

---

## Clinical Presentation of Adrenal Insufficiency (Adapted From Arlt 2016)

---

### *Clinical signs and symptoms:*

---

- Fatigue, lack of energy, weight loss
  - Low blood pressure, postural dizziness and hypotension ( $\geq 20$  mmHg drop in BP from supine to standing position), dizziness, collapse, in severe cases hypovolaemic shock
  - Abdominal pain, tenderness and guarding, nausea, vomiting (in particular in primary adrenal insufficiency), history of weight loss
  - Fever
  - Confusion, somnolence, in severe cases delirium or coma
  - Back and leg cramps/spasms are commonly reported and can be distracting if not recognised for what they are (electrolyte derangement in large muscles?)
  - In **primary** adrenal insufficiency: generalised skin hyperpigmentation, in particular in areas exposed to mechanical shear stress (palmar creases, nipples, scars, inside of oral mucosa)
  - In **secondary** adrenal insufficiency: alabaster-like, pale skin; dependent on underlying conditions also signs and symptoms of other pituitary axis *Lab findings:*
- 

### *Laboratory findings:*

---

- Hyponatraemia (in primary and secondary adrenal insufficiency)
  - Hyperkalaemia (in primary adrenal insufficiency)
  - Pre-renal failure (increased serum creatinine due to hypovolaemia)
  - Normochromic anaemia, sometimes also lymphocytosis and eosinophilia
  - Hypoglycaemia (primarily in affected children; can cause long-term neurological deficits, if not promptly treated)
- 

### *Diagnosis of AI*

---

- 9am cortisol  $< 100$  nmol/l
- 9am cortisol between 100-350 nmol/l may need a confirmatory test
- Normal cortisol  $< 415-450$  nmol/l on short synacthen test or insulin tolerance test

Note: Check cortisol values for assay at local institution as diagnostic cut-offs will vary)

---

adapted from Arlt<sup>3</sup>