

Data Sheet

Anapen[®] 500, Anapen[®] 300 and Anapen[®] 150

Adrenaline 500 µg/0.3 mL, Adrenaline 300 µg/0.3 mL and Adrenaline 150 µg/0.3 mL

Anapen[®] 500 µg Adrenaline Auto-Injector, Anapen[®] 300 µg Adrenaline Auto-Injector and Anapen[®] 150 µg Adrenaline Auto-Injector

Auto-Injector for Intramuscular Injection of Adrenaline for the Emergency Treatment of Anaphylactic Reactions.

Anapen[®] 500 µg/0.3 mL delivers a single 500 microgram (µg) intramuscular dose of adrenaline from Adrenaline Injection 1:600 USP (0.3 mL).

Anapen[®] 300 µg/0.3 mL delivers a single 300 microgram (µg) intramuscular dose of adrenaline from Adrenaline Injection 1:1000 USP (0.3 mL).

Anapen[®] 150 delivers a single 150 microgram (µg) intramuscular dose of adrenaline from Adrenaline Injection 1:2000 USP (0.3 mL).

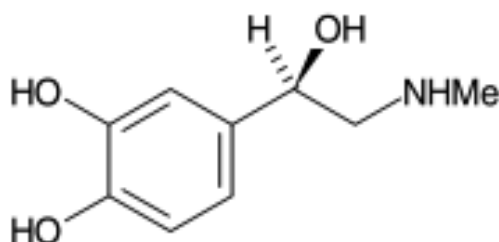
Description

Adrenaline is (*R*)-1-(3,4-dihydroxyphenyl)-2-methylaminoethanol.

Empirical Formula: C₉H₁₃NO₃.

CAS No: 51-43-4.

Adrenaline chemical structure is:



It is a white odourless crystalline powder, soluble in solutions of mineral acids and alkalis.

The Anapen[®] 500, Anapen[®] 300 and Anapen[®] 150 are auto-injector devices that provide adrenaline for intramuscular auto-injection in a sterile solution prepared from adrenaline with the aid of hydrochloric acid in Pyrogen Free Water. Anapen[®] 500, Anapen[®] 300 and Anapen[®] 150 contain 1 mL Adrenaline Injection 1:600 USP, 1:1000 USP and 1:2000 USP, respectively, and are designed to deliver a single 0.3 mL dose of 500 µg, 300 µg or 150 µg.

Each 0.3 mL of solution in Anapen[®] 500 contains: *Active*; 500 µg adrenaline, *Inactive*; 1.8 mg sodium chloride, 510 µg sodium metabisulfite and hydrochloric acid to adjust pH and water for injections to 0.3 mL.

Each 0.3 mL of solution in Anapen[®] 300 contains: *Active*; 300 µg adrenaline, *Inactive*; 1.8 mg sodium chloride, 510 µg sodium metabisulfite and hydrochloric acid to adjust pH and water for injections to 0.3 mL.

Each 0.3 mL of solution in Anapen[®] 150 contains: *Active*; 150 µg adrenaline, *Inactive*; 1.8 mg sodium chloride, 510 µg sodium metabisulfite and hydrochloric acid to adjust pH and water for injections to 0.3 mL.

Pharmacology

Adrenaline is a sympathomimetic drug, action on both alpha and beta receptors. Major effects are increased systolic blood pressure, reduced diastolic pressure, hyperglycaemia, tachycardia, and hypokalaemia. It is a powerful cardiac stimulant. It has vasopressor properties, an antihistaminic action and is a bronchodilator. 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.

Indications

For the emergency treatment of serious allergic reactions or anaphylaxis caused by peanuts or other foods, drugs, insect bites or stings and other allergens.

Anapen[®] 500, is intended for use in patients with a mean weight of 60 kg, or more or patients at high risk of severe anaphylaxis where the 300 micrograms dose may not be sufficient.

Anapen[®] 500 and Anapen[®] 300 should not be used in children with bodyweight below 30 kg

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 e.g. 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.

Anapen[®] 500 and Anapen[®] 300 should not be used in children with bodyweight below 30 kg. Anapen[®] 150 is available for that group.

Precautions

Anapen[®] 500, Anapen[®] 300 and Anapen[®] 150adrenaline Auto-Injectors contain 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, prefibrillatory 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.

Adrenaline can cause potentially fatal ventricular arrhythmias including fibrillation, especially in patients with organic heart disease or those receiving other drugs that sensitize the heart to arrhythmias (see **Interactions with Other Drugs**).

Anginal 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.

Anapen[®] 500, Anapen[®] 300 and Anapen[®] 150 should not be injected into the hands, feet, ears, nose, buttocks or the genitalia as it may result in loss of blood flow to the affected area. If accidental injection into one of these areas occurs, specialist medical advice must be sought immediately. Ensure the product is kept well clear of the face.

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.

Interactions with Other Drugs

Central Nervous System and Other Drugs

The effects of adrenaline may be potentiated by tricyclic antidepressants, thyroid hormones, monoamine oxidase inhibitors and some antihistamines (eg. diphenhydramine, dexchlorpheniramine).

Other Sympathomimetic Agents

Adrenaline should not be administered with other sympathomimetic agents because of the danger of additive effects and increased toxicity.

Alpha-adrenergic Blocking Agents

Alpha-adrenergic blocking agents such as ergot alkaloids and phentolamine can reverse the pressor response to adrenaline.

Beta-adrenergic Blocking Agents

Patients taking non-selective beta-blocking drugs when administered adrenaline for the treatment of an anaphylactic reaction may experience severe hypertension and bradycardia. Propranolol inhibits the bronchodilator effect of adrenaline. The risk of cardiac arrhythmias is higher when adrenaline is given to patients receiving digoxin or quinidine.

