

# ADRENALINE INJECTION BP 0.1% (1 mg/ml )

**POM**

## COMPOSITION :

Each ml contains :  
Adrenaline Acid Tartrate BP  
Eq. to Adrenaline 1 mg  
Water for Injections BP Q.S.

## THERAPEUTIC CLASS :

Beta-adrenoceptor agonist

## INDICATIONS :

Adrenaline injection is usually only given in cases of extreme emergency.  
Adrenaline may be used following a heart attack, or to make the heart beat if it has stopped.  
Adrenaline is also used in the emergency treatment of severe allergic reactions to insect bites or stings, medicines, foods or other substances. It may also be given during acute asthma attacks for severe breathing difficulties.

## CONTRAINDICATIONS :

Contraindications are relative as this product is intended for use in life-threatening emergencies.  
Adrenaline should not be used in the presence of cardiac dilation.  
Adrenaline should not be used in patients with certain types of arrhythmia, cerebral arteriosclerosis and where vasopressor drugs are contraindicated eg. thyrotoxicosis and in obstetrics where maternal blood pressure is in excess of 130/80.  
Adrenaline is also contraindicated in shock (other than anaphylactic shock), in patients with organic brain damage or during general anaesthesia with halogenated hydrocarbons or cyclopropane.  
Adrenaline Injection should not be used in children with bodyweight below 30 kg.

## SPECIAL PRECAUTIONS :

Adrenaline Injection contains sodium metabisulfite, a sulfite, which may itself cause allergic-type reactions in certain susceptible persons. The alternatives to using adrenaline in a life-threatening situation may not be satisfactory. The presence of a sulfite in this product should not deter administration for serious allergic reactions.  
**DO NOT INJECT INTRAVENOUSLY** as cerebral haemorrhage may occur due to a sharp rise in blood pressure.  
Use with caution in patients with ventricular fibrillation, pre-fibrillatory rhythm, tachycardia, myocardial infarction, phenothiazine-induced circulatory collapse and prostatic hypertrophy.  
Adrenaline causes ECG changes including a decrease in T-wave amplitude in all leads of normal persons.  
Angular pain may be induced by adrenaline in patients with coronary insufficiency.  
Administer with caution to the elderly, and to individuals with diabetes, cardiovascular disease, hypertension, narrow angle glaucoma, hyperthyroidism and psychoneurosis. In patients with Parkinsonism the drug increases rigidity and tremor.  
Syncope has occurred following administration to asthmatic children.  
*Use in Pregnancy: Category A:* Adrenaline has been given to a large number of pregnant women and women of childbearing age without any proven increase in the frequency of malformations or other direct or indirect harmful effects on the foetus having been observed.  
Adrenaline may delay the second stage of labour by inhibiting contractions of the uterus.  
*Use in Lactation:* Adrenaline is excreted in breast milk.

## ADVERSE EFFECTS :

Common symptomatic adverse events include anxiety, restlessness, tachycardia, respiratory difficulty, tremor, weakness, dizziness, headache, dyspnoea, cold extremities, pallor, sweating, nausea, vomiting, sleeplessness, hallucinations, palpitations, fear and flushing or redness of face and skin. Psychomotor agitation, disorientation, impaired memory and psychosis may occur.  
Potentially fatal ventricular arrhythmias, including ventricular fibrillation may occur and severe hypertension may lead to cerebral haemorrhage and pulmonary oedema.

## PHARMACOLOGICAL ACTION :

Adrenaline is a sympathomimetic drug, acting on both alpha and beta receptors. Major effects are increased systolic

blood pressure, reduced diastolic pressure, tachycardia, hyperglycaemia and hypokalaemia. It is a powerful cardiac stimulant. It has vasopressor properties, an antihistaminic action and is a bronchodilator.

**Pharmacokinetics :** Its action is rapid in onset and of short duration. Adrenaline is rapidly distributed to the heart, spleen, several glandular tissues and adrenergic nerves, and it is rapidly metabolised in the liver and tissues. It crosses the placenta and is excreted in breast milk. It is approximately 50% bound to plasma proteins.

**DOSAGE AND ADMINISTRATION :**

For subcutaneous or intramuscular use. Do not inject intravenously.

In emergency situations, adrenaline may be injected very slowly intravenously but only as the dilute solution of 1:10,000.

Do not use if the injection is brown or contains a precipitate.

When used in anaphylactic shock volume replacement is an essential concomitant treatment since effective intravascular volume may have been depleted by increased vascular permeability in anaphylaxis.

For the relief of anaphylactic shock and life threatening angioneurotic oedema, adrenaline should be administered by intramuscular injection. For acute allergic reactions due to insect stings etc. either the intramuscular or subcutaneous route may be used.

**Adults :** 0.3 to 0.5 mL (0.3-0.5mg), administered slowly. The dose may be repeated every 10 minutes if necessary. In severe reactions the dose can be increased to 1mL.

**Elderly patients :** The usual adult dose is used but should be given very slowly with caution as elderly patients may be more sensitive to adrenaline.

**Children (up to 12 years of age) :** 100 - 500ug depending on age, or 50ug for infants under 1 year

**OVERDOSAGE & IT'S TREATMENT :**

**Effects :** Overdosage or inadvertent intravascular injection of adrenaline may cause cerebral haemorrhage resulting from a sharp rise in blood pressure. Fatalities may also result from pulmonary oedema because of peripheral vascular constriction together with cardiac stimulation.

Cardiac arrhythmias may lead to ventricular fibrillation and death.

Repeated administration of adrenaline can result in severe metabolic acidosis because of elevated blood concentration of lactic acid.

**Treatment :** Adrenaline is rapidly inactivated in the body and treatment of acute toxicity is mainly supportive. If necessary, the combined alpha and beta mediated effects of adrenaline may be counteracted by labetalol. Individually, alpha mediated effects may be counteracted by phentolamine whilst beta mediated effects may be counteracted by beta blocking agents.

**DRUG INTERACTION :**

Sympathomimetics like ventolin & isoprenaline cause additive effects.

Beta-blockers antagonize therapeutic effects of adrenaline.

Digitalis potentiates the proarrhythmic effects of adrenaline.

Phenothiazine causes a paradoxical decrease in blood pressure.

Monoamine oxidase inhibitors (MOAIs) potentiate the cardiovascular effects of adrenaline.

**PRESENTATION :**

Ampoule pack

**STORAGE CONDITION :**

Store at 25°C. Do not refrigerate. Protect from light.

**DATE OF PUBLICATION :**

01.12.2015

Manufactured in India by:



Lincoln House, B/h. Satyam Complex,  
Science City Road, Sola, Ahmedabad-380060.

E-mail : [info@lincolnpharma.com](mailto:info@lincolnpharma.com)

Website : [www.lincolnpharma.com](http://www.lincolnpharma.com)

IRAO-E-P11-12/15

Packing Insert : 102 x 145 mm Original Size  
(Back)