RESEARCH PAPER

ERECTILE DYSFUNCTION AND HOLISTIC WELLNESS

An Integrative Perspective on Pathophysiology, Global Statistics and Responsible Lifestyle Support

Presented by

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ABSTRACT

Erectile Dysfunction (ED) is defined as the persistent or recurrent inability to attain or maintain a penile erection sufficient for satisfactory sexual performance. It is a common, age-associated and clinically significant condition, with prevalence rising from approximately 5% in men aged 40–49 to over 20% in men aged 70 and above, and is now recognised as an important early marker of underlying cardiovascular and metabolic disease rather than a purely sexual complaint.

This paper examines ED from a holistic wellness perspective while maintaining the primacy of evidence-based diagnosis and appropriate medical care. It reviews global prevalence statistics, the physiological pathway of erection,

the vascular, neurogenic, hormonal, psychogenic and drug-induced causes of ED, diagnostic evaluation, red-flag presentations and modern management. The paper proposes the SR VAIDYA Integrative Framework for Erectile Dysfunction Wellness Education, built on early screening, verified diagnosis, cardiovascular risk assessment, individualised lifestyle support and responsible Ayurvedic integration. Ayurvedic and Panchakarma approaches are discussed within clear safety boundaries as complementary wellness measures that must never replace or delay medical evaluation, particularly given the established link between ED and cardiovascular risk.

Keywords: Erectile Dysfunction, ED, Male Sexual Health, Cardiovascular Risk, IIEF-5, Holistic Wellness, Ayurveda, Panchakarma, Lifestyle Medicine, Integrative Health.

1. INTRODUCTION

Erectile Dysfunction is among the most common male sexual health concerns encountered in both urological and general medical practice, yet it remains under-reported due to stigma, embarrassment and limited awareness. Population-based estimates suggest overall prevalence figures ranging widely from 3% to 76.5% depending on population age, definition and assessment method used, with prevalence consistently and strongly increasing with age (BJU International review, 2019).

The term “impotence” was historically used interchangeably with ED in public discourse; contemporary clinical terminology reserves “Erectile Dysfunction” as the precise diagnostic term, recognising it as a symptom with multiple possible underlying causes rather than a single disease entity.

2. GLOBAL STATISTICS AND AGE-RELATED PREVALENCE

Age is the single most consistent correlate of ED across population studies worldwide. Data from the Global Study of Sexual Attitudes and Behaviours demonstrate a clear, stepwise increase in prevalence with advancing age.

