

**See Article:** Üzmezoğlu B, Altıay G, Özdemir L, et al. The Efficacy of Flutter® and Active Cycle of Breathing Techniques in Patients with Bronchiectasis: A Prospective, Randomized, Comparative Study. Turk Thorac J 2018; 19(3): 103-9.

Özyurt S, Yılmaz Kara B, Özçelik N, et al. Factors Affecting Influenza Vaccination Rates among Patients with Chronic Obstructive Pulmonary Disease in Rize, Turkey. Turk Thorac J 2018; 19(3): 122-6

## Essentials in the Comprehensive Management of Chronic Respiratory Diseases: Airway Clearance and Vaccination

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Bronchiectasis is defined as an irreversible dilatation of a portion of the bronchial tree, with the destruction of elastic and muscular components of their walls, often caused by recurrent or severe infections [1]. This predisposes to reduction in the clearance of mucoid and mucopurulent secretions.

Chronic symptoms and recurrent exacerbations are explained by the vicious cycle hypothesis, with chronic bronchial infection, impaired mucociliary clearance, and bronchial tissue damage being the key components of the disease [2]. Mucociliary clearance is impaired by structural lung damage, airway dehydration, and excess mucus production. The main principles of bronchiectasis treatment are to alleviate acute and chronic bronchial infections and to improve the impaired mucociliary clearance in order to reduce pulmonary symptoms and prevent exacerbations [3]. Presumably, airway clearance techniques (ACTs) should be performed once or twice daily in patients with chronic cough or those with difficulty in expectorating sputum [2]. There are various ACTs, with oscillatory positive expiratory pressure (PEP) therapy being a common practice. Previous evidence has suggested that airway clearance with PEP therapy is beneficial compared with usual care [4]. However, current evidence for the choice of ACTs remains weak because existing studies in the literature are small scaled and poorly comparable owing to methodological differences. Additionally, bronchiectasis is a common but orphan disease, and there are a limited number of original papers in the literature. In this issue of Turkish Thoracic Journal, Üzmezoğlu et al. [5] have reported that both oscillatory PEP device, the Flutter®, and the active cycle of breathing techniques are associated with significant reductions in dyspnea in a 4-week parallel, randomized trial comparing two groups. Moreover, the authors have shown that the Flutter® causes a more pronounced effect on the health-related quality of life and fatigue compared to active cycle of breathing techniques.

Patients with chronic respiratory diseases, such as chronic obstructive pulmonary disease and bronchiectasis develop frequent exacerbations, which are an important cause of reduced quality of life, morbidity, and mortality [6]. Main causes of exacerbations are of infectious origin. Vaccination against influenza can reduce lower respiratory tract infections, number of exacerbations, hospitalizations, and mortality in chronic obstructive pulmonary disease (COPD) patients, particularly in elderly group and patients with concomitant chronic cardiac comorbidities [7]. Pneumococcal vaccination has been shown to reduce community-acquired pneumonia in COPD patients with a severe airflow limitation ( $FEV_1 < 40\%$ ) and below 65 years of age [8]. Therefore, protective strategies, such as routine vaccination against influenza and pneumococci, are directed towards the prevention of acute exacerbations of chronic respiratory diseases. Unfortunately, although risk groups are well-defined and reimbursed in Turkey, vaccination rates still remain low in these risk groups. In this issue of Turkish Thoracic Journal, Özyurt et al. [9] have reported considerably low rates of vaccination for both influenza and pneumococcus in Rize, Turkey. Their results are in accordance with those of other studies reporting low vaccination rates in COPD patients from Turkey [10, 11]. Further studies evaluating the main reasons underlying low vaccination rates in COPD patients in Turkey are warranted.

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