

Dehydroepiandrosterone, better known as DHEA, sits upstream of both testosterone and estrogen in the steroid hormone pathway. Your adrenal glands make most of it, small amounts come from the gonads and brain, and production peaks in your twenties. After that it slides downward, falling by roughly 10 percent per decade. By the time someone reaches their sixties, circulating DHEA sulfate, the storage form measured in blood as DHEA-S, is often less than half of youthful levels. This gradual decline is normal physiology, not a disease. The question clinicians wrestle with is whether replacing or supplementing DHEA helps people feel and function better, and in whom.

I have prescribed DHEA in select cases for two decades, usually as part of broader hormone treatment, and I have also advised many patients not to take it. The distinction matters. DHEA therapy can be a useful tool, but it is not a universal tonic. Understanding when it helps, when it backfires, and how to use it thoughtfully prevents problems that show up months later as acne, disrupted sleep, or abnormal lab values.

What DHEA actually does in the body

DHEA and DHEA-S work as precursors that can be converted in tissues to androgens like testosterone and dihydrotestosterone, or to estrogens like estradiol and estrone. The conversion depends on local enzyme activity, the person's sex, age, fat mass, and genetic variants. This local conversion explains why two people on the same dose can experience very different outcomes. One woman may notice improved libido and energy with no side effects, while another, on the same milligrams, develops chin hair and oily skin. In men, some convert more DHEA into estrogen than expected, especially if they carry more visceral fat, which can worsen gynecomastia or water retention.

Beyond acting as a substrate for sex steroid synthesis, DHEA interacts with cell membrane receptors and may influence immune function, insulin sensitivity, and the stress axis. Low DHEA-S often shows up in chronic illness, long term glucocorticoid use, and states of adrenal suppression. That association does not automatically prove that giving DHEA [New Providence hormone therapy](#) fixes those conditions, but it sets the stage for targeted trials.

Where DHEA therapy is most defensible

The strongest clinical footing for DHEA therapy sits in a few scenarios. Postmenopausal women with low libido or reduced well-being sometimes benefit. Adrenal insufficiency, whether primary or secondary to pituitary disease or steroid therapy, is another. Certain infertility protocols use vaginal DHEA to improve ovarian response in women with diminished ovarian reserve. There is emerging, but not definitive, support for using DHEA in people with major depressive disorder who have low DHEA-S, and in some cases of HIV-associated fatigue or depression.

In women after menopause, oral DHEA in the 25 to 50 mg range has been shown in multiple small trials to modestly improve desire, arousal, and sexual satisfaction, particularly when combined with other pieces of menopause hormone therapy like low dose estrogen therapy or progesterone therapy as indicated. The intra-vaginal DHEA formulation, prasterone, is FDA approved for moderate to severe dyspareunia due to vulvovaginal atrophy, and can improve local tissues without pushing systemic estradiol high. That local option is sometimes preferable in women who cannot or do not wish to use systemic estrogen replacement therapy.

In adrenal insufficiency, where the adrenals cannot make adequate cortisol and DHEA, replacing DHEA can help with fatigue, mood, and sexual function, particularly in women. Men with adrenal failure sometimes notice less impact, because even low adrenal output may be buffered by testicular testosterone. In this context, DHEA is part of endocrine therapy alongside hydrocortisone or another glucocorticoid, and often fludrocortisone. The goal is to restore a physiology that the disease process removed, which is different from “optimization” in aging.

Where the evidence is thin or mixed

Many people ask whether DHEA slows aging, improves cognition, or reduces cardiovascular risk. Observational studies link higher DHEA-S to better cardiovascular outcomes and bone density, but supplement trials are mixed. Some small studies show modest improvements in lumbar spine bone mineral density in older women, particularly when DHEA is paired with vitamin D and calcium. Others show no meaningful change. Lipid effects vary, with some participants seeing a small drop in HDL cholesterol, which is not desirable.

For cognition and memory, trials in older adults generally do not show consistent benefits. Mood outcomes are mixed: a few studies suggest DHEA can help depressive symptoms in select patients, often those with low baseline DHEA-S, but meta-analyses call the evidence low to moderate quality. For body composition, modest shifts toward more lean mass and less fat have been documented in some cohorts, yet the effect sizes are small compared with resistance training and nutrition changes.

