

Function :-

1. On Carbohydrate Metabolism :-

- Stimulates the formation of glycogen in liver and muscles.
- Increase gluconeogenesis in liver
- Help in absorption of sugar from intestine
- Help in the Synthesis of glucose from Pyruvate in the liver.

2. On Protein Metabolism :-

- Increases the breakdown of tissue protein to amino-acids.
- Increase Glyconeogenesis in the liver from protein.
- Excess cortisol causes wasting of muscles and osteoporosis.

3. On Fat Metabolism :-

- Increases the lipid absorption from intestine.
- Mobilise lipid from Depot.
- Depress- the Synthesis of lipid.

4. On Mineral Metabolism :-

- It helps in the retention of NaCl and water.
- Increase the excretion of K and PO_4 .

5. On Blood Pressure :-

- It regulates the B. P. of body.
- Deficiency of cortisol cause Low B. P.

[3] Sex Hormones :-

Mainly sex hormones are :-

- i. Androgen.
- ii. Oestrogen.
- iii. Progesteron.

↳ Androgen :- secreted by testes.

- Stimulation of accessory sexual organs
- Secondary sexual characters
- Facilitate spermatogenesis
- Regulation of male accessory organs.

(iii) Oestrogen:- secreted by Graffian follicle.

- Maintenance of Female gonad well
- " " Secondary Sexual characters
- Sexual activity.

iii) Progesterone :- secreted by corpus luteum

- Responsible for cyclic changes in female reproductive tract.
- Responsible for uterine development after pregnancy.
- After ovulation Progesterone takes over to maintain & increase the uterine growth.

(iv) Relaxin $\rightarrow$ Increase the way of vagina at the time of delivery. ^{Expands} _{pelvis}

Hyper secretion of Sex hormones:-

- Patient is suffer from Androgenital Syndrome; characterised by disturbance of sex organs distribution of hairs & Precocity etc.

Hyper Secretion of Ad. cortex:-

- When ~~by~~ glucocorticoid secretion is in excess the patient suffers from Cushing's Syndrome, the disease is characterized by moon shaped face, fish shaped mouth & increase fat deposition in the upper half of the body.
- When mineralocorticoid secretion is in excess the patient suffers from Conn's Syndrome, the disease characterized by ~~the~~ hypertension, muscular weakness due to H_2O & Na^+ retention.

HYPOSECRETION OF AD. CORTEX:-

- Muscular weakness
- Vomiting tendency
- Low B.P.
- Low BMR
- Decrease Blood vessels.
- Homeostatic concentration.
- Depression in sex functions.

[2.] Hormones of Ad. Medulla:-

Epinephrine and Nor-Epinephrine or Adrenaline or Nor-Adrenaline are two important hormones. Both are called 'Emergency hormones' in the body.

<u>System</u>	<u>Epinephrine</u>	<u>Nor-Epinephrine</u>
1. Heart		
a. Rate	Increased	Slightly increases
b. output	Raised	No change
c. Blood Pressure	Increased	Raised
2. Vessels —	Dilator or Constrictor	Constrictor.
3. Respiration —	Stimulated	Stimulated.
4. Kidney —	Constrictor of Renal Vessels	Constrictor of Renal vessels.
5. Central Nervous system —	Increase mental anxiety	No effect