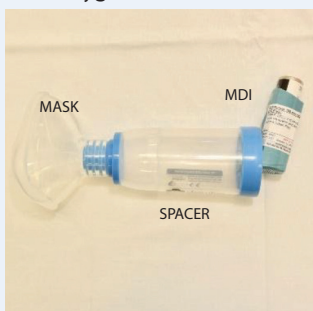


Salbutamol Administration: Metered Dose Inhaler

Salbutamol is beta2-agonist that assists in opening up the airway, by reducing bronchoconstriction through relaxing the smooth muscles. Administration using Metered Dose Inhaler (MDI) and spacer is preferred in children with mild to moderate respiratory distress. It is not appropriate for children who are unable to coordinate taking a deep breath through the spacer.

1 PREPARE

Gather equipment pictured below. Carry out medication safety checks & perform hand hygiene.



2 PROCEDURE

Sit child up. Smaller children may prefer to sit on caregiver's lap.



3

Remove cap from puffer, hold upright and shake well.



4

Attach puffer to spacer. Attach mask to puffer for younger children. Prime the spacer as required*



5

Place mask to child's face, ensuring it covers the bridge of the nose and is well-sealed around the mouth.



6

Release one puff of medication into the spacer. Ask the child to take 4-5 normal breaths.



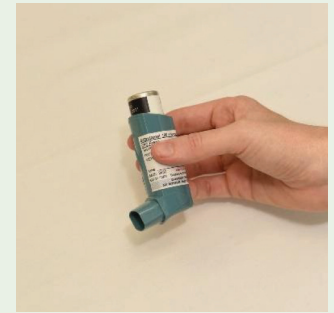
7

Ask the child to breath in and out normally for 4 breaths.



8

Shake the puffer and spacer between each dose. Repeat to give the number of doses, as ordered.



* Not all spacers require priming. Follow manufacturer's instructions. Priming spacer negates electrostatic charge (and optimises drug delivery).

Tips

- Attach a mask to the spacer if the child is not old enough to ensure a good seal over their mouth.
- Encourage children to shake the puffer as a playful way to involve them.
- Where possible parents should be supported and educated by nursing staff to administer salbutamol, as they may be required to carry this out once discharged.








ALERT

Children requiring high flow nasal therapy may require salbutamol to be delivered via another method, as flow must be reduced to facilitate the administration of salbutamol using a MDI. Refer to your local policies and discuss with the treating doctor if your patient requires both high flow nasal therapy and salbutamol.

Guide to salbutamol burst therapy:

For children who present to the Emergency Department with moderate asthma or pre-school wheeze, it is common for them to receive a "burst" of salbutamol. This is where a dose of inhaled salbutamol is given 20 minutes apart for 3 doses. For more information see the [Asthma Flowchart](#) and [Pre-School Wheeze Flowchart](#).

Age	 0 - 12 months	 1-5 years	 5 years and above
Salbutamol MDI	Not Recommended	6 puffs (1 dose)	12 puffs (1 dose)
Time between doses	N/A	3 doses 20 minutes apart	3 doses 20 minutes apart



ALERT

Seek prompt advice from a senior clinician for any child suffering signs of salbutamol toxicity such as agitation, tremor, tachycardia, tachypnoea and rarely, hypertension. Salbutamol toxicity causes hypokalaemia.

For further information:

Checking your paediatric medication dosage is correct:

[Australian Medicines Handbook: Children's Dosing Companion \(QH only\)](#)

Parent Handout:

[Queensland Paediatric Fact Sheet Puffers and Spacers](#)

For further information:

[CHQ Procedure: Medication Administration \(QH only\)](#)

[CHQ Guideline: Nasal High Flow Therapy \(QH only\)](#)

[Queensland Paediatric Guideline: Asthma](#)

[Queensland Paediatric Guideline: Pre-School Wheeze](#)

Videos:

[Administering Medication via Spacer \(SwIM\)](#)

[Asthma and Wheeze Education for Families \(CHQ\)](#)



References:

Children's Health Queensland Hospital and Health Service. (2018, January 9). Medication Administration.

https://qheps.health.qld.gov.au/_data/assets/pdf_file/0037/1807795/proc_01039new.pdf

Children's Health Queensland Hospital and Health Service. (2022, September 21). Asthma - Emergency management in children.

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Children's Health Queensland Hospital and Health Service. (2020, June 25). Nasal High Flow Therapy. Children's Health Queensland Guidelines.

<https://www.childrens.health.qld.gov.au/wp-content/uploads/PDF/guidelines/gdl-70025.pdf>

This Queensland Paediatric Emergency Skill Sheet was developed and revised by the Emergency Care of Children working group Initial work was funded by the Queensland Emergency Department Strategic Advisory Panel.

Skill Sheet Legal Disclaimer

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- Providing care within the context of locally available resources, expertise, and scope of practice.
- Supporting consumer rights and informed decision making in partnership with healthcare practitioners including the right to decline intervention or ongoing management.

- Advising consumers of their choices in an environment that is culturally appropriate and which enables comfortable and confidential discussion. This includes the use of interpreter services where necessary.
- Ensuring informed consent is obtained prior to delivering care.
- Meeting all legislative requirements and professional standards.
- Applying standard precautions, and additional precautions as necessary, when delivering care.
- Documenting all care in accordance with mandatory and local requirements.

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