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CHAIRPERSON

Sharon J. Parish, MD

FACULTY

Sheryl A. Kingsberg, PhD

James A. Simon, MD, CCD, NCMP, FACOG

EDITORS

Natasha Mitchner, PhD

Scientific Director, DIME

Chicago, Illinois

Nancy Baxter

DIME

Chicago, Illinois



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TARGET AUDIENCE

This activity is targeted to family and general practitioners in primary care.

ACTIVITY PURPOSE

DIME's educational goal is to assist participants with the diagnosis and treatment of HSDD by increasing knowledge of screening tools, strategies for patient-provider communication, and treatment options.

This activity may be accessed via the Internet on www.jfponline.com.

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This activity has a release date of July 15, 2009, and is valid for 1 year. Requests for credit must be received no later than July 15, 2010.

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DIME

222 Merchandise Mart Plaza

Suite 4-160

Chicago, IL 60654

DIMEinfo@DIMedEd.org

www.DiMedEd.org



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STATEMENT OF NEED

Hypoactive sexual desire disorder (HSDD), the persistent or recurrent lack of sexual fantasies, thoughts, and desires resulting in personal distress, is one of 4 categories of female sexual dysfunction. Providers are known to consistently underestimate and underrecognize their patients' sexual problems. A stigma associated with communicating about sex, cultural embarrassment, and avoidance of discussion of sexual dysfunction in the clinical environment are common barriers that prevent providers and patients from talking about sex. In addition, type of sexual dysfunction, duration, and frequency of satisfying sexual events are difficult to track and quantify and are limited by provider emphasis and patient adherence to tracking. The causal dimensions of HSDD are extremely broad and are not fully understood. The clinical evaluation of HSDD should consider biological, interpersonal, and psychological factors. Providers may perceive that there is simply a lack of scheduled office time to discuss sexual concerns, especially if the provider believes that a good assessment requires a substantial investment of time. Stigma, fear, embarrassment, discomfort (or a provider's

overconfidence in the patient's comfort level), and even the gender difference between the patient and provider may alter the interpersonal dynamics of the office visit. Approaches are needed to overcome barriers to recognizing sexual dysfunction and HSDD and to establish more effective dialogue and facilitate referral to appropriate resources.

LEARNING OBJECTIVES

On completion of this activity, participants should be able to:

- Define HSDD and identify the factors associated with it or that may contribute to it
- Describe the steps required for taking a thorough and clinically pertinent sexual history
- Explain how to screen patients for HSDD, how to identify and diagnose patients at risk for HSDD, and how to refer them to appropriate resources
- Identify interventions and pharmacologic treatments for HSDD and provide evidence of their effectiveness
- Discuss patient and provider obstacles to the recognition and management of HSDD and identify strategies for overcoming these barriers

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CHAIRPERSON

Sharon J. Parish, MD

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FACULTY

Sheryl A. Kingsberg, PhD

Sources of Funding for Research: BioSante Pharmaceuticals; Boehringer Ingelheim Pharmaceuticals, Inc.; Procter & Gamble Pharmaceuticals

Consulting Agreements: Boehringer Ingelheim Pharmaceuticals, Inc.; Wyeth Pharmaceuticals

Financial Interests/Stock Ownership: None

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James A. Simon, MD, CCD, NCMP, FACOG

Sources of Funding for Research: BioSante Pharmaceuticals; Boehringer Ingelheim Pharmaceuticals, Inc.; FemmePharma Global Healthcare, Inc.; GlaxoSmithKline; Nanma/Tripharma/Trinity; Novartis Pharmaceuticals Corp; Procter & Gamble Pharmaceuticals

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EDITORS

Natasha Mitchner, PhD

Sources of Funding for Research: None

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Nancy Baxter

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From whence comes HSDD?

Sharon J. Parish, MD
Associate Professor of
Clinical Medicine
Department of Medicine
Albert Einstein College
of Medicine
Director of Psychosocial
Training
Department of Medicine
Montefiore Medical Center
Bronx, New York

Female sexual dysfunction (FSD) encompasses a group of highly prevalent disorders characterized by problems related to sexual desire, arousal, or orgasm, or pain.^{1,2} Among these is hypoactive sexual desire disorder (HSDD), a condition that causes marked distress and interpersonal difficulties.¹ In view of the complexity of factors contributing to the various types of FSD, the identification of HSDD requires that it be carefully differentiated from other forms of sexual dysfunction. An understanding of the definitions of FSD and HSDD, their prevalence in various subpopulations of women, and their impact on quality of life can increase awareness of the importance of these disorders. Such knowledge will also help family physicians appreciate the place of HSDD within the spectrum of FSD and become better equipped to recognize this disorder in clinical practice.

Definitions of FSD and HSDD

The definition of FSD in the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders, 4th edition, text revision* (DSM-IV-TR) is based on a traditional linear model of human sexual response.¹ Sexual dysfunction is classified as disorders of desire, arousal, orgasm, and pain (TABLE 1).¹ An interdisciplinary consensus panel convened by the American Foundation for Urological Disease (AFUD) developed a classification system that retained the framework of the DSM-IV-TR categories but expanded them to include organic causes of sexual dysfunction (TABLE 2).² This system is also based on the linear model of sexual response. In both the DSM-IV-TR and AFUD classifications, HSDD is placed under the general category of sexual desire disorders. The definitions require that HSDD be marked by persistent or recurrent deficient (or absent) sexual fantasies and desire for sexual activity that causes marked distress or interpersonal difficulty.^{1,2} The category of HSDD can be further divided into subtypes: general (a general lack of sexual desire) vs situational (a woman previously had sexual desire for her current partner but now lacks sexual interest in that individual, although she still has desire for sexual stimulation alone or with someone other than her present partner), and acquired (beginning after a period of normal sexual function) vs lifelong (in a woman who has always had low or no sexual desire).¹

Definitions of FSD derived from a linear model have been criticized as being more characteristic of men than women.³ Newer models depict the sexual response in women as a circular sequence of events that may involve overlapping phases in a variable order.^{4,5} Women may not have a sense of desire at the initiation of a sexual encounter.⁵ Nonetheless, the absence of desire does not preclude a satisfactory sexual experience.^{6,7} The model shown in the FIGURE (page S20)

demonstrates that desire can be triggered later during a sexual experience once the woman has become subjectively aroused.^{4,5}

The DSM-IV-TR definition of HSDD has also been criticized because it considers sexual fantasies a primary trigger for sexual behavior. Research has shown that spontaneous sexual thoughts or fantasies may be characteristic of women in new relationships but occur much less frequently among sexually healthy women in longer-term relationships.⁸ Moreover, a woman's desire for sexual activity may be prompted by factors not addressed by current definitions, such as wanting to experience tenderness and appreciation by her partner and feeling desirable.⁹

Since lack of sexual desire at the beginning of a sexual encounter does not necessarily indicate HSDD, experts have suggested that the definition be refined to indicate a recurrent, consistent lack of ability to experience any desire or arousal.⁵ Such criteria would reflect the fact that desire problems are usually associated with difficulties in all phases of the sexual response cycle. For instance, orgasm cannot occur without arousal, and a lack of arousal often results in a lack of desire because sexual activity is not enjoyable. Sexual pain disorders and lack of sexual arousal may also be linked, as intercourse without arousal and associated lubrication can be painful and lead to the avoidance of sexual activity.

