonpharmacologic Interventions for Breathlessness in Advanced Stages of Malignant and Nonmalignant Diseases

Dora S.P. Lang, BSN, AdvDip (Oncology)

## Objective

To assess the effectiveness of nonpharmacologic and noninvasive interventions for relieving breathlessness in patients with advanced stages of diseases.

## Type of Review

An intervention review to assess the benefits of the intervention used in health care.

## Relevance for Nursing

Breathlessness is a common and distressing symptom for patients in the advanced stages of diseases, particularly with lung cancer, motor neuron disease, and chronic lung and heart diseases. Pharmacologic interventions alone often are not able to relieve breathlessness. Therefore, nurses should be updated on the best practice related to nonpharmacologic interventions in managing the symptoms effectively for providing comfort.

## Characteristics of the Evidence

Forty-seven trials with a total of 2,532 participants were included in the review. The inclusion criteria were adults suffering from breathlessness because of advanced stages of lung cancer, chronic obstructive pulmonary disease, interstitial lung disease, chronic heart

disease, or motor neuron disease, and adults who were receiving noninvasive interventions not classified as medicinal products. The primary outcome measured either the subjective reports of breathlessness on a validated scale or breathlessness-specific scales. Methodologic qualities of the trials were assessed using both the Oxford Quality Scale and the method score. Seventy-seven percent of the studies were of high quality using the method score; in contrast, only 21% were of high quality in the Oxford Quality Scale.

## Summary of Key Evidence

Strong evidence exists that neuro-electrical muscle stimulation and chest wall vibration relieve breathlessness. Moderate evidence exists that use of walking aids and breathing training relieve breathlessness. Little evidence exists that acupuncture or acupressure relieves breathlessness. No significant evidence was found to support the use of music to relieve breathlessness. Finally, insufficient evidence exists to evaluate the effectiveness of relaxation, fans, counseling and support with and without breathing-relaxation training, case management, and psychotherapy in managing breathlessness.

## Practice Recommendations

Neuro-electrical muscle stimulation, chest wall vibration, use of walking aids, and breathing training are recommended to manage breathlessness among patients with advanced-stage disease.

## Research Recommendations

A high-quality research design with adequate sample size and power calculation is needed to establish the effectiveness of nonpharmacology and noninvasive intervention for managing breathlessness in the palliative-care setting.

Qualitative research study is needed to explore patients and caregivers' acceptance and feasibility to the type of intervention used.

## Bibliography

Bausewein, C., Booth, S., Gysels, M., & Higginson, I.J. (2008). Nonpharmacological interventions for breathlessness in advanced stages of malignant and nonmalignant diseases. *Cochrane Database of Systematic Reviews*, 2008, CD005623.

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Dora S.P. Lang, BSN, AdvDip (Oncology), is a nurse clinician at the National University Cancer Institute, National University Health System, in Singapore. She is a member of the Cochrane Nursing Care Field. Lang can be reached at [siew\\_ping\\_lang@nuhs.edu.sg](mailto:siew_ping_lang@nuhs.edu.sg), with copy to editor at [CJONeditor@ons.org](mailto:CJONeditor@ons.org).

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