

Adrenal Fatigue and the Safe Uses of Cortisol

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ADRENAL FATIGUE AND THE SAFE USES OF CORTISOL BASED MOSTLY ON THE BOOK SAFE USES OF CORTISOL (3rd Edition) BY U.S. ENDOCRINOLOGIST WILLIAM McCORMACK JEFFERIES AND ALSO YOUR THYROID AND HOW TO KEEP IT HEALTHY BY DR BARRY DURRANT-PEATFIELD AND ALSO ADRENAL FATIGUE THE 21ST CENTURY STRESS SYNDROME BY JAMES L. WILSON, ND, DC, PHD By Kyle Grimshaw-Jones ND, RT www.conscioushealing.com.au Sep 30th, 2007 This five page educational article is written for health professionals and their clients, in the hope of stimulating interest and discussion in this vital area for the alleviation of human suffering. The author is a naturopath, not a doctor, and does not claim definitive knowledge in this area. This article is a summary of the above literature, and other research and personal experience and observation of the author. This article is not intended as a substitute for proper medical advice or training. It is written largely from memory so it may be best to check details by purchasing the original books. The author does not accept any liability for negative effects from any action or inaction, taken or not taken, by any person or group of persons in connection in any way with the information presented in this article. If in doubt consult your physician; Just pray he's read these books! CONTEMPT PRIOR TO THOROUGH INVESTIGATION WILL CONDEMN A PERSON TO IGNORANCE! BOTTOM LINE: SAFE LOW PHYSIOLOGIC DOSES OF CORTISOL GIVEN APPROX. EVERY SIX HOURS HAVE BEEN SAFELY AND SUCCESSFULLY USED FOR OVER 40 YEARS AND 40,000 PATIENT HOURS. THIS HAS OFTEN INVOLVED LONG-TERM SUPPLEMENTATION FOR YEARS OR DECADES, GIVING DRAMATIC PATIENT BENEFIT, AND HAS PRODUCED NO OBSERVABLE LONG-TERM NEGATIVE EFFECTS AS IS COMMONLY SUPPOSED.

“CORTISOL IS A NORMAL HORMONE, ESSENTIAL FOR LIFE.” - McCormack Jefferies (In fact it is the only hormone you die without!) “MOST PHYSICIANS TODAY ARE UNDER THE IMPRESSION THAT ANY DOSAGE OF CORTISOL CAN PRODUCE SIDE EFFECTS THAT OCCUR WITH ANY EXCESSIVE DOSES.” - McCormack Jefferies

1. Most physicians and pharmacists do not appear to understand the safe uses of cortisol, and are biased against its use by outdated generalised information based on beliefs about other substances/glucocorticoids that are chemically similar to cortisol but not the same, such as prednisone, or cortisone, and/or based on pharmacologic dosages that are far above what can be termed safe low physiologic doses. After safe low physiologic doses are administered, patient peak blood cortisol levels still fall within normal physiological ranges.
2. The cortisol that can be ordered in standard blood, urine, and saliva pathology tests is the same chemical as what is termed hydrocortisone which is sold under the brand name of Hysone in Australia, and can also be manufactured by compounding pharmacists. Hydrocortisone can therefore be defined as bioidentical. Hydrocortisone is somewhat inappropriately named, as it does not have a ketone side chain as its last three letters “one” would suggest. Many years ago Cortisol was originally classified as Compound F in the early research work by Kendall, as distinct from Cortisone which was originally classified as Compound E. Cortisone must be turned into Cortisol in the body for it to have its full effect.
3. Jefferies has used safe physiological dosage cortisol for over four decades, and has documented his findings as a summary of over 40,000 patient hours. As far as I can tell, despite multiple published papers in the medical literature, nobody has been able to refute his observations and recommendations.
4. The original patent rights on cortisol and related natural compounds have expired. In order for new usage claims to be made about a drug new trials would have to be run. This would require funding. This would normally only come from drug companies. These companies are unlikely to fund research into usages of a drug which they cannot patent, as any other company could profit from their research and market their own equivalent product.