Epidemiology

FSD

Prevalence estimates of FSD vary based on the patient population and methodology employed. For example, age and age-group categorizations have differed among many studies, and inclusion criteria are often limited to

women in sexual or stable relationships, omitting significant numbers of women. Cultural differences, avoidance of a dialogue surrounding sexual complaints, and span of recall also may confound epidemiologic studies.¹⁰ The

TABLE 1

DSM-IV-TR classification of female sexual dysfunction¹

Classification	Symptoms
SEXUAL DESIRE DISORDERS	
Hypoactive sexual desire disorder	Absence or deficiency of sexual interest and/or desire
Sexual aversion disorder	Aversion to and avoidance of genital contact with a sexual partner
SEXUAL AROUSAL DISORDERS	
Female sexual arousal disorder	Inability to attain or maintain adequate lubrication-swelling response of sexual excitement
ORGASMIC DISORDERS	
Female orgasmic disorder	Delay in or absence of orgasm after a normal sexual excitement phase
PAIN DISORDERS	
Dyspareunia	Genital pain associated with sexual intercourse
Vaginismus	Involuntary contraction of the perineal muscles, preventing vaginal penetration

DSM-IV-TR, *Diagnostic and Statistical Manual of Mental Disorders 4th edition, text revision.*

TABLE 2

AFUD classification of female sexual dysfunction²

Classification	Symptoms
SEXUAL DESIRE DISORDERS	
Hypoactive sexual desire disorder	Absence of sexual fantasies, thoughts, and/or desire for, or receptivity to, sexual activity, which causes personal distress
Sexual aversion disorder	Phobic aversion to and avoidance of sexual contact with a sexual partner, which causes personal distress
SEXUAL AROUSAL DISORDERS	
Female sexual arousal disorder	Inability to attain or maintain sufficient sexual excitement, causing personal distress, which may be expressed as a lack of subjective excitement, or genital (lubrication-swelling) or other somatic responses
ORGASMIC DISORDERS	
Female orgasmic disorder	Delay in or absence of attaining orgasm following sufficient sexual stimulation and arousal, which causes personal distress
PAIN DISORDERS	
Dyspareunia	Genital pain associated with sexual intercourse
Vaginismus	Involuntary spasm of the musculature of the outer third of the vagina that interferes with vaginal penetration, which causes personal distress
Noncoital pain	Genital pain induced by noncoital sexual stimulation

AFUD, American Foundation for Urological Disease.

TABLE 3

Medical conditions and drugs associated with decreased sexual desire and subjective arousal in women⁵

Medical conditions	Drugs
<ul style="list-style-type: none"> • Bilateral oophorectomy • Hypoprolactinemia • Lower urinary tract symptoms • Adrenal disease • Diabetes • Renal failure • Coronary artery disease • Cerebrovascular disease • Neurological disease • Parkinson's disease • Multiple sclerosis • Head injury • Depression 	<ul style="list-style-type: none"> • Antiandrogens • Antidepressants (eg, selective serotonin reuptake inhibitors) • Antihypertensives (eg, beta-blockers) • Antipsychotics • Antiepileptics • Narcotics

lack of standardized definitions of FSD precludes direct comparison, and few studies have included validated questionnaires or instruments for assessing FSD.¹⁰ Also, few studies have used questionnaires that assess both the presence of sexual dysfunction and distress.¹⁰ Nonetheless, accumulating data demonstrate the extent and impact of FSD.

The 1992 National Health and Social Life Survey (NHSLS) was the first study to examine female sexual problems in a nationally representative population. In this survey, a probability sample of US adults between the ages of 18 and 59 years, respondents answered a series of questions relating to sexual symptoms or problems in the preceding 12 months.¹¹ Sexual dysfunction was more prevalent in women compared with men (43% vs 31%). Lack of interest in sex was the most frequently reported sexual complaint (32%), followed by orgasmic dysfunction (28%) and painful sex (21%). In the National Social Life, Health, and Aging Project, Lindau et al examined the sexuality and health of older adults in a probability sample of US adults aged 57-85 years who were interviewed between 2005 and 2006.¹² Age-related decreases in sexuality were observed in both men and women; 62%, 40%, and 17% of women aged 57 to 64, 65 to 74, and 75 to 85 years, respectively, reported sexual activity with a partner in the previous 12 months. Approximately half the women reported a sexual complaint, with 61% stating that they were bothered by a lack of interest in sex.

The recent Prevalence and Correlates of Female Sexual Disorders and Determinants of Treatment Seeking (PRESIDE) study estimated the prevalence of self-reported problems with desire, arousal, and orgasm in a cross-sectional, population-based survey of US adult females.¹³ The presence of any sexual problem was reported by 44.2% of PRESIDE participants. Further, prevalence rates increased with age. Low sexual desire was the most common sexual problem (38.7%), followed by low arousal (26.1%) and orgasm difficulties (20.5%). Sexually related personal distress was reported by 22.8% of respondents. In spite of an age-related increase in rates of sexual dysfunction, the prevalence of personal distress decreased with older age, occurring in 12.6% of women ≥65 years of age compared with 24.4% of those aged 18 to 44 years and 25.5% of those aged 45 to 64 years. These findings also illustrate the fact that, regardless of age, many women with sexual problems are not bothered enough by them to be classified as being distressed, precluding a diagnosis of HSDD.

HSDD

A number of recent studies have focused on the prevalence of low sexual desire and HSDD. Estimates of the prevalence of HSDD have been found to vary, depending on the type of instrument used. In a survey of women aged 20 to 70 years, HSDD was present in 16% according to the combined Sexual Function Questionnaire and Female Sexual Desire Scale (SFQ-FSDS).¹⁰ In contrast, use of the SFQ alone or 2 instruments based on simple questions produced prevalence estimates ranging from 32% to 58%. The rates obtained with each of these instruments were significantly higher than those associated with the SFQ-FSDS ($P < .0001$).

In the Women's International Study of Health and Sexuality (WISHeS), women 20 to 70 years old from the United States and the European Union completed a questionnaire that included the Profile of Female Sexual Function and Personal Distress Scale, 2 validated patient-based instruments.^{14,15} The prevalence of low sexual desire showed a nonsignificant trend toward age-related increases in US women: 22% among those 20 to 29 years old vs 32% of those 60 to 70 years old.¹⁴ In contrast, the proportion of European women with low desire increased significantly with age, from 11% to 53% in these 2 age groups, respectively. The prevalence of HSDD, defined as the presence of both low sexual desire and personal distress, ranged from 12% to 19% in US women and from 6% to 13% in European women. Among subjects in their 30s, the prevalence of low

desire was higher in US than in European women (29% vs 16%, respectively), and more US women with this condition were distressed by it (65% vs 38%, respectively). These differences translated into a higher prevalence of HSDD among US women as compared to European women in this age group (19% vs 6%, respectively). Among women 60 to 70 years old, the prevalence of low desire was lower in US than European participants (32% vs 53%, respectively), but the proportions of women who were distressed by this condition did not differ greatly between the 2 populations (22% vs 37%, respectively), and the prevalence of HSDD was identical (12%). The WISHeS investigators pointed out that a variety of factors that differ between US and European women may explain the observed differences in sexual desire and distress. Such factors might include the overall health of the women, use of hormone therapies and other medications, and cultural and social factors such as sexual expectations.

In a separate analysis of the data from WISHeS, Leiblum et al reported on the prevalence of low sexual desire and HSDD in US women by reproductive status and age.¹⁶ For ages 20 to 49 years, low sexual desire was present in 26% of surgically postmenopausal women vs 14% of premenopausal women. Surgically postmenopausal women in this age group demonstrated a likelihood of HSDD (which included low sexual desire and personal distress) that was nearly 3 times higher than the premenopausal group (odds ratio, 2.7; 95% confidence interval, 1.5 to 5.0; $P < .002$). In the group aged 50 to 70 years, the prevalence of HSDD (including low desire and distress) was 14% in surgically postmenopausal women vs 9% in those who were naturally postmenopausal, a nonsignificant difference.

Other data from the WISHeS study shed light on the association between decreased sexual desire and personal distress.^{16,17} Similar to the observations in the PRESIDE study of women with FSD, WISHeS found that despite an age-related increase in low sexual desire, older women were less likely to report distress, precluding a diagnosis of HSDD.^{16,17} Younger women were 3 times more likely to report sexually related distress, compared with older women in this study.

