

## Revised Definitions of Women's Sexual Dysfunction

Rosemary Basson, MD,<sup>a</sup> Sandra Leiblum, PhD,<sup>b</sup> Lori Brotto, PhD,<sup>c</sup> Leonard Derogatis, PhD,<sup>d</sup> Jean Fourcroy, MD, PhD, MPH,<sup>e</sup> Kerstin Fugl-Meyer, PhD,<sup>f</sup> Alessandra Graziottin, MD,<sup>g</sup> Julia R. Heiman, PhD,<sup>c</sup> Ellen Laan, PhD,<sup>h</sup> Cindy Meston, PhD,<sup>i</sup> Leslie Schover, PhD,<sup>j</sup> Jacques van Lankveld, PhD,<sup>k</sup> and Willibrord Weijmar Schultz, MD<sup>l</sup>

<sup>a</sup>Departments of Psychiatry and Obstetrics & Gynaecology, University of British Columbia, Vancouver, BC, Canada; <sup>b</sup>Department of Psychiatry, University of Medicine and Dentistry of New Jersey, New Brunswick, NJ, USA; <sup>c</sup>Department of Psychiatry, University of Washington Medical School, Seattle, WA, USA; <sup>d</sup>Johns Hopkins University School of Medicine, Baltimore, MD, USA; <sup>e</sup>Washington, DC, USA; <sup>f</sup>Sexology Unit, University Hospital, Uppsala, Sweden; <sup>g</sup>Milan, Italy; <sup>h</sup>Department of Clinical Psychology, University of Amsterdam, Amsterdam, the Netherlands; <sup>i</sup>Department of Psychology, University of Texas, Austin, TX, USA; <sup>j</sup>Department of Medical Clinical and Experimental Psychology, Maastricht University, AX Maastricht, the Netherlands; <sup>k</sup>Department of Urology, Taussig Cancer Centre, Cleveland, OH, USA; <sup>l</sup>Maastricht University, AX Maastricht, The Netherlands; <sup>l</sup>Department of Obstetrics and Gynecology, University Hospital Groningen, Groningen, the Netherlands

Summary of Committee. For the complete report please refer to the *Second International Consultation on Sexual Medicine: Sexual Dysfunctions in Men and Women*, edited by T.F. Lue, R. Basson, R. Rosen, F. Giuliano, S. Khoury, F. Montorsi, Health Publications, Paris 2004.

### ABSTRACT

**Introduction.** Existing definitions of women's sexual disorders are based mainly on genitally focused events in a linear sequence model (desire, arousal and orgasm).

**Aim.** To revise definitions based on an alternative model reflecting women's reasons/incentives for sexual activity beyond any initial awareness of sexual desire.

**Methods.** An International Definitions Committee of 13 experts from seven countries repeatedly communicated, proposed new definitions and presented at the 2nd International Consultation on Sexual Medicine in Paris July 2003.

**Main Outcome Measure.** Expert opinions/recommendations are based on a process that involved review of evidence-based medical literature, extensive internal committee discussion, informal testing and re-testing of drafted definitions in various clinical settings, public presentation and deliberation.

**Results.** Women have many reasons/incentives for sexual activity. Desire may be experienced once sexual stimuli have triggered arousal. Arousal and desire co-occur and reinforce each other. Women's subjective arousal may be minimally influenced by genital congestion. An absence of desire any time during the sexual experience designates disorder. Arousal disorder subtypes are proposed that separate an absence of subjective arousal from all types of sexual stimulation, from an absence of subjective arousal when the only stimulus is genital. A new arousal disorder has provisionally been suggested, namely that of persistent genital arousal. Orgasm disorder is limited to absence of orgasm despite high subjective arousal. Dyspareunia includes partial painful vaginal entry attempts as well as pain with intercourse. Variable reflex muscle tightening around the vagina and an absence of abnormal physical findings are noted in the definition of vaginismus. Women's sexuality is highly contextual and descriptors are recommended re past psychosexual development, current context, as well as medical status. Diagnosing sexual disorders need not imply intrinsic dysfunction of the woman's own sex response system.