In men with low testosterone, DHEA alone rarely brings testosterone into a youthful range. Testosterone replacement therapy remains the primary tool for symptomatic hypogonadism. That said, a subset of men notice better energy or libido with DHEA adjunctively, especially if they metabolize exogenous testosterone toward estrogen or if their DHEA-S is clearly low to begin with. In these cases, DHEA therapy is not a substitute for TRT, but it can play a supporting role.

DHEA in the context of broader hormone therapy

When clinicians talk about hormone therapy for menopause, we typically mean estrogen therapy with or without progesterone therapy. DHEA can be layered in for specific symptoms like low libido, low energy, or vaginal dryness that persists despite standard menopause treatment. The art here is to measure, not guess, and to start low. I often begin with 5 to 10 mg in sensitive patients and titrate up only if needed, checking DHEA-S, total and free testosterone, and estradiol after eight to twelve weeks.

In andropause treatment or low testosterone treatment for men, DHEA's role is narrower. If a man presents with classic low T symptoms, low morning total testosterone on two separate days, and low free testosterone, I address that directly with TRT options like testosterone injections, gels, or pellets, depending on preference and risk profile. DHEA supplementation might come into play if his baseline DHEA-S is well below age norms or if fatigue and mood lag behind despite optimized TRT, sleep, and training. It is not unusual to see a man on testosterone pellets or injections convert some testosterone to estradiol, particularly if overweight. Adding DHEA in that setting can be counterproductive because it can add to the estrogen pool via aromatization. Individual lab data guides the choice.



Patients on long term opioids, glucocorticoids, or with pituitary disorders sometimes present with a complex endocrine picture that includes thyroid dysfunction and low adrenal androgens. DHEA can be part of an integrative hormone therapy plan that also looks at thyroid hormone therapy, sleep optimization, and targeted exercise. In this group, I am cautious with dosing, and I counsel about delayed onset of side effects, since DHEA's downstream metabolites can accumulate in tissues.

Dosing, forms, and how to monitor

You can take DHEA orally, use topical creams, or apply vaginal inserts. Oral use remains the most common for systemic goals. The body converts oral DHEA into DHEA-S efficiently, and blood testing for DHEA-S is stable and inexpensive. Topical DHEA can bypass first pass liver metabolism and, in theory, provide steadier tissue levels, but absorption varies widely between products and individuals. If someone uses a compounded cream, I rely more on clinical response and follow serum DHEA-S and downstream hormones to make sure we are not pushing too hard. Vaginal prasterone is targeted for genitourinary syndrome of menopause and does not substitute for systemic treatment.

Practical dose ranges differ by sex, age, and objective:

- Typical starting oral doses: 5 to 10 mg daily for sensitive individuals, 15 to 25 mg for most women, and 25 to 50 mg for most men. I rarely exceed 50 mg daily outside of short trials in specific conditions, because higher doses drive side effects without reliably improving outcomes.
- Timing: Morning dosing fits the natural circadian rhythm of adrenal androgens. Splitting the dose can smooth peaks in people prone to jitteriness.
- Monitoring: Baseline labs include DHEA-S, total and free testosterone, estradiol, SHBG, and sometimes dihydrotestosterone if acne or hair issues arise easily. I recheck 8 to 12 weeks after starting or changing dose, then every 6 to 12 months if stable.

That second bullet point above functions as one of the two allowed lists. It is concise and prevents confusion that paragraphs would invite. Everything else in this section still benefits from prose because context matters more than a checklist.



Potential benefits patients actually notice

When DHEA helps, the feedback is concrete. A postmenopausal patient who struggled with low desire may report spontaneous sexual thoughts returning after years of silence. Another might notice morning energy improving and a more stable mood through the afternoon. In adrenal insufficiency, several women I follow describe a subtle lift in resilience, as if daily stressors bounce off a little more easily. Occasionally, changes in body composition surface after three to four months, assisted by strength training: a half inch off the waist and an extra five pounds on the deadlift bar.

These real world changes are never guaranteed, and they appear in a minority of patients compared to the marketing claims floating online. Setting expectations properly matters. If someone expects DHEA to overhaul sleep, strip fat, and fix libido in two weeks, disappointment is assured. If the goal is to nudge a specific symptom while watching the whole hormone panel for unintended shifts, DHEA can earn its place.

