# Clinical benefit of training asthmatic Libyan patients on how to use metered dose inhalers by using 2Tone trainer

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Bronchial asthma is a serious chronic inflammatory disease of the respiratory system. Aerosol inhalation as a route of drug delivery has become well-known in therapy of asthma. This study was aimed to evaluate if the use of 2Tone helps patients maintain the correct inhalation technique after training and can improve the clinical benefit. 125 Libyan adult asthmatic patients were engaged from Tripoli Medical Centre, 2017. At the first clinical visit; 38, 44 and 43 patients were included as C, VT and 2T groups, respectively. Their IFR through an MDI was measured using an In-Check Dial. Patients in 2T group were trained on how to use the 2Tone Trainer according to its PIL and practiced inhaling through this training aid to familiarize themselves with the different sounds according to the IFR. At the second clinic visit for all the patients was held six weeks later, each patient was assessed in the same manner as on the first visit. Results indicate a significant positive correlation between percent predicted FEV1 and PEFR with all AQLQ domains. Patients in the 2T group showed reduced IFR of about double that in VT group whereas in the C group, there was no significant difference in IFR. However, comparison of IFR between VT vs. 2T groups at visit one showed no statistical significant difference. On the other hand, at visit two, comparison between all the groups showed a highly significant difference. Thus, this study shows that 100% and 29% of the patients in the C and VT groups were inhaling at a high IFR while the 2T group shows only one patient (3%) was inhaling at the high flow rate while the rest of the patients managed to obtain the optimum IFR needed for the MDIs. Thus, the findings strongly recommend the importance of the use of the 2T device to train the patients to slow their IFR.

**Recent Publications:**

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4. Tarsin W, Hshad NA, Elshamli I, Sherif FM. A clinical benefit of training asthmatic patients on how to use metered dose inhalers by using the 2tone trainer in Libya. Journal of Pharmacy and Pharmacology Research 3 (2019): 028-040 DOI: 10.26502/fjppr.0018
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## Biography

Tarsin has his expertise in evaluation of drug delivery reproducibility from different inhalation products using Pharmacokinetic methods and *In-vitro* characterisation of inhaled products focussing on DPI and MDI. He had several Clinical trials using the inhalation profile recorder to determine the total emitted dose and the fine particle mass of different inhalers *in vitro* by means of inhalation simulator (The Electronic Lung). He focused on clinical trials to identify which inhaled product to prescribe to an asthmatic patient and those with Chronic Obstructive Pulmonary Disease (COPD) using the In-Check Dial. He has built this model after years of experience in research, evaluation, teaching and administration in hospital and education institutions in the UK and Libya.