**Conclusions.** The International Definitions Committee has recommended a number of fundamental changes to the existing definitions of women's sexual disorders.

**Key Words.** Women's Sexual Dysfunction; Revised Definitions; Diagnosis; Arousal Subtypes; Persistent Genital Arousal; Distress

## Introduction

This manuscript summarizes the findings of an International Committee organized by the American Foundation of Urological Disease to further revise definitions of women's sexual dysfunction. The Definitions Committee met four times and repeatedly communicated electronically through a 2-year period. Informal piloting of drafted definitions in office and hospital-based practices allowed further revisions and presentation of the findings at the 2nd International Consultation on Sexual Medicine: Men and Women's Sexual Dysfunction, in Paris July 2003. The definitions have been published [1] with the sincere request of the Committee members that clinicians will appraise the usefulness of the revised definitions for diagnosing and managing women's sexual dysfunction and move on to formal assessment of their validity and reliability. A brief summary of the evidence underlying the need to change the conceptualization of women's sexual response and, therefore, the definitions of abnormal response is given prior to the revised definitions. The diagnostic algorithm presented in Paris is also reproduced here [2].

## Summary of Rationale for Advocating Revision and Expansion of Existing Definitions of Women's Sexual Dysfunction

Current diagnostic categories of women's sexual dysfunction are based on a conceptualization of men and women's sexual response depicted by Masters, Johnson and Kaplan. Their work was a great advance at the time and facilitated epidemiological and clinical research. However, unfortunately, the concept of one linear sequence of mainly genitally focused events has not proven helpful in assessing and managing women's sexual difficulties and sexual dysfunctions. Table 1 lists facets of women's sexual function and dysfunction, which are at variance with traditional views of women's sexual response, along with the levels of evidence of the various studies.

More recent conceptualization of both men and women's sexuality is that the sexual responding of mind and body may not follow just one set pattern [3]. Particularly for women, awareness of sexual desire is not necessarily present at the outset of a wanted sexual experience. Other motivations are well documented [4,5,6,7,8,9]. Moreover, orgasms may be multiple or not occur at all despite sexual satisfaction. The following typical depiction of a woman's experience clearly does not fit into

the desire, arousal (with a focus on lubrication), plateau, orgasm, resolution sequence of Kaplan, Masters and Johnson: a woman reports that when her sexual experience began, her main incentive was to please her partner and increase their ongoing emotional closeness. Kissing, hair stroking and gentle breast caressing, followed by oral genital stimulation, led to her subjective sexual excitement and orgasm. She experienced desire for the sexual stimulation per se, close to her orgasm. Her desire continued such that she moved on to pleasure her partner and experienced definite desire to engage in intercourse because of sexual internal pelvic sensations. At that particular moment, the sexual feelings were more predominant in her mind than her original goal/incentive of pleasing her partner and being emotionally close. Thus the "order" was sexual neutrality (but motivated for reasons of increasing emotional closeness), subjective arousal from nongenital and genital stimulation, desire, orgasm, ongoing sexual desire, more intense subjective arousal with associated physical sensations within her pelvis such that she desired the act of intercourse. A need for further orgasm was not experienced on this occasion. The stimulation afforded by intercourse led to her sexual satisfaction. Her original goal of increasing emotional intimacy was also achieved—both partners felt closer, more in tune and more tolerant of each other.

Reasons over and beyond awareness of sexual desire that motivate women to agree to or to initiate sex with their partner are currently being studied in an ongoing longitudinal study of women of different ethnic backgrounds in North America. Reasons include "to express love, for pleasure because the partner wanted, to release tension" [10]. Also included are potential reasons for not being active, including "no partner, no interest, too tired, partner has no interest, partner is too tired, own physical problem, partner's physical problem" [10].

The literature is also clear that sexually healthy women, particularly those in established relationships are frequently unaware of spontaneous sexual thoughts [11,12]. Also, many women fantasize very infrequently and those who do, interestingly, often use fantasy as a deliberate means of focusing on their sexual feelings or avoiding being distracted during sex [13]. Thus fantasies may not be an indication of innate sexual desire.