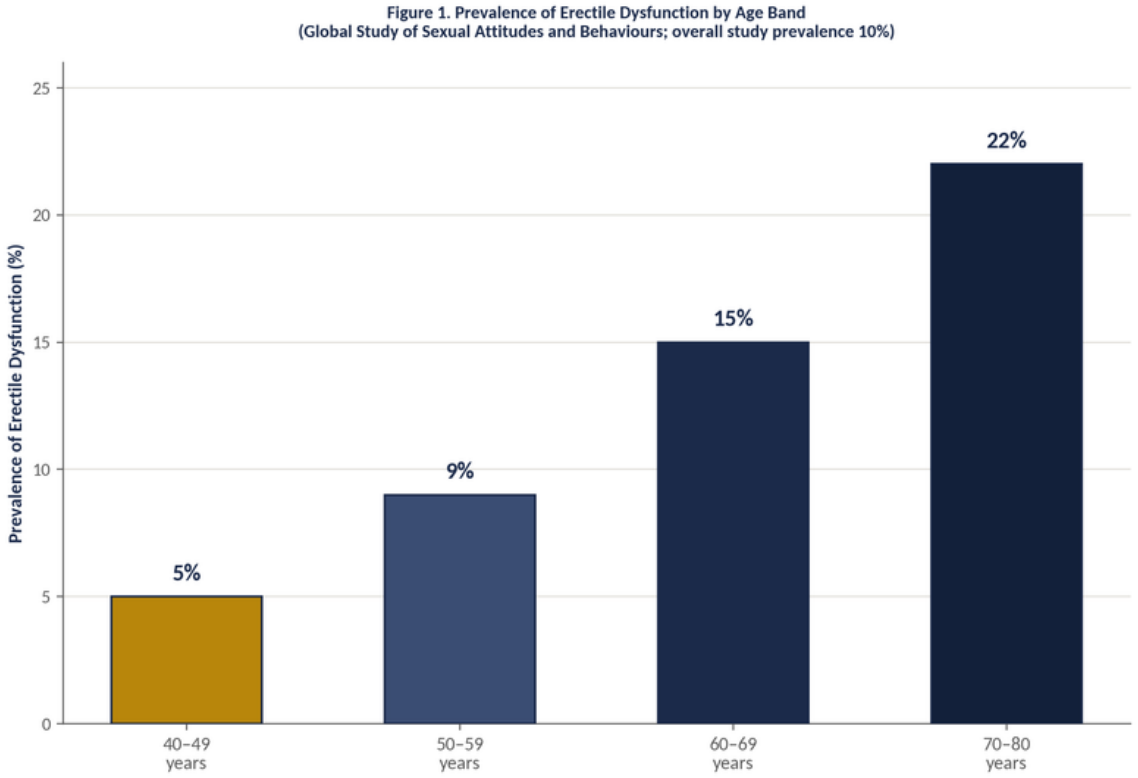

Figure 1. Prevalence of Erectile Dysfunction by Age Band (Global Study of Sexual Attitudes and Behaviours; overall study prevalence 10%)

Consistent with this pattern, the Massachusetts Male Aging Study found that 52% of men aged 40 to 70 experienced some degree of ED, with almost 10% reporting complete erectile dysfunction, and projected the worldwide number of affected men to rise from 152 million in 1995 to 322 million by 2025 (MMAS; Feldman et al., 1994). A 2021 U.S. national survey using the validated IIEF-5

questionnaire found an overall prevalence of 24.2%, rising to 48.0% in men aged 65–74 and 52.2% in men aged 75 and above (National Survey of Sexual Wellbeing, 2021).

3. ETIOLOGICAL CLASSIFICATION

Precise etiological classification is clinically important because management differs considerably depending on whether the predominant cause is psychogenic, vascular, hormonal, neurogenic, drug-induced or structural. The European Association of Urology notes that most clinical cases are of mixed aetiology, even where one predominant cause is identified for treatment planning purposes.

