

The **corticosteroids** are steroid hormones produced by the **adrenal cortex**. They consist of two major groups:

1. **Glucocorticoids:** have important effects on metabolism, catabolism, immune responses and inflammation. The majority of the anti-inflammatory and immunosuppressive actions of the glucocorticoids are probably the result of their action on **arachidonic acid** metabolism. They induce the synthesis of a protein that **inhibits phospholipase A2**, thus **decreasing** the production of both **prostaglandins** and **leukotrienes**.

The major natural glucocorticoid is **cortisol**. The synthetic glucocorticoids include **hydrocortisone** (*Cortef*), **cortisone**, **prednisone** (*Delatasone*), **prednisolone** (*Delta-Cortef*), **dexamethasone** (*Decadron*), **triamcinolone** (*Aristocort*), **methylprednisolone** (*Medral*), and **betamethasone** (*Cestone*). Glucocorticoids are most often used as anti-inflammatory and immunosuppressive agents.

Adverse effects of the short-term administration of systemic glucocorticoids include secondary infections, hyperglycemia, and a range of mood and behavioral changes. Long-term therapy may cause osteoporosis, cataracts, hypertension, myopathy, and adrenal insufficiency.

2. **Mineralocorticoids:** regulate sodium and potassium reabsorption in the collecting tubules of the kidney. The major natural mineralocorticoid in humans is **aldosterone**. Other mineralocorticoids include **deoxycorticosterone** and **fludrocortisone**. Mineralocorticoids are used in replacement therapy in hypoadrenocorticism or Addison's disease.

Note: Corticosteroids **do not cure** any disease. In patients with Addison's disease, corticosteroids serve as a replacement for the lack of steroid hormones being produced by the patient.

Contraindications to corticosteroid use include: latent TB or fungal infection, AIDS, herpes infections and patients with peptic ulcer disease (*specifically, gastric ulcers*) — these drugs themselves may cause **peptic ulcers**.

Toxic effects of the corticosteroids include growth inhibition, hyperglycemia, osteoporosis, psychosis and salt retention.