

## CLINICAL VIGNETTE

# Female Sexual Dysfunction: Identifying the Problem

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### Introduction

What is female sexual dysfunction? Another commonly used term is Hypoactive Sexual Desire Disorder (HSDD). It describes a woman who suffers from prolonged loss of sexual desire that causes her distress and cannot be explained by:

1. Problematic relationships;
2. Stressors; or
3. Medical conditions.

Distress associated with loss of desire for 75-100 percent of the time and lasting for more than 6 months are hallmark features of HSDD.<sup>1</sup> This is not describing the normal daily or weekly fluctuations in levels of desire.

### Case Presentation

A 47-year-old Caucasian female presents for her annual screening physical exam. She is healthy without known medical problems. She has been married for 20 years and has 2 children, a son and a daughter, the youngest is 9-years-old. Her gynecologic exam was done last year with PAP smear normal and HPV negative. Her menses are still regular, but she has noted some changes with heavier bleeding. ParaGard (a non-hormonal) intrauterine device was placed 05/23/2011 and she has otherwise not complained of any problems with its use.

Patient is employed as a Real Estate Agent. Her husband of 20 years is a restaurateur. Her 85-year-old mother died last month of natural causes but no significant family history of medical problems.

Physical Exam: Height = 5'7", Weight = 142 lbs., BMI = 22%, B.P. = 107/62, P = 77, and T=36.8.

In your allocated half an hour appointment with her, you have gone through a review of systems, and performed a physical exam including a pelvic exam to check her IUD strings. As you are about to leave the room so that she can get dressed, she blurts out: "I have not had interest in having sex with my husband in the past 5 years." What should you do next?

- A. Run out the door as quickly as possible, pretending that you did not hear her.
- B. Quickly review her medication list including OTC supplements that may not be listed.
- C. Order blood work to check her hormone levels.

- D. Hand her a 5-page sexual dysfunction questionnaire (FSFI) to complete.
- E. Do B, C & D + schedule a follow-up appointment to review and discuss further.

### Evaluation and Diagnosis

Our patient is still having regular menses at age 47. She is complaining of slightly heavier bleeding, which could be attributed to her ParaGard IUD or could be due to changes from perimenopause. There is little to support measurement of estrogen and testosterone as there is no established range for androgen deficiency in women (as there is for men). And there is no association between low serum testosterone and low desire. It would be reasonable to check some labs: FSH = follicle stimulating hormone, to rule out menopause, as the average age for menopause is 50; TSH = thyroid stimulating hormone to rule out hypothyroidism; a chemistry panel to screen blood sugar, liver & kidney function; a CBC to rule out anemia with her heavier bleeding; and a prolactin level to rule out hyperprolactinoma.

She does not smoke and only drinks wine socially. She did have a history of recurrent urinary tract infections a few years ago. She had to be hospitalized once due to side effects from taking the antibiotic Nitrofurantoin, which had caused shortness of breath and elevated blood pressure. She suffered no sequelae from the incident; however, it is possible that her concerns about getting another UTI may be contributing to her lack of interest in having sex.

Her 85-year-old mother also died last month, and her death may have triggered underlying depressive feelings that may have been suppressed. You review her 5-page, 19-item questionnaire called the Female Sexual Function Index (FSFI).<sup>2</sup> The FSFI questionnaire deals with specific aspects of sexual dysfunction: sexual desire, sexual arousal, lubrication, orgasm, sexual satisfaction, and pain.<sup>3</sup> Scores 5 or less = HSDD; score greater than 6, not likely HSDD. The FSFI is analogous to MMSE (mini mental status exam) used in screening for dementia.<sup>4</sup>

### Management and Treatment

Her labs are normal; she is not anemic, FSH = 12, TSH = 2.8, prolactin = 10. However, she scores 4 on her FSFI questionnaire, consistent with female sexual dysfunction. The patient states that her husband is wonderful and helps her at

home and with the children. What treatment options are available?