Etiologic dimensions of FSD and HSDD

The etiologies of FSD and HSDD likely involve a complex interplay among biological, psychological, socioeconomic, and interpersonal components. In PRESIDE, for example, poor health, thyroid conditions, urinary

TABLE 4

Medical and psychosocial effects of disease on female sexual function

<p>Medical factors resulting from disease, treatment, or both</p> <ul style="list-style-type: none"> • Fatigue, pain, incontinence, or changed anatomy of sexual organs • Reduced mobility, which limits ability to caress, stimulate self or partner, or engage in intercourse • Changed physical sensations, such as itching, irritation, insensitivity, or hypersensitivity • Interruption of sexual response, infertility, dyspareunia, or painful orgasm • Angina or dyspnea from sexual stimulation
<p>Psychological response to illness or sexual dysfunction</p> <ul style="list-style-type: none"> • Fear that sex could be dangerous and provoke myocardial infarction or cerebral vascular event • Fear of infection or conviction that illness was caused by sexual activity (eg, cancer as punishment) • Preoccupation with illness or loss of control and independence • Disrupted sexual self-image or feeling of failure as a sexual partner or potential parent • Anxiety, depression, anger, shame, guilt, stress, or emotional lability • Avoidance behavior, fearing pain or rejection due to disfigurement or stomas • Repeatedly remembering traumatic medical procedures to sexual parts
<p>Personal psychological factors</p> <ul style="list-style-type: none"> • Limited coping mechanisms or negative attitude • History of limited or unrewarding sexual experiences • Past abuse (sexual, physical, or emotional)
<p>Relationship and social factors</p> <ul style="list-style-type: none"> • Lack of intimacy, trust, or freedom from abuse • Difficulties with communication, power regulation, or role changes • Partner's negative reactions to illness • Partner's sexual dysfunction • Inability to meet a partner or lack of information about sexual rehabilitation • Social obstruction by third parties (eg, at a hospital or nursing home) • Cultural nonacceptance of sexuality when ill or old <p><small>Reprinted from The Lancet, 369, Basson R, Schultz WW, Sexual sequelae of general medical disorders, 409-424, 2007, with permission from Elsevier.</small></p>

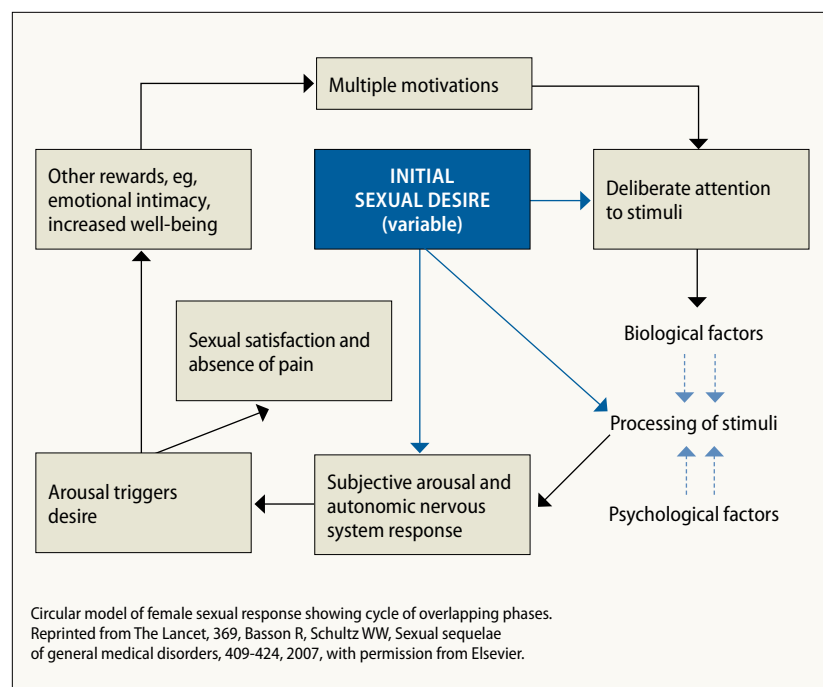
incontinence, depression, anxiety, and low education level were found to be associated with distressing sexual complaints.¹³ There is also significant overlap among the constellation of factors involved, such that a comorbid dysfunction evolves over time. The diagnostic process must incorporate assessment of the primary and any secondary conditions and identification of those factors that are amenable to intervention.

Biological factors

Overall, poor health has a negative impact on sexual

FIGURE

Medical and psychosocial effects of disease on female sexual function



function.^{12,13} Illnesses that interfere with endocrine systems are particularly important in the impairment of female sexual desire. Several lines of evidence have revealed a link between sexual desire and levels of androgens in women.⁹ Consequently, disorders of ovarian function and of the hypothalamic-pituitary-adrenal axis have been associated with decreased sexual desire and arousal.¹⁸ As discussed earlier, data from recent studies, including WISHeS, show that surgical menopause is a stronger risk factor for HSDD than is natural menopause.^{16,19} Reductions in estrogen levels may decrease vaginal lubrication and cause atrophy of vaginal tissue, which may also affect desire.⁹ Androgens are believed to be involved in maintaining sexual desire and mood, but their relative importance among the various factors contributing to female sexual desire remains controversial.⁹

In addition to endocrine factors, a range of other medical conditions as well as psychological disorders and pharmacologic therapies have been associated with reduced sexual desire and arousal (TABLE 3 on page S18).⁵ Some specific medical conditions (such as multiple sclerosis and spinal cord injury) and drugs (especially selective serotonin reuptake inhibitors and antipsychotics) have also been linked to orgasm disorders.^{5,20} The medical and psychosocial effects of disease

on sexual function are summarized in TABLE 4 and the FIGURE.⁶

Psychosocial factors

Many different types of psychosocial factors can influence attitudes toward sexuality. For instance, a history of sexual abuse or assault can give rise to feelings of shame or guilt associated with sexual activity.²¹ Untreated depression, anxiety, and other mood disorders have been linked to problems with sexual desire and arousal.^{9,22,23} In addition, self-consciousness about body image and doubts about sexual desirability have been found to reduce sexual esteem and sexual function in women.^{24,25} Sexual difficulties such as erectile dysfunction or premature ejaculation on the part of the woman's partner are also known to increase the risk for problems with female sexual desire and arousal.⁹

Impact of FSD and HSDD on quality of life

An international survey conducted in 27 countries determined that 80% of US women feel that sex is a necessary component of a fulfilling life.²⁶ The National Social Life, Health, and Aging Project also revealed that many older women remain sexually active and feel that sexuality is an important aspect of their well-being.¹² In addition, active and satisfying sexual relationships have been linked to emotional well-being, partner satisfaction, and quality of life.²⁷

FSD

All types of FSD were significantly correlated with low feelings of physical and emotional satisfaction and low general happiness in women participating in the NHSLS.¹¹ It is important to note that a causal relationship between FSD and emotional and psychological issues has not been established, since these may precede the development of FSD.

HSDD

The WISHeS study found that women with HSDD were significantly more likely to report dissatisfaction with their sex life and marriage or partner compared with women

without decreased sexual desire.¹⁶ Women with HSDD were also more likely to report feelings of frustration, hopelessness, and anger, as well as loss of femininity and altered self-esteem.^{16,28}

Obstacles to Identifying HSDD

Patients and physicians alike are reluctant to initiate a dialogue about sexuality. In the NHSLS, only 20% of women reporting a sexual complaint had sought medical assistance for their problem.¹¹ Survey data indicate that patients do not address sexual concerns due to fears that the physician would be uncomfortable and dismiss their concern.²⁹

Physicians report low knowledge and comfort levels with FSD due to limited training, embarrassment, time constraints, and lack of effective treatments.³⁰ The great majority of respondents in a small survey of primary care physicians had not screened a patient for HSDD (90%).³¹ Furthermore, 90% reported little confidence in making a diagnosis of HSDD, and 98% had not prescribed pharmacotherapy for HSDD.

