

# Pulmolin®

Salbutamol

## Description

Salbutamol (Pulmolin®) is a selective  $\beta_2$  adrenergic stimulant. Therefore, when accepted in therapeutic doses, it produces an effective bronchodilation without any marked cardiac stimulation.

## Mode of action

Salbutamol is a selective  $\beta_2$  adrenoceptor agonist with effects on smooth and skeletal muscle. The drug binds with receptor and converts ATP to cyclic-AMP, which activates protein kinase. This leads to phosphorylation of proteins, which ultimately reduces availability of ionized intracellular calcium. The consequent inhibition of actin-myosin linkage causes relaxation of smooth muscle.

## Pharmacokinetics

After oral administration, salbutamol is well absorbed from the gastrointestinal tract and undergoes considerable first-pass metabolism to the phenolic sulphate. Both unchanged drug and conjugate are excreted primarily in the urine. The bioavailability of orally administered salbutamol is about 50%. Salbutamol is bound to plasma proteins to the extent of 10%.

## Composition

**Pulmolin® 4 mg Tablet:** Salbutamol Sulfate BP equivalent to Salbutamol 4 mg.

**Pulmolin® 60/100 ml Syrup:** Each 5 ml contains Salbutamol Sulphate BP 2.4 mg equivalent to Salbutamol 2 mg.

## Indications

Acute and chronic bronchial asthma, chronic bronchitis, bronchospasm, reversible airways obstruction.

## Dosage & administration

Adults: 4 mg (elderly and sensitive patients, initially 2 mg) 3-4 times daily; maximum single dose 8 mg. Children: Under 2 years, 100 mcg/kg body weight 4 times daily; 2-6 years, 1-2 mg 3-4 times daily; 6-12 years, 2 mg 3-4 times daily.

## Contraindications

Hypersensitivity to salbutamol or other ingredients of the preparation.

## Side effects

Fine tremor (particularly in hands), muscle cramps, nervous tension, headache, palpitations, hypersensitivity reactions e.g. urticaria and angioedema.

## Use in pregnancy & lactation

Salbutamol should be used in pregnancy only if the expected benefit to the mother is greater than any possible risk to the foetus. As salbutamol is probably secreted in breast milk, its use in nursing mother requires careful consideration.

## Precautions

Salbutamol and non-selective beta-blocking drugs, such as propranolol, should not usually be prescribed together. Salbutamol should be administered cautiously to patients with thyrotoxicosis. Salbutamol can induce reversible metabolic changes such as increased blood glucose levels.

## Drug interactions

No potentially hazardous interactions have been reported, but treatment with diuretics may augment the hypokalemia that occurs with large doses of salbutamol.

## Overdosage

Overdose of salbutamol with doses between 5 and 240 mg in patients produces no fatalities. The common symptoms are tremor, flushing, agitation and palpitations due to sinus tachycardia. The preferred antidote for overdose with salbutamol is a cardio-selective beta-blocking drug but beta-blocking drugs should be used with caution in patients with a history of bronchospasm. Hypokalemia may occur following overdose with salbutamol. Therefore, serum potassium levels should be monitored.

## Storage

Store in a cool and dry place, protected from light.

## Packaging

**Pulmolin® 4 mg Tablet:** Each carton contains 10X10 tablets in blister pack.

**Pulmolin® 60 ml Syrup:** Each PET bottle contains 60 ml syrup.

**Pulmolin® 100 ml Syrup:** Each PET bottle contains 100 ml syrup.



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