

## ARTICLE

## Female sexual dysfunction

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Patients want to discuss concerns about their sexual health, but these discussions can be difficult to initiate. Most patients wait for their healthcare provider to enquire about their sexual health. Female sexual problems are highly prevalent, affecting up to 43% of women. Between a third and half of these women describe their problem/s as distressing, causing a major impact on their quality of life and interpersonal relationships. Addressing sexual health issues with patients can enhance medical practice and improve patient well-being. This article provides healthcare providers with an approach to addressing female sexual dysfunction, along with an overview of diagnosis and treatment options.

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Female sexual dysfunction is relatively common, but women seldom seek medical help. This article discusses the issues around female sexual dysfunction by reviewing the available literature, including publications written or cited by the International Consultation on Sexual Medicine, the *Journal of Sexual Medicine* (official journal of the International Society of Sexual Medicine) and a personal archive of references.

### Talking about sexual issues

An online survey of 3 807 healthy volunteers indicated that 40% of women did not discuss sexual problems with their clinician.<sup>[1]</sup> Research suggests that healthcare providers may feel uncomfortable discussing sexual health issues with their patients. The reasons may include: (i) a lack of training and skills to deal with patient concern; (ii) embarrassment when talking about sex; (iii) concern about offending or embarrassing the patient; (iv) underestimating the prevalence of sexual dysfunctions; and (v) underestimating the impact sexual complaints have on a patient's health.<sup>[2]</sup> A multinational study revealed that while half of sexually active participants had a sexual problem, only 19% and 9% had sought medical care and had been asked about sexual health in the last 3 years, respectively.<sup>[3]</sup> Female sexual problems are highly prevalent, affecting up to 43% of women.<sup>[4,5]</sup> Between a third and half of these women describe their problem/s as distressing, causing a major impact on their quality of life and interpersonal relationships.<sup>[4,6]</sup> The lack of effective and safe treatment options may also have an impact.<sup>[2]</sup> However, sexual health questions should be part of a normal review of systems starting with a normalising statement (e.g. 'It is part of my routine to ask about sexual health') and continuing with an open-ended question (e.g. 'Do you have any concerns?').<sup>[7]</sup> Basic screening for sexual function should include two key questions: 'Are you currently involved in a sexual relationship?' and 'Are your sexual partners men, women, or both?'.<sup>[7]</sup> The permission, limited information, specific suggestions and intensive therapy (PLISSIT) model is one of intervention for sexual problems.<sup>[8]</sup>

#### Permission

Open-ended questions give the patient permission to talk about her sexual concerns, give reassurance that her feelings are normal, and validate and legitimise the patient's complaint (e.g. 'Tell me about any

sexual concern/problem you would like to discuss' and 'How does the problem affect your life and relationship?').<sup>[7]</sup>

#### Limited information

Address topics in the time available and suggest a follow-up appointment to focus on sexual health concerns. Provide information about anatomy, physiology, normal sexual response, sexual changes occurring with age, medication use (e.g. antidepressants), or the influence of comorbid medical conditions (e.g. depression). Dispel myths about sexual concerns.

#### Specific suggestions

Offer specific suggestions and solutions to try to treat the complaint (e.g. management of comorbid conditions or reassessment of medications that may affect sexual function).<sup>[7,9]</sup> Further suggestions may include: improved time/stress management skills; improved exercise and diet habits; if privacy is a problem – locking the bedroom door; addressing sexual boredom – spending time as a couple (e.g. date nights), changing the sexual routine, exploring sexuality via masturbation, using accessories; and education about sexual response (e.g. women in long-term relationships may not feel spontaneous desire).

#### Intensive therapy

It may be necessary to refer the patient for more specific investigations and intensive therapy to qualified specialists, including sex therapists, couples counsellors, cognitive-behavioural therapists, physiotherapists, and medical or surgical subspecialists. Any patient with a sexual issue that exceeds your comfort level or expertise should be referred.

#### Female sexual response

Masters and Johnson described the human sexual response as a linear process of distinct phases of excitement, arousal, orgasm and resolution.<sup>[10]</sup> This model was later modified into a three-phase model of desire, arousal and orgasm.<sup>[11]</sup> More recently, a circular sexual response cycle of overlapping phases has been described.<sup>[12]</sup> This more complex, non-linear model includes emotional and relational factors as well as external and cognitive sexual stimuli. Desire may/

may not be present initially, but may be triggered by arousal to appropriate sexual stimuli.

## Pathophysiology

An integrative approach is required, with attention to the biological (physical health, neurobiology and endocrine function), psychological (anxiety and depression), relational (current and past) and contextual (life stressors) contributors to the sexual problem,<sup>[13]</sup> as well as the predisposing, precipitating and maintaining factors relating to the disorder.<sup>[14]</sup> Involving the partner is advantageous.