5. Many different disease patterns have responded favourably to Jefferies low-dose physiological protocol of cortisol administration, sometimes in conjunction with other hormone supplementation. These include allergies, amenorrhoea, low stomach acid, low secretory IgA production, poor resistance to infection/frequent infection (poor immunity), infertility, tendency to miscarriage, inflammation, autoimmune thyroiditis, lupus, and rheumatoid arthritis.
6. The negative effects from the gross heavy-handed pharmacologic dosages of the cortisone compounds that occurred in the early days of experimentation do not occur with safe low dose physiological cortisol, even when prolonged for decades. In addition, women who had previously miscarried repeatedly only managed to carry their pregnancy to full term when supplemented with cortisol, and no negative effects on mother or child have been observed in over 40 years and 40,000 patient hours. These negative side effects of high-pharmacologic doses of compounds that are in the same family as cortisol, include “moon face”, “buffalo hump”, shut-down of the hypothalamus-pituitary-adrenal axis, osteoporosis, gastrointestinal ulcerations, and immune suppression.
7. Many clinicians, even if they may begrudgingly be persuaded to prescribe low dose cortisol to a patient, are very reticent to do so, very nervous and cautious, and usually have the viewpoint that the client should not be allowed to remain on this dosage medium or long term. Many pharmacists share this belief. I believe this attitude should change. If a patient has a degree of under responsiveness of the hypothalamus-pituitary-adrenal axis which is contributing to their health condition, then this can and perhaps often should be supplemented for as long as necessary, while every attempt is made to support the patient's body in eventually being able to produce adequate cortisol in response to various types of stressors. This may include nutritional, herbal, dietary, or other methods. Specific examples include vitamin C, B complex, Rehmannia, Licorice, Eleutherococcus, Withania, raw bovine or porcine adrenal, adrenal cortex, (and other) glandular extracts, and Iodine (which appears to influence steroid hormone receptor sensitivity).
8. Jefferies points out that even if blood cortisol, ACTH, ACTH stimulation tests, and CRF stimulation tests all show as normal, then low-dose cortisol supplementation may still be indicated and is worth trialling. It appears that certain types of feedback to the hypothalamus can sometimes not result in an adequate

response down the endocrine chain. Interleukin I feedback from monocytes has been shown to influence this process through its effect on the hypothalamus, as has the influenza virus. This connection between the hypothalamus-pituitary-adrenal axis and the immune system has been reported in medical literature since the 1980s.⁹ In the 1918 flu epidemic, many victims who were fatally affected were shown on autopsy to have exhausted their adrenal glands, which had ruptured, not from direct infection per se, but from trying to respond to the infection.¹⁰ It can happen that 8am blood cortisol and DHEA levels, and even supposed 24 hr urinary "free" cortisol tests can all appear in normal limits, yet saliva tests that show the amount of actual free hormone that is available to the body cells can be grossly deficient indicating that bioidentical supplementation is likely to be required. Standard 8am blood cortisol or DHEA indicate the combined amount of both free and globulin-bound hormones. (Globulin-bound hormone is unavailable to the body cells.) Saliva cortisol or DHEA indicate the amount of free hormone available to the body cells. Salivary cortisol is usually tested at 6am, 12pm, 6pm, and 10pm in order to assess the diurnal pattern of cortisol production/cell availability. DHEA cortisol is usually tested at 6 am.¹¹ Jefferies would use dosages of up to 40 mg/day, excepting in severe conditions requiring very strong short-term intervention. 40mg/day is the amount that in unstressed circumstances will temporarily shut down the endogenous production of cortisol by negative feedback to the pituitary gland. Dosages below this, in unstressed circumstances, result in only partial shut down of endogenous production, and when gradually reduced do not impair long-term or medium-term endogenous production.¹² For the purposes of dosage comparisons, Prednisone is considered as four times stronger than cortisol. So a 20 mg/day dose of cortisol could be comparable to a 5 mg/day dose of prednisone.