Highly Effective Treatments for Pain and Fatigue
by Jacob Teitelbaum, MD

How to Safely & Effectively Use Adrenal Hormones and Glandulars

Adrenal hormones are essential for life. But, as with any hormone, too much can be dangerous. In the early studies using adrenal hormones, the researchers had no idea what dose was normal and what was toxic. When they gave injections of the hormone to patients, the patients' arthritis went away and they felt better. However, when they gave patients many times more than the normal amount, the patients became toxic and died. Because of this, the researchers became frightened and avoided using adrenal hormones whenever possible. Medical students were taught to avoid adrenal hormones unless no other treatment choices existed.

The use of adrenal hormones needs to be put into perspective, however. Imagine if the early thyroid researchers had given their patients 50 times the usual dose of thyroid hormone. Thyroid patients would have routinely died of heart attacks. The thyroid researchers, though, were fortunate enough to stumble upon the body's healthy dose early on and to skip these negative outcomes. If they had not, people today would not be treated for an undiagnosed thyroid until they displayed symptoms of very advanced thyroid disease (myxedema) and were nearly comatose. Medical science is just beginning to learn that a person can feel horrible and function poorly even with a minimal to moderate hormone deficiency.

Dr. Jeffries has found that as long as the adrenal hormone level is kept within the normal range, the main toxicity that a patient might experience is a slight upset stomach, due to the body not being used to having the hormone come in through the stomach. Taking the hormone with food usually helps. In addition, some patients gain a few pounds. This is because a low adrenal level can cause a person's weight to drop below the body's normal "set point," even if that set point is high because of CFIDS/FMS. However, any weight gain is often more than offset by the weight loss resulting from being able to exercise once again.

Many practitioners do not like to prescribe even low doses of adrenal hormone. Others are not legally able to. If you are a physician who is still uncomfortable with very low dose cortisol, I invite you to read Dr. William Jeffries' book on the safety of low-dose cortisone as well as our recent study (the full text of the study can be seen at www.vitality101.com ). A study by R. McKenzie and colleagues at the N.I.H. Institute of Allergy and Infectious Diseases showed that what they called "low-dose" Cortef (25 to 35 milligrams a day) moderately helped CFIDS patients but caused some patients' adrenal glands to be suppressed. As noted in my letter to the editor printed in the Journal of the American Medical Association, their dose was two to three times as high as most CFIDS patients need and this predictably and dramatically worsened the sleep disorder. Another study using 10 milligrams of Cortef a day in CFIDS and our studies of CFIDS/FMS patients showed significant benefit without significant toxicity using lower doses. Most patients only need 5 to 12 1/2 milligrams a day, equivalent to 1 to 3 milligrams a day of prednisone - a dose so low that most doctors have never prescribed it! Cortef is better than prednisone, though, for people with CFIDS/FMS. Most patients find that 5 to 10 milligrams of Cortef in the morning, 0 to 7 1/2 milligrams at noon, and 0 to 2 1/2 milligrams at 4 PM works best.

After feeling well for six to eighteen months, most people are able to begin slowly decreasing their adrenal hormone dosage, eventually discontinuing the treatment entirely. Some patients may benefit from staying on natural adrenal glandulars (see below) for longer periods or whenever they are experiencing fatigue and/or hypoglycemia.

What are Low Dose Cortef's Side Effects?

If the dose is too high, the patient may feel shaky and should lower it. If it causes upset stomach, have them take it with meals or lower the dose. Taken too late in the day, Cortef can disrupt sleep. Recently, studies have been published about osteoporosis with low-dose adrenal hormones, but even these studies do not use the very low doses that we are recommending. At a dose of over 20 milligrams a day, one can begin to see the other, much more toxic side effects of cortisol. I cannot recommend using higher doses unless benefits clearly outweigh the risks.

How Can I Tell if the Patient Needs Cortisol?

Dr. Jeffries recommended that all patients with unexplained persistent fatigue be given a therapeutic trial of 20 milligrams of Cortef daily. Although most patients do not need this much, I agree that a therapeutic trial is appropriate in the presence of unexplained disabling fatigue regardless of the test results. Nonetheless, testing can add significant information.

Unfortunately, I have found that salivary testing for hormones is very unreliable. This disappointed me because from a theoretical point of view they're wonderful. Sadly, I have found that they often give the opposite results of blood testing and, when this occurs, it is usually the blood test that fits the clinical picture. This has also been the experience of many other practitioners.

Because of anachronistic laws, some practitioners are unable to get cortisol blood testing on their patients. Because of this, any person can come to my website
Adrenal Hormones & Glandulars

(www.vitality101.com) and get a prescription (at no charge) that they can take to their local lab to have this and many other blood tests done. We do this because we feel everyone has the right to have noninvasive testing done if they so choose.