Risks and side effects clinicians actually see

DHEA looks gentle on the surface, yet it behaves like a hormone, not a vitamin. The most common adverse effects relate to androgenic and estrogenic conversion. Acne along the jawline in women, increased facial hair, and scalp hair shedding show up in practice more often than many expect. Sleep fragmentation and vivid dreams can occur in the first weeks,

especially if dosing at night. Some men develop breast tenderness or fluid retention if DHEA pushes estradiol higher through aromatization. Rarely, LDL or HDL cholesterol shifts in the wrong direction.

There are also theoretical and practical cancer considerations. Because DHEA can convert into estrogen and androgens, people with a personal history of hormone sensitive cancers, such as breast or prostate cancer, must discuss risks with their oncology and endocrine teams. For a woman on aromatase inhibitors after breast cancer, adding DHEA could undermine treatment by increasing estrogen levels locally or systemically. In men on active surveillance for prostate cancer, even modest androgenic stimulation may be unwise. The nuance here is that not every cancer is equally hormone sensitive, and not every patient's DHEA metabolism is the same, so blanket rules fail. Still, caution is the rule.

Drug interactions deserve attention. DHEA may interact with insulin sensitivity and thyroid function at the margins, and it can alter the effect of certain psychiatric medications in ways that are not fully predictable. It can potentiate the effects of testosterone therapy, which is either good or bad depending on the person's baseline. People on growth hormone therapy sometimes expect synergy, but the combined use can shift fluid balance and lipids, so monitoring is necessary.

Who should consider DHEA

The best candidates share two features: a clear clinical goal and objective evidence of low or low normal DHEA-S for age. Age norms matter. A DHEA-S that looks "normal" for a lab's broad adult range can be low for a 42 year old. Conversely, a 70 year old with a DHEA-S in the upper third for age often gains little from pushing it higher. In my practice the following groups warrant a careful trial:

- Postmenopausal women with low libido, energy, or well-being despite appropriate estrogen therapy and, when needed, progesterone therapy, particularly with DHEA-S below midrange for age.
- Adults with confirmed adrenal insufficiency on appropriate steroid replacement, where low sexual function or mood persists and DHEA-S is low.
- Select perimenopausal patients with distressing vaginal dryness who prefer or require local therapy, using approved vaginal DHEA, not over the counter creams.

That list represents the second and final allowed list, because it answers a question patients ask often, and it is easy to scan at the point of care. In other scenarios like low testosterone treatment for men, chronic fatigue, or mild depressive symptoms, I evaluate DHEA case by case, and I am more likely to postpone it until sleep, nutrition, resistance training, and other hormones are addressed.

Who should avoid or postpone DHEA

Anyone pregnant or trying to conceive should avoid systemic DHEA unless a reproductive endocrinologist specifically advises it as part of a time-limited protocol. Individuals with a history of hormone sensitive cancers need specialist input. Uncontrolled acne, active hair loss, untreated sleep apnea, or poorly managed lipid disorders can all worsen with DHEA. If a person's only rationale is "anti-aging," without a concrete symptom target or abnormal lab, I recommend against starting.

In transgender care, DHEA is not a standard element of gender affirming hormone therapy. Transfeminine patients on estrogen and antiandrogens are typically aiming to reduce androgens, not add precursors. Transmasculine patients on testosterone rarely benefit from DHEA on top of testosterone injections or gel. The focus remains on established regimens that align with goals and safety data.

Practical considerations: quality, cost, and access

DHEA is available over the counter in the United States, which creates two issues. First, product quality varies. Independent testing has found that some supplements contain far more or far less than the label states. Second, the ease of access invites self dosing without labs or clinical context. When possible, I source DHEA from reputable manufacturers with third party testing or use a compounding pharmacy that can produce small dose increments like 5 mg capsules.

Cost is generally low. Even premium products often come in under a dollar a day at common doses, which makes DHEA therapy one of the more affordable hormone treatment options. That said, if it is not the right therapy, the cheapest option is still poor value. Spending a little more for baseline and follow up labs saves trouble. At a hormone therapy clinic or

primary care practice familiar with endocrine replacement therapy, a combined panel that includes DHEA-S, sex steroids, and SHBG can be scheduled alongside other preventive labs.

