

3 RESPIRATORY SYSTEM

3.01 ANTI-ASTHMATICS

3.01a BETA₂ AGONIST – ASTHMA, CHRONIC BRONCHITIS & EMPHYSEMA

GENERIC (TRADE) NAME	CAT.	INDICATION/DOSE
Salbutamol Inhaler 100ug/dose [Albuterol] (Ventolin)	EDL	Acute and intermittent episodes of wheezing and asthma, 100-200ug (1-2 puffs) up to 3-4 times daily; child 100ug (1 puff) increased to 200ug (2 puffs) up to 4 times daily if needed.
Salbutamol Sulphate Respirator Solution 0.5% (5mg/ml), Nebules 1mg & 2.5mg (Ventolin) [Albuterol]	EDL	Adult & child > 18 mth, 2.5-5mg up to q6h during acute, severe asthma. Dilute 0.5% (5mg/ml) solution with 3mls of NS before administration.

COMMENT/CAUTIONS:

- If dosing is needed more than once daily in beta₂ agonists alone regimen, consider adjunct therapy.
- Inadequate response may be due to poor inhalation technique. An aerochamber or spacer device may be useful.
- **Dry powder devices** such as turbuhalers or accuhalers are available for patients with co-ordination difficulties, but should be considered after MDIs and spacers have been tried.
- **S/E** (minimal with inhaled preparations): tachycardia, tremor, nervousness, hypokalaemia, muscle cramp, and impaired glucose tolerance.
- See Appendix I for the choice of inhaler devices for children.

3.01b OTHER BRONCHODILATORS

GENERIC (TRADE) NAME	CAT.	INDICATION/DOSE
Epinephrine Inj 1mg/ml [Adrenaline 1:1000]	MSL EDL	Anaphylaxis: undiluted SC/IM, adult 500ug (0.5ml), 6-12 yo 250ug (0.25ml), 6 mth-6 yo 120ug (0.12ml), < 6 mth 50ug (0.05ml).

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GENERIC (TRADE) NAME	CAT.	INDICATION/DOSE
Ipratropium Bromide Inhaler 20ug/dose (Atrovent Metered Aerosol)	EDL	For chronic obstructive pulmonary disease or chronic asthma: adult, 20-40ug (1-2 puffs) 3-4 times daily, max 80ug (4 puffs) 4 times daily; child < 6 yo 20ug (1 puff) and 6-12 yo 20-40ug (1-2 puffs), 3 times daily.
Ipratropium Bromide Nebuliser Solution 0.0125% (250ug/2ml) & 0.025% (500ug/2ml) (Atrovent)		100-500ug (0.4-2ml) up to 4 times daily; child 3-14 yo 100-500ug up to three times daily.

COMMENT/CAUTIONS:

- **Ipratropium** is useful for bronchitis or emphysema, and in the elderly and in young children.

3.02 CORTICOSTEROIDS – PROPHYLAXIS OF ASTHMA

GENERIC (TRADE) NAME	CAT.	INDICATION/DOSE
Beclomethasone Dipropionate Inhaler 100ug/dose (Becotide 100)	MSL EDL	Adult 200ug (2 puffs) twice daily, if severe max 800ug (8 puffs) daily then reduced; child 100ug (1 puff) 2-4 times daily or 100-200ug (1-2 puffs) twice daily.
Beclomethasone Dipropionate Inhaler 250ug/dose (Becloforte)	NF EDL	Adult 500ug (2 puffs) twice daily or 250ug (1puff) 4 times daily, max 500ug (2 puffs) 4 times daily.
Budesonide 50ug/dose Inhaler, or 200ug/dose Turbuhaler/Inhaler (Pulmicort/Inflammid)		Adult: 200ug twice daily, reduced if well-controlled to 200ug daily, in severe asthma increased to max 1.6mg daily; child 50ug twice daily, in severe asthma increased to max 800ug daily.
Prednisolone Tablet 5mg, 25mg & 50mg	MSL EDL	For acute severe asthma, adult 30-60mg orally for 1-3 days; child < 1 yo 1-2mg/kg daily, 1-5 yo 20mg daily, for 1-3 days.

COMMENT/CAUTIONS:

- **REGULAR DOSING IS ESSENTIAL.** Consider aerochamber or spacer devices to minimise side effects and increase dosing efficiency.
- Administering the bronchodilator before the corticosteroid inhalation preparation may enhance dosing.
- **S/E:** hoarseness, candidiasis of mouth and throat (reduce by using spacer device, or rinsing/wiping mouth with water after inhalation), glaucoma, paradoxical bronchospasm, Suppression of adrenal cortex may occur at **beclomethasone** doses of over 1500ug daily.