¹³ Typically, Jefferies patients would end up on maintenance dosages of 5 mg four times per day. This would often be increased during times of infectious stress/exposure (e.g. pre and post-operatively), or other periods of heightened stress, or if slightly higher dosages were needed to maintain symptom remission. Other common dosages were therefore 7.5 mg four times per day, 10 mg four times per day, and sometimes 2.5 mg four times per day. These dosages were administered with breakfast, lunch, dinner, and before bed. The dose before bed was taken with some light food or milk if it created any tummy upset (cortisol is a gastric acid stimulant).¹⁴ Some physicians have tried to follow the diurnal pattern by giving dosages of 12, 8, 4, and 1 mgs throughout the day. Some suggest omitting the evening dose. Taking such a small dose at bed time does not support the body in its early morning rise towards the normally and ideally highest cortisol level of the day. This is when it is needed the most. Therefore the evening dose is essential, and should probably not be omitted, but may need to be tapered slightly if any sleeplessness results.¹⁵ Some authors have cautioned that stomach acid supplementation (with betaine hydrochloride for example) may need to be lowered or discontinued if cortisol supplementation is commenced. It can be observed that people with mild adrenal insufficiency often appear to have low stomach acid production also. These individuals may still need stomach acid supplementation however. In Australia direct measurement of stomach acid production seems to be a grossly underused diagnostic procedure. For more information read Lawrence Wight’s work, including Why Stomach Acid is Good for You.¹⁶ Typically, Jefferies would attempt to lower the dose in stages over time. If symptoms returned then he would slightly increase the dose again. People would often remain supplemented for years or decades, with no ill effects, and certainly NONE of the ill effects reported during the early work using high pharmacologic dosages (as distinct from low physiologic dosages). Jefferies has noted that a typical scenario is that a physician attempts to remove cortisol supplementation far too quickly because of biased and incorrect education in this area, and the false belief that prolonged supplementation is always harmful no matter what the dosage (or which glucocorticoid is used!), instead of experimenting to find the safe physiologic dose that allows the patient to live free of their symptoms with no ill effects, even if supplementation is required for many decades and even through pregnancies.¹⁷ Jefferies noted, as have others, that it appears to take 2 weeks for full effect of the dosage that is being used to become apparent. It is important to consider this when finding the necessary dose. A cautious and patient attitude should be employed, beginning with small dosages, and making small changes followed by 2 week observation periods at each stage. Some physicians begin with 2.5 mg four times daily.¹⁸ Jefferies also noted and demonstrated the importance of dividing the dosages of the cortisol throughout the day. It is extremely important to understand that 20 mg of cortisol given once by mouth in the morning is very different in its effect than 5 mg given four times (once every 6 hours, or as close to this as is practical), even though the overall daily intake is the same in both cases. Three or four divided doses have been found to be most effective. Two divided doses has not. One is out of the question.¹⁹ Contrary to popular belief, cortisol given in safe low physiologic dosages is an immune stimulant. Jefferies has convincingly demonstrated this with graphs of immunoglobulin levels over time relative to supplemental cortisol, and also with case history reports and observations that repeatedly demonstrate the dramatically improved immunity to infection of those supplementing with safe low physiological doses of cortisol. To put it simply, people who used to get sick at the drop of a hat turned into the only people in the office who didn’t catch the bug that laid everyone else up in bed for a week! To be cautious, he still would increase the dosage of cortisol during times of likely infection. This is in stark contrast to conventional conditioned thinking which is basically that "cortisone suppresses the immune system".²⁰ Apart from dramatically improved resistance to infection, the following effects are notable in people on safe low medium to long-term physiological dose cortisol supplementation: increased alertness, better digestion (return of desire for food!), more sustained energy levels/better endurance, better ability to concentrate, dramatic relief or remission of rheumatoid arthritis and other autoimmune disease, disappearance of chronic allergies, return of colour to the face - normalisation of low blood pressure, disappearance of postural hypotension (getting dizzy when you stand up quick!), and more stable blood sugar levels.