

CLINICAL PROTOCOL TO SUPPORT FEMALE PATIENTS WITH LOW LIBIDO*

Low libido or reduced sexual desire is common. The associated condition is known as hypoactive sexual desire dysfunction (HSDD). It has a prevalence between 7% and 12% of females. Low libido is a common symptom of menopause, but it may also occur due to other conditions, such as depression, anxiety, thyroid disease, and certain medications. Interpersonal and psychosocial factors may also influence libido.¹⁻³

Ovarian steroid hormones (e.g., testosterone, estrogen, and progesterone) may influence sexual desire, although they are not the cause. Animal studies have shown that estradiol in mammals is critical for female sexual behavior. In humans, testosterone may play a larger role compared with other mammals, but estradiol still plays a significant role.⁴ Alterations to ovarian steroid hormones likely result in a reduction of libido, especially when associated with menopause. Neurotransmitters (e.g., dopamine, melanocortin, oxytocin, vasopressin, and norepinephrine) are also involved in the regulation of sexual desire.^{1,4-6} Alterations in hypothalamus-pituitary-adrenal function, including lower serum levels of dehydroepiandrosterone (DHEA) and cortisol may also be involved in low libido.⁷

The diagnosed criteria for HSDD include an absence or reduced desire for sexual activity and lack of sexual fantasies with associated clinically significant distress. Sexual desire exists on a spectrum, making it important to consider an individual's history when making a diagnosis.^{6,8} Treatment may incorporate psychotherapy, sex therapy, medication, and support for hormonal balance.^{2,8} This clinical protocol is designed to support female patients with low libido.*



Diagnostic Biomarkers and Clinical Indicators of Low Libido (Female)

- Validated Questionnaires^{2,6,8}
 - Decreased Sexual Desire Screener
 - Female Sexual Function Index
 - Female Sexual Distress Scale-Revised version
- Steroid Hormone Levels
 - Serum Estradiol⁹
 - Follicular phase: 20 to 350 pg/mL
 - Mid-cycle peak: 150 to 750 pg/mL
 - Luteal phase: 30 to 450 pg/mL
 - Postmenopausal: ≤ 20 pg/mL
 - Serum Progesterone¹⁰
 - Follicular phase: < 50 ng/dL
 - Luteal phase: 300 to 2,500 ng/dL
 - Postmenopausal: < 40 ng/dL
 - Serum Total Testosterone¹¹
 - ≥ 19 years of age: 8 to 60 ng/dL
- HPA Axis Function
 - Cortisol Awakening Response (CAR)
 - Cortisol and saliva¹²
 - 7 am to 9 am: 199 to 750 ng/dL
 - 3 pm to 5 pm: < 401 ng/dL
 - 11 pm to Midnight: < 100 ng/dL
 - Serum DHEA¹³
 - 18 to 40 years old: 1,330 to 7,780 ng/L
 - 40 to 67 years old: 630 to 4,700 ng/L
 - Serum DHEA-S¹⁴
 - 18 to 30 years old: 83 to 377 mcg/dL
 - 31 to 40 years old: 45 to 295 mcg/dL
 - 41 to 50 years old: 27 to 240 mcg/dL
 - 51 to 60 years old: 16 to 195 mcg/dL
 - 61 to 70 years old: 9.7 to 159 mcg/dL
 - ≥ 71 years old: 5.3 to 124 mcg/dL

Therapeutic Diet and Nutritional Considerations

- Instruct patients to consume an anti-inflammatory diet rich in vegetables and fruits, as this has been shown to promote healthy hormone and neurotransmitter balance and normal stress response¹⁵⁻¹⁷
- Advise patients to consume foods rich in omega-3 fatty acids, as these have been found to support the dopaminergic system¹⁸
 - Chia seeds
 - Flax seeds
 - Mackerel
 - Salmon
 - Sardines
 - Walnuts
- Counsel patients on incorporating foods, herbs, and spices to meals that support healthy hormone balance^{19,20}
 - Broccoli
 - Brussels sprouts
 - Cabbage
 - Flax seed
 - Kale
 - Soy

Lifestyle Intervention

- Recommend mindfulness meditation, as it has been found to improve sexual desire and other aspects of sexual dysfunction²¹
- Provide advice on stress relief techniques, as stress has been found to be correlated with alterations in libido and sexual dysfunction²²
- Counsel patients on an exercise routine, as this may promote healthy endocrine and sympathetic nervous system function to support sexual desire and overall sexual function²³



Supplement Protocol

Primary Support:



LibidoStim-F™

Dose	2 capsules once daily with breakfast
Duration	Ongoing as needed
Formula Highlights	LibidoStim-F™ is a complex formulary blend of nutraceutical and herbal ingredients for the promotion of female sexual desire and pleasure.* The unique and targeted combination of ingredients provides support for natural testosterone production, optimization of testosterone and estrogen metabolism, healthy blood flow, and adrenal support.* This product is designed to help promote overall healthy desire and sexual satisfaction, specifically for women.*

Adrenotone™

Dose	3 capsules per day with meals
Duration	Ongoing as needed
Formula Highlights	Adrenotone™ is a combination of standardized adaptogenic herbs and nutrients that are known to contribute to rejuvenating the adrenals.* This product is designed to help support healthy cortisol metabolism, hypothalamic, and pituitary function (HPA axis), and catecholamine production (dopamine, norepinephrine, and epinephrine).*

B-Supreme

Dose	1 capsule per day with a meal
Duration	Ongoing as needed
Formula Highlights	B-Supreme is a powerful combination of B vitamins supplied mostly in their coenzyme forms so that the body does not have to phosphorylate them to be used in biochemical reactions. This formula also includes the patented folate derivative Quatrefolic®, which is an innovative form of folate that has demonstrated high bioavailability, solubility, and long-lasting stability. Trimethylglycine (TMG) and choline are also included to support methylation.

Annatto-GG™ 150

Dose	1 softgel per day
Duration	Ongoing as needed
Formula Highlights	Annatto-GG™ 150 is a unique product that provides 150 mg of geranylgeraniol (GG), a compound that plays critical roles in numerous biological processes affecting organs and tissues throughout the body, including the support of normal testosterone production.* It features GG-Gold®, a patented form of GG extracted from annatto seeds. By introducing an external source of GG, Annatto-GG™ 150 may help compensate for the natural decline in GG synthesis during aging.*

Adjunct Support:

Add additional DHEA support if needed based upon testing (Note: LibidoStim-F™ has 10 mg DHEA per serving)

DHEA 5 MG

Dose	1 capsule per day
Duration	Ongoing as needed
Formula Highlights	DHEA 5 MG supplies 5 mg of dehydroepiandrosterone (DHEA) for the synthesis of important hormones and a variety of potential physiological responses, such as healthy aging, ongoing energy and vitality, and balanced stress response.* This low-dose DHEA can be slowly titrated upwards as needed.

For a list of references cited in this document, please visit:

<https://www.designsforhealth.com/protocol-references/protocol-low-libido-female-references.pdf>

Dosing recommendations are given for typical use based on an average 150 pound healthy adult. Health-care practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage. Any product containing botanical substances has the potential for causing individual sensitivities, appropriate monitoring, including liver function tests (LFT) is recommended.

For considerations regarding herb-drug and nutrient-drug interactions, please refer to reliable, evidence-based resources such as the Natural Medicine Database or Stargrove MB, Treasure J, McKee DL. *Herb, Nutrient, and Drug Interactions: Clinical Implications and Therapeutic Strategies*. St. Louis, MO: Mosby-Elsevier; 2008.

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*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.