The logo of Galgotias University is a circular emblem with a stylized 'G' in the center. The 'G' is composed of several curved, overlapping bands in shades of yellow, orange, and blue. The background of the emblem is a light pinkish-red color.

# **Cushing's Disease/Syndrome**

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## Introduction

### **Cushing's Disease/ Cushing's Syndrome:**

Cushing's is a hormonal disorder caused by prolonged exposure of the body's tissues to high levels of the hormone cortisol. Adrenal glands, which are right above kidneys, release cortisol when they receive a chemical message from pituitary gland.

The message comes in the form of adrenocorticotrophic hormone (ACTH), which travels through the bloodstream.

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## DEFINITION

It is a condition in which the plasma cortisol level is elevated due to excessive adrenocortical activity, causing signs and symptoms of Hypercortisolism.

Syndrome may result from excessive administration of corticosteroids or ACTH or from hyperplasia of adrenal cortex.

S/S are mainly a result of over secretion of glucocorticoid and androgens (sex hormones) also mineralocorticoid secretion also may be affected.

## Etiology

- A benign tumor of the adrenal gland
- A benign tumor of the pituitary gland
- A benign tumor of the lung or other organ
- Extensive use of cortisone medication
- Administration of ACTH or Corticosteroids.
- Primary hyperplasia of both adrenal gland.
- Excessive secretion of adrenal androgen.
- Exogenous Glucocorticoid administration.

## Pathophysiology

Due to etiological factor

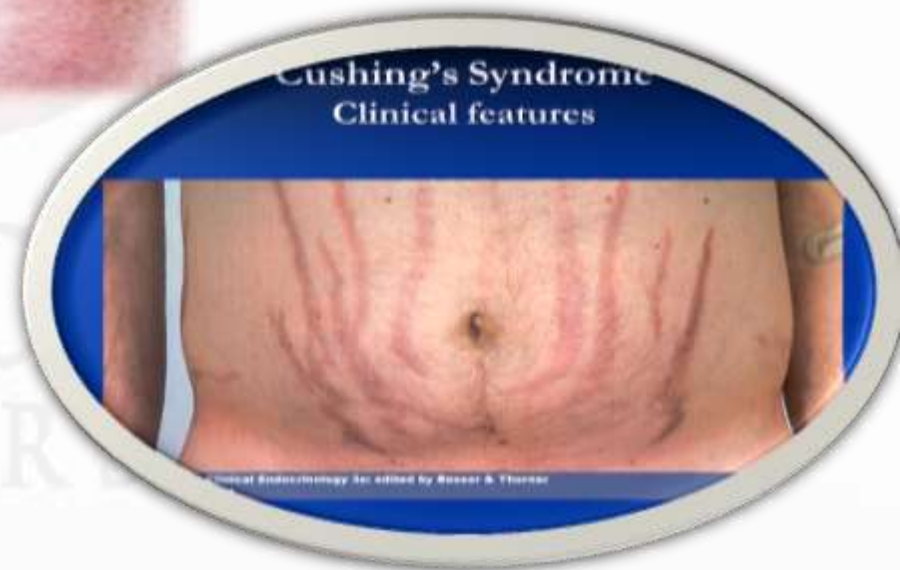
Normal feedback mechanisms that control adrenocortical function are ineffective.

