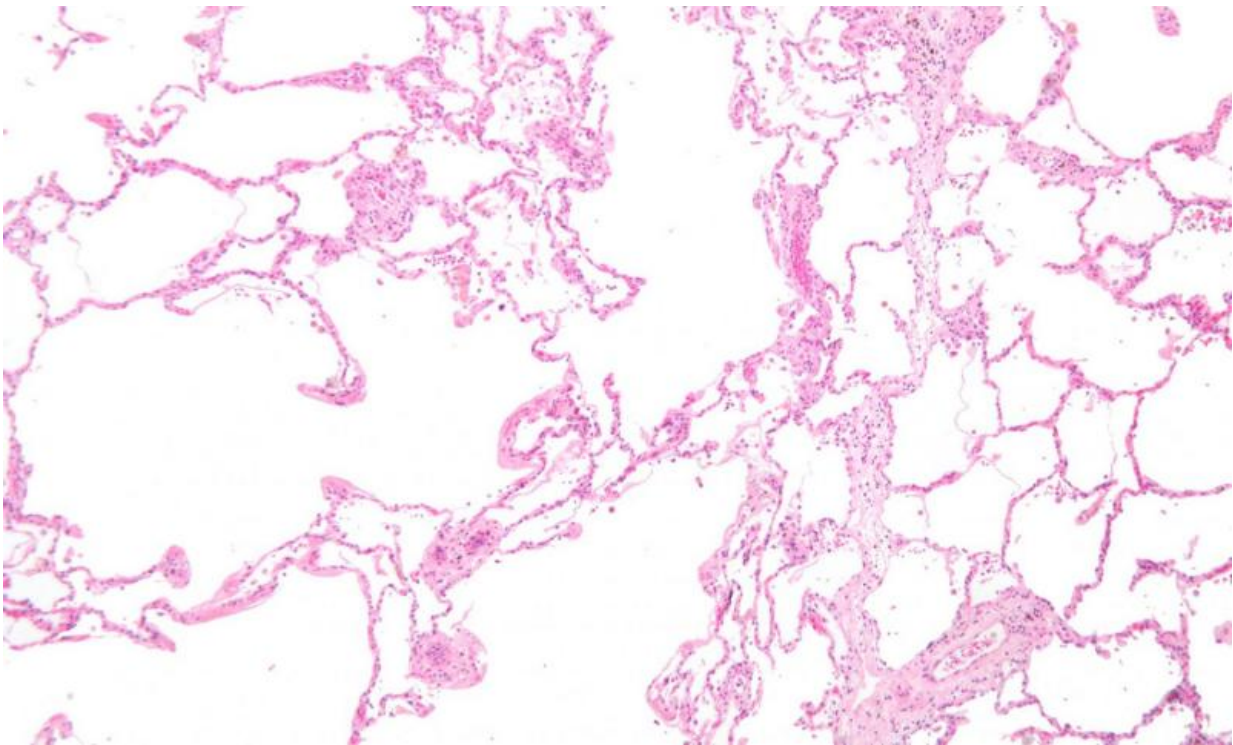


# Treating COPD patients for anxiety using CBT reduces hospital visits and is cost-effective

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Micrograph showing emphysema (left – large empty spaces) and lung tissue with relative preservation of the alveoli (right). Credit: Wikipedia, CC-BY-SA 3.0

Cognitive behavioural therapy (CBT) delivered by respiratory nurses is cost-effective and reduces anxiety symptoms in chronic obstructive

pulmonary disease (COPD) patients, according to research published in *ERJ Open Research*.

COPD is a long-term condition that causes inflammation in the lungs, narrowing of the airways and damaged lung tissue, making breathing difficult. Anxiety often occurs alongside COPD and can mean that patients do less physical activity, leading to loss of fitness, isolation, and deteriorating health overall. The new study found that brief CBT sessions with respiratory nurses reduced feelings of anxiety for patients with COPD and resulted in less frequent use of A&E and hospital services.

Dr. Karen Heslop-Marshall, a Nurse Consultant at Newcastle-upon-Tyne NHS Foundation Trust and Newcastle University, UK, was lead researcher on the study. She explains: "One of the main symptoms of COPD is breathlessness. This is very frightening and often leads to feelings of anxiety. Many [healthcare professionals](#) do not currently screen COPD patients for symptoms of anxiety, even though it can have an impact on their overall health.