The DSM-IV TR definition of hypoactive sexual desire disorder with its focus on sexual desire at the outset of an experience and in between

**Table 1** Facets of women's sexual function and dysfunction which are at variance with traditional views of women's sexual response

Facets of women's sexual function/dysfunction	References	LOE Cited
An awareness of sexual desire is not the most frequent reason women accept or initiate sexual activity.	1,2,3,4,5,6,7	II-2, III
Sexually healthy women in established relationships are frequently unaware of spontaneous sexual thoughts.	8,9,10	III
Sexual fantasies are often deliberate means to focus on the sexual stimulus rather than an indication of sexual desire.	10	III
The sexual, and the larger context is integral to women's sexual function/dysfunction.	8,11,12,13,14,15,16,17	II-2, III
The couple, rather than the woman, is the correct focus for assessing dysfunction.	8,11,12,18,19,20,21	II-2, III
The phases of women's sexual response are not discreet and comorbidity of dysfunction is common.	17,18,21,22,23,24,25,26,27,28	I, II-2, III
Women's experience of sexual arousal is not primarily to do with genital vasocongestion/ vaginal lubrication/perception of genital swelling.	29,30,31,32,33,34,35,36,37	II-2, III
Women's subjective sexual arousal is strongly modulated by emotions and cognitions.	23,28,38,39,40,41	II-2, III
There is no demonstrable lack of genital congestion in the majority of women (with or without arousal disorder) who watch erotic videos and disclaim any subjective arousal.	29,40,41	III

Adapted with permission from Basson et al. [2].

