

Hypothalamic Integration

Hypothalamus is the glandular floor of diencephalon. Its neurosecretory cells secrete several neuro hormones. They include (1) Inhibiting hormones (2) Releasing hormones (3) Oxytocin, (4) Vassopressin and (5) Somatostatin. The carrier protein neurophysin carries oxytocin and vasopressin to the posterior lobe of pituitary through nerve fibres. The posterior pituitary stores them and secretes them to blood.

Inhibiting and releasing hormones are carried to the anterior lobe of pituitary by blood. They govern the production and release of pituitary hormones. For each pituitary hormone there would be specific inhibiting hormone and releasing hormone. Inhibitory hormones inhibit the production of the corresponding pituitary hormones. On the other hand, releasing hormones stimulate the secretion of corresponding pituitary hormones. Thyrotropin releasing hormones stimulate the secretion of corresponding pituitary hormones. Thyrotropin releasing hormone (TRH) Corticotrophin releasing hormone (CTRH), gonadotrophin releasing hormone (GTRH), etc are releasing hormones. Somatostatin is an inhibitory hormone.

Oxytocin is concerned with ejection of milk from mammary glands, contraction of uterine walls during parturition and reabsorption of Na^+ in the kidneys.

Vasopressin or Antidiuretic hormone (ADH) has 2 roles.

1. Stimulates the contraction of arterioles and thereby increases B.P.
2. Stimulates the renal re-absorption and conversion of water.