



Calming the Storm

Glossary of Terms

Use the following definitions with HEEL-DB.804 and HEEL-DB.804a “*Calming the Storm: The Body’s Response to Stress*” fact sheets to gain a greater understanding of how each of these parts of the body and their hormones play a role in responding to stress.

Hypothalamus - A portion of the brain which lies beneath the thalamus and secretes substances which control metabolism by exerting an influence on pituitary gland function. The hypothalamus is also involved in the regulation of body temperature, water balance, blood sugar and fat metabolism. The hypothalamus regulates other glands such as the ovaries, parathyroid and thyroid.

Adrenal gland - This gland is found above each kidney and is made up of an outer wall (cortex) that secretes important steroid hormones and an inner portion (medulla) that produces adrenaline and noradrenalin. The hormones help control heart rate, blood pressure, the way the body uses food, and other vital functions.

Adrenaline - A hormone produced by the adrenal medulla in mammals. It can be produced synthetically for medical purposes. It is secreted by the adrenal medulla in response to low blood glucose, exercise and stress and causes a breakdown of glycogen to glucose in the liver, encourages the release of fatty acids from adipose tissue, causes vasodilation of the small arteries within muscles and increases cardiac output.

Pituitary gland - A small oval shaped endocrine gland situated at the base of the brain in the fossa (depression) of the sphenoid bone. The overall role is to regulate growth and metabolism. The gland is divided into the posterior and anterior pituitary, each responsible for the production of its own unique hormones.

Adrenocorticotrophic Hormone (ACTH) - A peptide hormone that is produced by the anterior pituitary gland. It stimulates the adrenal cortex to secrete glucocorticoid hormones, which help cells synthesize glucose, catabolize proteins, mobilize free fatty acids and inhibit inflammation in allergic responses.

Cortisol - The major adrenal glucocorticoid, stimulates conversion of proteins to carbohydrates, raises blood sugar levels and promotes glycogen storage in the liver.

Hippocampus — An area of the mammalian brain, the hippocampus has been known since the 1950s to be important for long term memory storage in humans and other mammals. It is essential for initial storing of long-term memory for a period of days to weeks before the memory trace is consolidated elsewhere.

Amygdala - Denoting the cerebellar tonsil, as well as the lymphatic tonsils (pharyngeal, palatine, lingual, laryngeal, and tubal).

Source: MD Dictionary.com Online Medical Dictionary. Retrieved September 2004. <http://www.mddictionary.com/?a=search&q=>

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