- <sup>1</sup> Cain VS, Johannes CB, Avis NE, Mohr B, Schocken M, Skurnick J, Ory M. Sexual functioning and practices in a multi-ethnic study of midlife women: baseline results from SWAN. *J Sex Res* 2003;40:266-76.
- <sup>2</sup> Lunde I, Larson GK, Fog E, Garde K. Sexual desire, orgasm, and sexual fantasies: a study of 625 Danish women born in 1910, 1936 and 1958. *J Sex Educ Ther* 1991;17:111-5.
- <sup>3</sup> Hill CA, Preston LK. Individual differences in the experience of sexual motivation: theory and measurement of dispositional sexual motives. *J Sex Res* 1996;33:27-45.
- <sup>4</sup> Galyer KT, Conaglen HM, Hare A, Conaglen JV. The effect of gynecological surgery on sexual desire. *J Sex Marital Ther* 1999;25:81-8.
- <sup>5</sup> Weijmar Schultz WCM, van de Wiel HBM, Hahn DEE. Psychosexual functioning after treatment for gynecological cancer an integrated model, review of determinant factors and clinical guidelines. *Int J Gynecol Cancer* 1992;2:281-90.
- <sup>6</sup> Regan P, Berscheid E. Belief about the states, goals and objects of sexual desire. *J Sex Marital Ther* 1996;22:110-20.
- <sup>7</sup> Kiusmann D. Sexual motivation and the duration of partnership. *Arch Sex Behav* 2002;31:275-87.
- <sup>8</sup> Bancroft J, Loftus J, Long JS. Distress about sex: a national survey of women in heterosexual relationships. *Arch Sex Behav* 2003;32:193-211.
- <sup>9</sup> Cawood EHH, Bancroft J. Steroid hormones, the menopause, sexuality and well being of women. *Psychol Med* 1996;26:925-36.
- <sup>10</sup> Garde K, Lunde I. Female sexual behaviour. The study in a random sample of 40-year-old women. *Maturitas* 1980;2:225-40.
- <sup>11</sup> Shokrollahi P, Mirmohamadi M, Mehrabi F, Babaei G. Prevalence of sexual dysfunction in women seeking services at Family Planning Centres in Tehran. *J Sex Marital Ther* 1999;25:211-5.
- <sup>12</sup> Nappi R, Veneroni F, Verde JB, Polatti F, Fignon A, Farina C, Genazzani AR. Climacteric complaints, female identity, and sexual dysfunctions. *J Sex Marital Ther* 2001;27:567-76.
- <sup>13</sup> Ernst C, Földényi M, Angst J. The Zurich study: XXI sexual dysfunctions and disturbances in young adults. *Eur Arch Psychiatry Clin Neurosci* 1993;243:170-88.
- <sup>14</sup> Sprecher S. Sexual satisfaction in premarital relationships: associations with satisfaction, love, commitment, and stability. *J Sex Res* 2002;39:190-6.
- <sup>15</sup> Nusbaum MRH, Gamble G, Skinner B, Heiman J. The high prevalence of sexual concerns amongst women seeking routine gynecological care. *Fam Pract* 2000;49:229-32.
- <sup>16</sup> Sjögren Fugl-Meyer K, Fugl-Meyer AR. Sexual disabilities are not singularities. *Int J Impot Res* 2002;14:487-93.
- <sup>17</sup> Fugl-Meyer KS. Erectile problems—the perspective of the female. *Scand J Urol Nephrol* 1998;32:S197-212.
- <sup>18</sup> Hartmann U, Heiser K, Rüffer-Hesse C, Kloth G. Female sexual desire disorders: subtypes, classification, personality factors, a new direction for treatment. *World J Urol* 2002;20:79-88.
- <sup>19</sup> Hill CA. Gender, relationship stage, and sexual behaviour: the importance of partner emotional investment within specific situations. *J Sex Res* 2002;39:228-40.
- <sup>20</sup> Dennerstein L, Leher P, Burger H, Dudley E. Factors affecting sexual functioning of women in the midlife years. *Climacteric* 1999;2:254-62.
- <sup>21</sup> Wylie KR, Steward D, Seivewright N, Smith D, Walters S. Prevalence of sexual dysfunction in three psychiatric outpatient settings: a drug misuse service, an alcohol misuse service and a general adult psychiatry clinic. *Sex Relationship Ther* 2002;17:149-60.
- <sup>22</sup> Basson R, McInnes R, Smith MD, Hodgson G, Koppiker N. Efficacy and safety of sildenafil citrate in women with sexual dysfunction associated with female sexual arousal. *Gend Based Med* 2002;11:367-77.
- <sup>23</sup> Cyranski JM, Andersen BL. Schemas, sexuality, romantic attachment. *J Pers Soc Psychol* 1998;74:1364-79.
- <sup>24</sup> Derogatis LR, Schmidt CW, Fagan PJ, Wise TN. Subtypes of anorgasmia via mathematical taxonomy. *Psychosomatics* 1989;30:166-73.
- <sup>25</sup> Segraves KB, Segraves RT. Hypoactive sexual desire disorder: prevalence and comorbidity in 906 subjects. *J Sex Marital Ther* 1991;17:55-8.
- <sup>26</sup> Rosen RT, Taylor JF, Leiblum SR. Prevalence of sexual dysfunction in women: results of a survey study of 329 women in an outpatient gynecological clinic. *J Sex Marital Ther* 1993;19:171.
- <sup>27</sup> Meston CM. Validation of the female sexual function index (FSFI) in women with female orgasmic disorder and in women with hypoactive sexual desire disorder. *J Sex Marital Ther* 2003;29:39-46.
- <sup>28</sup> Trudel G, Ravart M, Matte B. The use of the multi axis diagnostic system for sexual dysfunctions in the assessment of hypoactive sexual desire. *J Sex Marital Ther* 1993;19:123-30.
- <sup>29</sup> Morokoff PJ, Heiman JR. Effects of erotic stimuli on sexually functional and dysfunctional women: multiple measures before and after sex therapy. *Behav Res Ther* 1980;18:127-37.
- <sup>30</sup> Brotto L, Basson R, Gorzalka B. Psychophysiological assessment in female sexual arousal disorder. *J Sex Med* 2004 (in press).
- <sup>31</sup> Beggs VE, Calhoun LS, Wolchik SA. Sexual anxiety and female sexual arousal: a comparison of arousal during sexual anxiety stimuli and sexual pleasure stimuli. *Arch Sex Behav* 1987;16:311-9.
- <sup>32</sup> Meston CM, Heiman JR. Ephedrine-activated physiological sexual arousal in women. *Arch Gen Psychiatry* 1998;55:652-6.
- <sup>33</sup> Meston CM, Gorzalka BB. The effects of immediate, delayed and residual sympathetic activation on physiological and subjective sexual arousal in women. *Behav Res Ther* 1996;34:143-8.
- <sup>34</sup> Brotto L, Gorzalka B. Genital and subjective sexual arousal in postmenopausal women: influence of laboratory induced hyperventilation. *J Sex Marital Ther* 2002;28S:39-53.
- <sup>35</sup> Laan E, Everaerd W, van Bellen G, Hanewald G. Women's sexual and emotional responses to male- and female-produced erotica. *Arch Sex Behav* 1994;23:153-69.
- <sup>36</sup> Laan E, Everaerd W, van der Velde J, Geer JH. Determinants of subjective experience of sexual arousal in women: feedback from genital arousal and erotic stimulus content. *Psychophysiology* 1995;32:444-51.
- <sup>37</sup> Meston CM, Worcel M. The effects of yohimbine plus L-arginine glutamate on sexual arousal in postmenopausal women with sexual arousal disorder. *Arch Sex Behav* 2002;31:323-32.
- <sup>38</sup> Beck JG, Bozman AW. Gender differences in sexual desire: the effects of anger and anxiety. *Arch Sex Behav* 1995;24:595-612.
- <sup>39</sup> Katz RC, Gipson MT, Turner S. Brief report: recent findings on the sexual aversion scale. *J Sex Marital Ther* 1992;18:141-6.
- <sup>40</sup> Laan E, Everaerd W. Determinants of female sexual arousal: psychophysiological theory and data. *Annu Rev Sex Res* 1995;6:32-76.
- <sup>41</sup> Laan E, van Driel E, van Lunsen RHW. Seksuele reacties van vrouwen met een seksuele opwindingsstoornis op visuele seksuele stimuli [Sexual responses of women with sexual arousal disorder to visual sexual stimuli]. *Tijdschrift voor Seksuologie* 2003;27:1-13.

