

## **Hormone Action**

The secretions of endocrine glands are called hormones. They act very specifically on certain organs and such organs are referred to as target organs. Minute amounts of a hormone can bring about an effect on the target tissue.

### **Hormone Receptors.**

Since the hormone travels in the blood, they are able to reach practically all tissues. A hormone receptor is a receptor protein on the surface of a cell or in its interior that binds to a specific hormone.

(i). **Steroid hormone Receptors:-** The receptors for steroid hormones and the thyroid hormones are proteins that are located inside the target cells. Because these hormones are lipid-soluble, they readily pass through the plasma membrane and bind their specific receptors inside the cell.

(ii) **Peptide Hormone Receptors;** The peptide hormones are lipophobic and hence cannot cross the plasma membrane to reach target sites.

### **Steroid Hormone Response**

Many lipid-soluble hormones diffuse across the plasma membrane and interact with receptors in the cytosol or nucleus.

eg; steroid hormones, Cortisol, Oestrogen etc. After entering the cytoplasm steroid hormones interact with their specific steroid receptors. The hormone receptor complex

then enters the nucleus and act as a transcription factor. The hormone- receptor complex has a high affinity for DNA.

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