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Breathing exercises for specialist care asthma patients: a multicentre randomised trial

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Patients with mild-to-moderate symptomatic asthma improve asthma-related quality of life from physiotherapist delivered breathing exercises (BE), yet no evidence exists for patients with moderate-to-severe asthma.

We completed a multicentre randomised trial in Danish specialist asthma care units (7 hospitals + 1 private clinic) in 2017-20. Eligible patients included Asthma Control Questionnaire (ACQ) 0.8, ≥18 years, ≥2 asthma unit visits. Usual asthma care (UC) including pharmacotherapy was compared to UC+BE. BE included breathing pattern improvements aimed at rhythmic, nasal inspired and diaphragmatic breathing in rest and during activity, and relaxation, given in 3 physiotherapy sessions and added daily home exercise. Primary outcome: 6-month change in Mini-Asthma Quality of Life Questionnaire (AQLQ). Secondary outcomes: lung function, 6-minutes' walk test, Nijmegen Questionnaire, and Hospital Anxiety and Depression Scale. We analyzed data using repeated measures mixed effects models.

193 patients participated (63% female, mean age 52 years, mean AQLQ 4.3, median ACQ 2.2, 83% in GINA step 4-5). AQLQ was completed by 95% at 6-month.
AQLQ improved 0.35 units, 95% confidence interval (CI) 0.07 to 0.62 between groups, favouring UC+BE in intention to treat analysis. Numbers needed to treat was 7.6. The only secondary outcome with significant between group difference was depression, which improved -0.9 units (95%CI -1.67 to -0.14) favouring UC+BE. Asthma exacerbations occurred in 9.6% of UC+BE and 10.2% of UC participants (p=0.79).

BE in addition to specialist asthma care appears to be safe and effective in improving asthma-related quality of life in patients with symptomatic moderate-to-severe asthma.