Another obstacle to the identification of HSDD is the considerable overlap in symptoms of various types of

FSD.³² For instance, some women who complain of HSDD also have components of sexual aversion, although they may not manifest the phobic avoidance associated with the latter disorder.³² Moreover, there is substantial overlap between the symptoms of desire disorders and arousal disorders. Conceivably, then, a given patient may have characteristics of HSDD and sexual arousal disorder that may manifest in different ways at different times.³²

Conclusion

Data attesting to the considerable prevalence and impact of HSDD argue in favor of greater awareness of the disorder and its consequences. Current definitions provide a useful conceptual framework for HSDD but have been criticized for their shortcomings in fully describing the nature of such dysfunction in women. As definitions of HSDD continue to evolve, their clinical utility will hopefully improve. ■

Disclosure

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Identifying HSDD in the family medicine setting

Sheryl A. Kingsberg, PhD

Associate Professor
Departments of Reproductive
Biology and Psychiatry
Case Western Reserve
University School of Medicine
Chief, Division of Behavioral
Medicine
Department of Obstetrics and
Gynecology
University Hospitals Case
Medical Center
MacDonald Women's Hospital
Cleveland, Ohio

Hypoactive sexual dysfunction disorder (HSDD) occurs among women of all ages but continues to be underdiagnosed and undertreated.¹ A lack of patient-physician communication is a major reason underlying the failure to identify HSDD. Research has revealed that this problem represents a 2-way street: patients are reluctant to discuss sexual difficulties with their physicians, and physicians are reluctant to inquire about such issues.^{2,3} Moreover, some physicians are concerned that conversations about sexual function might consume too much time during the office visit.⁴ An additional consideration is the fact that many physicians do not believe they have the requisite knowledge and experience to diagnose and manage HSDD.¹ By recognizing the nature of these barriers and implementing strategies to overcome them, family physicians can play an important role in promoting more widespread screening for female sexual dysfunction (FSD), leading to greater use of diagnostic modalities designed to ascertain the exact nature of the dysfunction.

Obstacles to screening for HSDD

Studies have found that the topic of sexual dysfunction may never come to light if the responsibility for initiating a discussion is left to the patient.⁵ In 2000, a report from a survey of women receiving routine gynecologic care from family practitioners revealed that 87% struggled with lack of interest in sexual activity.⁵ Yet, a 2004 update of a 1999 survey found that only 8% of US women aged 45 to 49 years and 12% of those aged 50 to 59 years had sought treatment from their personal physicians for a sexual problem.⁶ Of particular note is the fact that the overall proportion of women who had sought treatment for sexual dysfunction from any health professional remained consistent, at 10%, between the 1999 survey and the 2004 update.⁶ This finding suggests that little progress has been made in encouraging patients to discuss such problems with their physicians.

According to other studies, embarrassment is a key obstacle to patients' ability to broach the subject of sexual function with their physicians.⁷ Apart from the patients' own embarrassment, a survey found that 68% of patients were actually afraid the physician would be embarrassed if they brought up sexual issues.³ Of interest in this regard are data from a survey of nearly 2000 health care professionals who cited embarrassment as a major obstacle to their initiating discussions about sexual health.¹ These providers also stated that limited time and training were important barriers to their addressing sexual problems. Approximately 60% of respondents rated their knowledge and comfort level with the subject of FSD as only fair or poor.

Identifying who should be screened

Overcoming obstacles to patient-provider communication

The investigations described above suggest that direct questioning by physicians is often critical to uncovering patients' concerns about sexual function.¹ Even if the patient offers information spontaneously, questions initiated by the physician will convey concern and let the patient know that it is appropriate to discuss these issues.⁴

Studies have demonstrated that training in communication skills is the strongest predictor that a physician will take a sexual history.⁸ Physicians should work on improving their communication abilities, both to put themselves at ease and to put the patient at ease.⁹ TABLE 1 lists additional physician characteristics that patients find important in order to establish a comfortable discussion of sexual issues.¹⁰ This information was obtained in a survey of women receiving routine gynecologic care, 90% of whom stated that they believed these physician traits made it more comfortable for them to talk about sexual concerns.¹⁰

Physicians' concerns regarding the amount of time necessary to address sexual disorders during the office visit are not well founded.⁴ Indeed, just a few brief questions can allow the family physician to evaluate whether a woman is experiencing sexual problems and should be screened for FSD (TABLE 2).^{4,11,12}

Medical factors that should prompt screening

Many health-related conditions may be associated with the development of sexual problems. Therefore, office visits related to these circumstances provide vital opportunities to inquire about changes in sexual function.¹¹ Examples of such situations include visits prior to surgery for uterine prolapse, hysterectomy, or oophorectomy; antenatal and postnatal visits; consultations regarding infertility; and visits for the management of chronic conditions such as diabetes, renal failure, and coronary artery, cerebrovascular, neurological, or adrenal disease.^{11,13} The use of certain antidepressants (for instance, selective serotonin reuptake inhibitors), as well as depression itself, can lead to a decrease in sexual desire and subjective arousal in women.¹³ Other medications (for example, antihypertensives, antipsychotics, antiepileptics, antiandrogens, and narcotics) can also have such effects.¹³ Furthermore, in light of the fact that postmenopausal women embody a key population at increased risk of FSD, the subject of sexual dysfunction should always be

TABLE 1

Physician characteristics that make it easier for patients to discuss sexual concerns¹⁰

- Physician has seen the patient before
- Physician knows the patient
- Physician seems concerned about sexual wellness
- Physician has professional demeanor
- Physician appears comfortable
- Physician seems kind and understanding

TABLE 2

Questions to prompt patients to discuss sexual concerns^{4,11,12}

- Are you currently involved in a sexual relationship? With men, women, or both?
- How often do you engage in sexual activity?
- Do you have difficulty with desire, genital or subjective arousal, or orgasm?
- Are you satisfied with your current sexual relations?
- Do you have any sexual concerns you would like to discuss?

raised as a patient enters this crucial period.^{11,14} Such a conversation can be initiated during a routine visit or during a visit specifically dedicated to the management of menopause-related symptoms, including the discussions of the pros and cons of hormonal therapy.⁴

Brief screening tools for FSD and HSDD

Once a woman has been identified as a candidate for FSD screening, she should be evaluated using formal screening instruments. Several brief screening tools for FSD and HSDD are readily available for use in clinical practice (see examples listed in TABLE 3).¹⁵⁻²¹ These validated instruments assess major categories of FSD, explore quantitative and qualitative aspects of the woman's sexual experience, and evaluate past and current levels of sexual desire. The screeners can often be self-administered by the patient, are simple to understand, and take little time to complete. For example, the Decreased Sexual Desire Screener (DSDS) was designed for use by clinicians with limited experience diagnosing HSDD.¹⁷ The DSDS, which is comprised of a series of questions answered by the patient and a multi-point question to assist the clinician with a diagnosis of HSDD, was recently validated for use in pre-, peri-, and postmenopausal women (TABLE 4).¹⁷

TABLE 3

Medical and psychosocial effects of disease on female sexual function

Screening tool	Modality/administration time	Domains
Female Sexual Function Index ¹⁹	Self-report; 10-15 minutes	Desire, arousal, lubrication, orgasm, satisfaction, pain
Brief Index of Sexual Functioning for Women ²¹	Self-report; 15-20 minutes	Thoughts/desires, arousal, frequency of sexual activity, receptivity, pleasure/orgasm, relationship satisfaction, problems affecting sexuality
Brief Profile of Female Sexual Function ²⁰	Self-report	Desire
Decreased Sexual Desire Screener ¹⁷	Self-report/ interview; 15 minutes	Desire
Brief HSDD Screener ¹⁸	Self-report; 3-8 minutes	Desire
Female Sexual Distress Scale/Female Sexual Distress Scale-Revised ^{15,16}	Self-report; 10-15 minutes	Distress

