

## SOP: Physical Examination and Laboratory Testing for Men with Erectile Dysfunction

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### ABSTRACT

**Introduction.** Physical examination and laboratory evaluation of men with erectile dysfunction (ED) are opportunities to identify potentially life-threatening etiologies and comorbid conditions.

**Aim.** To review genital anatomy, identify any physical abnormalities, assess for comorbid conditions, and reveal significant risk factors for ED.

**Methods.** Expert opinion was based on evidence-based medical literature and consensus discussions between members of this International Society for Sexual Medicine (ISSM) standards committee.

**Results.** For men with ED, a general examination including blood pressure and pulse measurements and a focused genital exam are advised. Fasting blood sugar, serum total testosterone, prolactin levels, and a lipid profile may reveal significant comorbid conditions.

**Conclusions.** Though physical examination and laboratory evaluation of most men with ED may not reveal the exact diagnosis, these opportunities to identify critical comorbid conditions should not be missed. **Ghanem HM, Salonia A, and Martin-Morales A. SOP: Physical examination and laboratory testing for men with erectile dysfunction. J Sex Med 2013;10:108–110.**

**Key Words.** Erectile Dysfunction; Diagnosis; Physical Examination; Laboratory Tests

### Introduction

Physical examination and laboratory evaluation of men with erectile dysfunction (ED) are opportunities to diagnose the etiology but may also identify important comorbidities that can lead to life-threatening conditions. In a study of 24,708 ED patients who were naïve to phosphodiesterase type 5 inhibitors, the detection rate of a previously undiagnosed disease was 11.5% and the prevalence of a significant underlying comorbidity was 70.2% [1].

### Physical Examination for Men with ED

The aim of physical examination in men with ED is to review genital anatomy and identify any related abnormalities (e.g., Peyronie's plaques),

endocrine signs, and possible comorbidities (neurological, vascular, and possible life-threatening conditions).

According to the Recommendations of the International Consultation in Sexual Medicine (ICSM), for the Clinical Evaluation of Men and Women with Sexual Dysfunction, physical examination and laboratory testing are highly recommended but not always necessary (grade C) [2]. However, in some cases of men with ED, a physical examination alone may identify important comorbidities or life-threatening conditions.

Physical examination in cases of ED does not often reveal the diagnosis. However, it is recommended and may reveal information of value (e.g., Peyronie's plaques or atrophic testicles). Hypertension and an irregular heart rhythm are potentially life threatening and are comorbidities with ED (hypertension has a prevalence of 40% in ED

patients) [1,3]. A general examination includes assessment of male secondary sex characters, gynecomastia, peripheral pulses, peripheral sensation, and scars from previous surgeries or trauma. Waist circumference measurement may be helpful in counseling the patient about the risks of obesity and the possibility of the metabolic syndrome. A controlled study in obese men (body mass index [BMI] > 30) revealed that an increase of physical activity from 48 to 195 minutes/week and a decrease in BMI from 36.9 to 31.2 over 2 years resulted in an increase of International Index of Erectile Function-erectile function domain scores from 13.9 to 17 ( $P < 0.001$ ) [4].

Genital examination (Table 1) includes inspection of the penis for lesions, scars, size, position of the meatus, skin abnormalities, and palpation for fibrous plaques. Testicular size and consistency are assessed. Occasionally, an inguinal hernia is noticed. Digital rectal examination is advised in men who may be possible candidates for testosterone replacement therapy. The bulbocavernosus reflex (squeezing the glans penis resulting in contraction of the bulbocavernosus muscle detected by a finger in the anus) is not a standard test during physical examination. However, this test demonstrates integrity of the spinal sacral segments and is elicited in 70% of normal men. However, the validity of the bulbocavernosus reflex has been challenged [5].

### Laboratory Evaluation

Table 2 lists routine tests to reveal risk factors for ED and additional optional tests. A fasting blood glucose test and a lipid profile may uncover potentially serious conditions. Diabetes mellitus (DM) and dyslipidemias are important comorbidities for

**Table 1** General and local examination for men with erectile dysfunction

General examination
• Blood pressure and heart rate and rhythm measurement
• Male secondary sex characters
• Gynecomastia
• Peripheral pulses
• Rule out obvious abdominal masses (e.g., aortic aneurysm)
• Vibratory sensation
• Waist circumference
• Scars from previous surgery or trauma
Local examination
• Penis: size, lesions, scars, fibrosis, and position of meatus
• Scrotum: testicular size and consistency
• Digital rectal examination: prostate and seminal vesicles
• Bulbocavernosus reflex (optional)

**Table 2** Laboratory tests

#### Tests for risk factors for ED

- Fasting blood sugar
- Total testosterone
- Prolactin
- Lipid profile

#### Optional tests

- Thyroid hormones
- PSA

ED = erectile dysfunction; PSA = prostate-specific antigen

ED. DM occurs in 20–25% of ED patients, while dyslipidemias occur in 40–70% of ED patients [1,6].

Serum prolactin will reveal a rare prolactin-producing pituitary microadenoma. In a review compiling over 3,200 ED patients, hyperprolactinemia was identified in 0.76% of patients and pituitary adenomas in 0.4% [7].

Assessment of serum testosterone will document adult onset hypogonadism. Low serum testosterone levels can cause both ED and the metabolic syndrome [8]. Serum prostate-specific antigen measurement is indicated in men over 40–45 years, specifically if testosterone replacement therapy is being considered.

According to the Recommendations of the ICSM, for the Clinical Evaluation of Men and Women with Sexual Dysfunction, the recommended laboratory tests for men and women with sexual problems include fasting blood glucose, cholesterol, lipid panel, and gender-specific hormones. Additional laboratory tests (e.g., thyroid function) may be performed at the discretion of the physician based on the medical history and clinical scenario [2].

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### Statement of Authorship

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