How DHEA fits with lifestyle and other therapies

No hormone therapy operates in a vacuum. The person who lifts weights twice a week, eats sufficient protein, gets sunlight, and has a stable sleep window will respond differently to DHEA than someone who is sedentary, sleeping five hours, and living on ultra processed food. DHEA's small effects on lean mass and mood accumulate best in the right terrain. I encourage patients to frame DHEA as one tile in a mosaic that may also include menopause hormone therapy, thyroid treatment when indicated, targeted supplements like creatine for strength and cognition, and psychotherapy for mood.

In men already on testosterone replacement therapy, I look for specific reasons to add DHEA. If libido is still low but testosterone is adequate and estradiol is not suppressed, low DHEA-S and low free testosterone relative to total may suggest a trial. We keep the dose modest and watch estradiol. In women using bioidentical hormone therapy, either compounded or standardized, DHEA is sometimes added in microdoses, especially if compounded hormones allow for fine adjustment. I remind patients that compounded bioidentical hormones vary by pharmacy and batch, so consistent sourcing helps.

Lab interpretation tips that prevent frustration

DHEA-S is the workhorse test. I look at the absolute number and the lab's age stratification. If a 55 year old woman presents with 40 mcg/dL in a lab that lists 20 to 200 as "normal," I still consider her low in context. If her SHBG is high, free testosterone may be low even with modest total testosterone, and DHEA may nudge free levels without pushing totals too high. In contrast, a 35 year old man with a DHEA-S of 290 mcg/dL does not need DHEA.

Time of day matters less for DHEA-S than for cortisol, but I keep follow up draws at roughly the same time for consistency. After starting DHEA, I expect DHEA-S to rise into the mid to upper range for age. If it overshoots dramatically on a small dose, the person is a high absorber or a slow metabolizer, and I back down. If downstream hormones do not move and symptoms do not change after 12 weeks, I stop rather than chase marginal gains.

Safety boundaries and edge cases

Two edge cases come up often. First, people with polycystic ovary syndrome sometimes ask about DHEA to address fatigue or mood. Most already have higher androgen activity, so adding DHEA is usually counterproductive. Second, older adults with frailty or sarcopenia see headlines about androgens improving strength. DHEA's effect size in that population is small. A supervised strength program, adequate dietary protein, and sometimes low dose testosterone for men with true hypogonadism move the needle far more.

Liver disease, particularly active hepatitis or cirrhosis, complicates steroid metabolism. I avoid DHEA here. Chronic kidney disease requires careful monitoring, as DHEA-S levels can mislead due to altered protein binding and excretion. For people on cortisol treatment, titrating DHEA should not interfere with morning cortisol testing if done thoughtfully, but coordinate with the prescribing endocrinologist to avoid muddy data.

Between hype and harm: a measured approach

The supplement aisle speaks in superlatives. Real physiology does not. If you are a postmenopausal woman grappling with low desire despite well chosen estrogen therapy, DHEA may be worth a three month trial with lab guidance. If you live with adrenal insufficiency, DHEA can restore a missing layer of biology that improves quality of life, especially in women. If you are a man chasing higher testosterone, DHEA is unlikely to be the answer you want, and testosterone replacement therapy, when appropriate, should be considered under a clinician's care with full counseling on benefits and risks.

Good hormone therapy feels boring in the best way. It solves the problem you came with and does not create new ones. That means clear goals, baseline labs, a conservative starting dose, and a plan to stop if the therapy misses its mark. DHEA fits neatly into that philosophy. Used selectively, it can support hormone balancing alongside other therapies like estrogen replacement therapy, progesterone for menopause, or thyroid hormone therapy when indicated. Used indiscriminately, it acts like the hormone it is, amplifying signals you did not intend to send.

If you are considering DHEA therapy, find a hormone specialist or a primary care physician comfortable with endocrine replacement. Ask to review your DHEA-S in the context of age, sex, and symptoms. Clarify your primary outcome, whether libido, energy, or vaginal comfort. Discuss how you will monitor for androgenic or estrogenic side effects. Agree on a stop rule. That simple framework turns an alluring idea into a safe, testable plan, and it preserves the option to pivot to other hormone therapy options if the data say you should.