TABLE 4

Decreased Sexual Desire Screener¹⁷

Dear Patient, Please answer each of the following questions:	
1. In the past was your level of sexual desire or interest good and satisfying to you?	Yes/No
2. Has there been a decrease in your level of sexual desire or interest?	Yes/No
3. Are you bothered by your decreased level of sexual desire or interest?	Yes/No
4. Would you like your level of sexual desire or interest to increase?	Yes/No
5. Please check all the factors that you feel may be contributing to your current decrease in sexual desire or interest:	
A. An operation, depression, injuries, or other medical condition	<input type="checkbox"/>
B. Medication, drugs, or alcohol you are currently taking	<input type="checkbox"/>
C. Pregnancy, recent childbirth, menopausal symptoms	<input type="checkbox"/>
D. Other sexual issues you may be having (pain, decreased arousal or orgasm)	<input type="checkbox"/>
E. Your partner's sexual problems	<input type="checkbox"/>
F. Dissatisfaction with your relationship or partner	<input type="checkbox"/>
G. Stress or fatigue	<input type="checkbox"/>
Clinician Verify with the patient each of the answers she has given.	
The <i>Diagnostic and Statistical Manual of Mental Disorders, 4th edition, Text Revision</i> , characterizes Hypoactive Sexual Desire Disorder (HSDD) as a deficiency or absence of sexual fantasies and desire for sexual activity, which causes marked distress or interpersonal difficulty, and which is not better accounted for by a medical, substance-related, psychiatric, or other sexual condition. HSDD can be either generalized (not limited to certain stimulation, situations, or partners) or situational, and can be either acquired (develops only after a period of normal functioning) or lifelong.	
If the patient answers "NO" to any of the questions 1 through 4, then she does not qualify for the diagnosis of generalized acquired HSDD.	
If the patient answers "YES" to all of the questions 1 through 4, and your review confirms "NO" answers to all of the factors in question 5, then she does qualify for the diagnosis of generalized acquired HSDD.	
If the patient answers "YES" to all of the questions 1 through 4 and "YES" to any of the factors in question 5, then decide if the answers to question 5 indicate a primary diagnosis other than generalized acquired HSDD. Co-morbid conditions such as arousal or orgasmic disorder do not rule out a concurrent diagnosis of HSDD.	
Based on the above, does the patient have generalized acquired HSDD?	Yes/No

Clayton AH, Goldfischer ER, Goldstein I, et al. Validation of the Decreased Sexual Desire Screener (DSDS): a brief diagnostic instrument for generalized acquired female hypoactive sexual desire disorder (HSDD). *J Sex Med.* 2009;6:730-738. Copyright © 2009 Blackwell Publishing Ltd. Reproduced with permission of Blackwell Publishing Ltd.

Establishing a diagnosis

If screening tools suggest the presence of FSD, a diagnosis can be established by evaluating the patient's past medical history, undertaking a comprehensive sexual assessment, performing a physical examination, and conducting selected laboratory tests.^{9,22} The medical history should include reproductive history and current status; presence of any endocrine, neurologic, cardiovascular, or psychiatric disorders; and current use of prescription and over-the-counter medications.⁹ The comprehensive sexual assessment should encompass inquiries aimed at identifying the components of the complaint. Essential questions to include in the sexual assessment are listed in TABLE 5.²³ The physical examination should include inspection of the external genitalia as well as mono- and bimanual examinations to check for conditions that may impair sexual function (such as vaginismus, vulvar vestibulitis, rectal disease, urinary tract infection, fibroids, endometriosis, and cysts, among others).^{22,24}

Appropriate laboratory tests should be ordered to check the patient's thyroid function, liver function, lipid profile, and fasting glucose level.²⁵ If a hormonal problem is suspected, assessment of prolactin, total and free testosterone, sex hormone-binding globulin, dihydroepiandrosterone, and estrogens may be warranted.²⁶ Androgen levels in premenopausal women should be measured at the time they peak (on days 8 through 10 of the menstrual cycle).

Conclusion

Lack of physician-patient communication is a major contributor to the underdiagnosis of sexual dysfunction in women. Without proper

recognition of these problems, women affected by FSD remain untreated and experience adverse consequences that undermine their relationships and quality of life. As primary care providers, family physicians have numerous opportunities to screen women for various types of FSD, including HSDD, and to implement appropriate strategies for establishing a diagnosis. Candidates for FSD screening can be identified by overcoming obstacles to discussing sexual issues and by maintaining an awareness of medical factors that can contribute to sexual dysfunction. Simple screening tools can determine which women should be further evaluated with medical and sexual histories, physical examination, and laboratory tests to establish a diagnosis. Greater involvement of family physicians in the detection of sexual dysfunctions such as HSDD will undoubtedly improve the lives of the many women who continue to experience these problems. ■

Disclosure

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TABLE 5

Essential questions to include in a sexual assessment²³

- How does the patient understand or describe the problem?
- How long has the problem been present?
- Is the problem lifelong or acquired after a period of normal function?
- Was the onset sudden or gradual?
- Is the problem specific to a situation or partner or is it generalized?
- Were there likely precipitating events (biological or situational)?
- Are there problems in the patient's primary sexual relationship (or any relationship in which the sexual problem is occurring)?
- Are there current life stressors that might be contributing to sexual problems; and, if so, how is stress perceived and managed?
- Is there some underlying guilt, depression, or anger that is not being directly acknowledged?
- Are there physical problems, such as pain?
- Are there problems with desire, arousal, or orgasm, and can the patient determine the primary problem?
- Is there a history of physical, emotional, or sexual abuse that may be contributing?
- Does the partner have any sexual problems?

Opportunities for intervention in HSDD

James A. Simon, MD, CCD, NCMP, FACOG
Clinical Professor of Obstetrics and Gynecology
Division of Reproductive Endocrinology and Infertility
George Washington University School of Medicine
President and Medical Director
Women's Health & Research Consultants
George Washington University Hospital
Washington, DC

Hypoactive sexual desire disorder (HSDD) is relatively common among women and causes considerable distress as well as interpersonal difficulties.^{1,2} Nevertheless, many women with HSDD remain untreated because they are reluctant to discuss sexual issues with their physicians and have low expectations concerning the prospects for help.^{3,4} Compounding this situation is the fact that clinicians frequently do not inquire about patients' sexual health.⁵ As primary care providers, family physicians are in an excellent position to improve the care of women with HSDD by adopting a proactive approach to identifying sexual concerns and determining the best available courses of treatment.⁶

Deciding whether to treat or refer

Once a patient has voiced concerns regarding sexual function, whether spontaneously or in response to direct questioning, the physician can make a decision as to whether the problem should be addressed during the same visit, during a follow-up visit, or through referral to a specialist in sexual disorders.⁷ The choice of whether to treat the patient or refer her to a specialist will depend on the family physician's level of comfort and experience in establishing a diagnosis and treating the disorder.^{7,8} Other factors that come into play are the complexity of the problem and the availability of appropriate resources.^{7,8} A recent survey of primary care physicians found that the vast majority had little confidence in their abilities to diagnose HSDD, had not screened patients for HSDD, and had not prescribed medication for HSDD.⁵ The findings from this survey and similar studies indicate that family physicians interested in pursuing additional medical education and training will have a vital opportunity to improve the care of women with HSDD.^{5,9} Indeed, family physicians who are prepared to discuss sexual dysfunction can do much to advance the quality of life for these patients. In addition to providing medical treatment, physicians can avail themselves of important opportunities to educate patients concerning their problem.

If the physician decides to refer the patient, a determination must be made as to the best types of experts to involve in the case. Options include medical professionals who are experienced in the treatment of HSDD (such as some gynecologists and other primary care practitioners) and mental health professionals who can address the psychosocial aspects of the disorder (such as psychologists, psychiatrists, marriage or relationship counselors, and sex therapists).⁷ The choice will depend on the nature of the individual's dysfunction as well as her interest and willingness in exploring specific forms of more focused treatment.⁷ Even if the family physician chooses to assume responsibility for the patient's medical

management, consideration should be given to referrals for nonpharmacologic interventions such as cognitive-behavioral therapy.⁷

Nonpharmacologic interventions

Relatively few systematic trials of psychotherapy for HSDD have been conducted, and varying levels of efficacy have been reported with both traditional sex therapy and cognitive-behavioral therapy.¹⁰ At least in part, these divergent results likely stem from the heterogeneity of treatment methods and study designs, which has limited the comparability of results across studies.¹¹ Overall, the data gathered thus far would seem to support the efficacy of cognitive-behavioral treatment for HSDD.¹² Sex therapy typically involves cognitive-behavioral approaches, the goals of which are to alter negative thoughts, attitudes, and behaviors. Often, modified sensate focus exercises are used whereby couples initially engage in nonsexual touching and caressing and gradually transition to sexual touching and activity. However, sensate focus techniques appear to be less effective in treating HSDD than in treating sexual aversion and arousal disorders.¹³ Whereas HSDD is characterized by persistently or recurrently deficient (or absent) sexual fantasies and desire for sexual activity, female sexual aversion disorder (FSAD) consists of persistent or recurrent extreme aversion to, and avoidance of, all (or almost all) genital sexual contact with a sexual partner.¹ Female sexual arousal disorder is defined as a persistent or recurrent inability to attain, or to maintain until completion of the sexual activity, an adequate lubrication-swelling response of sexual excitement.¹

Pharmacologic, hormonal, and alternative therapies

Pharmacologic therapies

A wide range of pharmacologic agents have been evaluated for their efficacy in the treatment of HSDD. Some of these drugs have shown little potential for clinical use, whereas others have exhibited promise.

