Epinephrine

Epinephrine (also known as adrenaline, adrenalin, or β,3,4-trihydroxy-N-methylphenethylamine) is a hormone and a neurotransmitter.

Epinephrine and norepinephrine are two separate but related hormones secreted by the medulla of the adrenal glands. They are also produced at the ends of sympathetic nerve fibres, where they serve as chemical mediators for conveying the nerve impulses to effector organs.

Epinephrine is normally produced by both the adrenal glands and certain neurons.

It plays an important role in the fight-or-flight response by increasing blood flow to muscles, output of the heart, pupil dilation, and blood sugar.

It does this by binding to alpha and beta receptors.

It is found in many animals and some single cell organisms.Napoleon Cybulski first isolated epinephrine in 1895.

The investigation of the pharmacology of epinephrine made a major contribution to the understanding of the autonomic system and the function of the sympathetic system. Epinephrine remains a useful medicine for several emergency indications. This is despite its non-specific action on adrenoceptors and the subsequent development of multiple selective medicines that target subtypes of the adrenoceptors. The word adrenaline is used in common parlance to denote increased activation of the sympathetic system associated with the energy and excitement of the fight-or-flight response.

The influence of adrenaline is mainly limited to a metabolic effect and bronchodilation effect on organs devoid of direct sympathetic innervation.