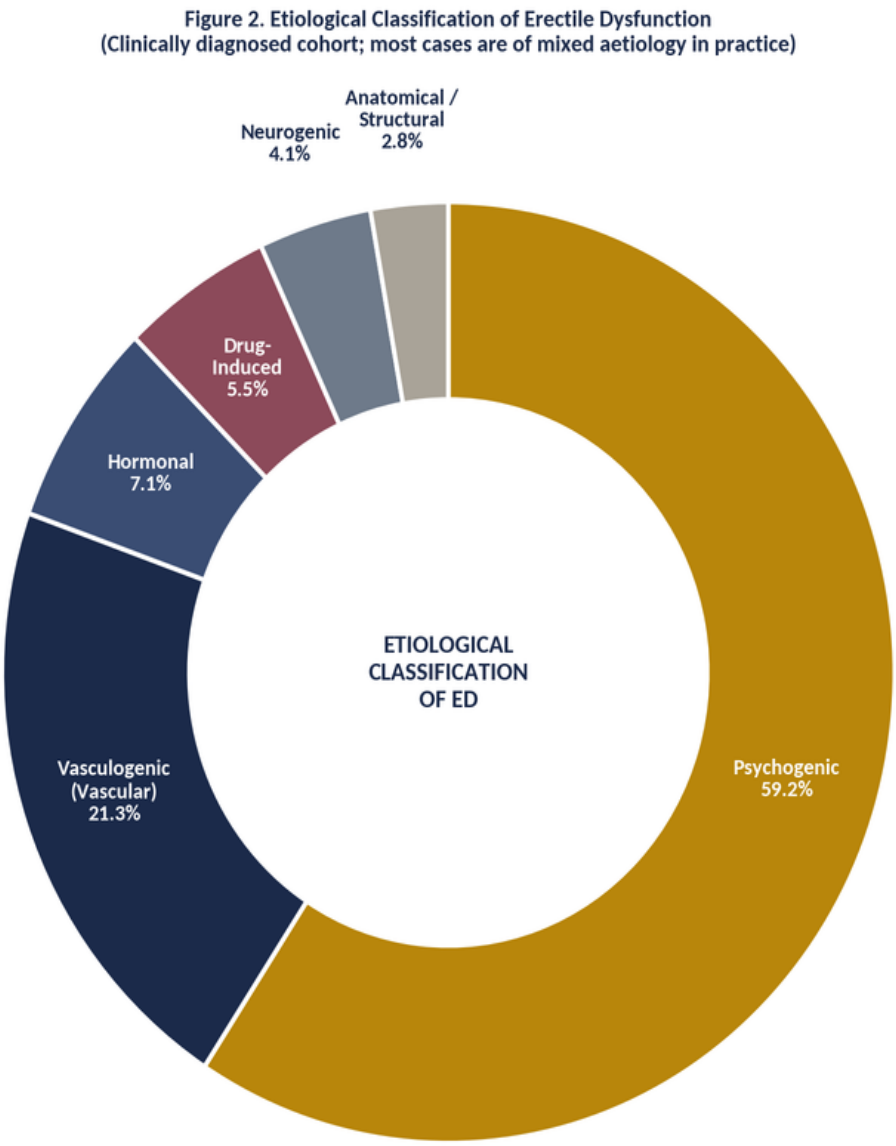

Figure 2. Etiological Classification of Erectile Dysfunction (Clinically diagnosed cohort; most cases are of mixed aetiology in practice)

Vasculogenic (vascular) causes are widely regarded as the most frequent organic contributor, commonly linked to atherosclerosis,

hypertension, diabetes and hyperlipidaemia, and account for approximately half of all organic ED cases. Because the penile arteries are smaller in calibre than the coronary arteries, vasculogenic ED frequently precedes a clinically apparent cardiac event by two to three years, making it a valuable early screening opportunity.

4. THE PHYSIOLOGICAL PATHWAY OF ERECTION

A normal erection depends on the coordinated interaction of neural, vascular and smooth-muscle mechanisms. Sexual stimulation, whether physical or psychogenic, triggers the release of nitric oxide within the cavernosal tissue, leading to smooth muscle relaxation, increased arterial inflow and compression of the venous outflow channels (veno-occlusion), which together produce and sustain penile rigidity.