Numerous investigations have examined whether vasoactive drugs used to treat erectile dysfunction in men might also improve sexual function in women.¹⁴ In general, studies of such agents (including phosphodiesterase inhibitors and alprostadil) have produced negative results. One exception was a placebo-controlled trial in which sildenafil was associated with significant benefits in postmenopausal

women with FSAD who had normal (protocol-specified) levels of estradiol and free testosterone (or were receiving estrogen and/or androgen replacement therapy).¹⁵ However, sildenafil had no significantly positive effects on sexual function in a subgroup of women who had HSDD in addition to FSAD. Another placebo-controlled study found that sildenafil significantly improved sexual function (particularly the ability to achieve orgasm) in postmenopausal women with depression who had sexual dysfunction related to therapy with selective serotonin reuptake inhibitors.¹⁶ Assessments of sustained-release bupropion in women with HSDD have revealed significant, albeit small, effects on some measures of sexual function but not others.^{14,17} Research focusing on dopaminergic drugs (such as levodopa, pergolide, and apomorphine) has yielded mixed results in women with HSDD.¹⁸

Flibanserin is another agent under investigation for HSDD. This agent is known to work on the central nervous system, acting as both a 5-HY1A serotonin receptor agonist and a 5-HY2A serotonin receptor antagonist. However, its specific mechanism of action remains under study. A number of clinical trials are under way in premenopausal women with HSDD.¹⁹

Melanocortin receptor agonists have generated interest in the wake of studies demonstrating increased sexual responsiveness in both men and women.^{14,20-22} One such agent,bremelanotide, had shown significant benefits with respect to desire and arousal success rates in postmenopausal women, although its effects in premenopausal women were comparable to those of placebo.²³ The clinical development of bremelanotide for the treatment of sexual dysfunction was discontinued in 2007-2008 due to concerns about increased blood pressure.²³ The clinical development program has now been redirected toward potential use of the drug to treat hemorrhagic shock and prevent postsurgical organ dysfunction.^{23,24} However, the manufacturer is also initiating studies of a new melanocortin receptor agonist, PL-6983, for use in sexual dysfunction.²³ Effects on blood pressure are believed to be less pronounced with this compound than with bremelanotide.²³ Other melanocortin receptor agonists are likewise continuing to undergo evaluation.

Hormonal therapies

Estrogen therapy improves vaginal dryness and pain, which may contribute to sexual problems in women with surgical or natural menopause but does not directly affect sexual desire.²⁵ In contrast, a growing body of data has demonstrated that exogenous testosterone improves many facets of sexual function, including arousability,

TABLE 1

Current options for testosterone therapy in women with HSDD

Type of therapy	Comments
Combination of oral esterified estrogens and methyltestosterone*	• Only for use in postmenopausal women
Testosterone products approved for the treatment of low testosterone disorders in men (used off-label in women)	• Available in various formulations (oral, intramuscular injection, transdermal) • Doses must be adjusted downward for use in women, then titrated according to clinical response Note: Appropriate doses have not been clearly established for women with low sexual desire.
Custom compounded products (eg, buccal therapy with testosterone lozenge)	• Requires availability of skilled compounding pharmacist • Clinician must be knowledgeable and experienced in this approach

*Manufacturer discontinued supplying product to US market in March 2009. HSDD, hypoactive sexual desire disorder.

TABLE 2

Herbal therapies and proposed mechanisms of action in female sexual dysfunction³³

Therapy	Proposed mechanism of action
Ginkgo biloba	Increases blood flow by inhibiting platelet-activating factor
L-arginine	Required to produce nitric oxide; increases blood flow
Damiana leaf	Stimulates sexual desire; may have progestin-like action
Ginseng	Phytoestrogenic activity; increases blood flow

desire, fantasy, orgasm, and overall satisfaction.²⁶ Currently, no testosterone products are specifically approved by the US Food and Drug Administration (FDA) for the treatment of low sexual desire in women. However, some options are available, as listed in TABLE 1. At present, only oral therapy is FDA approved for use in women (albeit not for the treatment of sexual dysfunction). Transdermal testosterone is being evaluated in clinical trials of women with sexual dysfunction. Some practitioners are treating such women with transdermal testosterone products that are approved by the FDA for various disorders in men; these therapies are being prescribed off label in women, with doses adjusted as needed. Family physicians should familiarize themselves with the treatments listed in TABLE 1 so as to evaluate potential advantages in specific patients.

The beneficial effects of testosterone therapy have prompted research into treatments designed specifically for HSDD or other forms of female sexual dysfunction (FSD). A wide range of formulations, including injections, implants, and tablets, have been studied, with varying results.²⁷ In recent years, the most active area of development

not taking estrogen.²⁹ The overall incidence of androgenic adverse events was higher with the 300 mcg testosterone patch than with placebo (30.0% vs 23.1%, respectively). Most of this difference was attributable to a significantly higher incidence of increased hair growth with testosterone 300 mcg/d, compared with placebo (19.9 vs 10.5%, respectively). The frequency and severity of acne, alopecia, and voice deepening were similar between groups, and most of these events were considered to be mild. However, various studies have produced conflicting data concerning the safety of exogenous testosterone in women, and the longer-term effects (including the potential impact on the risk of breast cancer) remain unknown.²⁷ Large-scale studies of sufficient duration are needed to shed more light on these issues.

Studies have also documented benefits with transdermal testosterone creams or gels. In a crossover trial of premenopausal women with diminished libido, a ≥50% increase in total sexual self-rating score was reported by 46% of women with testosterone cream, compared with 19% with placebo, after 12 weeks of treatment with each

in the United States has involved transdermal formulations. A controlled trial of surgically menopausal women with HSDD who were receiving estrogen replacement therapy found that the addition of a testosterone patch (delivering 300 mcg/d) for 24 weeks significantly increased the frequency of episodes of sexually satisfying activity (FIGURE).²⁸ Furthermore, the testosterone group exhibited a significant increase in sexual desire and a significant decrease in distress. The risk of a patient experiencing at least one type of androgen-related adverse effect (eg, acne, alopecia, unwanted hair growth, or voice deepening) was lower in the testosterone group than in the placebo group (12.7% vs 15.8%, respectively). Lipid profiles were similar in the 2 groups. Other studies likewise documented significant increases in the frequency of satisfying sexual episodes, as well as significant increases in desire and decreases in distress, during 24 weeks of treatment with a testosterone patch (300 mcg) vs placebo in postmenopausal women with HSDD who were

study drug.³⁰ A testosterone gel for use in HSDD is currently in late stages of clinical development.^{31,32}

Complementary and alternative therapies

Several forms of complementary and alternative medicine (CAM) have been used to treat FSD, including symptoms associated with HSDD. Many herbal derivatives are based on traditional Chinese and Native American medicine.³³ The mechanisms of action of these therapies are largely unknown, although hypotheses have been advanced to explain their effects (TABLE 2).³³

