

# Addison's Disease

## Definition

Addison's disease is an adrenocortical hormone deficiency due to damage to the outer layer of the adrenal gland (adrenal cortex).

The damage may be caused by autoimmune disease, TB, haemorrhage and other factors

## Causes, Incidence & Risks

- The adrenal glands are located on top of each kidney and consist of the cortex and the medulla.
- The cortex produces three types of hormones:
  - androgens and oestrogen's
    - affect sexual development and reproduction
  - glucocorticoid hormones
    - (cortisol) maintain glucose regulation
    - suppress the immune response
    - provide for the response to stress
  - mineralocorticoid hormones
    - (aldosterone) regulate sodium and potassium balance.

- Risk factors include
  - rare familial autoimmune diseases
  - early menopause
  - type I diabetes
  - hypoparathyroidism
  - hypopituitarism,
  - pernicious anemia,
  - testicular dysfunction,
  - Graves' disease,
  - chronic thyroiditis
- Other risk factors are anticoagulant use and AIDS.

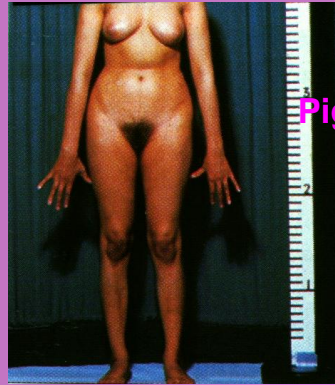
## Symptoms

- extreme weakness
- Loss of appetite
- Unintentional weight loss
- Nausea/Vomiting
- Chronic diarrhoea
- Darkening of the skin - skin colour, patchy
  - Colour is unnaturally dark in some locations
  - Paleness may also occur
- buccal mucosa pigmentation
- Slow, sluggish, lethargic movement
- Changes in the blood pressure or heart rate
- Salt craving

- Incidence 1: 100,000
- 80% idiopathic (autoimmune)



Buccal  
Mucosa  
Pigmentation



Skin  
Pigmentation

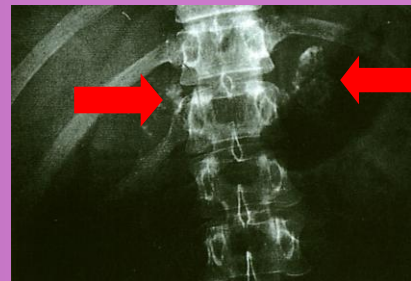
### Palmer Crease Pigmentation



### Signs and Tests

- Low BP
- Serum cortisol level is low.
- Serum sodium level is low. (aldosterone)
- A potassium test may show increased potassium.
- An abdominal x-ray may show adrenal calcification.
- An abdominal CT scan may show adrenal calcification, enlargement or atrophy.

### Abdominal X-Ray



## Treatment

- HRT for rest of life, usually in combination (cortisone or hydrocortisone & mineralocorticoids) will control the symptoms of this disease.
- Medication may need to be increased during times of stress, infection, or injury.
- In adrenal crisis, an intravenous or intramuscular injection of hydrocortisone must be given immediately.
- Supportive treatment for low blood pressure is usually necessary.

## Prognosis

With adequate replacement therapy, most people with Addison's disease are able to lead normal lives.

## Complications

Complications may result from the following associated illnesses:

- Diabetes
- Thyrotoxicosis
- Hashimoto's thyroiditis
- Hyperparathyroidism
- Pernicious anaemia
- Ovarian hypofunction or testicular failure

## Facial Pigmentation



## Scar Pigmentation