I recommend a simple cortisol level for most patients with chronic fatigue. It is critical that it be drawn before 9:30 AM. Most people ran a cortisol of approximately 20 mcg/dL before 9 AM, about approximately 4 mcg/DL at bedtime. Therefore, if it is drawn too late in the morning, the cortisol test cannot be properly interpreted. A normal morning cortisol is considered anything over six. I consider a morning cortisol of 16 mcg/DL or under to be suspicious in the face of symptoms. Although it is a very rough measure, I also check a glycosylated hemoglobin (HgbA1C), which gives a rough idea of the patient’s average blood sugar. I consider anything under 5.2 to be suspicious for hypoglycemia and inadequate adrenal function.

In addition, if the patient's symptoms started suddenly after a viral infection, if they suffer from hypoglycemia, or if they have recurrent infections that take a long time to resolve, it is reasonable to suspect on clinical grounds that they have underactive adrenal glands. About two-thirds of my severe chronic fatigue patients have underactive or marginally functioning adrenal glands or a decreased adrenal reserve.

Although I prefer natural products to pharmaceuticals, in this situation I am most comfortable with standardized hormones. If the amount of hormone given is within the body’s normal range, the body can decide for itself how much of the hormone it wants to use. Using natural remedies with the Cortef though, may help to lower the dose (or none at all) and able to stop the cortisone sooner.

Another important function of the adrenal gland is maintaining blood volume and pressure. Low blood pressure, blood volume, and dehydration are common in CFS patients. In this case, however, the other prescription adrenal hormone, fluocortisone (sold under the brand name Florinef) is not very effective in people under 18 years old, and I rarely prescribe it for people over 22 years old. Nonetheless, researchers suspect that in CFIDS, blood pressure may drop precipitously at times and trigger symptoms that can last for weeks (NMH). Drinking plenty of water and getting a lot of salt is very helpful. Adding licorice can also be very helpful. The licorice also seems to help with energy and acts as an antiviral – which can be very helpful in these patients. As a caution, be aware that excess licorice can cause high blood pressure and potassium depletion.

Dehydroepiandrosterone (DHEA)

The adrenal gland makes many hormones in addition to hydrocortisone. One of these is DHEA. DHEA is often very low in CFIDS patients. Although DHEA's function is not yet fully understood, it appears to be important for good health, which makes a low DHEA level worth treating. Some studies suggest that the higher a person's DHEA level is, the longer

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*Source 3: Activities of polysaccharides obtained from Grifora frondosa on insulin-dependent diabetes mellitus induced by streptozotocin in mice. H. Namba, H. Kunishima and N. Kodama, M. pharma. science 41: 475-481.

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that person will live and the healthier he or she will be. I’m concerned that pushing the blood level above the upper limit of normal may increase the risk of breast cancer. For many patients, when a low DHEA level is treated, the result is a dramatic boost in energy.

If the patient’s DHEA-S (not DHEA) level is low (under 120 micrograms per deciliter [mg/dL] of blood for females or 325 mcg/dL for males), I recommend beginning treatment with 5 to 25 milligrams of DHEA per day and slowly working up to what feels like an optimal level to you. For women, I suggest keeping the DHEA-S level at around 150 to 180 mcg/dL, which is the middle of the normal range for a 29-year-old female. For men, I keep the DHEA-S level between 350 and 500 mcg/dL, which is the normal range for a 29-year-old male. The low ends of the normal ranges are normal only for people over eighty. If the patient has side effects, such as facial hair or acne, which are uncommon, check their blood level of DHEA-S and decrease the dose. Excellent (pharmaceutical grade) forms of DHEA (many are not and do raise DHEA levels) are available from Integrative Therapeutics, compounding pharmacies, and General Nutrition Centers.

What if I Do Not Want to Use Cortef?

This is an excellent situation then, in which to use adrenal glandulars. It is actually reasonable to combine a number of natural therapies, and then Cortef can be added to this or not (per your preference). To simplify the patient’s treatment, my favorite natural adrenal product is called “Adrenal Stress – End” (available wholesale at 800-931-1709 from Integrative Therapeutics/PhytoPharmica). This contains high (yet safe) levels of adrenal glandular and licorice, as well as other helpful nutrients including pantothenic acid, B6, tyrosine, trimethylglycine, and vitamin C. Using two capsules in the morning supplies excellent stress and adrenal support.

Interestingly, many food allergies resolve with adrenal support and treating bowel infections (including yeast). In the next issue, we will talk about food allergies and food allergy testing. I would start by saying that most food allergy blood tests are worse than useless. In our next column, we will talk about how to reliably test for and eliminate food and other allergies!

Jacob Teitelbaum, MD is director of the Annapolis Research Center for Effective CFS/Fibromyalgia Therapies, which sees patients with CFS/FMS from all over the world (410-573-5388; www.EndFatigue.com) and author of the best selling book From Fatigued to Fantastic! His newest book “Three Steps To Happiness! Healing Through Joy” has just been released. He gives 2-day workshops on effective CFS/Fibromyalgia therapies for both prescribing and non-prescribing practitioners (see www.EndFatigue.com). He accepts no money from any company whose products he recommends and 100% of his royalty for products he makes is donated to charity.