

ADRENAL GLANDS

- **Resistance Phase**= this is stage is lagged by 20-30 mins for the production of glucocorticoids
- **Exhaustion Phase**= this is the eventual breakdown of homeostatic regulation and the starting of disease onset.

Causes of Excess Glucocorticoids

- Excess corticotrophin releasing factor is released from the hypothalamus
- Enlargement (hyperplasia) of the adrenal cortex
- Excess production of adrenocorticotrophic hormone
- Certain tumours can also secrete corticotrophins such as pancreatic tumours
- Long-term treatment of steroids for example can cause it.

Cushing's Disease

This is the name given to the disease which is characterised by an overactive adrenal gland

Symptoms

- Weight gain
- Fatigue
- Hypertension
- Thin arms and legs
- Purple skin stretch marks
- Psychiatric problems

Treatment

- Gland irradiation
 - This is the process of attacking the gland with radiation
- Surgery
 - Removal of the pituitary gland or bilateral adrenalectomy (removal of both glands)
- Metyrapone
 - This is a corticosteroid antagonist

Addisons' Disease

This disease is characterised by the under-activity of the adrenal glands. Very rare

Symptoms

- Hypoglycaemia and fatigue
- Hypotension
- Weight loss
- Skin hyperpigmentation

Treatment

- Hormone Replacement Therapy
 - Hydrocortisone (glucocorticoid) side effects include diabetes and heart disease
 - Fludrocortisone (mineralocorticoid) side effects are hypertension.