

ASTHMA TREATMENTS: INHALATIONS (part 1 of 2)

Brand & Company	Generic	Strength	Formulations	Class	Dosage
ADVAIR DISKUS (GlaxoSmithKline)	fluticasone propionate + salmeterol	100/50 250/50 500/50 (mcg)	dry pwd	steroid + long-acting β_2 -agonist	<4yrs: not recommended. 4-11yrs: 1 inh of 100/50 twice daily. ≥12yrs: initially 1 inh of 100/50 or 250/50 twice daily; max 1 inh of 500/50 twice daily.
ADVAIR HFA (GlaxoSmithKline)		45/21 115/21 230/21 (mcg)	MDI		<12yrs: not recommended. ≥12yrs: not currently on inhaled steroid: 2 inh 45/21 or 115/21 twice daily. Already on inhaled steroid: see literature. Max 2 inh 230/21 twice daily.
Albuterol (various)	albuterol sulfate	0.5%	soln	β_2 -agonist	Children: use other forms Adults: use nebulizer. 2.5mg 3-4 times daily.
		0.083%	soln		<4yrs: not recommended.
		90mcg	MDI		≥4yrs: 2 inh every 4-6 hrs as needed; 1 inh every 4 hrs may suffice. EIB*: 2 inh 15 mins before exercise
ALUPENT (Boehringer Ingelheim)	metaproterenol sulfate	0.65mg	MDI	β_2 -agonist	Children: not recommended. Adults: 2-3 inh every 3-4 hrs; max 12 inh daily.
		0.4% 0.6%	soln		Children: not recommended. Adults: use intermittent positive pressure breathing apparatus (IPPB): 2.5mL 3-4 times daily; up to every 4 hrs.
ALVESCO (Sunovion)	ciclesonide	80mcg 160mcg	MDA	steroid	Children: not recommended Adults: previously on bronchodilators alone: initially 80mcg twice daily, max 160mcg twice daily. Previously on inhaled corticosteroids: initially 80mcg twice daily; max 320mcg twice daily. Previously on oral corticosteroids (see literature): 320mcg twice daily. Rinse mouth after use; avoid eyes.
ASMANEX TWISTHALER (Merck)	mometasone furoate	110mcg 220mcg	dry pwd	steroid	<4yrs: not recommended. 4-11yrs: 110mcg once in PM; max 110mcg/day. ≥12yrs: previously on bronchodilators alone or inhaled steroids: Initially 220mcg once in PM; max 440mcg/day (as 2 inh once daily or 1 inh twice daily). Previously on oral steroids: Initially 440mcg twice daily; max 880mcg/day.
ATROVENT HFA (Boehringer Ingelheim)	ipratropium bromide	17mcg	MDI	anticholinergic	Children: not recommended. Adults: 2 inh 4 times daily; max 12 inh/day.
		0.02%	soln		Children: not recommended. Adults: 500micrograms orally by nebulization 3-4 times daily; separate doses by 6-8 hrs.
Cromolyn (various)	cromolyn sodium	20mg/2mL	soln	mast cell stabilizer	<2yrs: not recommended. ≥2yrs: use nebulizer. 20mg 4 times a day.
DULERA (Merck)	mometasone furoate + formoterol fumarate	100/5 200/5 (mcg)	MDI	steroid + long-acting β_2 -agonist	Children: not recommended. Adults: Previously on medium dose of steroid: use 100/5; previously on high dose of steroid: use 200/5. For both: Two inhalations twice daily.
FLOVENT DISKUS (GlaxoSmithKline)	fluticasone propionate	50mcg 100mcg 250mcg	dry pwd	steroid	<4yrs: not recommended. 4-11yrs: Previously on bronchodilators alone or on inhaled corticosteroids: initially 50mcg twice daily; max 100mcg twice daily. ≥11yrs: Previously on bronchodilators alone: initially 100mcg twice daily; max 500mcg twice daily. Previously on inhaled corticosteroids: initially 100-250mcg twice daily; max 500mcg twice daily. Previously on oral corticosteroids (wean gradually): initially 500-1000mcg twice daily; max 1000mcg twice daily.
FLOVENT HFA (GlaxoSmithKline)	fluticasone propionate	44mcg 110mcg 220mcg	MDI	steroid	<4yrs: not recommended. 4-11yrs: 88 mcg twice daily. ≥12yrs: previously on bronchodilators alone: Initially 88mcg twice daily; max: 440mcg twice daily. Previously on inhaled steroids: Initially 88-220mcg twice daily; max 440mcg twice daily. Previously on oral steroids: Initially 440mcg twice daily; max 880mcg twice daily.
FORADIL AEROLIZER (Merck)	formoterol fumarate	12mcg	dry pwd	long-acting β_2 -agonist	<u>Asthma Maintenance</u> <5yrs: not recommended ≥5yrs: 1 inh every 12 hrs; max 1 inh twice daily. Prevention of EIB ≥5yrs: 1 inh at least 15mins before exercise; max 1 inh/12 hrs.

