

Publication

Use and inhalation technique of inhaled medication in patients with asthma and COPD: data from a randomized controlled trial

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Author(s) Gregoriano, Claudia; Dieterle, Thomas; Breitenstein, Anna-Lisa; Dürr, Selina; Baum, Amanda; Maier, Sabrina; Arnet, Isabelle; Hersberger, Kurt E.; Leuppi, Jörg D.

Author(s) at UniBasel [Hersberger, Kurt](#) ; [Arnet, Isabelle](#) ; [Dieterle, Thomas](#) ;

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The burden of asthma and COPD among patients is high and people affected are frequently hospitalized due to exacerbations. There are numerous reasons for the lack of disease control in asthma and COPD patients. It is associated with non-adherence to guidelines on the part of the health care provider and with poor inhalation technique and/or non-adherence to the prescribed treatment plan by the patient. This study aims to present data on inhaler technique and its impact on quality of life (QoL) and symptom control in a typical population of patients with chronic lung disease from a randomized controlled trial on medication adherence.; For this cross-sectional analysis, 165 asthma and COPD patients were analyzed. Correct application of inhaler devices was tested using pre-defined checklists for each inhaler type. QoL and symptom control were investigated using COPD Assessment Test (CAT) and Asthma Control Test (ACT). Spirometry was used to measure forced vital capacity (FVC) and forced expiratory volume in one second (FEV₁; %).; Overall, incorrect inhalation technique ranged from 0 to 53% depending on the type of inhaler. COPD patients with incorrect device application had a higher CAT sum score compared to those with a correct device application ($P = .02$). Moreover, COPD patients with incorrect device application were more likely to suffer from cough ($P = .03$) and were more breathless while walking uphill or a flight of stairs ($P = .02$). While there was no significance found in asthma patients, COPD patients who used their devices correctly had a significantly better mean FEV₁; % predicted at baseline compared to those who applied their devices incorrectly ($P = .04$).; Correct inhalation of prescribed medication is associated with improved health status and lung function. These findings should encourage health professionals to provide instructions on correct inhalation technique and to regularly re-evaluate the patients' inhalation technique.; ClinicalTrials.gov: NCT0238672 , Registered 14 February 2014.

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