

From *The Hormone Handbook*
By Dr. Thierry Hertoghe

For everybody whose results show low cortisol production in the morning and increasing levels (or even high) cortisol levels at night, there are many ways to naturally boost the cortisol levels. The principal lifestyle changes that boost the effects of the cortisol are:

- 1) Increase exposure to sunlight, especially in the morning and maximise darkness at night by sleeping with an eye mask for example, which helps having optimal cortisol levels during the day and minimal cortisol at night. Avoid living and working in semi-darkness during the day.
- 2) At each meal, blood levels of cortisol temporarily triple. Dietary saturated fat is necessary for the production of cortisol as saturated fat cholesterol is the first building block for cortisol synthesis. Avoid alcohol, vinegar, caffeinated drinks, sugar, sweets, soft drinks, cookies, bread, pastas and cereals. Avoid cereal fibre (whole grain bread, bran flakes) Avoid milk products.
- 3) Beverages with caffeine (coffee, tea, cola) and alcohol should be avoided before bedtime as caffeine can increase cortisol and considerably reduce night-time secretion of melatonin, a hormone that tends to reduce any cortisol production at night. Dietary starch and especially sugar and sweets increase the blood sugar level, which in turn, reduces cortisol production.
- 4) Excessive prolonged stress exhausts the adrenal glands that finally become unable to produce adequate amounts of cortisol anymore (burn-out syndrome). Evening or night-time stress is a strong stimulator of cortisol secretion, but depletes the adrenal supply of cortisol resulting in decreased cortisol levels for the next morning at a time when the serum level of cortisol should be high.

Cortisol production can be enhanced by correcting any other hormone deficiencies that influence the working of the adrenal glands. The principal hormone replacement therapies that can increase or decrease the secretion of cortisol and/or its action are: testosterone, dihydrotestosterone, anabolic (androgen) steroids. These are strong stimulators of cortisol. A mild stimulator is thyroid hormone. Strong inhibitors of cortisol are growth hormone, hyperthyroidism, melatonin excess. Mild inhibitors are oral oestrogen (including the birth control pill) DHEA, fludrocortisone, and aldosterone.

Cortisol supplementation provides one of the quickest improvements of all the hormone therapies. The higher the dose, the quicker the short-term benefit, Nevertheless, he recommends using small physiological doses for most cortisol deficiencies that are not life-threatening.

Patients on cortisol therapy may improve during the first days of intake, but complete recovery from physical signs and symptoms of cortisol deficiency takes more time. With patients who are less responsive, optimal results may take as much as two to three months.

A lack of responsiveness most often has to do with a poor diet (high in sweets for example). Therefore, the patient should be encouraged to improve his diet as a way of accelerating progress.

Once the treatment has started, fine-tuning the dose means finding the optimal dose for the patient and not a dose that is slightly too low or too high. This process is primarily achieved by carefully checking physical signs and symptoms and much less by relying on lab tests. The optimal dose is the dose that relieve the patient completely from the symptoms of cortisol deficiency without causing any signs of cortisol excess. Dosing by lab. tests may help to some degree to avoid severe over - or under dosing, but are less helpful for the fine-tuning. The optimal dose may vary following changes in the need for cortisol.

Dr. Hertoghe recommends that in most cases, cortisol can be started at the estimated dose. The minimal efficient dose in women is usually 15 - 20 mg per day. In men, it is about 30 mg per day divided in at least two separate doses: one given in the morning and one at noon.

There are two fundamental contraindications to cortisol supplementation: when it is not necessary or when it could cause harm. First: Cortisol treatment is not needed when lab tests are normal. In

that case, cortisol treatment will generally not help and may, on the contrary, cause harm. Second, cortisol treatment – even appropriate replacement doses of cortisol, may cause harm if the patient does not have sufficient levels of anabolic hormones such as DHEA and sex hormones to counter cortisol catabolic effects. The catabolic effects of cortisol can cause excessive breakdown of the tissues of the body, which result in osteoporosis (loss of bone tissue), skin atrophy (thinning), ecchymosis, petechia (bruising) and immunosuppression (decrease in immune defences). So the recommendation is to treat only when necessary and to do it safely with the smallest effective physiologic doses and with simultaneous correction of any deficit in anabolic hormones.

According to Dr. Hertoghe, [this chart](#) (Adobe PDF format) shows the recommended dosing for cortisol.

The principal mental and emotional signs and symptoms of cortisol excess after several hours to several days are - overly emotional, excessive agitation, euphoric, insensitive to human suffering, craves stress and creates it, stressing others but not oneself, insomnia.

The principal physical signs and symptoms of cortisol excess after several hours – days are: cardiac erethism (heart pounding in chest. Several days to more than a week; swollen hands and feet, swollen face, high blood pressure. After several weeks to several months: weight gain, obesity, ecchymosis (easily bruises), Petechiae (tiny skin haemorrhages) and after several months: atrophic skin, osteoporosis.

What to do in the case of an urgent and stressful cortisol overdose?

Reduce the dose but do not stop completely, except for a synthetic dexamethasone that can remain in the body for 48 hours.