## Prevalence of conditions

A wide range of prevalence estimates of female sexual dysfunctions (FSDs) have been reported. When associated distress was considered, a survey found the prevalence of hypoactive sexual desire disorder to be 16%, sexual arousal disorder 7%, orgasmic disorder 8%, and dyspareunia 1%.<sup>[15]</sup> An overlap of disorders is common.

## Clinical assessment

### Detailed history

By asking the patient open-ended questions, she should be encouraged to describe her complaint in her own words. Attention should be paid to whether it has always been present (lifelong) or has been acquired, whether it is situational, generalised or related to specific situations (e.g. the partner's sexual difficulty/behaviour), and whether she experiences difficulties with desire, arousal, orgasm or pain or a combination of complaints.<sup>[16]</sup> The degree of distress should be assessed.

Biomedical factors include diseases, drugs and hormones, and should be assessed in detail to include a gynaecological and an obstetric history, contraception methods, a medical and surgical history, and medication use (including over-the-counter medications, alcohol and illicit drugs).<sup>[16]</sup>

The medical history may include conditions that interfere with sexual function, e.g. lifestyle (nutrition, sleep), cardiovascular disease, diabetes, endocrinopathies (thyroid), urinary (incontinence), renal, or neurological (multiple sclerosis, Parkinson's disease) problems, trauma and cancer.<sup>[16]</sup> Psychological factors, including individual psychological (anxiety and depression), relational and social factors, should be discussed. History taking should include negative early experiences, sexual abuse and relationship factors.<sup>[16]</sup> Medication may have an impact on FSDs, e.g. antidepressants and mood stabilisers (selective serotonin re-uptake inhibitors (SSRIs)), anticonvulsants, hormones and hormone antagonists (hormonal contraception, anti-androgens, gonadotropin-releasing hormone (GnRH) agonists), antihypertensives (beta-blockers, alpha-blockers, diuretics), cardiovascular agents, and histamine receptor blockers.<sup>[17]</sup>

### Psychometric measures

The Brief Sexual Symptom Checklist for Women, a self-reporting tool, asks four questions regarding a patient's satisfaction, sexual problem and whether she wishes to address these issues.<sup>[16]</sup> More detailed screening tools may be used, although these should not be a substitute for a thorough sexual, medical and psychosocial history.

### Examination

A general medical examination is indicated when relevant and should be guided by the medical history. A genital examination is recommended for good medical care, reassurance and education. A normal examination may be highly informative. The patient's

beliefs, perceptions and attitudes about her body can be assessed. An examination is mandatory if there is lack of sexual interest due to endocrine changes, a combination of dysfunctions or sexual pain. The examination includes careful inspection for changes or abnormalities (e.g. signs of inflammation, scarring, skin quality or colour, atrophy, fissures, erosions, ulcers, and vaginal pH), culture of discharge if present, careful palpation, if appropriate, with pain mapping and assessment of the pelvic floor, muscular tone and strength.<sup>[18]</sup> An ultrasound scan or a laparoscopic examination may be required if an abnormality is suspected.

### Laboratory testing

Testing for glucose, haemoglobin level, thyroid, prolactin and reproductive hormones (luteinising hormone, and follicle-stimulating hormone) to rule out metabolic or pituitary dysfunction may be required.<sup>[18]</sup> Oestrogen or androgen deficiencies are usually detected by history and examination.

## Definitions, diagnostic criteria and treatment options

The *Diagnostic and Statistical Manual of Mental Disorders* version 5 (DSM-5)<sup>[19]</sup> states that a sexual dysfunction must have persisted for a minimum of 6 months, must cause clinically significant distress, is not better explained by a non-sexual mental disorder or as a consequence of severe relationship stress or other significant stressors, and is not attributed to the effects of a substance or medication or another medical condition. Clinicians should specify whether the condition is lifelong or acquired and generalised or situational.

### Female sexual interest/arousal disorder

Female sexual interest/arousal disorder is defined as the lack of or significantly reduced sexual interest/arousal with at least three of the following: absent/reduced interest in sexual activity; absent/reduced sexual/erotic thoughts or fantasies; no/reduced initiation of sexual activity, and typically unreceptive to a partner's attempts to initiate; absent/reduced sexual excitement/pleasure during sexual activity in almost all or all (75 - 100%) sexual encounters (in identified situational contexts or, if generalised, in all contexts); absent/reduced sexual interest/arousal in response to any internal or external sexual/erotic cues (e.g. written, verbal, visual); absent/reduced genital or non-genital sensations during sexual activity in almost all or all (75 - 100%) sexual encounters (in identified situational contexts or, if generalised, in all contexts).<sup>[19]</sup>

