DHEA

WHAT IS DHEA?

Dehydroepiandrosterone (DHEA) is a steroid produced by the adrenal glands. DHEA acts like a hormone, so it is called a steroid hormone. A hormone is a chemical produced in one part of the body that is carried to another part of the body where it has a specific effect. The adrenal glands are located on top of the kidneys.

DHEA is the most common steroid in humans. It can be transformed in the body into testosterone (the primary male sex hormone), estrogen (an important female sex hormone), or other steroids.

DHEA has not demonstrated the same effects as anabolic (muscle-building) steroids, but the Food and Drug Administration has already examined the possibility of classifying DHEA as a Schedule III drug. If this happens, it will be extremely difficult to get DHEA.

In normal adults, DHEA levels are highest at about age 20, and then decrease steadily. HIV patients with lipodystrophy (See Fact Sheet 553) have very low levels of DHEA.

WHAT ARE THE BENEFITS OF DHEA?

People with various diseases have levels of DHEA that are unusually low. DHEA has been used in the last thirty years or so to treat obesity, diabetes, and lupus. It has also been found to improve sleep. Many people who have taken DHEA report improved energy levels and a better sense of well being.

WHY DO PEOPLE WITH HIV USE DHEA?

Some people with HIV take DHEA in amounts designed to restore normal levels. This might help improve their energy levels. Several studies have found that DHEA increases the levels of IL-2, a chemical messenger that increases the production of CD4 (T-helper) cells. See Fact Sheet 482 for more information on IL-2. DHEA also improves the ability of CD8 (T-killer) cells to destroy infected cells. DHEA may help normalize the immune system. A recent study shows that DHEA can reduce depression in people with HIV.

HOW IS DHEA USED?

DHEA is available in "regular" form or as DHEA-S (DHEA sulfate). The body can convert DHEA into DHEA-S and back again.

A doctor in San Francisco who uses DHEA with his HIV-positive patients tries to maintain blood levels that are typical for young adults. This usually means taking 200 milligrams of DHEA either once or twice a day.

A blood or saliva test can measure the amount of DHEA in your blood. This can help determine how much DHEA to take and whether your level is where you want it to be. DHEA levels vary during the day, so you should do each test at the same time of day.

We do not know the best doses of DHEA for women.

DHEA is not recommended for children or adolescents with HIV.

WHAT ARE THE SIDE EFFECTS?

There are no documented side effects of DHEA at doses up to 2,500 mg per day, except for an increase in acne, especially in women.

Some studies suggest that **people with HIV and Kaposi's Sarcoma (KS, see Fact Sheet 511) have very high levels of DHEA. Taking more DHEA might be harmful for these people.** Check your blood or urine levels before you take DHEA.

HOW DOES DHEA INTERACT WITH OTHER THERAPIES?

There are no documented interactions of DHEA with other therapies. Because DHEA occurs naturally in the body, interactions are unlikely. It is possible that DHEA could affect the processing of drugs by the liver, but this has not been studied.

HOW DO WE KNOW IT WORKS?

There is increasing scientific interest in DHEA, with well over 100 scientific articles written in each of the last four years. However, there have not been many studies that document health benefits in humans, and some initial good results have not been confirmed in follow-up studies.

There is not good scientific support for taking DHEA *supplements* (that is, getting more than normal amounts in your body). However, some health care providers recommend DHEA *replacement,* which means taking enough DHEA to bring your levels back into the normal range. A Phase II clinical trial is studying the effects of DHEA supplementation in people with HIV.

THE BOTTOM LINE

DHEA is a steroid hormone produced by the body. DHEA levels go down with age, and go down even faster with some illnesses including HIV. DHEA may help with immune function, increasing energy levels, and reducing depression.

It may be helpful to take enough DHEA to bring levels up to the normal range. This is called "replacement" therapy. Before you take DHEA, check your blood or saliva levels.

At this point, there are no research studies that support taking DHEA supplements (in amounts that would give you higher than normal levels).

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