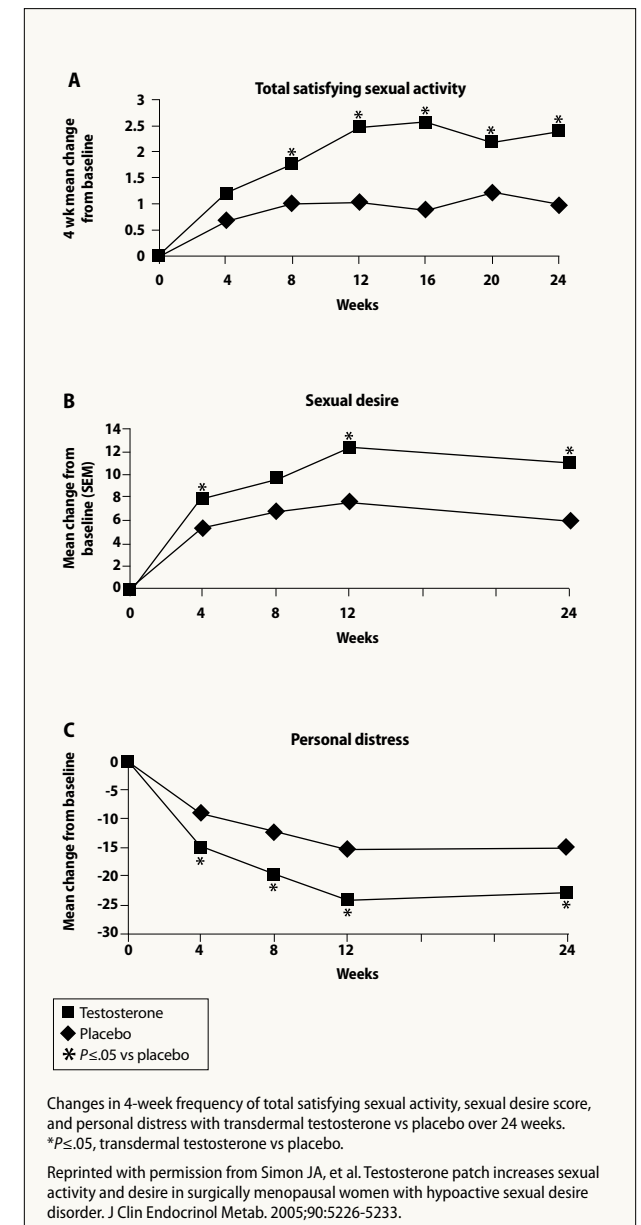
Only limited data are available concerning the effectiveness and long-term safety of most of these products in HSDD or other forms of FSD. In one of the few published reports (a randomized, placebo-controlled, double-blind trial of women with sexual dysfunction secondary to antidepressant therapy) improvements were observed with both ginkgo biloba and placebo, but there were no significant differences between treatments.³⁴ A randomized, double-blind, crossover study of 24 women with sexual arousal disorder found significant improvements from baseline with yohimbine (with or without L-arginine glutamate), but the effects were not significantly different from those achieved with placebo.³⁵

Other work has produced conflicting results concerning supplementation with dehydroepiandrosterone (DHEA), which is produced in the adrenal gland and converted to testosterone. In a 4-month, randomized study of women with adrenal insufficiency, DHEA was associated with significant improvements in the frequency of sexual thoughts or fantasies, sexual interest, and sexual satisfaction.³⁶ However, DHEA failed to produce significant improvements in sexuality measures.³⁷⁻³⁹ Commercial DHEA supplements are sold over the counter.

In addition, a variety of nonprescription oral and topical commercial products are being marketed with the assertion that they can improve female sexual function. These products contain proprietary blends of herbal and other botanical ingredients as well as vitamins and minerals.³³ A handful of studies have reported significant increases in sexual desire and arousal with these treatments. For instance, a randomized, double-blind, placebo-controlled trial found significant improvements in sexual arousal, desire, and pleasure with the use of an herbal topical cream.⁴⁰ Another controlled study identified improvements in sexual desire and other measures of sexual function with a nutritional supplement that supposedly enhances a woman's sexual response by increasing blood flow and promoting relaxation.⁴¹ In the case of most commercial products, how-

FIGURE

Changes in 4-week frequency of scores associated with transdermal testosterone vs placebo



ever, few or no studies have been conducted, and existing data have been neither peer reviewed nor published, leaving questions regarding efficacy and safety unanswered.³³

Physicians should be aware that an increasing number of women are using alternative medicines, including products that claim to improve sexual response.^{33,42} Notably, large-scale surveys have found that approximately 70% of adults do not disclose the use of CAM to their physicians.⁴²

In light of the potential for adverse events or drug-drug interactions, physicians should specifically ask patients whether they are taking herbal or other remedies.

Conclusion

No therapies have yet been approved by the FDA for patients with HSDD specifically, although many types of treatment are currently under study and some (such as testosterone patches and gels) are in advanced stages of development.

Until such treatment becomes available, family physicians can make strides toward improving the management

of HSDD through increased recognition of this disorder in women, application of existing forms of hormonal and nonpharmacologic therapies, and referrals to specialists. ■

Disclosure

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CASE STUDY

Challenges in the identification and management of HSDD

Sharon J. Parish, MD

Associate Professor of Clinical Medicine
Department of Medicine
Albert Einstein College of Medicine
Director of Psychosocial Training
Department of Medicine
Montefiore Medical Center
Bronx, New York

A 52-year-old woman, A.J., complains of mild vasomotor symptoms. She has had some sleep disturbance and an increase in daytime fatigue. She notes that she has been suffering from a depressed mood of increasing severity and frequency. On screening and then on direct questioning, she admits to a lack of sexual desire and a decrease in sexual arousal.

Evaluation

The patient's medical history reveals that she has been taking paroxetine for symptoms of depression for the past 4 years. Her depressive symptoms were well controlled; as noted, however, her depressive symptoms have recently recurred. Also, in the past few months her menstrual cycle has become increasingly irregular and has been characterized by bothersome heavy bleeding. Otherwise her medical history is unremarkable, without chronic or serious illness or surgical procedures. Her general physical examination is normal.

Regarding her sexual history, A.J. reports that she first noticed a decrease in sexual arousal 2 to 3 years previously, followed by a decrease in sexual desire. Intercourse has become uncomfortable for her. She appears to have pain due to a reduction in vaginal lubrication. It is not clear whether this is the underlying cause of her low desire. The patient's problems with decreased sexual desire and arousal are causing her extreme distress. She has been married for 26 years and has not experienced marked discord with her husband until recently, when her sexual difficulties began to create tension in the relationship.

Discussion

This case illustrates some of the challenges involved in establishing a diagnosis of female sexual dysfunction and, specifically, hypoactive sexual desire disorder (HSDD). Problems with sexual desire and arousal may indicate a primary diagnosis of HSDD or may occur secondary to factors such as poorly controlled depressive symptoms, the manifestations of menopause, or the side effects of antidepressant medications.¹⁻³ Moreover, declining estrogen levels beginning during perimenopause may decrease vaginal lubrication and cause atrophy of vaginal tissue, which can result in discomfort during intercourse and can also reduce desire.⁴ Because of the complex interplay among many factors, it is not always possible to clearly identify the "primary" disorder in a patient such as A.J. An important

consideration is that personal distress must be present to establish a diagnosis of HSDD.^{5,6}

The approach to management should address any factors that might be amenable to intervention, whether or not they constitute the primary cause of the complaint of loss of sexual desire. In A.J.'s case, a consultation with her psychiatrist is in order to discuss the possible strategies to lessen the potential impact of her depressive symptoms and antidepressant therapy on her sexual function. Her complaints of vasomotor symptoms and vaginal dryness suggest that she may benefit from systemic estrogen therapy to improve her sleep and reduce daytime fatigue and/or local estrogen therapy to decrease pain on intercourse by increasing vaginal lubrication. However, estrogen therapy does not directly affect sexual desire, so the patient's complaints of low desire may well persist. If

so, a trial (off-label) of testosterone therapy may be appropriate, as testosterone treatment may be effective in significantly increasing sexual desire and decreasing distress in naturally menopausal women with HSDD when used concomitantly with estrogen replacement therapy.⁷ Testosterone therapy, in combination with estrogen, has also been shown to improve arousability, fantasy, orgasm, and overall sexual satisfaction in women with HSDD.⁸ A recent trial investigating the use of testosterone alone in naturally menopausal women with low desire has demonstrated modest dose-dependent improvements in sexual satisfaction with this therapy.⁹ ■

Disclosure

Dr. Parish is a consultant for Boehringer Ingelheim Pharmaceuticals, Inc., and Wyeth.

