Erectile Dysfunction Protocol

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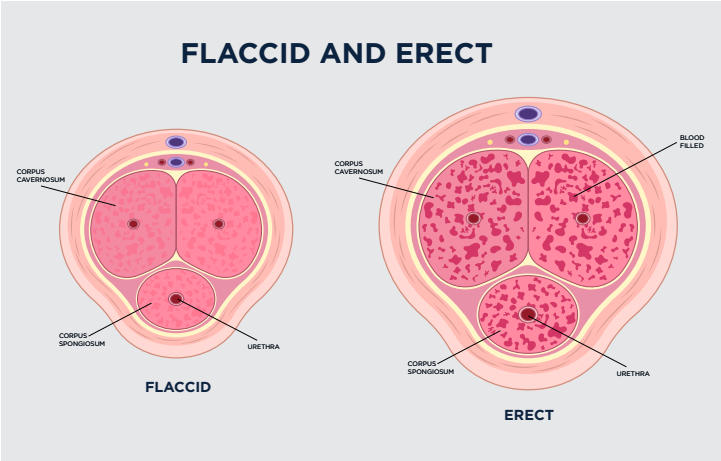
Clinical Protocol to Support Healthy Nitric Oxide Status and Penile Health*



The Pathophysiology of Erectile Dysfunction

Erectile dysfunction (ED) is a condition common among men over the age of 40. It is characterized by the inability to achieve or maintain a rigid penile erection sufficient for sexual intercourse. The prevalence of ED increases with age and in the presence of co-morbidities. "Organic" ED can be attributed to underlying conditions affecting the penile arteries, nervous system, endocrine system, immune balance, metabolism, smooth muscle tissue, corporal endothelium, or tunica albuginea. Consequently, organic ED is closely associated with cardiovascular disease, diabetes, hyperlipidemia, and hypertension, all of which share endothelial dysfunction as a common pathology. "Psychogenic" ED may stem from psychological disturbances, especially in younger men, such as relationship issues, expectations, loss of self-esteem, anxiety, or depression, among other factors.[1,2]

Under normal circumstances, sympathetic activation maintains proper smooth muscle contraction and penile flaccidity. Erection initiation involves external stimuli acting through somatic and autonomic pathways. Parasympathetic activation leads to the production of nitric oxide (NO) by the NO-synthase enzyme in penile endothelial cells. NO, in turn, results in smooth muscle relaxation and penile vasodilation, leading to an erection. Thus, ED may be associated with impaired NO production and metabolism.[2]

This clinical protocol is designed to support individuals with erectile dysfunction by helping maintain proper NO metabolism and penile health through evidence-based lifestyle, dietary, and nutrient interventions.*

Diagnostic Biomarkers and Clinical Indicators of Erectile Dysfunction

- Obtain the patient's medical and sexual history and conduct a physical examination.
- ED is classified based on the International Index of Erectile Function (IIEF), a validated subjective score with high sensitivity and specificity for ED.[2]
- Assess cardiovascular disease (CVD) risk screening and treatment. [1,3] CVD is a significant risk factor for ED, where atherosclerotic plaques may lead to vasculogenic ED years before the clinical manifestation of coronary artery disease.[1]
- There are no specific blood tests for ED. However, one should assess for hypertension, renal and liver function, hyperlipidemia, diabetes, hypogonadism, obesity, benign prostatic hyperplasia (BPH) with lower urinary symptoms (LUTS), depression, and premature ejaculation.[1]
- Review prescription medications, as ED can be a common side effect.[1]

Therapeutic Diet and Nutritional Considerations

- Encourage a plant-based, antioxidant-rich Mediterranean-style diet that includes seeds, nuts, olive oil, whole grains, fruits, and vegetables.[2,4–6] The prospective analysis of the Health Professionals Follow-Up Study (n = 21,942) demonstrated the clinical benefits of a plant-based diet to men with ED, as it helps maintain a healthy inflammatory response, normal glucose metabolism, and antioxidant status in the body.[7]
- Recommend foods and nutrients that support healthy NO production and metabolism: L-arginine, L-citrulline, vitamin C, beets, garlic, and berries.[1,2,8,9]
- Advise adequate consumption of folate and vitamin D, as a deficiency in both nutrients has been associated with the development of ED.[10–13]

Lifestyle Interventions

- Encourage quitting smoking, E-cigarettes, recreational drugs, and alcohol use, all of which are linked to ED.[1,14–17] In individuals who quit smoking, penile erectile quality improved by 25% after one year.[1]
- Support healthy weight loss if necessary. Obese men are associated with a 50% increased risk of ED compared to men with normal weight.[1]
- Refer patients to an appropriate mental health professional, especially in cases of psychogenic ED.[1]
- Encourage regular physical activity, which has been shown to promote endocrine health, increase NO production, help maintain healthy blood pressure, and support healthy metabolism.[2] Consider aerobic exercises with moderate-to-vigorous intensity and pelvic floor exercises.[2,18]

Supplement Protocol

Primary Support:

Vascanox HP®

Dose	2 capsules per day in the morning with a meal	**Duration**	Ongoing as needed
Formula Highlights	Vascanox HP® features beetroot and black garlic extracts, along with a combination of berry extracts and essential vitamins and minerals that work together to enhance sustained NO production, storage, and bioavailability.* By supporting NO, this formula may be clinically relevant to those with ED.*		

NOx Synergy™

Dose	Mix 7 grams (approximately one scoop) in 8 to 10 oz of water per day	**Duration**	Ongoing as needed
Formula Highlights	NOx Synergy™ is a unique combination of L-arginine, citrulline, taurine, glutathione, grape and apple extracts, vitamin C, magnesium, and B vitamins provided in a convenient berry-flavored powder. These ingredients work synergistically to promote NO synthesis and discourage NO breakdown, which may benefit cardiovascular function, circulation, muscular endurance, and proper penile erection.*		

LibidoStim-M™

Dose	2 capsules per day	**Duration**	Ongoing as needed
Formula Highlights	LibidoStim-M™ is a targeted blend of biologically active nutrients and botanicals formulated to help promote normal testosterone production, which may support erectile function and sexual desire in men.* The ingredients in LibidoStim-M™ help to facilitate healthy blood flow and support the efficient production and proper utilization of male sex hormones, which are key factors for optimal sex drive.*		

Secondary Support:

Nitric Oxide Test Strips

Dose	1 test strip in the morning before Vascanox HP®. Test again after supplementation to monitor NO status*	**Duration**	Ongoing as needed
Formula Highlights	These test strips detect prebiotic nitrate and the presence of the oral microbiome needed to properly convert plant-derived dietary nitrates to nitric oxide. Nitric Oxide Test Strips can be used to self-monitor NO status.*		

For a list of references cited in this document, please visit:
https://www.designsforhealth.com/api/library-assets/literature-reference---erectile-dysfunction-protocol-references

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.

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

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