3.03 ANTIHISTAMINES & ANTIALLERGICS

GENERIC (TRADE) NAME	CAT.	INDICATION/DOSE
Cetirizine HCL Tab 10mg (Zyrtec)	NF	Adult and child > 6 yo, 10mg daily or 5mg twice daily; Child 2-6 yo, for hay fever, 5mg daily or 2.5mg twice daily.
Chlorpheniramine Maleate Tab 4mg & Suspension 2mg/5ml (Piriton)	EDL	Child 1-2 yo 1mg twice daily; 2-5 yo 1mg, 6-12 yo 2mg, adult 4mg, given 3-4 times daily. <i>May cause drowsiness.</i>
Diphenhydramine Inj 50mg/ml (Benadryl)		Hypersensitivity reactions, motion sickness, antidyskinetic: adult IM/IV 10-100mg, max daily dose 400mg; child >10kg, 5mg/kg/DAY IM/IV; max 300mg/DAY.
Hydroxyzine HCl Tab 25mg (Atarax)		Pruritus, initially 25mg at night, up to 3-4 times daily. <i>May cause drowsiness.</i>
Loratadine Tab 10mg (Clarityne)	MSL	10mg daily.
Loratadine 5mg/5ml Syrup (Clarityne), 100ml		Child 2-12 yo, <30kg, 5ml daily; >30kg, 10ml daily.

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GENERIC (TRADE) NAME	CAT.	INDICATION/DOSE
Promethazine HCl Inj 25mg/ml (Phenergan)	MSL EDL	IM 25-50mg, max 100mg. Child 5-10 yo 6.25-12.5mg. Slow IV in emergencies 25-50mg, max 100mg (max rate 25mg/min). Inject IM undiluted deep into a large muscle mass. Inject slow IV undiluted or dilute 25mg with 10ml WFI over 1-2 min.
Promethazine HCl Tab 25mg & Syrup 5mg/5ml (Phenergan)	EDL	Adult, 25-50mg daily in divided doses or single dose at night; max 75mg daily. Child, 1-5 yo 5-15mg daily, 6-10 yo 10-25mg daily. <i>May cause drowsiness.</i>

COMMENT/CAUTIONS:

- **Antihistamines** may cause drowsiness, advice patients not to drive or operate machinery if affected. They potentiate the effects of alcohol.

3.04 COUGH & COLD REMEDIES

GENERIC (TRADE) NAME	CAT.	INDICATION/DOSE
Diphenhydramine Expectorant Paediatric (Benadryl 1:2)	NF	Child 2-6 yo 6.25mg every 4-6 hours, max 37.5mg/DAY; 6-12 yo 12.5mg q4-6h, max 75mg/DAY.
Diphenhydramine 14mg Compound Adult Expectorant (Benadryl)	NF	Adult 5-10ml, child 1-5 yo 2.5ml, 6-12 yo 5ml, usual 3-4 times daily for chesty cough.

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GENERIC (TRADE) NAME	CAT.	INDICATION/DOSE
* Pholcodine Linctus 5mg/5ml (Pavachol-D)	EDL	For unproductive and persistent cough: adult 5-15ml (1-3 teaspoonfuls) up to 4 times daily; child 6-12 yo 5ml (1 teaspoon) up to 4 times daily, 3-5 yo 5ml up to 3 times daily, 1-2 yo 2.5ml up to 4 times daily.

COMMENT/CAUTIONS:

- **Pholcodine** may cause constipation, monitor chronic use also for abuse.
- **DRUG-INDUCED DRY COUGHS:** All therapeutic aerosols may cause coughs by local irritant effect, ACE inhibitors can also produce the adverse effect of persistent dry cough. Other factors may include occupational or environmental exposure to irritant aerosolised chemicals or dust particles, consider asthma or allergic reactions.

3.05 SYSTEMIC NASAL DECONGESTANTS

GENERIC (TRADE) NAME	CAT.	INDICATION/DOSE
Pseudoephedrine Hydrochloride Tab 60mg (Sudafed)		Nasal congestion, adult 60mg (one tablet) up to 4 times daily, child 2-6 yo 15mg (quarter tablet) 3 times daily, 6-12 yo 30mg (half tablet) 3 times daily.

COMMENT/CAUTIONS:

- **Pseudoephedrine** should be used with caution in diabetes, hypertension, hyperthyroidism, and ischaemic heart disease, and **AVOIDED** in patients taking monoamine oxidase inhibitors.

NOTE. For Topical Nasal Decongestants, and Throat and Mouth Preparations, see Chapter 10 Ear, Nose and Throat Section 10.02 Topical Nasal Preparations & Section 10.04 Medicines for Oral Ulceration & Inflammation.