(continued)

ASTHMA TREATMENTS: INHALATIONS (part 2 of 2)

Brand & Company	Generic	Strength	Formulations	Class	Dosage
MAXAIR AUTOHALER (Medicis)	pirbuterol acetate	200mcg	MDI	β_2 -agonist	Children: not recommended. Adults: 1–2 inh every 4–6 hrs; max 12 inh/day.
Metaproterenol (various)	metaproterenol sulfate	5%	soln	β_2 -agonist	< 6yrs: not recommended. 6–12yrs: use nebulizer. 0.1–0.2mL 3–4 times daily, up to every 4 hrs. ≥12yrs: 3–4 times daily (see literature).
PROAIR HFA (Teva)	albuterol sulfate	90mcg	MDA	β_2 -agonist	<u>Prevention & Treatment</u> < 4yrs: not recommended ≥4yrs: 2 inh every 4–6 hrs; 1 inh every 4 hrs may suffice. <u>Prevention of EIB</u> ≥4yrs: 2 inh 15–30mins before exercise.
PROVENTIL HFA (Merck)			MDA		<u>Prevention & Treatment</u> < 4yrs: use other forms. ≥4yrs: 2 inh every 4–6 hrs; 1 inh every 4 hrs may suffice. <u>Prevention of EIB</u> ≥4yrs: 2 inh 15–30mins before exercise.
PULMICORT FLEXHALER (AstraZeneca)	budesonide	90mcg 180mcg	dry pwd	steroid	< 6yrs: not recommended. 6–17yrs: initially 180mcg twice daily; may consider starting at 360mcg twice daily; max 360mcg twice daily. ≥18yrs: initially 360mcg twice daily; 180mcg twice daily may suffice; max 720mcg twice daily.
PULMICORT RESPULES (AstraZeneca)		0.25mg/2mL 0.5mg/2mL 1mg/2mL	susp		< 6months: not recommended 6–12months–8yrs: see literature. 12months–8yrs: previously on bronchodilators alone: 0.5mg/day once daily or in 2 divided doses. Previously on inhaled corticosteroids: 0.5mg/day once daily or in 2 divided doses; max 1mg/day. Previously on oral cortico-steroids: 1mg/day once daily or in 2 divided doses. Adults: use Flexhaler.
QVAR (Teva)	beclomethasone dipropionate	40mcg 80mcg	MDI	steroid	< 5yrs: not recommended. ≥5–11yrs: initially 40mcg twice daily; max 80mcg twice daily. Adults: previously on bronchodilators alone: Initially 40–80mcg twice daily; previously on inhaled corticosteroids: Initially 40–160mcg twice daily. Max 320mcg twice daily.
SEREVENT DISKUS (GlaxoSmithKline)	salmeterol xinafoate	50mcg	dry pwd	long-acting β_2 -agonist	<u>Asthma</u> < 4yrs: not recommended. ≥4yrs: 1 inh twice daily. <u>Prevention of EIB</u> ≥4yrs: 1 inh at least 30mins before exercise; max 2 doses/day.
SYMBICORT (AstraZeneca)	budesonide + formoterol fumarate dihydrate	80/4.5 160/4.5 (mcg)	MDI	steroid + long-acting β_2 -agonist	For all: 2 inh twice daily (AM & PM). (see literature)
VENTOLIN HFA (GlaxoSmithKline)	albuterol sulfate	90mcg	MDA	β_2 -agonist	<u>Prevention & Treatment</u> < 4yrs: not recommended. ≥4yrs: 2 inh every 4–6 hours; 1 inh every 4 hours may suffice. <u>Prevention of EIB</u> ≥4yrs: 2 inh 15–30mins before exercise.
XOPENEX (Sunovion)	levalbuterol HCl	0.31mg/3mL 0.63mg/3mL 1.25mg/3mL	soln	β_2 -agonist	< 6 yrs: not recommended. 6–11 yrs: 0.31mg by nebulization 3 times daily; max 0.63mg 3 times daily. >12yrs: initially 0.63mg 3 times daily at 6–8 hr intervals; may increase to 1.25mg 3 times daily.
XOPENEX CONCENTRATE (Sunovion)		1.25mg/0.5mL			
XOPENEX HFA (Sunovion)	levalbuterol tartrate	45mcg	MDI		<u>Prevention & Treatment</u> < 4yrs: not recommended. ≥4yrs: 2 inh every 4–6 hours; 1 inh every 4 hours may suffice.

NOTES

dry pwd = dry powder for inhalation; MDI = metered-dose inhaler; soln = solution for inhalation; MDA = metered dose aerosol;

susp = suspension for inhalation

*EIB = exercise induced bronchospasm

(Rev. 5/2013)