

Is Your Depression Linked to Low DHEA Levels?

DHEA Has Potential to Relieve Depression

Posted July 8, 2011



As an Integrative Medicine physician, my role involves exploring the psychological, biological and at times the spiritual deficiencies that may sustain depression and other mood disorders.

[My last blog article](#) spoke about cholesterol, specifically how low cholesterol is directly related to depression. Now, I would like to share a few thoughts about one of the hundred of hormones synthesized from cholesterol-DHEA.

While there are clearly many factors that influence our mood and the onset of depression, there is a biological core—a physiological component—that cannot be ignored. For some, low levels of DHEA may be part of that process.

DHEA is an abbreviation for dehydroepiandrosterone, a hormone mainly produced by the adrenal glands. It is the most abundant steroid hormone in the human body.

DHEA exists in two forms, DHEA and DHEAS. DHEAS is the form most commonly measured in the bloodstream and many physicians believe that low levels are related to depressed mood, fatigue, and a general sense of not feeling well.

Levels of DHEA peak in your 20's and slowly fall as you age. By the time you reach 40, your body makes about half as much DHEA as it used to. By 65, levels drop to 10 to 20 percent; by age 80, it plummets to less than 5 percent.

As DHEA levels decline with age, attempts have been made to replace the hormone with an over-the-counter supplement. DHEA supplementation is most talked about in two controversial areas-anti-aging medicine and athletic performance enhancement. DHEA's reputation has been much maligned due to these associations. The anti-aging movement has the reputation of extravagant health claims without sufficient scientific evidence. DHEA has also made its way into national headlines as a "performance enhancing" substance.

Despite DHEA's reputation, data suggest that DHEA synthesized in the brain may have neuroprotective effects, which means DHEA may play a role in brain function and development.

In my experience, low levels of DHEA are one of many important factors that may contribute to a depressed mood. Yet, routine testing for DHEA levels and DHEA supplementation is not considered a component of traditional medical or psychiatric practice.

ARTICLE CONTINUES AFTER ADVERTISEMENT

Many of my colleagues may label the use of DHEA supplementation as "alternative" or something in the realm of CAM-Complementary Alternative Medicine. Yet, I have always struggled with the label of "alternative" for DHEA. It is the most abundant hormone in the human body and a precursor to all of our sex hormones: estrogen, progesterone, testosterone, and the stress hormone cortisol. Perhaps, it is because DHEA is an over-the-counter supplement that can't guarantee high profit margins for pharmaceutical companies?

Although clinical research with DHEA in the treatment of depression is limited, studies have consistently demonstrated beneficial results of supplementation.

1. The [National Institute of Mental Health](#) studied 46 patients age 40-65 with major and minor depression. After six weeks of administering DHEA, 23 patients showed a 50% decrease in depressive symptoms. Ten patients chose to continue taking DHEA for one year at a low dose and remained free of depression.

THE BASICS

[What Is Depression?](#)

[Take our Depression Test](#)

[Find a therapist to overcome depression](#)

2. [Ten elderly men](#) (58-69 years old) with a range of age-related symptoms such as feeling weak and having low-energy showed significant improvement in symptoms after taking 25 mg of DHEA every morning for one-year.

3. In a 1999 study published in *Biological Psychiatry*, researchers tested the effects of DHEA in 15 people who had developed mid-life depression. Sixty percent of those receiving DHEA responded well to treatment compared to only twenty percent of those who received the placebo.

4. In [a large-scale study conducted in 2007](#), of 2,855 elderly men and women, it was concluded that low DHEAS levels were linked with depressive symptoms.

5. A 2007 study of [sixty-one patients with Dysthymic disorder \(DD\)](#), a chronic state of mild depressive symptoms, found that individuals with DD have low levels of DHEAS.

A [2009 comprehensive review of DHEA](#) in the treatment of depression concluded:

"Thus to date, every controlled trial of DHEA in depression has reported significant antidepressant effects."

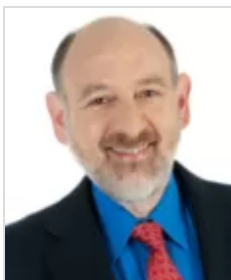
These studies are the first steps toward providing clinical data supporting the potential involvement of DHEA in neuropsychiatric illnesses. Future research studies on DHEA need to appreciate the concept of biochemical individuality and personalized medicine. Studies should be based on the fact that rates of DHEA decline are different for each individual and it is likely that there is a genetic component.

As an integrative physician, I try to see each patient with unique biochemical and nutritional needs as well as the more obvious, unique psychological presentations. Optimal mental health and recovery from depression often requires a more detailed comprehensive program than the traditional symptomatic based treatment with antidepressant medication. Evaluating DHEAS levels and prescribing DHEA if levels are low should be part of a comprehensive plan for depression.

It is important to note, for patients with normal levels of DHEA I do not recommend or prescribe DHEA supplements.



About the Author



[James M. Greenblatt, M.D.](#), a professor of psychiatry at Tufts University School of Medicine, is the author of many books including *The Breakthrough Depression Solution*.

Online: [Author Homepage](#), [LinkedIn](#)