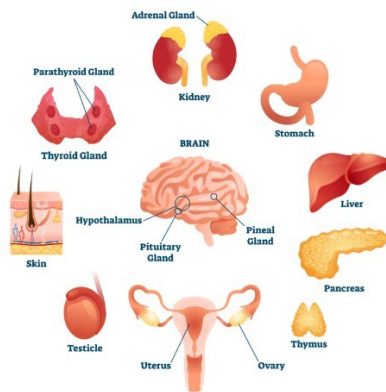


Week 1 NR 325 Edapts –

Nursing Care: Altered Hormonal Regulation

ENDOCRINE SYSTEM



- Primary hyperthyroidism is due to a defect in the thyroid gland.
- Secondary hyperthyroidism is due to the pituitary gland over-secreting thyroid-stimulating hormone (TSH).

Homeostasis and Hormones

- **Antidiuretic hormone (ADH)** targets the renal tubules and the vascular smooth muscle. It promotes water reabsorption from the renal tubules and causes vasoconstriction. Under-secretion of antidiuretic hormone can result in fluid volume deficit. Over-secretion of antidiuretic hormone can result in fluid volume overload.
- Thyroid-stimulating hormone (TSH), or thyrotropin, targets the thyroid gland. It stimulates synthesis and release of thyroid hormones and supports the growth and function of the thyroid gland.
- Luteinizing hormone targets the reproductive organs. It promotes secretion of sex hormones resulting in reproductive organ growth and reproductive processes.
- Growth hormone (GH), or somatotropin, targets all body cells. It promotes growth and tissue repair.

Metabolism and Hormones

- **Triiodothyronine (T3)** targets all body tissues and regulates the metabolic rate. It also regulates cell growth and tissue differentiation. Under-secretion of T3 results in a decreased metabolic rate. Over-secretion of T3 results in an increased metabolic rate.
- Adrenocorticotropic hormone (ACTH) targets the adrenal cortex. It supports growth of the adrenal cortex and corticosteroid secretion.
- Melanocyte-stimulating hormone (MSH) targets the melanocytes in the skin, the ovary and mammary glands in women, and the testes in men. It increases melanin production in melanocytes, making the skin darker, stimulates milk production in lactating women, and increases response of follicles to LH and FSH.
- Somatostatin targets the pancreas. It inhibits insulin and glucagon secretion.

Primary and Secondary Causes of Endocrine Dysfunction

Altered hormonal regulation can be due to a primary cause (**originates within the gland in question**) or a secondary cause (**originates from another organ dysfunction**).

For example, primary hyperthyroidism is due to a defect in the thyroid gland. Secondary hyperthyroidism is due to the pituitary gland over-secreting thyroid-stimulating hormone (TSH).