experiences and on sexual thoughts and fantasies is therefore problematic [14]. Spontaneous sexual thinking and fantasizing has a broad spectrum across sexually content women. It is the inability to access *any desire during the experience* that appears to be the critical factor. Moreover, in any definition of desire disorder in women, account must be taken of normative changes across the lifecycle and with relationship duration [9].

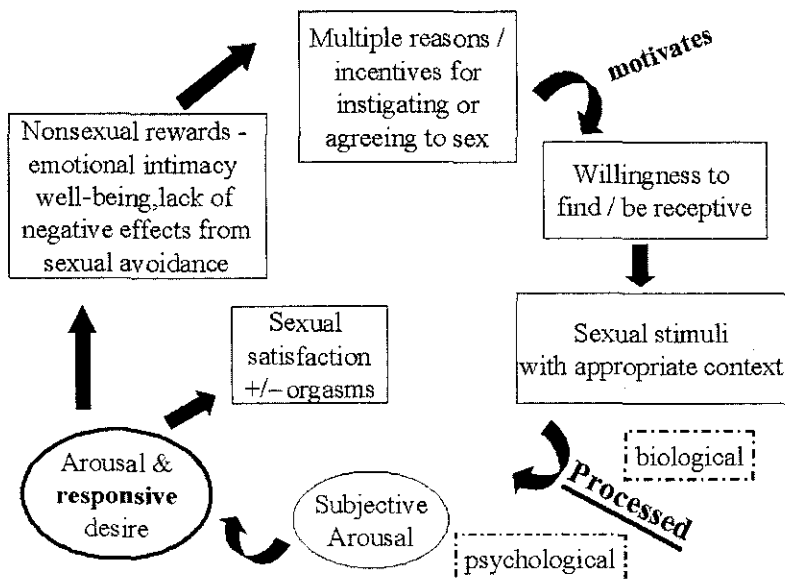
Figure 1 shows a woman's sexual response may begin for one of a number of reasons (incentives). At that stage, there may be no awareness of sexual desire. A willingness to be receptive to sexual stimuli in appropriate context allows her potential sexual arousal—both subjective excitement and physical responding. Many psychological and biological factors influence this information processing in her mind and determine her arousability. Once arousal is experienced, if it continues sufficiently long and is enjoyed, sexual desire may be accessed [3]. This has been termed a responsive form of desire [15]. A psychologically and physically rewarding outcome need not necessarily involve orgasmic release(s). The wanting or motivation to be sexually active again is increased if the outcome is positive and decreased if it is either emotionally or physically dissatisfying [3].