Resulting in excess secretion of adrenal cortical hormones Inadequate amount of

adrenal cortical hormones in secretion

Hypercortisolism

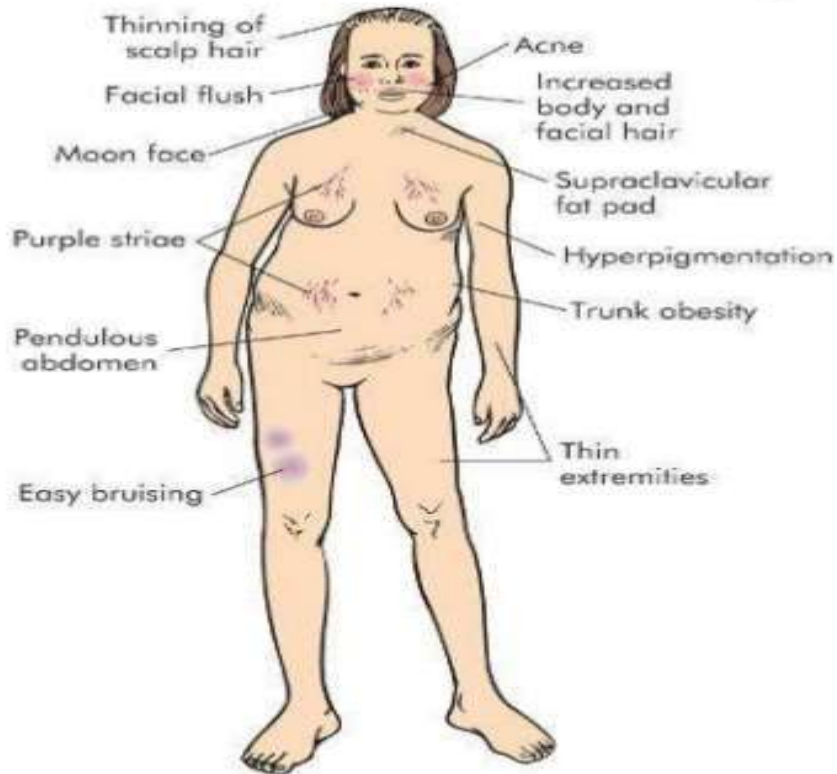
## CLINICAL FINDINGS



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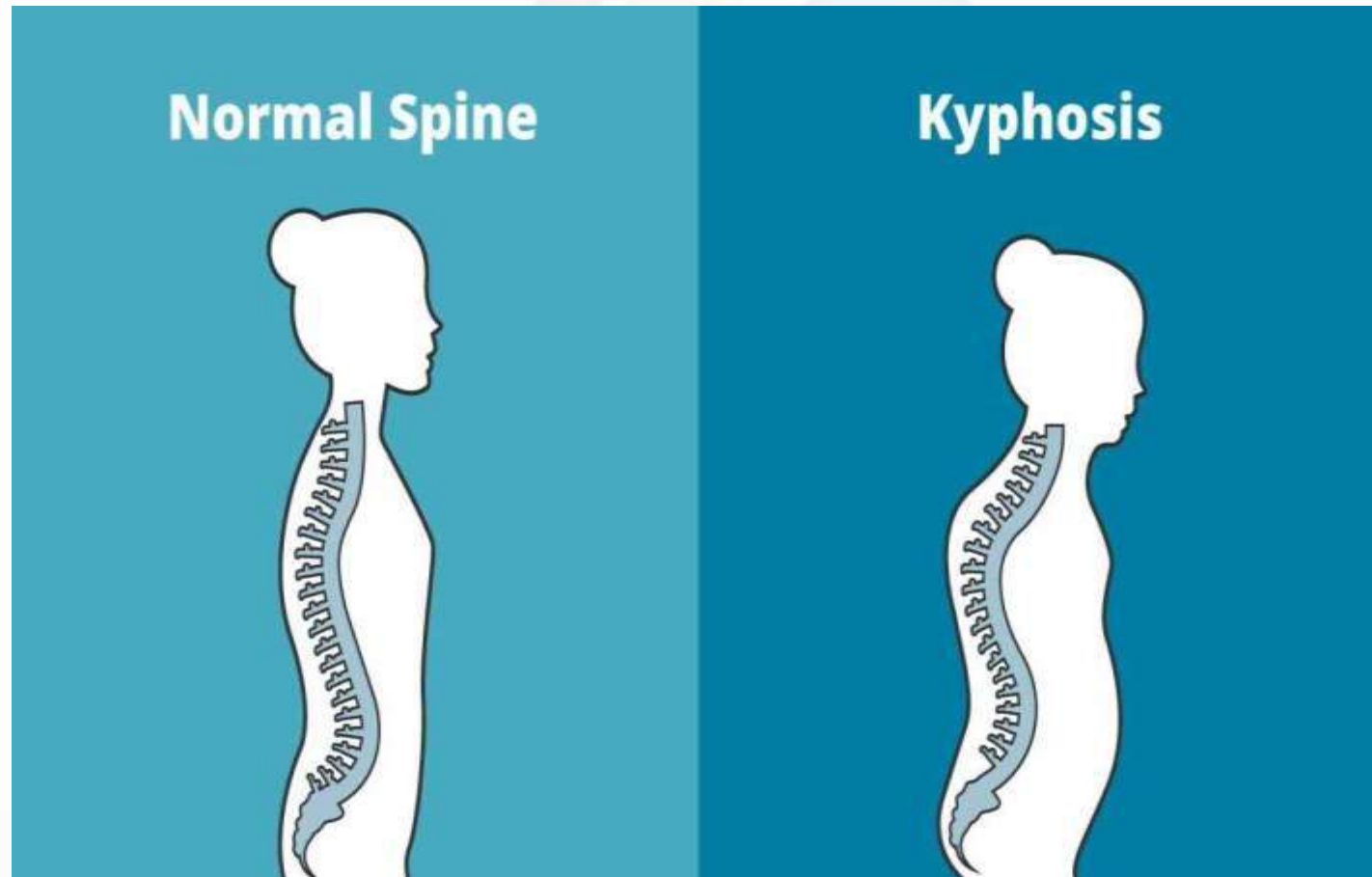
## CLINICAL FINDINGS

