

DHEA Promotes Quality of Life

By: Stephanie Myers

DHEA is one of the most abundant hormones in the bloodstream.

With age, DHEA levels decline.¹

From a high point in our 20s, DHEA levels fall by **80%-90%** by the time we hit 80 years old.²

This loss has been associated with loss of function and increased risk for disease. It impacts quality of life and [longevity](#).³⁻⁷

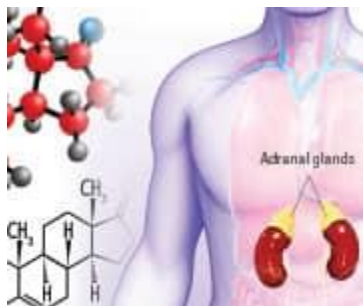
Back in 1981, **Life Extension**® recommended the hormone DHEA as a strategy to slow aging. There are now hundreds of published papers substantiating DHEA's youth-promoting properties.

DHEA has become a popular **anti-aging** supplement.

One landmark study that followed older men for 12 years found that an increase of **100 ug/dL** of DHEA-S circulating in the blood was associated with a **reduced risk of death from any cause by 36%**.³

A simple **blood test** can identify DHEA status in men and women. Taking oral **DHEA** capsules can restore **youthful** levels.

What Is DHEA?



Dehydroepiandrosterone (DHEA) is a **hormone** derived from cholesterol and pregnenolone.

It's produced by the adrenal glands, located just above the kidneys, and in smaller amounts in the testes in males and the ovaries in females.

DHEA acts as a **precursor**—the starting material—for production of the sex hormones testosterone and estrogen.

It also has direct hormonal effects of its own throughout the body.

Impact on the Sex Hormones

The adrenal glands, testes, and ovaries *need* DHEA to produce adequate **testosterone** and **estrogen**.

As DHEA levels drop with age, less testosterone and estrogen are produced.

Low levels of these sex hormones contribute to loss of vitality and eventual **frailty** in older men and women.

Lower DHEA levels are tied to other health problems and a diminished quality of life.

In older men, **low** testosterone results in **erectile dysfunction**, a drop in libido, loss of muscle mass and bone density, a tendency towards **depression**, and slowing brain function.^{4,8,9}

In older women, **low** estrogen levels are associated with a loss of libido, along with hot flashes, mood swings, fatigue, headaches, thinning of the bones, and risk for bone fractures.^{10,11}

By *increasing* DHEA levels, we help provide the body with some of the raw material it requires to produce the testosterone and estrogen.

But DHEA is not always the optimal way for men to boost **testosterone** or women to increase estrogen.

In men, DHEA can convert to **estrogen**, which is good for men with low estrogen that is not in the optimal range of **20 pg/mL-30 pg/mL**. Men need enough estrogen to protect against **osteoporosis**, but not so much that it increases **cardiovascular** risks.

This is why **blood testing** is so important for men to achieve **optimal** estradiol (an estrogen) levels of **20 pg/mL-30 pg/mL**.

In women, DHEA more often cascades into testosterone, which can be beneficial for aging women with deficient testosterone that can diminish sexual functions. It can be challenging for menopausal women to fully restore estrogen levels with DHEA alone.

In general, as **men** age, DHEA tends to increase estrogen more than testosterone. The opposite happens for **women**, whereby DHEA tends to increase testosterone more than estrogen.

This is one reason why women often only need **15 mg** a day of **DHEA** to achieve optimal levels, whereas aging men usually require about **25 mg** of supplemental **DHEA** a day.

However, the direction DHEA goes is influenced by genetics, diet, lifestyle and visceral fat levels. The best way for an individual to assess if DHEA is going more toward testosterone or estrogen is through blood tests that measure levels of **DHEA-S, testosterone** and **estradiol**.

Systemic Effects of DHEA

Although DHEA helps produce sex hormones, it also has a widespread, direct impact on tissues throughout the body.

Low levels of DHEA have been tied to premature aging and shortened lifespan, along with an *increased* risk for:^{2-5,7,10,12-17}

- Cognitive decline and dementia,
- Cardiovascular disease,
- Osteoporosis and bone fractures,
- Depression,
- Sexual dysfunction,
- Inflammation and inflammatory disorders, and

- Frailty.

Maintaining normal, youthful levels of DHEA into older age may help fend off the problems associated with low DHEA.

WHAT YOU NEED TO KNOW

Keeping Youthful with DHEA

- **Dehydroepiandrosterone (DHEA)** is a hormone produced primarily in the adrenal glands, testes, and ovaries.
- It's needed by the body to produce the sex hormones **testosterone** and **estrogen**.
- DHEA also has many health-promoting effects of its own, directly impacting many bodily functions.
- Levels of DHEA drop as much as **80%-90%** by later adulthood, declining in parallel with our vitality and health.
- These low levels are associated with increased risk of disease, diminished quality of life, frailty, and shortened lifespan.
- Blood testing for DHEA can identify low levels and help guide proper oral intake to attain more youthful levels.
- Most older people can achieve optimal, youthful levels by taking **15 mg-50 mg** of DHEA daily.

