

# DHEA Update

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There has been much interest in the possible benefits of taking oral DHEA (dehydroepiandrosterone) for persons with Addison's disease. As mentioned in several previous issues of the NADF Newsletter, DHEA is a natural androgenic steroid (male hormone) made in the adrenal cortex along with cortisol and aldosterone. Research has shown that the blood level of DHEA (best measured by levels of the stable compound DHEA sulfate or DHEAS), decrease with age in normal people. Laboratory studies over several years suggested benefits with DHEA, including all sorts of anti-aging, immune system improvements, better sexual function and muscle strength. Unfortunately, most of this work was in rodents and rabbits, which normally do not make DHEA like humans, so the effects were suspect. Human trials often showed minor or mixed results when compared to placebo. Since there is no known cell receptor for DHEA itself, it was assumed that any effect was due to the natural metabolism of DHEA to the androgens androstenedione or testosterone, or to a neurotransmitter effect in the brain. Interest in the possible effects of DHEA in humans has been focused on people with adrenal insufficiency, both primary (Addison's disease), and secondary (pituitary) because these people have the lowest levels of the hormone, while being treated with replacement doses of the other steroids. The NADF Newsletter has mentioned a research trial of DHEA in Addison's by Dr Samuel Yen, and some of our members participated. The results of that trial have not been published. However, two other trials were just presented at the 1999 Endocrine Society Meeting in San Diego in June.

In the first study, researchers from Germany W. Arlt et al. (University of Wuerzburg, Jena, and Hamburg) gave 50 mg doses or placebo to 24 women with adrenal insufficiency (14 had Addison's disease and 10 had secondary adrenal insufficiency) for four months and then crossed over, so the other half took the other pill. They found that blood levels of DHEAS and testosterone went up to normal. The DHEA improved sexual interest and satisfaction, and decreased anxiety and depression over the placebo group. There was no difference in effect between primary or secondary adrenal insufficiency. The researchers cautioned, however, that the dosage might cause unwanted androgenic side effects, such as acne and excessive facial hair, and further research on dosing was necessary.

In the second study, researchers in England E.M. Gurnell et al. (Cambridge and Oxford University) also used 50 mg doses of DHEA or placebo in a crossover study, but for a three-month interval. All the participants had Addison's disease, and 15 were males, with 24 females. They also found blood levels of DHEAS went up to normal. Testosterone levels increased, but not all the way to normal. They found a significant improvement in fatigue, mood, and memory in the DHEA interval. Interestingly, these improvements were reported to be most significant in the male Addisonians. This group also cautioned that further work, with longer intervals and perhaps lower doses was needed, especially with the concern about androgenic side effects in the women.

At this point, I would still caution our readers that this research is preliminary. However, since DHEAS is freely available in health food stores, some people are already experimenting with it. Anyone who does want to try it should at least discuss it with their doctor, check baseline levels of DHEAS and other androgens, monitor blood levels, and probably use lower than 50 mg doses, especially women.