### Cushing's Syndrome



**Redistribution of adipose:**  
Truncal obesity, moon face, buffalo hump  
**Protein wasting:** limb muscles  
**Loss of collagen:** thin skin, striae, bruising

## CLINICAL FINDINGS





## CLINICAL FINDINGS

### • Excess Glucocorticoids:

- Weight gain/obesity
- Heavy trunk and thin extremities
- Buffalo hump in neck
- Thin skin
- Rounded face/moon face
- Muscles wasted
- Osteoporosis
- Mental Disturbance
- Increased susceptibility to infection.

### • Excess Mineralo-corticoids:

- Hypertension
- Hypernatremia
- Hypokalemia
- Weight gain
- Expanded blood volume
- Edema

### Excess Antrogen:

- Women- Hirsutism
  - Breast atrophy
  - Clitoris enlargement
  - Voice masculine
- Men- Loss of Libido

### Gastro Intestinal:

- Peptic Ulcer
- Pancreatitis
- Gastritis and Duodenitis
- Tachycardia
- Fatty Liver
- Mild slowing on EEG
- Pituitary Adenoma
- Migraines
- Syncope
- Memory and cognitive skills diminished
- Superficial skin infections

## Diagnostic Findings

- History Collection
- Physical Examination
- CT Scan and USG
- ACTH
- Corticotropin releasing factor (CRF) Stimulation Test.
- Dexamethasone suppression Test
- Blood samples
- X-rays of the skull
- Excessive Plasma cortisol level

## TREATMENT

- Mitotane = An agent toxic to the adrenal cortex.(ADRENAL ENZYME INHIBITOR)
- Metoprine = To control (steroid hyper secretion) who do not respond to mitotanetherapy.
- Amino-glutethimide = Effectively Blocking cortisol production

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## Surgical Mgt:

- i) Trans sphenoidal adenomectomy or Hypophysectomy:  
= Removal of pituitary gland
- ii) Transfrontal Carinotomy:  
= It is necessary when pituitary tumor is enlarge.
- iii) Bilateral Adrenalectomy:  
= Hyperplasia of adrenals