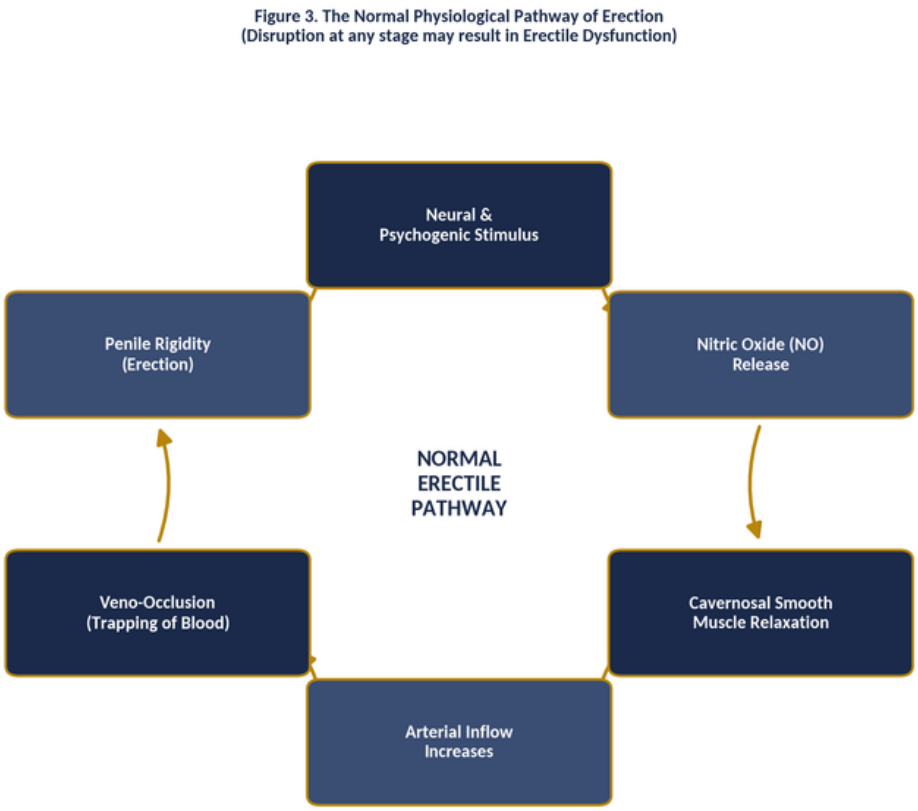

Figure 3. The Normal Physiological Pathway of Erection (Disruption at any stage may result in Erectile Dysfunction)

Erectile Dysfunction results when this pathway is disrupted at any single stage or, more commonly, at several stages simultaneously — which is why comprehensive, multi-domain assessment is more clinically useful than searching for one isolated cause.

5. DIAGNOSTIC EVALUATION

A responsible approach to suspected ED begins with a structured history, validated symptom scoring and targeted investigation, always considering cardiovascular risk.

Assessment	Purpose
IIEF-5 Questionnaire	Validated 5-item tool grading severity: mild, mild-moderate, moderate, severe
Detailed Medical & Sexual History	Onset (gradual vs sudden), situational vs generalised, morning erections, relationship context
Cardiovascular Risk Assessment	Blood pressure, lipid profile, blood glucose — given established shared risk factors
Hormonal Panel (Testosterone, Prolactin, TSH)	Identifies endocrine contributors, e.g. hypogonadism
Medication & Substance Review	Antihypertensives, antidepressants, alcohol, smoking, recreational drug use
Specialist Vascular / Doppler Studies	Selected cases with suspected vasculogenic cause or treatment non-response

No single question or test should be interpreted in isolation. Because ED and cardiovascular disease share the same underlying vascular pathology, evaluation of a man presenting with new-onset ED should routinely include cardiovascular risk screening, particularly in men without previously known heart disease.

6. RED FLAG PRESENTATIONS WARRANTING URGENT ASSESSMENT

- Sudden-onset ED in a previously well man, particularly with chest pain, breathlessness or exertional symptoms — requires urgent cardiovascular assessment.
- ED accompanied by pelvic trauma, prolonged priapism, or penile pain or deformity.
- ED with signs of hypogonadism (reduced libido, fatigue, loss of body hair, gynaecomastia) warranting hormonal evaluation.

- New ED in a man with diabetes, hypertension or known cardiovascular disease — signals need for reassessment of overall cardiovascular risk control.
- ED associated with significant depression, relationship distress, or suicidal ideation — requires prompt mental health support alongside medical evaluation.

7. MODERN MANAGEMENT OF ERECTILE DYSFUNCTION

Management is individualised according to identified aetiology, severity, comorbidities, patient preference and partner considerations.

- First-Line Therapy: Phosphodiesterase type 5 (PDE5) inhibitors (e.g., sildenafil, tadalafil), alongside cardiovascular risk-factor optimisation and lifestyle modification.

- Hormonal Therapy: Testosterone replacement in confirmed hypogonadism, under appropriate monitoring.
- Psychosexual Therapy: Particularly valuable in predominantly psychogenic or performance-anxiety-related ED, and often combined with pharmacotherapy.
- Second-Line Therapy: Intracavernosal injections, vacuum erection devices, for men not responding to or unsuitable for oral therapy.
- Third-Line / Surgical Therapy: Penile prosthesis implantation in selected cases refractory to other treatments.