General Anaesthetics

Halothane and other anaesthetics such as cyclopropane and trichloroethylene increase the risk of adrenaline-induced ventricular arrhythmias and acute pulmonary oedema if hypoxia is present.

Hypoglycaemic Agents

Adrenaline-induced hyperglycaemia may lead to loss of blood sugar control in diabetic patients treated with hypoglycaemic agents.

Incompatibilities

Adrenaline is physically incompatible with alkalis, metals, oxidising agents, sodium warfarin, hyaluronidase and many other drugs; it forms polymers with sodium bicarbonate.

Adverse Reactions

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.

Dosage and Administration

Anapen[®] 500, is intended for use in patients with a mean weight of 60 kg or more, or patients at high risk of severe anaphylaxis, for whom the 300 microgram dose may not be sufficient. Anapen[®] 300 Auto-injector is intended for use in patients with body weight exceeding 30 kg. Anapen[®] 150 is intended for children with body weights between 15 and 30 kg. The use of Anapen[®] 500, Anapen[®] 300 and Anapen[®] 150 in patients with body weight less than 15 kg is not recommended.

The prescribing physician may choose to prescribe more or less than this amount*.

The delivered dose of the Anapen[®] 500 Auto-Injector should be injected intramuscularly into the anterolateral aspect of the thigh. The delivered dose is 0.3 mL of 1:600 USP Adrenaline Injection (500 µg).

The delivered dose of the Anapen[®] 300 Auto-Injector should be injected intramuscularly into the anterolateral aspect of the thigh. The delivered dose is 0.3 mL of 1:1000 USP Adrenaline Injection (300 µg),.

The delivered dose of the Anapen[®] 150 Auto-Injector should be injected intramuscularly into the anterolateral aspect of the thigh. The delivered dose is 0.3 mL of 1:2000 USP Adrenaline Injection (150 µg),.

DO NOT INJECT INTRAVENOUSLY.

Every effort should be made to avoid inadvertent intravascular administration (see **Overdosage**).

Anapen[®] 500, Anapen[®] 300 and Anapen[®] 150 should not be injected into the hands, feet, ears, nose, buttocks or the genitalia as it may result in loss of blood flow to the affected area. If an accidental injection into one of these areas occurs, specialist medical advice must be sought immediately. Ensure the product is kept well clear of the face.

Anapen[®] 500 Auto-Injector:

To manage severe anaphylaxis, repeat Anapen[®] 500 injections may be necessary. Each Anapen[®] 500 Auto-Injector is used once only. The Anapen[®] 500 dose may be repeated every 5 to 15 minutes if symptoms recur or have not subsided (see **Overdosage**).

Anapen[®] 300 Auto-Injector:

To manage severe anaphylaxis, repeat Anapen[®] 300 injections may be necessary. Each Anapen[®] 300 Auto-Injector is used once only. The Anapen[®] 300 dose may be repeated every 5 to 15 minutes if symptoms recur or have not subsided (see **Overdosage**).

Anapen[®] 150 Auto-Injector:

To manage severe anaphylaxis, repeat Anapen[®] 150 injections may be necessary. Each Anapen[®] 150 Auto-Injector is used once only. The Anapen[®] 150 dose may be repeated every 5 to 15 minutes if symptoms recur or have not subsided (see **Overdosage**).

Appropriate steps should be taken to ensure that the patient thoroughly understands the indications and use of this device. The Anapen[®] 500, Anapen[®] 300 and Anapen[®] 150 Auto-Injector should not be used for demonstration purposes. The "Anapen[®] Trainer" injector is available to assist with patient education and practice. The physician should review in detail with the patient, the Consumer Medicine Information, which includes usage instructions for the Anapen[®] 500, Anapen[®] 300 and Anapen[®] 150 auto-Injectors.

The Anapen[®] 300 Auto-Injector is intended for immediate self-administration. It is designed as emergency supportive therapy only and is not a replacement or substitute for subsequent medical or hospital care.

Patients should be instructed to dispose of the device safely after use by placing the used auto-Injector in a sharps disposal unit.

Overdosage

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.

Presentation

Package containing one Anapen[®] 500, Anapen[®] 300 or Anapen[®] 150 Auto-Injector.

The Anapen[®] 500 Auto-Injector contains 1 mL Adrenaline Injection 1:600 USP and delivers a single 500 µg/0.3 mL adrenaline dose.

The Anapen[®] 300 Auto-Injector contains 1 mL Adrenaline Injection 1:1000 USP and delivers a single 300 µg/0.3 mL adrenaline dose.

The Anapen[®] 150 Auto-Injector contains 1 mL Adrenaline Injection 1:2000 USP and delivers a single 150 µg/0.3 mL adrenaline dose.

Medicine Classification

Restricted Medicine

Storage

Adrenaline is light sensitive and should be stored in the carton provided. STORE AT 15°C to 25°C. DO NOT REFRIGERATE OR FREEZE. PROTECT FROM LIGHT.

Sponsor:

Link Pharmaceuticals Ltd.
Level 31, Vero Centre

48 Shortland Street,

Auckland 1140,

New Zealand

Date of Preparation:

09 November 2011

Version: 5.0

**Australian Society of Clinical Immunology and Allergy Anaphylaxis Working Party.*

Guidelines for adrenaline auto injector prescription. Sydney: ASCIA, 2009.

http://www.allergy.org.au/images/stories/anaphylaxis/ascia_guidelines_for_adrenaline_autoinjector_prescription.pdf