The latest drug is Flibanserin/Girosa/Addyi. It has been touted as the “pink Viagra.” It is a MSAA = Multifunctional Serotonin Agonist and Antagonist; both Serotonin 1A agonist and Serotonin 2A antagonist. Flibanserin was originally developed as an antidepressant and received FDA approval 06/04/2015 for treatment of HSDD.<sup>5</sup> Unlike Viagra for men, where the pill is taken “as needed,” Flibanserin is taken as 100 mg orally every night. It theoretically improves sexual functioning by enhancing downstream release of dopamine and norepinephrine, while reducing serotonin release in the brain circuits.

Sildenafil/Viagra (phosphodiesterase inhibitor) has been used by men since 1998. Six small studies showed benefit for premenopausal women and those on SSRIs.

Bupropion is an aminoketone, weak norepinephrine-dopamine reuptake inhibitor. It was found to increase arousability and sexual response in a small study. It is not FDA approved for treatment HSDD, and there is a warning that it can decrease seizure threshold in patients.

DHEA = dehydroepiandrosterone, metabolic intermediate in biosynthesis of androgen and estrogen sex steroids. Available as OTC supplement.

Tibolone: synthetic steroid drug with estrogenic, progestogenic and weak androgenic effects. Available since 1988. Used in Europe/Asia/Australia (not US) for treatment endometriosis and HRT in menopause. Further studies needed as possible treatment for female sexual dysfunction.

Yohimbine: indole alkaloid, extracted from bark Yohimbe tree in Central Africa. Veterinary drug used to reverse sedation in dogs and deer. Extracts used in traditional medicine in West Africa as an aphrodisiac.

Ephedrine: sympathomimetic amine, CNS stimulant, similar to amphetamines. It causes increased vaginal congestion, but no subjective arousal. It is an ingredient in “MaHuang” found in traditional Chinese Medicine.

## Conclusion

Sexual dysfunction is common in women but is under diagnosed and under treated. This is partly because patients are not likely to discuss it with their physicians, and physicians lack adequate training and confidence. There are also few treatment options and inadequate time to obtain a sexual history.

Counseling is definitely a recommendation, but key points to consider are Awareness, Acknowledgement, and Acceptance. Our patient was diagnosed with HSDD, but opted not to take medication.

Another important consideration (before you run out the door!) is being able to bill for the diagnosis with ICD-9/10 codes that coincide with DSM-5 definitions. Example: coding

for decreased libido (799.81) or psychosexual dysfunction (302.7) = female sexual dysfunction. With CPT = current procedural terminology, one can also bill for the extra time spent counseling the patient. Use Modifier 25 to associate each item.<sup>6</sup>

## Appendix

### Female Sexual Function Index (FSFI)

#### Background and Validation

The Female Sexual Function Index (FSFI), a 19-item questionnaire, has been developed as a brief, multidimensional self-report instrument for assessing the key dimensions of sexual function in women.<sup>1</sup> It was developed on a female sample of normal controls and age-matched subjects who met DSM-IV®-TR criteria for female sexual arousal disorder (FSAD) and provides scores on six domains of sexual function (desire, arousal, lubrication, orgasm, satisfaction, and pain) as well as a total score.<sup>2</sup>

The FSFI has been validated on clinically diagnosed samples of women with female sexual arousal disorder (FSAD), female orgasmic disorder (FOD), and hypoactive sexual desire disorder (HSDD).<sup>2</sup>

#### Physician Instructions

Participants are to be allowed to complete the FSFI alone, in a private room.<sup>2</sup> Instructions for scoring appear on the last FSFI Pocket Card.

A copy of the FSFI is attached to this card.

1. Rosen R, et al. *J Sex Marital Ther*. 2000;26:191-208.
2. Meston CM. *J Sex Marital Ther*. 2003;29:39-46.

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## Female Sexual Function Index (FSFI)

Name:

Date:

INSTRUCTIONS: These questions ask about your sexual feelings and responses during the past 4 weeks. Please answer the following questions as honestly and clearly as possible. Your responses will be kept completely confidential.

In answering these questions the following definitions apply:

Sexual activity can include caressing, foreplay, masturbation, and vaginal intercourse.

Sexual intercourse is defined as penile penetration (entry) of the vagina.

Sexual stimulation includes situations like foreplay with a partner, self-stimulation (masturbation), or sexual fantasy.

