

# IHHS Health & Wellness Center

1607 South H Street, Bakersfield, CA 93304

Custom Rx Compounding & IV Pharmacy

Hormonal, Homeopathic, & Nutritional Services

Office (661)-837-0453 FAX (661)-837-0560

HRT Patient Information

\$6.5

## **Adrenal Insufficiency Replacement Therapy (Cortisol-Cortisone-DHEA)**

---

The medication prescribed for you is a normal adrenal hormone. In the dose that is prescribed, cortisol and/or cortisone will not cause harmful side-effects that can result from excessive higher non-replacement, pharmacologic, dosages. The instructions must be followed carefully. For this reason keep out of the reach of children or others who may use it by mistake. The medication is most effective when used in divided doses over the day as prescribed by your Health Care Professional. It is not harmful to double up on doses if occasionally forgotten but it will be more effective if used properly.

The adrenals are situated above each kidney. The hormones produced by these glands are important for a person's ability to respond to prolonged stress such as infection, injury, starvation, and strenuous or prolonged exertion. The adrenal hormones stimulate the formation of glucose, from proteins, which is the bodies main form of energy. This mechanism also maintains normal blood sugar levels when food intake is irregular. Hormones secreted by the adrenals also maintain normal blood vessel tone, fluid balance, as well as growth and repair of damaged tissues, especially muscle. The adrenal glands also produce the hormone, estrogen. DHEA secretion mainly appears to be involved with providing a estrogen supply at menopause when ovarian production is temporarily or permanently interrupted. Estrogen may also be produced in the peripheral tissues from DHEA that is also part of adrenal insufficiency. All these hormones are released in a cyclical pattern throughout the day. Each patient with deficiency may have altered output of hormones at different times of the day. This is the reason it is important to follow your specific instructions.

This is a normal bio-identical hormone. It will not interfere with your taking of any other medication. It is used for insufficiency of secretion. Cortisol and cortisone may cause weakness, fatigue, anorexia, susceptibility to collapse, shock following exposure to stress, and hyperpigmentation. A total physiologic replacement dose is 35 to 40 milligrams. A dose of 20 to 35 mg can be used to maintain adrenalectomized patients. Patients with deficiency may be maintained at 5 to 7.5mg of cortisol at mealtimes, 3 times a day. For temporary deficiency states treatment is initiated at 6 to 9mg three times a day 6 days a week. This is to mimic deficient times of secretion. Therapy is then decreased 1 day a week every 8 weeks until weaned off the hormone completely. Improvement in patients with ovarian dysfunction, allergies, fatigue, etc. appear, as normal secretion is corrected without undesirable side effects.

Dosage can vary with each patient and the levels of exposure to stress, infections, or other trauma to the body. For example a more strenuous day may require 10mg extra cortisol, where a severe infection could require several hundred milligrams a day. Usually a sensation of fatigue is felt when additional doses are needed, and this will disappear soon after extra cortisol is administered. After the patient feels well, the dosage may be decreased in a tapering schedule, as defined by your Health Care Professional. A patient in an adrenal deficiency state and also under physiologic stress may require higher doses to maintain the bodies normal balance. Due to the stress, doses may be higher that what could have been considered complete replacement therapy. When the stress is alleviated the dose needs to be decreased.

# IHHS Health & Wellness Center

1607 South H Street, Bakersfield, CA 93304

Custom Rx Compounding & IV Pharmacy

Hormonal, Homeopathic, & Nutritional Services

Office (661)-837-0453 FAX (661)-837-0560

## HRT Patient Information

\$6.5

Your Health Care Professional may also prescribe Adrenal glandular tablets to give you energy for the first few weeks of your therapy. These are to be taken on waking and just before lunch on the days the hormones are given. In most cases they need to be taken before 2PM so that your sleep and rest patterns will not be affected as you get energy back.

Your Health Care Professional may instruct you to use a little extra cortisol if you begin to feel fatigued in response to stress or infection. For many patients doubling their dose to 10, 15, or 20mg four times a day is adequate. As soon as you feel well the dose should be reduced again. This should not exceed 4 to 6 days. Your Health Care Professional should always be informed of your actions.

The difference in action between physiologic and pharmacological doses is substantial. The higher pharmacological doses are related to the "horror" stories we have heard about using "steroids or cortisone's". When replacing the hormone(s) that are missing or deficient, your medical practitioner only replaces them to normal levels in the body. This is done with the very same species-specific hormone that is missing, so that normalization/optimization without side-effects is the result. Side effects related to pharmacologic, higher than the normally used physiologic doses of cortisol may cause, fluid retention, potassium loss, muscle weakness, osteoporosis, impaired wound healing, dizziness, headaches, decreased glucose tolerance, weight gain, increased appetite, nausea, malaise, and development of cushingoid states.

DHEA is a normal bio-identical hormone that is produced in larger quantities under unstressed conditions than other adrenal hormones. It is a precursor for both testosterone, estrogen but is a relatively weak androgen. Levels of DHEA decline as we age so that by the time a person is 60 years old their levels are only 5 to 15% of what they were earlier in their life. In prolonged adrenal insufficiency not only cortisol but also DHEA will become deficient. If you are in this situation your Health Care Professional may have also prescribed DHEA for you as well. This is also a hormone involved with optimization of your health. Therapy will start at 5 to 15mg a day 6 days a week and decrease 1 day/week every 8 weeks until weaned off. As the dose decreases the body should begin to normalize its own production. At the end of the weaning period your secretion should be normal. In high doses the side effects for this hormone in women have included facial hair growth and, for both men and women it may contribute to liver damage but studies confirming this and other effects have yet to be done.

Many oral dosage forms have fillers and excipients that appear to cause allergic reactions and significant gastrointestinal distress in some patients. The preferred route is to perfuse hormones directly through the skin into the blood stream. This deposits the hormone exactly where the body would have secreted it if it were not deficient. This process allows the hormone to go directly to its receptors in the body and eliminates first pass through the liver for metabolism and breakdown. When correctly compounded and prepared absorption is consistent, predictable, and reliable with a minimum, if any, of side effects. These forms are available from IHHS pharmacists.

Imperative to proper hormonal balancing is proper nutrition. Some basic suggestions follow that are supportive to therapy.



# **IHHS Health & Wellness Center**

1607 South H Street, Bakersfield, CA 93304

Custom Rx Compounding & IV Pharmacy

Hormonal, Homeopathic, & Nutritional Services

Office (661)-837-0453 FAX (661)-837-0560

## **HRT Patient Information**

compound natural hormones, to maximize results. It is not uncommon to experience failures due to lack of compounding and prescribing knowledge.

Use this information in the absence of more specific or personal advice given you by your health care professional