Sexual desire that appears to be “innate” or “spontaneous,” as reflected by sexual thinking/fantasizing/a wanting of sexual sensations per se, may or may not augment or override the cycle based on other motivations. See Figure 2. Women typically are far more aware of this type of desire early

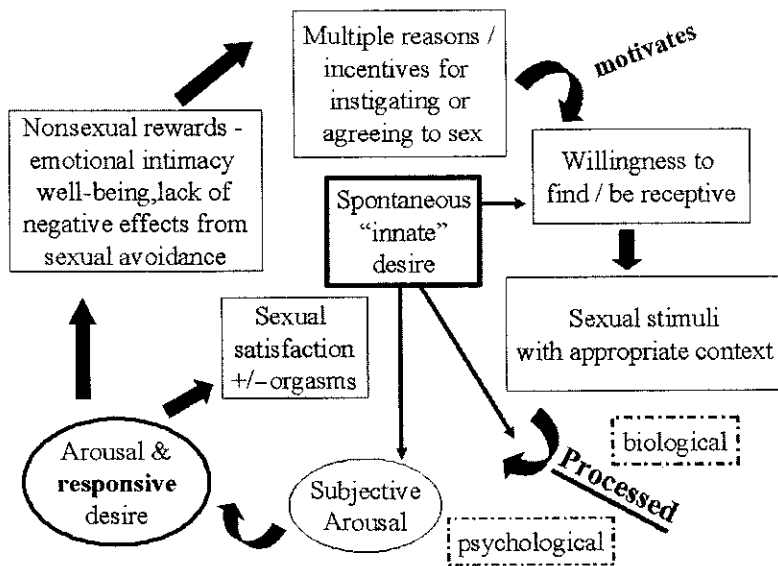
on in relationships. For some, it continues decades with the same partner, for the majority, it is infrequent [4,5,6,7,8,9]. Whether this apparent “innate” or “spontaneous” desire is truly so—is not able to be established [2].

Current definitions of arousal disorder focus on genital events [14,16]. This is at variance with the evidence regarding the importance of women's subjective arousal, which may correlate rather poorly with genital congestion (see Table 1). In women complaining of arousal disorders, the lack of correlation between the subjective experience and measured increase in congestion is even more marked given their recordings of vaginal congestion in response to a visual erotic stimulus match those of sexually healthy women [17,18,19]. Only the latter find the erotic video subjectively arousing. This evidence comes from work with the vaginal photoplethysmograph, which measures the increase in vasocongestion around the vagina whilst the woman watches an erotic video and assesses her subjective sexual excitement in an ongoing manner. It is clear that many women do not assess their experience of arousal to any large extent from genital sensations—this appears to be especially so at low and moderate levels of arousal. Genital feedback becomes more important for women at high levels of arousal [18]. Emotions and thoughts appear to modulate the experience of arousal in an ongoing manner to a greater degree than genital feedback (see Figure 3).

