

From [Medscape Medical News](#)

Daily Singing Reduces Dyspnea and Fatigue in COPD

Jim Kling

[Authors and Disclosures](#)

Other Health Care Provider Rating:

 [Print This](#)
 [Email this](#)
 [Share](#)

INFORMATION FROM INDUSTRY

[What is the evidence for treating mildly symptomatic \(FC II\) PAH?](#)

Review important study data on the evidence for clinical improvement in patients with FC II PAH.

[View data now](#)

November 16, 2010 (Vancouver, British Columbia) — Daily singing exercises reduce dyspnea in patients with chronic obstructive pulmonary disease (COPD), according to research presented here at CHEST 2010: American College of Chest Physicians Annual Meeting.

Dyspnea can be quite debilitating and can prevent patients from taking part in normal daily activities. There are no available medications to counter the long-term decline in lung function in COPD, but patients sometimes use pursed-lip breathing to improve symptoms.

Singing requires precise control of pulmonary muscles. Researchers at Southern Illinois University School of Medicine, in Springfield, Illinois, conducted a case–controlled pre/post study to determine if singing exercises could improve pulmonary function and quality of life. At baseline and 12 weeks, they assessed spirometry, inspiratory and expiratory pressures, Borg scale scores, Brief Symptom Inventory-18 (BSI-18) score, and Saint George Respiratory Questionnaire (SGRQ) score.

The study involved 31 patients, 25 of whom completed the study (9 males, 16 females), with a mean age of 69.44 ± 9.43 years (range, 47.00 to 84.00 years). The subjects had COPD, were in phase 3 pulmonary rehabilitation, and had no other respiratory diseases. They were given a singing pamphlet describing breathing and vocal warm-ups, and then sang a song to complete the 5-minute exercise, which was done once in the morning and once in the evening.

Patients showed significant improvement in the Borg Fatigue Rating (baseline score, 8.88 ± 3.76 ; follow-up score, 7.60 ± 2.61 ; $P = .04$). The researchers used a number of pulmonary function measures, none of which showed statistically significant changes. These included forced expiratory volume in 1 second (baseline, 1.05 ± 0.44 ; follow-up, 1.01 ± 0.39 ; $P = .12$); forced vital capacity (baseline, 2.11 ± 0.75 ; follow-up, 2.04 ± 0.61 ; $P = .21$); inspiratory pressure (baseline, -53.44 ± 15.02 ; follow-up, -48.56 ± 33.75 ; $P = .38$); expiratory pressure (baseline, 68.52 ± 14.77 ; follow-up, 67.88 ± 6.48 ; $P = .81$); SGRQ score (baseline, 42.44 ± 17.53 ; follow-up, 39.87 ± 13.86 ; $P = .18$); and BSI-18 Global Severity Index score (baseline, 52.56 ± 9.11 ; follow-up, 51.68 ± 8.75 ; $P = .51$).

Subjects generally found singing to be an agreeable therapy: 84% said it was comforting or nonpainful, 64% reported that it wasn't inconvenient, and 64% said they would likely continue the exercises.

The research supports previous work showing that weekly singing improves quality of life in COPD patients. "Singing is an action that requires a controlled and precise use of respiratory musculature, both on inhalation and exhalation, through the vibrating vocal folds," Anton Gräsch, MS, instructor in the Division of Cardiothoracic Surgery at the Southern Illinois University School of Medicine, said during the presentation. Mr. Gräsch added that singing can help patients develop greater independence and reduce reliance on healthcare providers.

The effect might have strong psychological underpinnings, according to Dennis Jensen, a postdoctoral research fellow at Queens University in Kingston, Ontario, who attended the presentation. Dr. Jensen noted that depression and anxiety are comorbidities that are often associated with COPD. "If you see symptom relief in the absence of a change in physiology, even in the setting of a very established treatment such as pulmonary rehabilitation, a lot of times there is a very large psychological component," he added.

Dyspnea itself has a strong psychological component, said Dr. Jensen. "It's a sensation that we all perceive," he explained. If patients find themselves able to do something they thought they'd never do again, such as singing, "it may change their perception of the dyspnea."

The study did not receive commercial support. Mr. Gräsch and Dr. Jensen have disclosed no relevant financial relationships.

CHEST 2010: American College of Chest Physicians Annual Meeting: Abstract 9428. Presented October 31, 2010.