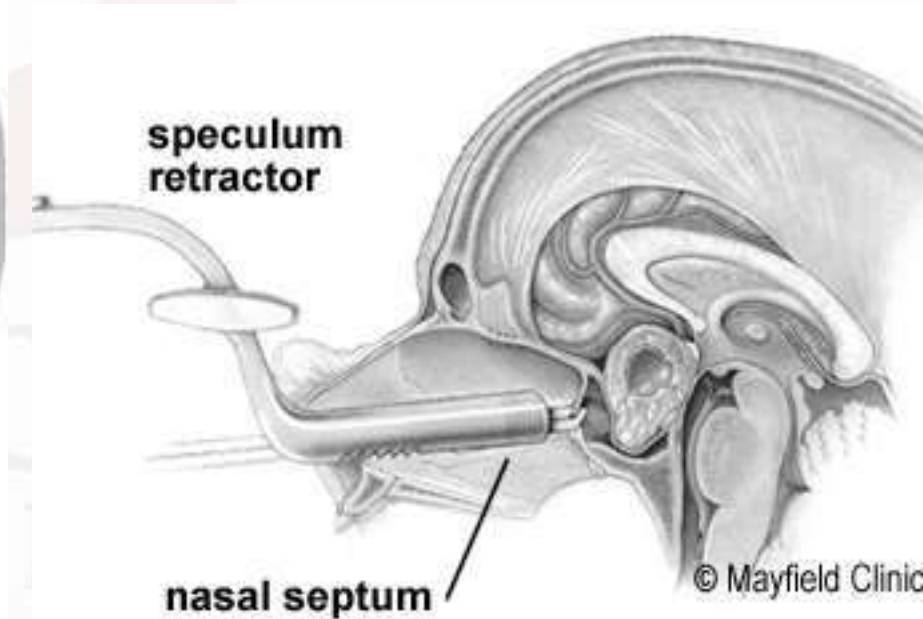
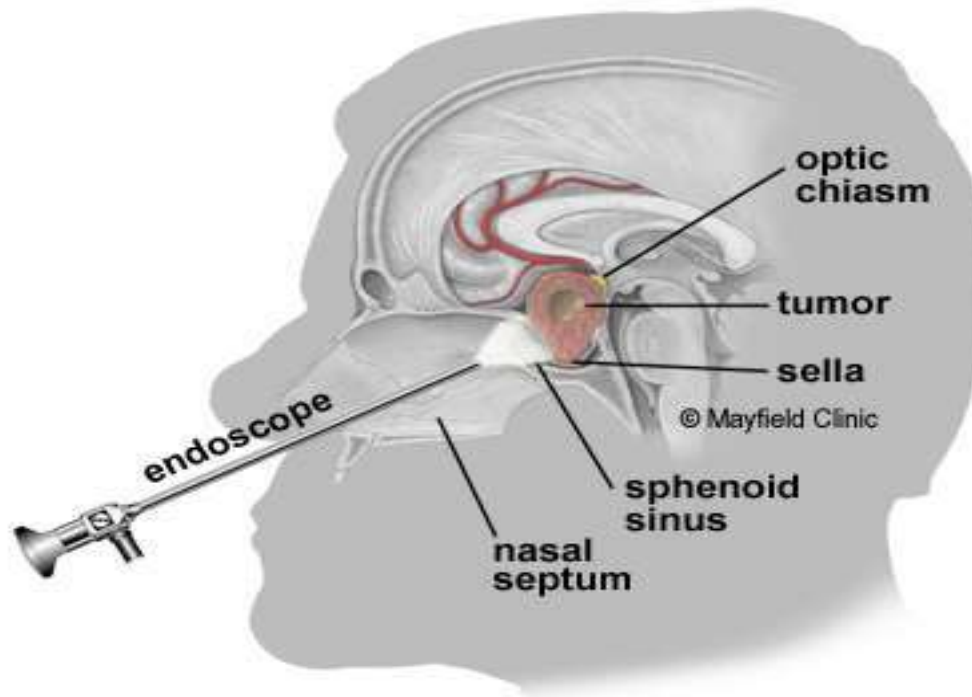
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## Endoscopic pituitary surgery (transsphenoidal)

- **Endoscopic surgery is performed through the nose to remove tumors from the pituitary gland and skull base.**
- **In this minimally invasive surgery, the surgeon works through the nostrils with a tiny endoscope camera and light to remove tumors with long instruments. Pituitary tumors can cause hormone problems and vision loss.**
- **Tumor removal often reverses vision problems and restores normal hormone balance.**



- Transsphenoidal literally means “through the sphenoid sinus.” It is a surgery performed through the nose and sphenoid sinus to remove [pituitary tumors](#) .
- Transsphenoidal surgery can be performed with an endoscope, microscope, or both. It is often a team effort between neurosurgeons and ear, nose, and throat (ENT) surgeons.



## Complication:

- Adrenal Carcinoma
- Addisonian crisis
- Adverse effects of Adreno – cortical activity.

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## Nursing Diagnosis

- Impaired skin integrity r/t altered healing and edema.
- Self care deficit r/t muscle wasting and fatigue.
- Anxiety r/t surgery
- Risk for Injury to surgical procedure.
- Self – Esteem disturbance related to altered physical appearance.

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