"Feeling anxious has a negative impact on patients' quality of life and leads to more frequent use of healthcare resources. We wanted to test whether one-to-one CBT sessions delivered by respiratory nurses could reduce symptoms of anxiety and whether this could be a cost-effective intervention."

A total of 236 patients with a diagnosis of mild to very severe COPD took part in the trial.

Each patient had also been screened for anxiety using the HADS-Anxiety Subscale. This is a simple questionnaire that asks patients about their feelings of anxiety and depression over the past week. Scores of between eight and ten are considered to show mild symptoms, 11-14

indicate moderate symptoms, and scores of more than 15 indicate severe symptoms.

All the patients entered into the study scored eight or higher on the HADS scale. In total, 59% of those screened for entry into the study had raised HADS scores, suggesting anxiety is very common in COPD.

Over a three-month period, patients were either given leaflets on anxiety management or given leaflets as well as CBT. The CBT sessions coached patients on how to develop coping strategies to deal with the anxiety caused by breathlessness, to help to improve physical activity levels.

All patients also received standard medical care, including lung function testing, a medical review and appropriate drug treatments. If they were eligible, they also received pulmonary rehabilitation, which is a supervised exercise programme designed for COPD patients.

After three months, patients completed the HADS-Anxiety questionnaire again to assess how the different treatment methods affected their levels of anxiety.

The researchers found that CBT was more effective in reducing [anxiety symptoms](#) in COPD patients compared to leaflets alone; on average, the HADS-Anxiety scale scores of CBT patients improved by 3.4, while patients in the leaflet group improved by just 1.9.

After checking the hospital attendance records of patients in the study, the researchers found that for each patient who attended CBT, there was an average saving of £1,089 for hospital admissions and £63 for emergency room attendances.

The data also showed no link between a patients' lung function, measured by how much air a person can breathe out in one second, and

their anxiety score. The researchers say this suggests that even patients with mild COPD can feel extremely anxious, and so would benefit from this intervention.

Dr. Heslop-Marshall said: "We found that one-to-one CBT sessions delivered by respiratory nurses could reduce symptoms of anxiety and that this could be a cost-effective intervention. Although the CBT intervention initially resulted in added costs, as respiratory nurses required training in CBT skills, this was balanced by the savings made thanks to less frequent need of hospital and A&E services.

"Reducing the levels of anxiety patients experience has a significant impact on their quality of life as well as their ability to keep physically active and may improve survival in the long-term. Our research shows that front-line respiratory staff can deliver this intervention efficiently and effectively."

The researchers say it was not possible to blind participants to what method of treatment they received, which may have had an impact on their responses to the second HADS questionnaire. They are also unable to determine which specific element of the CBT intervention, such as the coping strategies to address frightening thoughts, pacing, breathing control, distraction, or encouraging physical activity, was most effective at reducing feelings of anxiety.

Dr. Thierry Troosters, from the Katholieke Universiteit Leuven, Belgium, is President-Elect of the European Respiratory Society and was not involved in the research. He said: "COPD is a major burden to individuals, societies and healthcare systems across the world. This is partly due to the continued exposure to risk factors for COPD, such as smoking and air pollution, and partly due to ageing populations.

"This research highlights how using a multidisciplinary approach in the

treatment of COPD can reduce the burden on patients and healthcare services. Treating patients for co-existing conditions such as [anxiety](#) contributes greatly to improving their overall health, and these methods can be cost-effective. Care provided by dedicated and properly trained healthcare professionals also allows for early referral of [patients](#) with more serious mental health conditions to even more specialised care tracks."

**More information:** [DOI: 10.1183/23120541.00094-2018](https://doi.org/10.1183/23120541.00094-2018) Heslop-Marshall K, Baker C, Carrick-Sen D, et al. Randomised controlled trial of cognitive behavioural therapy in COPD. *ERJ Open Res* 2018; 4: 00094-2018. [doi.org/10.1183/23120541.00094-2018](https://doi.org/10.1183/23120541.00094-2018)

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