8. THE CARDIOVASCULAR AND METABOLIC CONNECTION

ED and cardiovascular disease share common underlying vascular pathology — endothelial dysfunction, atherosclerosis and impaired nitric

oxide bioavailability. Obesity, diabetes, hypertension, dyslipidaemia, smoking and physical inactivity are established shared risk factors, and diabetic men experience a strikingly high burden of ED, with pooled global prevalence estimated at 65.8% among men with diabetes (umbrella review, 2024).

A holistic assessment may therefore include attention to body weight, waist circumference, blood pressure, lipid profile, blood glucose, sleep quality and physical activity, in addition to targeted sexual health history.

9. AYURVEDIC AND HOLISTIC WELLNESS PERSPECTIVE

Ayurvedic literature describes erectile difficulties under Klaibya, within the broader context of

Vajikarana (rejuvenative and reproductive health science), with traditional emphasis on Shukra Dhatu (reproductive tissue) balance, Ahara (diet), Vihara (lifestyle), Nidra (sleep) and stress management.

Responsible holistic integration means that Ayurvedic dietary science, stress management, sleep hygiene and rejuvenative practices may complement conventional ED care by supporting general vascular and psychological wellbeing — but must never be presented as a substitute for cardiovascular risk assessment, verified diagnosis, or evidence-based pharmacological or surgical treatment where clinically indicated.

10. PANCHAKARMA: THE NEED FOR RESPONSIBLE INTEGRATION

Panchakarma represents an important therapeutic system within Ayurveda. Its consideration in individuals with ED requires careful assessment of cardiovascular stability, diabetes status, current medications (particularly nitrates, where interaction with certain treatments is a recognised safety concern), and general health, given the physiological demands some procedures place on the body.

Within appropriately supervised settings and stable cardiovascular status, general categories such as structured Ahara-based dietary correction, stress-reduction practices and mild, individualised Basti protocols have been discussed in traditional literature as supportive measures. Any such intervention requires practitioner-level clinical judgement, is contraindicated in unstable

cardiovascular disease, uncontrolled diabetes or active infection, and must be sequenced around — never in place of — cardiovascular risk assessment and medical management.

Panchakarma should not be promoted as a treatment for ED arising from unstable cardiovascular disease, uncontrolled diabetes, hormonal deficiency, or as a substitute for validated pharmacological therapy.

11. THE SR VAIDYA HOLISTIC WELLNESS FRAMEWORK

The following integrative framework is proposed for responsible holistic wellness education in ED care, structured around the Institute's name to

support ease of recall among practitioners and patients alike.

Figure 4. The SR VAIDYA Integrative Framework for Erectile Dysfunction Wellness Education (S-R-V-A-I-D-Y-A)

12. ROOT-FACTOR ANALYSIS: A SCIENTIFICALLY RESPONSIBLE APPROACH

Erectile Dysfunction does not arise from a single root cause. A more scientifically defensible concept is Root-Factor Analysis, which identifies multiple vascular, neurogenic, hormonal, psychological, lifestyle, medication-related and comorbid-disease factors contributing to an individual's overall presentation and treatment response.

Figure 5. Root-Factor Analysis Wheel for Erectile Dysfunction (Multidimensional Contributing Domains)

13. EVIDENCE GRADING OF KEY CLAIMS

In keeping with the Institute's evidence-grading standard, the principal claims discussed in this paper are graded below as Strong, Moderate or

Weak, reflecting the current weight of peer-reviewed evidence.