Treatment should focus on providing specific information regarding desire and variations with age, relationship duration, lifestyle changes or the female sexual response cycle, including motivations for sexual intimacy.<sup>[20]</sup> Techniques that encourage focusing on awareness of genital response, including cognitive therapy, behavioural and mindfulness exercises, have been shown to improve arousal.<sup>[21]</sup>

Pharmacotherapy use is limited. Decreased androgen levels do not correlate well with decreased desire.<sup>[22]</sup> However, although not approved for use in South Africa, testosterone (300 µg daily), administered transdermally, has been shown to benefit sexual desire in oestrogen-repleted, naturally and surgically postmenopausal women.<sup>[23]</sup> Topical and systemic oestrogen improves vaginal lubrication for vaginal atrophy.<sup>[24]</sup> In postmenopausal women, tibolone has been associated with significant increases in sexual desire and arousal compared with placebo.<sup>[25]</sup> The Eros clitoral therapy device, designed to improve arousal, increases clitoral blood flow.<sup>[26]</sup> Use of water-based lubricants and moisturisers is advised.

### Female orgasmic disorder

Female orgasmic disorder (FOD) is defined as the presence of either of the following symptoms and experienced on almost all or all (75 - 100%) occasions of sexual activity: marked delay in, marked infrequency of, or absence of orgasm; markedly reduced intensity of orgasmic sensations.<sup>[19]</sup>

Treatment recommendations include a combination of cognitive and behavioural techniques, directed masturbation training, and anxiety reduction techniques, with mindfulness<sup>[27]</sup> and yoga practice<sup>[28]</sup> as possible adjuncts. Education regarding coital positioning with maximum glans clitoral stimulation during vaginal intercourse has been shown to be beneficial. Hormone treatments for postmenopausal women may be indicated, with more research recommended in women with FOD as a primary complaint. One study has shown phosphodiesterase type 5 (PDE5) inhibitors to be beneficial for the adverse side-effects of SSRIs on orgasmic functioning.<sup>[29]</sup>

### Genitopelvic pain/penetration disorder

This disorder is defined as persistent or recurrent difficulties with one (or more) of the following: vaginal penetration during intercourse; marked vulvovaginal or pelvic pain during vaginal intercourse or penetration attempts; marked fear of or anxiety regarding vulvovaginal or pelvic pain in anticipation of, during, or as a result of vaginal penetration; marked tensing or tightening of the pelvic floor muscles during attempted vaginal penetration.<sup>[19]</sup>

Sexual pain disorders may have a biological (e.g. vulvovaginal infections, dermatoses, hormonal, vascular, neurological, or iatrogenic), psychosexual and functional (pelvic floor hypertonicity) component.<sup>[30]</sup> Context-related factors may contribute to this.<sup>[31]</sup> A multisystemic, multidisciplinary approach is advised when treating female sexual pain, with attention to mucous membrane, pelvic floor experience of pain, sexual and relationship functioning, and psychosocial adjustment/sexual abuse.<sup>[32]</sup>

Organic disorders (e.g. inflammatory, dermatological, infectious, neoplastic) should be treated appropriately (e.g. topical oestrogens, steroids, antibiotics, surgical). Pain management includes pharmacotherapy (systemic and/or topical) with tricyclic antidepressants and topical lidocaine. Further research regarding treatment outcomes is needed. Vestibulectomy is recommended as a last resort when distinct mucosal involvement occurs.<sup>[33]</sup>

Where tense pelvic muscles contribute, pelvic floor physiotherapy,<sup>[30]</sup> cognitive behavioural therapy,<sup>[34]</sup> and Kegel's and relaxation exercises may be beneficial. Preventive hygiene measures are encouraged (e.g. avoiding soaps/douches, nylon underwear and, if an irritant, vulvar contact with semen). Sitz baths may help to reduce inflammation and symptoms.<sup>[33]</sup> While pain is present, avoidance of penetration during sexual activity may be advised to break the cycle of avoidance and catastrophism. Counselling regarding restarting of the sexual relationship is recommended.<sup>[33]</sup>

If phobic avoidance of penetration is present, treatments targeting fear-avoidance issues, progressive desensitisation by vaginal dilatation using fingers or vaginal trainers, education on sexuality, and Kegel's and relaxation exercises may help to decrease penetration fear and anxiety.<sup>[35]</sup> If considered necessary, treatment for sexual trauma should occur prior to treatment for sexual dysfunction.<sup>[35]</sup>

### Conclusion

Female sexual problems are highly prevalent. Patients want to discuss concerns about their sexual health with their healthcare provider. An

integrative approach is required, with attention paid to the biological, psychological, relational and contextual contributors to the sexual problem. FSDs include interest/arousal, orgasmic and genitopelvic pain/penetration disorders.

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