### CHECK ONLY ONE BOX PER QUESTION.

Sexual desire or interest is a feeling that includes wanting to have a sexual experience, feeling receptive to a partner's sexual initiation, and thinking or fantasizing about having sex.

#### 1. Over the past 4 weeks, how often did you feel sexual desire or interest?

- ☐ 5 = Almost always or always  
☐ 4 = Most times (more than half the time)  
☐ 3 = Sometimes (about half the time)  
☐ 2 = A few times (less than half the time)  
☐ 1 = Almost never or never

#### 2. Over the past 4 weeks, how would you rate your level (degree) of sexual desire or interest?

- ☐ 5 = Very high  
☐ 4 = High  
☐ 3 = Moderate  
☐ 2 = Low  
☐ 1 = Very low or none at all

Sexual arousal is a feeling that includes both physical and mental aspects of sexual excitement. It may include feelings of warmth or tingling in the genitals, lubrication (wetness), or muscle contractions.

#### 3. Over the past 4 weeks, how often did you feel sexually aroused ("turned on") during sexual activity or intercourse?

- ☐ 0 = No sexual activity  
☐ 5 = Almost always or always  
☐ 4 = Most times (more than half the time)  
☐ 3 = Sometimes (about half the time)  
☐ 2 = A few times (less than half the time)  
☐ 1 = Almost never or never

#### 4. Over the past 4 weeks, how would you rate your level of sexual arousal ("turn on") during sexual activity or intercourse?

- ☐ 0 = No sexual activity  
☐ 5 = Very high  
☐ 4 = High  
☐ 3 = Moderate  
☐ 2 = Low  
☐ 1 = Very low or none at all

#### 5. Over the past 4 weeks, how confident were you about becoming sexually aroused during sexual activity or intercourse?

- ☐ 0 = No sexual activity  
☐ 5 = Very high confidence  
☐ 4 = High confidence  
☐ 3 = Moderate confidence  
☐ 2 = Low confidence  
☐ 1 = Very low or no confidence

#### 6. Over the past 4 weeks, how often have you been satisfied with your arousal (excitement) during sexual activity or intercourse?

- ☐ 0 = No sexual activity  
☐ 5 = Almost always or always  
☐ 4 = Most times (more than half the time)  
☐ 3 = Sometimes (about half the time)  
☐ 2 = A few times (less than half the time)  
☐ 1 = Almost never or never

#### 7. Over the past 4 weeks, how often did you become lubricated ("wet") during sexual activity or intercourse?

- ☐ 0 = No sexual activity  
☐ 5 = Almost always or always  
☐ 4 = Most times (more than half the time)  
☐ 3 = Sometimes (about half the time)  
☐ 2 = A few times (less than half the time)  
☐ 1 = Almost never or never

#### 8. Over the past 4 weeks, how difficult was it to become lubricated ("wet") during sexual activity or intercourse?

- ☐ 0 = No sexual activity  
☐ 1 = Extremely difficult or impossible  
☐ 2 = Very difficult  
☐ 3 = Difficult  
☐ 4 = Slightly difficult  
☐ 5 = Not difficult

#### 9. Over the past 4 weeks, how often did you maintain your lubrication ("wetness") until completion of sexual activity or intercourse?

- ☐ 0 = No sexual activity  
☐ 5 = Almost always or always  
☐ 4 = Most times (more than half the time)  
☐ 3 = Sometimes (about half the time)  
☐ 2 = A few times (less than half the time)  
☐ 1 = Almost never or never

#### 10. Over the past 4 weeks, how difficult was it to maintain your lubrication ("wetness") until completion of sexual activity or intercourse?

- ☐ 0 = No sexual activity  
☐ 1 = Extremely difficult or impossible  
☐ 2 = Very difficult  
☐ 3 = Difficult  
☐ 4 = Slightly difficult  
☐ 5 = Not difficult

#### 11. Over the past 4 weeks, when you had sexual stimulation or intercourse, how often did you reach orgasm (climax)?

- ☐ 0 = No sexual activity  
☐ 5 = Almost always or always  
☐ 4 = Most times (more than half the time)  
☐ 3 = Sometimes (about half the time)  
☐ 2 = A few times (less than half the time)  
☐ 1 = Almost never or never

#### 12. Over the past 4 weeks, when you had sexual stimulation or intercourse, how difficult was it for you to reach orgasm (climax)?