Claim	Evidence Grade	Basis
ED prevalence increases consistently with age	Strong	Multiple large population studies (GSSAB; MMAS; NSSW 2021)
ED is an early marker of cardiovascular disease risk	Strong	Consistent shared-pathophysiology and longitudinal evidence
PDE5 inhibitors are effective first-line pharmacological therapy	Strong	Extensive randomised controlled trial evidence
Weight loss, exercise and smoking cessation improve erectile function as adjunctive measures	Moderate	Multiple observational and some randomised studies
Specific Ayurvedic herbal formulations improve IIEF scores comparably to PDE5 inhibitors	Weak	Limited, heterogeneous trials; insufficient for treatment substitution
Panchakarma alone reverses vasculogenic or hormonal ED	Weak / Unsupported	No robust controlled evidence; contraindicated as sole therapy

14. DISCUSSION

The future of ED care increasingly requires integration without exaggeration. Conventional medicine provides diagnostic precision, pharmacological therapy, hormonal treatment and surgical options where indicated, alongside crucial cardiovascular risk screening. Holistic wellness can contribute through lifestyle education, stress management, sleep improvement, weight management and patient empowerment.

A successful integrative model should therefore be evidence-aware, patient-centred, safety-oriented, referral-conscious, cardiovascular-risk-aware and individualised — consistent with the approach adopted throughout this paper.

15. PROPOSED CONFERENCE RECOMMENDATIONS

- Recommendation 1: Treat new-onset ED as an opportunity for cardiovascular risk screening, not solely a sexual health complaint.
- Recommendation 2: Train wellness practitioners to recognise red-flag presentations, especially sudden-onset ED with cardiac symptoms, requiring urgent referral.
- Recommendation 3: Focus lifestyle interventions on modifiable vascular and metabolic risk factors rather than claiming to cure ED of all aetiologies.
- Recommendation 4: Use validated assessment tools (IIEF-5) for diagnosis, severity grading and monitoring of treatment response.
- Recommendation 5: Individualise Ayurvedic and Panchakarma interventions and never delay cardiovascular assessment or validated pharmacological therapy.

- Recommendation 6: Conduct ethically designed observational and controlled studies of integrative wellness approaches in ED.
- Recommendation 7: Study quality of life, psychological wellbeing and cardiovascular risk-factor outcomes without unsupported cure claims.

16. FUTURE RESEARCH PROPOSAL FOR SR VAIDYA HOLISTIC WELLNESS RESEARCH INSTITUTE

Proposed Title: "Effect of a Structured Holistic Lifestyle Programme on Erectile Function and Cardiovascular Risk Markers in Men with Mild-to-Moderate Erectile Dysfunction Receiving Standard Medical Care."

Study Type: Prospective observational study or pilot randomised controlled study.

Participants: Men with IIEF-5-confirmed mild-to-moderate ED under active medical management, target sample size 100–130 participants across two sites.

Standard Care: Participants continue prescribed medical management, including PDE5 inhibitors where indicated, throughout the study.

Holistic Components: Structured dietary counselling, physical activity guidance, sleep hygiene, stress-management practices and appropriate yoga-based wellness practices delivered within professional scope over a 12-week intervention period.

Primary Endpoint: Change in IIEF-5 score at 12 weeks. Secondary Endpoints: blood pressure, lipid profile, body weight, waist circumference and self-reported quality of life.

Important Principle: The study should investigate whether a structured holistic lifestyle programme

improves erectile function and cardiovascular risk markers as an adjunct to standard medical care, rather than claiming to cure ED.

17. CONCLUSION

Erectile Dysfunction is a common, age-associated condition with important vascular, neurogenic, hormonal and psychological dimensions, and carries significant value as an early marker of cardiovascular risk. Responsible care requires both precise medical evaluation and sustained lifestyle support.

SCREEN → VERIFY → REFER → SUPPORT → FOLLOW UP

Holistic wellness has an important role in promoting healthy lifestyle behaviours, cardiovascular health, stress management and

patient awareness. However, responsible integration requires clear boundaries.

MEDICAL DIAGNOSIS PROVIDES CLARITY. LIFESTYLE PROVIDES FOUNDATION. HOLISTIC WELLNESS PROVIDES SUPPORT. RESPONSIBLE REFERRAL PROVIDES SAFETY.

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