Increasing DHEA Levels



DHEA levels peak between ages 20 and 30, then decline at a rate of roughly **5% every year**.¹⁸

One effective way to raise DHEA levels in the blood in older adults is by taking **oral DHEA**.

As with any hormone, excess levels of DHEA are not desirable.

A simple blood test called **DHEA-S** can assess current levels. The results can then be used as a guide to determine how much oral DHEA is needed to achieve youthful levels.

For women, an ideal DHEA-S blood level is **275 ug/dL-400 ug/dL**. For men, it's **350 ug/dL-500 ug/dL**.

Most older people can achieve optimal results by taking **15 mg-50 mg** of DHEA daily.

Quality of Life

The impact of *higher* DHEA levels can be dramatic.

A recent study assessed the relationship between DHEA and **quality of life**, using the World Health Organization Quality of Life Scale.^{7,19}

The researchers found that in adults of various ages, *higher* DHEA levels corresponded to *better* results in three areas of the scale:

- **Physical health**, including levels of energy and fatigue, pain and discomfort, and sleep and rest,
- **Social relations**, including quality of personal relationships and sexual activity, and
- **Environmental dimensions**, including participation in recreation and leisure activities.

Those with higher DHEA also had better **working memory**, the ability to hold and use information in the short term, which is an important marker of cognitive function.

Other studies have reported similar findings related to cognitive function.

For example, one recent study found *lower* levels of DHEA-S in patients with [Alzheimer's disease](#), compared to those with normal brain function.¹⁵

Improving Sexual Function

Many people consider a waning libido and diminished sexual function to be a normal part of aging. Studies of DHEA show that these signs of decline are closely associated with the age-related decline in levels of DHEA.

Studies have demonstrated that age-related *decline* in DHEA is associated with erectile dysfunction in men⁴ along with a drop in libido, ability to reach orgasm, and sexual frequency.²⁰

In women and men, *higher* levels of DHEA are associated with *improved* sexual function, including arousal, libido, ability to orgasm, and sexual frequency.^{20,21}

DHEA and Longevity



DHEA's impact goes far beyond quality-of-life issues.

Low levels are associated with increased risk for several disorders of older age, including cardiovascular disease, inflammatory disorders, and metabolic disorders.^{2-5,14,16}

Maintaining youthful levels of DHEA could help ward off these diseases, leading to a longer and healthier life.

Aside from its impact on disease, DHEA has also demonstrated an association with **longevity**.

Blood levels of DHEA correlate with longevity in primates.²²

This appears to be done by activating various “housekeeping” responses that keep tissues youthful and functioning optimally, thus maintaining balance in the body, supporting a healthy immune system, and improving resistance to the development of cancer.

In humans, studies have shown that *lower* levels of DHEA are predictive of **earlier death**.^{5,6,23-27}

For example, a study published in the *New England Journal of Medicine* followed older men for 12 years.³ It found that those with *lower* levels of DHEA-S were more likely to die from cardiovascular causes than those with *higher* levels.

The same study found that an increase of **100 ug/dL** in DHEA-S reduced the risk of death **from any cause** by **36%**.

Many other studies have reported similar findings.^{5,6,23-27}

One study took a different approach, tracking DHEA levels **over time** in older individuals.²⁴ It found that those people whose levels dropped at a *faster* rate were at greater risk of death than those whose levels declined at a slower rate.

In fact, the steeper downward trajectory was associated with a **75%** greater likelihood of death.

Tracking DHEA levels over time may give a better picture of overall health and identify those individuals who are most in need of taking oral DHEA to get back to youthful levels.

Life Extension[®] suggests checking **DHEA-S** levels as part of people's yearly battery of lab tests.

Summary



DHEA is a vital hormone needed to produce testosterone and estrogen. It also has many direct health-promoting effects throughout the body.

Its levels drop dramatically in older age.

Many quality-of-life factors that deteriorate with age, such as sexual function, mood, cognitive function, and physical health, are associated with low DHEA levels.

Decreased DHEA levels are correlated with risk for age-related disorders and overall mortality.

Blood testing can help identify individuals with low levels and guide how much oral DHEA intake is needed to restore youthful levels, to help ward off aging and a diminished quality of life.

Note : Concerns have been raised regarding DHEA supplementation and hormone-sensitive cancers. To date, no study has convincingly shown an increased risk of hormone-dependent cancer in people supplementing with DHEA. As always, anyone with a medical condition should consult their doctor before beginning a new supplement or medication.

If you have any questions on the scientific content of this article, please call a **Life Extension**® Wellness Specialist at 1-866-864-3027.

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