



4. ALBUTEROL (PROVENTIL®, VENTOLIN®)

a) Pharmacology

- (1) Synthetic sympathomimetic amine (a type of stimulant)
- (2) Stimulates beta-2 adrenergic receptors of the bronchioles
- (3) Minimal effect on blood pressure
- (4) Minimal cardiac effects
- (5) Main effect is bronchodilation.
- (6) It may cause some vasodilation as evidenced by headache or flushing.

b) Pharmacokinetics

- (1) Bronchodilation begins within 5–15 minutes after inhalation.
- (2) Peak effect occurs in 30–120 minutes.
- (3) Duration of action is usually 3–4 hours.

c) Indications

- (1) To reverse bronchospasm (wheezing)
- (2) Hyperkalemia


d) Contraindications

Known hypersensitivity

e) Adverse Effects

Tachycardia, palpitations, peripheral vasodilation, tremors, nervousness, headache, sore throat, PVCs, nausea, and vomiting

f) Precautions

- (1) Bronchospasm may worsen in rare situations due to patient tolerance or hypersensitivity.
- (2) If respirations worsen, consider discontinuing use.
- (3) Should be used with caution in patients with hyperthyroidism or coronary artery disease.
- (4) Use with caution when administering to patients taking MAO inhibitors or tricyclic antidepressants, which may be potentiated by albuterol.
- (5)  Medical direction required before administering to pregnant patient or patient having a cardiac history.





g) Dosage

Bronchospasm

- (1) Adult: 2.5 mg by nebulized aerosol connected to 6–8 lpm of oxygen; may repeat one time
- (2) Pediatric: May repeat one time; connect to 6–8 lpm of oxygen
 - (a) **Age 2 or older:** 2.5 mg by nebulized aerosol
 - (b) **Age less than 2 years:** 1.25 mg by nebulized aerosol

Hyperkalemia

- (3)  Adult: 20 mg (if available) by nebulized aerosol connected to 6–8 lpm of oxygen
- (4)  Pediatric
 - (a) **Age 2 or older:** 2.5 mg by nebulized aerosol
 - (b) **Age less than 2 years:** 1.25 mg by nebulized aerosol