- ☐ 0 = No sexual activity  
☐ 1 = Extremely difficult or impossible  
☐ 2 = Very difficult  
☐ 3 = Difficult  
☐ 4 = Slightly difficult  
☐ 5 = Not difficult

#### 13. Over the past 4 weeks, how satisfied were you with your ability to reach orgasm (climax) during sexual activity or intercourse?

- ☐ 0 = No sexual activity  
☐ 5 = Very satisfied  
☐ 4 = Moderately satisfied  
☐ 3 = About equally satisfied and dissatisfied  
☐ 2 = Moderately dissatisfied  
☐ 1 = Very dissatisfied

#### 14. Over the past 4 weeks, how satisfied have you been with the amount of emotional closeness during sexual activity between you and your partner?

- ☐ 0 = No sexual activity  
☐ 5 = Very satisfied  
☐ 4 = Moderately satisfied  
☐ 3 = About equally satisfied and dissatisfied  
☐ 2 = Moderately dissatisfied  
☐ 1 = Very dissatisfied

#### 15. Over the past 4 weeks, how satisfied have you been with your sexual relationship with your partner?

- ☐ 5 = Very satisfied  
☐ 4 = Moderately satisfied  
☐ 3 = About equally satisfied and dissatisfied  
☐ 2 = Moderately dissatisfied  
☐ 1 = Very dissatisfied

#### 16. Over the past 4 weeks, how satisfied have you been with your overall sexual life?

- ☐ 5 = Very satisfied  
☐ 4 = Moderately satisfied  
☐ 3 = About equally satisfied and dissatisfied  
☐ 2 = Moderately dissatisfied  
☐ 1 = Very dissatisfied

#### 17. Over the past 4 weeks, how often did you experience discomfort or pain during vaginal penetration?

- ☐ 0 = Did not attempt intercourse  
☐ 1 = Almost always or always  
☐ 2 = Most times (more than half the time)  
☐ 3 = Sometimes (about half the time)  
☐ 4 = A few times (less than half the time)  
☐ 5 = Almost never or never

#### 18. Over the past 4 weeks, how often did you experience discomfort or pain following vaginal penetration?

- ☐ 0 = Did not attempt intercourse  
☐ 1 = Almost always or always  
☐ 2 = Most times (more than half the time)  
☐ 3 = Sometimes (about half the time)  
☐ 4 = A few times (less than half the time)  
☐ 5 = Almost never or never

#### 19. Over the past 4 weeks, how would you rate your level (degree) of discomfort or pain during or following vaginal penetration?

- ☐ 0 = Did not attempt intercourse  
☐ 1 = Very high  
☐ 2 = High  
☐ 3 = Moderate  
☐ 4 = Low  
☐ 5 = Very low or none at all

Thank you for completing this questionnaire.

## FSFI Domain Scores and Full Scale Score

The individual domain scores and full scale (overall) score of the FSFI can be derived from the computational formula outlined in the table below. For the individual domain scores, add the scores of the individual items that comprise the domain and multiply the sum by the domain factor (see below). Add the six domain scores to obtain the full scale score. It should be noted that within the individual domains, a domain score of zero indicates that the subject reported having no sexual activity during the past month. Subject scores can be entered in the right-hand column.

Domain	Questions	Score Range	Factor	Minimum Score	Maximum Score	Score
Desire	1, 2	1 – 5	0.6	1.2	6.0	
Arousal	3, 4, 5, 6	0 – 5	0.3	0	6.0	
Lubrication	7, 8, 9, 10	0 – 5	0.3	0	6.0	
Orgasm	11, 12, 13	0 – 5	0.4	0	6.0	
Satisfaction	14, 15, 16	0 (or 1) – 5	0.4	0	6.0	
Pain	17, 18, 19	0 – 5	0.4	0	6.0	
Full Scale Score Range				1.2	36.0	
A score $\leq 26.55$ is classified as FSD.*						Total

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\*Wiegall M, et al. *J Sex Marital Ther*. 2005;31:1-20.

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