

MDI Medication Administration

Spontaneously Breathing Patient on a FiO₂ >.40 via Oxygen Mask

1. Place patient on a pulse oximetry prior to MDI administration.
2. Assess need to place patient on low flow or high flow nasal prongs in addition to oxygen mask.
3. Verify MDI is not empty. Prime MDI according to specific inhaler instructions if being used for the first time. Shake MDI vigorously 10 times and insert into spacer device.
4. Instruct patient to tilt head back slightly or keep at level and exhale slowly.
5. Remove patient from oxygen mask and insert mouthpiece between patient's teeth and lips or place mask attached to spacer device onto patient's face.
6. Actuate MDI and instruct patient to inhale slowly and deeply so that no whistle is heard during inspiration. Patient may take 6 tidal breaths if unable to take a deep breath and breath hold. Instruct patient to breath hold for 10 seconds or as long as comfortable before exhaling slowly.
7. Reapply oxygen mask and allow SpO₂ to return to previous levels before administering any additional puffs.*

Mechanically Ventilated Patient

1. Place collapsible aerochamber between the flex tube and the HME in the ventilator circuit or in the inspiratory limb of circuit at the patient 'Y' if using active humidity. Do not change ventilator settings.
2. Verify MDI is not empty. Prime MDI according to specific inhaler instructions if it is being used for the first time.
3. Shake MDI vigorously 10 times and insert into the MDI adaptor.
4. **Actuate MDI at the start of inspiration.**
5. Shake MDI and wait a minimum of 15 seconds between each puff.*
6. Collapse aerochamber and secure in closed position.



Manually Ventilated Patient

1. Place collapsible aerochamber between the patient interface (mask or flex tube) and the HME on the manual ventilation unit.
2. Verify MDI is not empty. Prime MDI according to specific inhaler instructions if it is being used for the first time.
3. Shake MDI vigorously 10 times and insert into the MDI adaptor.
4. **Actuate MDI at the start of inspiration.**
5. Shake MDI and wait a minimum of 15 seconds between each puff.*
6. Collapse aerochamber and secure in closed position.



Patient with Uncorked Tracheostomy

1. Assess need to suction patient. Ensure that the inner cannula is clean.
2. Verify MDI is not empty. Prime MDI according to specific inhaler instructions if it is being used for the first time.
3. Shake MDI vigorously 10 times and insert into the trach spacer device.
4. Place trach spacer device onto patient's tracheostomy.
5. Actuate MDI and instruct patient to inhale slowly and deeply so that no whistle is heard during inspiration. Patient may take 6 tidal breaths if unable to take a deep breath and breath hold. Instruct patient to breath hold for 10 seconds or as long as comfortable before exhaling slowly.
6. Shake MDI and wait a minimum of 15 seconds between each puff.*



* MDIs require a wait time of 15 seconds between actuations to allow for consistent dosing. Patients are instructed to wait 30 seconds between puffs as many patients underestimate time. A longer wait time may be desirable to allow for bronchodilation to occur.

