

Steroids Save Lives

In a normal person, during situations of emotional or physical stress the body releases more cortisol. The excitement from a happy event, the sadness from a death of a loved one or the strain from exercising are examples of things that would cause the body to release more cortisol.

In an adrenal insufficient person, this does not happen.

Adrenal patients have to artificially manage their cortisol. Their personal cortisol needs may differ from day to day. No two days are the same and it is a struggle to regulate proper cortisol levels.

The standard treatment for all adrenal disease patients is daily cortisol replacement medication- steroids.

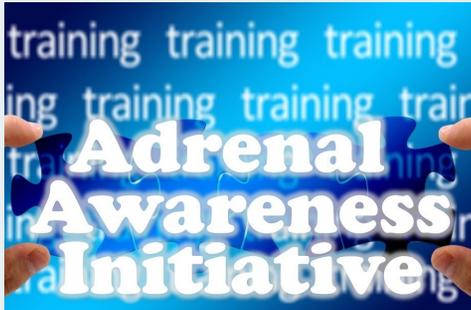
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Guide to Steroids



Adrenal Alternatives Foundation



Deficient Hormones in Adrenal Insufficiency

Cortisol– Glucocorticoid hormone:
The body’s stress hormone.

Glucocorticoids: Corticosteroids that are involved in the metabolism of carbohydrates, proteins, and fats and have anti-inflammatory activity.

Glucocorticoid medications are steroids such as prednisone, hydrocortisone, dexamethasone, rayos, solu-cortef, cortisone acetate and methylprednisilone are used to replace cortisol in adrenal insufficient patients.

Cortisol must be replaced in all forms of adrenal insufficiency.

Aldosterone: Mineralocorticoid hormone that regulates electrolyte balances by instructing the kidney to release potassium and retain sodium.

Mineralocorticoids: Corticosteroids that regulate electrolyte balance and fluid balance in the body. In salt wasting forms of adrenal disease, mineralocorticoid replacement is necessary. Medications such as fludrocortisone are used to supplement mineralocorticoid deficiency.

All forms of adrenal insufficiency do not require aldosterone replacement.

Types of Steroids

Prednisone-Synthetic corticosteroid which mimics the action of cortisol produced in the body by the adrenal glands. Most often used for its potent anti-inflammatory effects and in autoimmune/inflammatory diseases. Prednisone is inactive in the body and in order to be effective, first must be converted to prednisolone by enzymes in the liver. Prednisone may not work as effectively in people with liver disease whose ability to convert prednisone to prednisolone is impaired.

Methylprednisolone- Also referred to as Medrol, this medication is a synthetic corticosteroid mainly used to achieve prompt suppression of inflammation but can also be used to treat adrenal insufficiency.

Dexamethasone-Also known as Decadron, this medication is used in the treatment of cancers such as leukemia, lymphomas and to treat diseases involving destruction by the body's own immune system. Also used to treat adrenal insufficiency. Dexamethasone is a long acting steroid and remains in blood circulation for approximately 16 hours after administration, with a half-life of approximately 4 hours.

Cortisone Acetate- Cortisone acetate is the acetate salt form of cortisone, a semisynthetic form of the naturally occurring cortisone hormone. Cortisone itself is inactive; it is converted in the liver to the active metabolite hydrocortisone.

Hydrocortisone- Also known as Cortef, this medication is the most bio-identical form of cortisol. It is a short acting steroid used to treat autoimmune diseases, allergic reactions and also adrenal insufficiency.

Rayos- Long acting corticosteroid medication in the form of delayed-release prednisone. This medication releases the action of prednisone about 4 hours after tablets are ingested. Used in the treatment of inflammatory diseases and also adrenal insufficiency.

Solu-Cortef- Sterile powder form of cortisol that is an anti-inflammatory glucocorticoid that contains hydrocortisone sodium succinate as the active ingredient. This medication can be administered by intravenously, by intramuscular injection or used in a continuous infusion pump.

Steroid Conversion Chart

Prednisone	5mg
Dexamethasone	0.8mg
Cortisone	25mg
Methylprednisolone	4mg
Prednisolone	5mg
Hydrocortisone	20mg

Fludrocortisone (Florinef) cannot be converted to another corticosteroid on the basis of anti-inflammatory potency. It is not a replacement for cortisol.

Finding the right steroid medication replacement should be an individualized process for each adrenal insufficient patient.

Variables such as:
Personal cortisol clearance rates
Pain Levels
Health Status,
Comorbidities,
Weight
Stress Management
Physical Activity may impact cortisol needs.

It is important to work with an endocrinologist who is proficient in managing adrenal disease to determine the most optimal steroid replacement medication.