²¹ Cortisol increases the conversion of T4 (thyroxine) to T3 (triiodothyronine) at the cell level, and so interrelationships between the adrenals and the thyroid glands must be considered. For further information on this area the book Your Thyroid and how to keep it healthy by Dr Barry Durrant-Peatfield is highly recommended. Here’s a hint - supplement the adrenals first, and don’t rely on blood tests for assessing thyroid function - test basal temperature and interview and assess the case based on signs and symptoms!²² Durrant-Peatfield lists the following signs and symptoms as indicating low thyroid

function disorder:**SYMPTOMS** **SIGNS**Weight Gain Reduced pulse pressure (difference between systolic and diastolic)Lowered Body Temperature Slowed pulseLack of Energy Slowed reflexes (e.g. Achilles)(common to adrenal dysfunction also)Fluid Retention Lab tests taken alone can be grossly and dangerously unreliable.Chronic Constipation Lowered basal temperatureNervous Disorders (taken upon waking under armpit - some recommend testing both armpits)Loss of memory and thinking ability (to understand this in more detail refer to the work of Dr Broda Barnes)HeadachesSkin troublesHair LossChanges in the VoicePoor resistance to infectionAtherosclerosisAnaemiaLoss of libidoInfertilityEffects on Menstruation, Childbirth and Postnatal DepressionRaynaud's phenomenon23. For more understanding of adrenal insufficiency that is not classic Addison's disease, the book Adrenal Fatigue by James L Wilson is recommended. Any condition that improves with low dose physiological supplementation of cortisol is very likely to have a component of adrenal fatigue involved with it! Mainstream medical syndrome classification does not usually include a category for adrenal insufficiency unless it is formally diagnosed as classic Addison's disease. This is a problem.24. Wilson lists the following symptoms and signs as indications of adrenal fatigue. Clinicians may find these useful in identifying adrenal fatigue in their patients.**SYMPTOMS**Difficulty getting up in the morning.Continuing fatigue not relieved by sleepCraving for salt or salty foodsLethargy (lack of energy)Increased effort to do every day tasksDecreased sex driveDecreased ability to handle stressIncreased time to recover from illness, injury or traumaLight-headed when standing up quicklyMild DepressionLess enjoyment or happiness with lifeIncreased PMSSymptoms increase if meals are skipped or inadequateThoughts less focused, more fuzzyMemory less accurateDecreased toleranceDon't really wake up until 10am, afternoon low between 3 and 4 pm, feels better after evening mealDecreased productivity**SIGNS**On exposure to a light source the iris of the eye contracts, but then it oscillates wider and narrower instead of holding a stable increased tone. In severe cases it hardly responds at all.Low blood pressure and postural low blood pressure - pressure drops on standing up from lying down - this is known as Raglan's sign, and getting dizzy when you stand up quick is called postural hypotension.Sergent's White Line (present in about 40% of people with adrenal fatigue)- with the dull end of ballpoint pen lightly stroke the skin of abdomen - within few seconds a reddened line should appear- if it stays white for about 2 minutes and widens you probably have adrenal fatigue!Lab tests taken alone can be grossly and dangerously unreliable and misinterpreted.25. Supplementation with DHEA, 7-keto DHEA, or other hormones may be indicated concurrently in cases of adrenal insufficiency.26. Jefferies used cortisone acetate for some time, but reached the conclusion over the decades that it was far better to use the biodentical cortisol (hydrocortisone).27. Much human suffering has been caused by ignorance of the information contained in this document. Please feel free to photocopy it and distribute it, on the condition that you do not edit or modify it in any way, and ensure that each copy is complete. Please give this to all people you know with autoimmune diseases, and all doctors, rheumatologists, etc. that you come across.**THIS DOCUMENT IS RESPECTFULLY DEDICATED TO ALL THOSE WHO:HAVE WORKED TO EASE HUMAN SUFFERING,ARE WILLING TO THOROUGHLY INVESTIGATE AN AREA OF CONCERN BEFORE ARRIVING AT AN OPINION,ARE WILLING TO REVISE THEIR OPINIONS AND PRACTICES IN THE LIGHT OF NEW INFORMATION,WHO PLACE THE LONG-TERM WELFARE OF THE PERSON ABOVE PROFIT MOTIVES, AND THEIR PERSONAL NEED TO BE RIGHT OR TO STAND UNCORRECTED, AND WHO HAVE SOUGHT AND FOUND HOW TO SERVE.- Kyle Grimshaw-Jones ND**