

## Protocol for the use salbutamol and ipratropium metered dose inhalers (MDI's) in mechanically ventilated patients

### Technique

NB There is only information of administering salbutamol and ipratropium MDIs in this way. Other MDI devices should not be administered by this method.

1. Shake MDI.
2. Place canister in actuator of spacer device, situated in the inspiratory limb of the ventilatory circuit.
3. Actuate MDI, immediately before inspiratory flow of ventilator.
4. Wait 2-3 breaths or 30-40 seconds before administering subsequent puffs.
5. Close spacer 5 minutes after dosing.

### Delivering salbutamol via MDI & spacer

- Administer one puff on inspiration (one puff = 100micrograms).
- Wait 30-40 seconds before administering subsequent puffs, up to a total dose of 4 puffs.

Some patients may not respond to this dose, and will require it to be titrated to response. Please refer to medical staff. **MAXIMUM SALBUTAMOL DOSE = 10 PUFFS.**

### Delivering ipratropium via a MDI and spacer

- Administer one puff on inspiration (one puff = 20micrograms).
- Wait 30-40 seconds before administering subsequent puffs, up to a total dose of 4 puffs (usual dose).

**Monitoring** Note peak airway pressure prior to administration of drug. Then, administer 4 puffs as previously described. Note response in peak airway pressure. If there is no response, report to medical staff. Consider increasing the dose of salbutamol provided there are no side-effects e.g.tremor, tachycardia etc.

	Nebuliser dose	Starting MDI dose	Max. MDI dose
Salbutamol	2.5 milligrams	4 puffs	10 puffs
Ipratropium	500 micrograms	4 puffs (20micrograms/puff)	4 puffs

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