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HYPOACTIVE SEXUAL DESIRE DISORDER IN WOMEN

Implications for Family Practice

RELEASE DATE: **JULY 15, 2009** ESTIMATED TIME TO COMPLETE ACTIVITY: **1.25 HOURS**
EXPIRATION DATE: **JULY 15, 2010**

CME POSTTEST

PLEASE CIRCLE OR CHECK THE CORRECT ANSWER TO EACH QUESTION.

1. A diagnosis of hypoactive sexual desire disorder (HSDD) in women involves:

- Overlap with another female sexual dysfunction
- Personal distress
- Decreased androgen levels
- Transition through menopause

2. Unlike HSDD, female sexual aversion disorder involves:

- Avoidance of all or almost all genital sexual contact
- Inability to attain an adequate lubrication response
- Personal distress
- Absence of sexual fantasies

3. The prevalence of HSDD:

- Has been decreasing in recent years, according to epidemiologic studies
- Has generally been reported as <10% in women aged 20 to 70 years
- Is significantly lower in premenopausal than in surgically postmenopausal women aged 20 to 49 years
- Is significantly lower in surgically than in naturally postmenopausal women aged >50 years old

4. The PRESIDE study showed that the most common sexual complaint among US women is:

- Low sexual desire
- Lack of sexual arousal
- Failure to achieve orgasm
- Erectile dysfunction in partner

5. Survey data have revealed that the identification of female sexual dysfunction is hampered by:

- The rarity of these conditions
- A lack of simple screening tools
- Patient concerns that the physician will be embarrassed
- The reluctance of physicians to refer patients to specialists

6. Which of the following physician characteristics was cited as increasing patient comfort in discussing sexual issues, according to 90% of women surveyed?

- Number of years in clinical practice
- Solo vs group practice
- Having seen the patient before
- Never having seen the patient before

7. Which of the following medical situations should prompt screening for female sexual problems?

- Diagnosis of diabetes
- Early postnatal period
- Presence of adrenal disease
- All of the above

8. A recent survey found that the vast majority of family physicians screen their female patients for HSDD.

- True
- False

9. Studies of pharmacologic therapies for HSDD have shown that:

- Drugs used to treat erectile dysfunction in men are consistently effective in women
- Bupropion improves all measures of sexual function
- Dopaminergic agents provide the greatest efficacy
- None of the above

10. Which of the following statements is *not* true?

- Data have confirmed that transdermal testosterone improves symptoms of HSDD
- Estrogens have a greater impact on female sexual function than do androgens
- Studies of dehydroepiandrosterone in women with HSDD have yielded conflicting results
- More data are needed to determine whether flibanserin is effective in women with HSDD

HYPOACTIVE
SEXUAL DESIRE DISORDER
IN WOMEN

Implications for Family Practice

▶ EDUCATIONAL OUTCOMES
QUESTIONS

PLEASE ANSWER TO THE BEST OF YOUR ABILITY. THESE QUESTIONS ARE NOT GRADED AND YOUR ANSWERS WILL NOT AFFECT YOUR CME CREDIT.

1. In prevalence studies of sexual dysfunction, which of the following is the most common sexual complaint reported by women?

- a. Orgasm difficulties
- b. Low sexual arousal
- c. Low sexual desire
- d. Pain with intercourse

2. A 57-year-old woman presents for a new patient visit and examination. She stopped menstruating at age 51 and received combination estrogen/progestin therapy for several years to alleviate vasomotor symptoms but discontinued use. She reports no significant medical history. On the patient intake checklist she noted pain during intercourse and, upon questioning, reports a progressive decrease in sexual desire since the menopause transition. Her husband complains about her lack of desire; however, she is satisfied with her current sexual activity and does not feel that it negatively affects her relationship. What would be your diagnosis for this patient?

- a. Dyspareunia
- b. Situational hypoactive sexual desire disorder (HSDD)
- c. Sexual aversion disorder
- d. Generalized HSDD

3. What treatment strategy would you select for this patient?

- a. Administer compounded testosterone to increase sexual desire
- b. Administer local estrogen to relieve pain during intercourse
- c. Administer systemic estrogen to relieve pain during intercourse and increase desire
- d. Refer to a sex therapist

4. A wide range of pharmacologic agents have been evaluated for their efficacy in the treatment of HSDD. Which of the following mechanisms of action has *not* been investigated for the treatment of HSDD?

- a. Testosterone formulations
- b. 5-HY1A serotonin receptor agonist/5-HT2A serotonin receptor antagonist
- c. Melanocortin receptor agonist
- d. Serotonin-noradrenaline reuptake inhibitor

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RELEASE DATE: JULY 15, 2009 ESTIMATED TIME TO COMPLETE ACTIVITY: 1.25 HOURS
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▶ EVALUATION QUESTIONS

OVERALL ENDURING MATERIAL
EVALUATION

5=Excellent, 4=Good, 3=Satisfactory,
2=Fair, 1=Poor

Using the above scale, please evaluate
this activity by marking the appropriate
response.

1. Objectivity and balance
5 4 3 2 1
2. Did you perceive any bias or
commercialism in this activity toward
any product or drug?
 Yes No *If Yes, please explain*

3. Scientific rigor
5 4 3 2 1
4. Amount of information presented
5 4 3 2 1
5. Level of instruction
5 4 3 2 1

LEARNING OBJECTIVES

5=Strongly agree, 4=Agree, 3=Neutral,
2=Disagree, 1=Strongly disagree
Using the above scale, indicate whether after
completing this activity you are better able to:

6. Define HSDD and identify the
factors associated with it or that
may contribute to it.
5 4 3 2 1
7. Describe the steps required for
taking a thorough and clinically
pertinent sexual history.
5 4 3 2 1

8. Explain how to screen patients for
HSDD, how to identify and diagnose
patients at risk for HSDD, and how to
refer them to appropriate resources.
5 4 3 2 1

9. Identify interventions and
pharmacologic treatments for
HSDD and provide evidence of their
effectiveness.
5 4 3 2 1

10. Discuss patient and provider
obstacles to the recognition and
management of HSDD and identify
strategies for overcoming these
barriers.
5 4 3 2 1

REASON FOR PARTICIPATION

5=Extremely, 4=Very, 3=Somewhat,
2=Not very, 1=Not at all

Using the above scale, indicate how important
the following reasons are for your participation
in educational activities.

11. Topics
5 4 3 2 1
12. Faculty/editor's reputation
5 4 3 2 1
13. CME credit
5 4 3 2 1

14. As a result of participating in this
activity, did you learn anything that
would cause you to make a change
in your clinical practice (choose
only one)?
 Yes, I am going to try to
incorporate some of the information
presented into my clinical practice
 No, I am not going to
incorporate any of the information
into my clinical practice

15. If yes, how soon do you intend to
incorporate changes in your practice as
a result of this CME activity?
 Immediately
 In 1 month
 In 3 months
 In 6 months
 I do not know

16. If no, why not?
 I learned some new information,
but the information presented is not
applicable to my clinical practice
 The information presented con-
firmed my current clinical practice
 I did not find the information
useful and I will not change my
current clinical practice
 I do not know

17. Please indicate whether you would
recommend this activity to others.
 Yes
 No

18. Please rate your interest in the following
educational topics for HSDD from 5
(highest interest) to 1 (lowest interest):
___ Definitions of FSD
___ Emerging treatment strategies
for HSDD
___ Psychosocial aspects of FSD
___ Diagnosing HSDD
___ Referral strategies for FSD
___ Screening tools for FSD
___ Available treatments for HSDD
___ Etiology of FSD/HSDD
___ Approaches to taking a sexual history

19. Additional comments:

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