

# COPD and Singing for Lung Health: A Patient and Clinician Perspective

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## ABSTRACT

This article, co-authored by a patient living with chronic obstructive pulmonary disease (COPD) and a respiratory physiotherapist, discusses the patient's experience of COPD and singing as a form of therapy. The clinician then discusses his experience of Singing for Lung Health in the context of the patient, and how more research is needed in this area.

**Keywords:** COPD; Patient perspective; Respiratory; Singing for lung health

## PATIENT'S EXPERIENCE

I wanted to shed a little light on what goes on for me each day with respect to my COPD that was diagnosed over 9 years ago.

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Fairly early on, I discovered the clinical study work that was going on at the Royal Brompton Hospital following some results that a singing instructor was achieving in the heavy duty end of the respiratory ward. They have, of course, now gone on by 'leaps and bounds'. Singing delivers a natural and highly potent virtuous circle that I continually enjoy.

I am fortunate in that I currently live somewhere that is virtually perfect for music production. I also have been playing music in private for several years so I was 'all geared up for this'. I learnt favourite songs by accomplished artists in comfortable keys and began to emulate them in homage. I continue to monitor my progress and can see that I am able, for example, to hold a long note for as long as the master and I could not do that yesterday!

These days it is 1 h or so of lusty singing in the afternoon both with the keyboard and in Kari-Croaky style. Just started touring the localities 'Open Mic Nights' that drew applause. Open mics also help me deal with an auxiliary psychological problem of shyness. I am 70 by the way. Learning progress and recollection ability is always part of my monitoring. Music memory is somewhat more stable than recent general memory stuff like, "Why did I come into this room?" and general vocabulary.

Before cessation of smoking and living in a HMO (house in multiple occupation) with nine other tenants in a town eight or so years ago, I had four exacerbation episodes with steroid

rescue packs in 4 months. I have been without an exacerbation event now for 7 years though I have had some colds during that time. With respect to bacteria, I find it hard to say if the music therapy energises the immune system, but it would not surprise me in the least if it did.

I use Ventolin pressurised Salbutamol inhalers along with Seebri Breezhaler Inhalation Powder, Hard Capsules 44 mcg. I have had steroid inhalers, but I have discontinued them as oral thrush plagued me to distraction. I do not miss them.

I believe I have Stage 3 COPD though I can not be sure, since I have not been to the COPD clinic at my doctor's surgery for a while now.

I believe that COPD is a disease that can have its progress halted. It is only a disease at the end of the day. The inhaler package is useful. The music therapy is indispensable. I cannot praise it highly enough. It also 'exorcises my demons' for no cost. It gives me seriously deep breathing exercises. It is wonderful. Life-affirming. It is a gorgeous anthem in Eb Major, sailing high on a beautiful mountainside on a lovely day...

Back in reality, I am also overweight as a result of stopping smoking but am now dieting fairly hard. There's no need for me to carry all this lard around. I am also increasing my cardio. Dieting is difficult but each kilo gone makes it easier to breathe when walking around. I am a good cook and I know how I like my food, and I cook when hungry with big eyes! Hard, yes, even worst case conditions, but dieting must be done. My breathing is getting easier. Less weight on the faltering knee. Good enough reason. Nevertheless, it is still frustrating!

Have to go now, it is music time!

## CLINICIAN'S RESPONSE

I thank John for his honest appraisal of his current health status, his outlook on living with his respiratory disease, and in particular how he views his Singing for Lung Health in comparison to his other therapy he receives.

I am a respiratory physiotherapist with a background in pulmonary rehabilitation and an interest in ways patients can self-manage their

chronic respiratory disease, in particular their breathlessness.

I started working in a research role in 2015 and had the opportunity of visiting a Singing for Lung Health (SLH) group. The group was run by a dynamic leader, and the group was very enthusiastic. At the end of the session I knew that there was clinical reasoning and a potential benefit behind SLH. As John says he can hold a note for longer than he once could. The method behind SLH in obstructive respiratory disease is to enable people to extend their out breath through sung phrases. It is interesting that John says he gets serious deep-breathing exercises which are life-affirming. In COPD the last thing you want to do is breathe deeply to full inspiration. Often it is the case that people with COPD have inspired almost all they can when exerting themselves already. They must learn to breathe out more. If this is done effectively then the following breaths in will be more relaxed, larger, comfortable and indeed 'life-affirming', compared to tense, small, petrifying and panicked breaths which people with COPD may experience. A recent prospective case controlled study showed an association between increased phonatory time and reduced obstruction in the airways for individuals with COPD [1]. Conversely, the greater the dysphonia the worse the obstruction according to Forced Expiratory Volume in 1 s (FEV1) [1]. The authors state the main reason for this dysphonia is functional, and; therefore, suggests it is treatable too. The singing leaders in SLH groups have suitable experience and training to deliver groups, providing adapted repertoire to enable COPD patients to extend their phrasing, train their abdominal and postural musculature appropriately, and breathe easier. If delivered effectively, participants do not over exert themselves with increased accessory muscle use. SLH may make breathing more functionally efficient, by training the singers to use their abdominal muscles to provide support to the voiced breath. These muscles must also have coordinated action with the inhalation to release and relax at the right time. Repeated practice of these functional actions is likely to reduce breathlessness on exertion.

In SLH, participants arrive into a group where they are treated as people and not as patients. Individuals work together in a group on a shared artistic task which creates physical, psychological, emotional and social bonding. Participants also report using the techniques taught in the breathing and vocal warm ups, alongside the repertoire to help them cope with their breathlessness in exacerbations, and that it helps their mucous clearance. Previous research has shown that trained experienced singers had a lower residual volume to total lung capacity ratio (RV/TLC) compared to those in training or those with no significant singing experience [2]. Other research has demonstrated that the vocal folds may function differently in COPD to health in order to improve breathing control [3]. Furthermore, a recent service evaluation of British Lung Foundation SLH programmes states that singers reported reduced GP visits and Hospital Admissions after 12 weeks of singing [4]. I can see why John feels that singing may have had an impact on reducing his exacerbations!

The skilled SLH leader will treat by ‘stealth’. To the outsider, SLH may look like any other community singing group for fun. It is superb fun, but many people do not want to be treated. Rather than breathlessness being focused upon, highlighted and described with all the pathophysiology that may increase anxiety, singing leaders provide warm ups, repertoire and relaxation techniques which offer a distraction from breathlessness. John can remember songs when he can not remember other simple immediate things. Songs that can be remembered by participants may transport people to a particular time before they had breathing difficulties and made to feel like themselves again. By participating in SLH, individuals are suddenly part of a new society, where everyone understands their condition. Their COPD is no longer hidden in conspicuousness, but externalised, giving people a voice which they feel they may have lost literally, and in a more holistic sense.

SLH groups are expanding across the UK. There are now over 100 groups across nationally. However, without sufficient, robust evidence for clinical benefit, funding these groups is a problem in the long term. Although there

are some small randomised controlled trials to suggest that SLH benefits quality of life for individuals with COPD [5, 6] there are no large scale trials with significant follow-up periods to justify placing SLH alongside other interventions for COPD in national or international guidelines. Should these trials be completed, it may be possible to provide a cost per quality adjusted life years estimate for SLH which certainly appears to be a high value low cost intervention.

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Please note that, to retain the ‘patient’s voice’, the patient section has not been edited to remove colloquialisms. Colloquialisms have instead been highlighted with quotation marks.

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