

DHEA - a brief synopsis of the controversy

By Dr. David Torpy

DHEA or dehydroepiandrosterone, is the most abundant steroid produced by the human adrenals. Despite this, there is little knowledge on which to base recommendations for the use of DHEA as a replacement hormone in humans. DHEA is a precursor steroid from which the male sex steroid testosterone or the female sex steroid oestrogen can be produced. In women the adrenals are an important source (about 50%) of testosterone but the adrenals are relatively less important in men for testosterone. Conversely, the adrenals are an important source of oestrogen production in men. Apart from acting as a precursor for testosterone and oestrogen, DHEA may have intrinsic properties of its own and research has recently focused on finding some of these. The production of the adrenal androgens, DHEA and androstenedione, in late childhood/early adolescence, is associated with "adrenarche" or the development of hair under the arms and in the pubic area.

Recently DHEA has been touted as a youth promoting hormone, joining in on a long history of such assertions relating hormones and youth. The basis for this is that DHEA declines about 30% with each decade after the 20's. Of course this does not mean that all the deleterious effects of aging are due to loss of DHEA!

In the United States, DHEA is freely available without prescription as it is regarded as a food additive or agent with low potency. This has made it straightforward for promoters to offer DHEA and make claims as to its value.

The situation is different with Addison's. Unlike people in the general community, most patients with adrenal insufficiency of any cause, but especially Addison's disease, have no detectable, or very little, DHEA in blood. Hence, replacement doses of DHEA are capable of elevating DHEA levels to normal, which is rather different than taking DHEA when your body can produce it.

In Addison's taking replacement hydrocortisone or fludrocortisone is essential for life. DHEA, on the other hand is not life-saving, but researchers have performed initial studies to determine if DHEA is of any benefit.

Limited studies, in small numbers of Addison's patients, have suggested that DHEA may subtly improve well-being, libido, thinking and energy. Benefits were not universal but seem to apply to both women and men. However, these studies generally involved only small numbers of people with Addison's for short periods. We lack information from a large study over a long period. Most importantly there is no long term safety information.

In the short-term side effects of DHEA are quite common and most commonly involve the skin with acne and excess hair growth.

Taking all this into account, a conservative approach would be to use DHEA in a replacement dose (usually 50 mg) in Addison's. Such a dose may be sufficient to elevate DHEA levels to normal and this can be continued if there is symptomatic benefit. In my experience, some patients do not feel any benefit and would rather not pay for these tablets (they are not available on the Pharmaceutical Benefit Scheme). However, other Addison's patients detect a useful benefit. There are unfortunately, homeopathic preparations of DHEA, which do not actually contain DHEA and would not be of benefit. As the regulation of DHEA in Australia is complicated it is important to use a reliable source, if at all. In summary, the situation with regard to DHEA in Addison's disease requires careful judgement and an informed decision between the individual patient and doctor, with full awareness that long term safety is not proven.