Sexual arousal is complex and subtypes of arousal disorder are likely. A major difficulty is



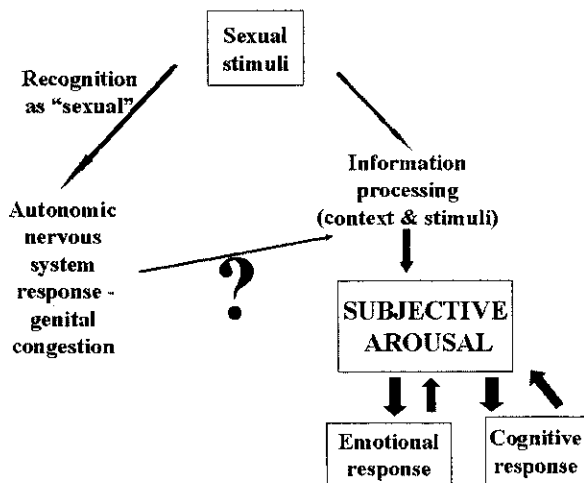
**Figure 1** Sexual response initiated by reasons/incentives that are not strictly sexual. Sexual stimuli in appropriate context lead to subjective sexual arousal which, when sufficiently intense, can trigger sexual desire to experience more sexual sensations and a need for sexual satisfaction. Positive emotional and physical outcome also fulfill the original, often intimacy based, goals. Adapted from Basson R, *Obstet Gynecol* 2001; 98:350–3. Permission granted from publisher Lippincott Williams & Wilkins.



**Figure 2** Blended sex response cycle: apparently spontaneous desire may augment or override sexual response initiated by other motivations. Adapted from Basson R, *Obstet Gynecol* 2001;98: 350-3. Permission granted from publisher Lippincott Williams & Wilkins.

women’s relative disconnection from the genital events such that the reality is frequently lack of perceived genital congestion and lubrication rather than there is evidence that the physiological response is absent or markedly diminished. A major clinical criteria which could distinguish different subgroups of arousal disorder, focuses on which stimuli (if any) are effective. The majority of women with arousal concerns report lack of sexual arousal to any stimulus—be it reading something erotic, pleasuring the partner, receiving oral, breast, genital stimulation, or engaging in intercourse. They may focus particularly on their

lack of subjective arousal and acknowledge some vaginal lubrication, or they may detect neither subjective arousal nor genital changes. A completely different subgroup of women retain their ability to be aroused by various stimuli and report only the loss of their genital responsivity such that genital touch and intercourse are now minimally arousing [20]. The new definition for that latter subtype of disorder is “genital arousal disorder” [1]. Despite the subtyping of different arousal disorders, each is of variable etiology—even genital arousal disorder is proving to be heterogeneous [20].



**Figure 3** A model of women’s sexual arousal. Adapted from A model of women’s sexual arousal. *J Sex Marital Ther* 2002;28:1-10. With permission from Taylor Francis.

The definition of vaginismus has proven problematic as there is no evidence that either the superficial or deep pelvic muscles or the smooth muscle of the vaginal wall itself exhibits any muscular “spasm” [21]. Reflexive tightening of various muscles, including pelvic, abdominal, thigh and even those of the jaws, hands and feet, may occur with intercourse attempts in some women. Fear and avoidance typically occur—the latter often with a phobic quality, along with the expectation and experience of pain as the penis (or dildo or fingers) pushes against the introitus surrounded by reflexively tightened muscles. A major difficulty with the syndrome of vaginismus is that the diagnosis cannot be made until some therapy has been given to facilitate a careful detailed introital and vaginal examination. Thus it is a presumed diagnosis until this examination is possible.

The definition of dyspareunia has been problematic in that the large number of women who have never been able to tolerate full vaginal entry

of penis or dildo did not fit the previous category of dyspareunia, i.e., they did not experience pain *with* intercourse but with the failed attempt at intercourse.

Regarding the definition of orgasmic dysfunction, there has been difficulty in that many women with minimal arousal (and therefore as expected, no orgasm) are mistakenly diagnosed as having orgasmic disorder [22]. There needs to be clarity that the woman reports high levels of sexual arousal and excitement, which invoke a need for orgasmic release that cannot be achieved.

#### *Proposed Definitions of Women's Sexual Dysfunction Based on Evidence in Table 1 [1]*

**Women's Sexual Interest/Desire Disorder.** There are absent or diminished feelings of sexual interest or desire, absent sexual thoughts or fantasies and a lack of responsive desire. Motivations (here defined as reasons/incentives) for attempting to have sexual arousal are scarce or absent. The lack of interest is considered to be beyond the normative lessening with life cycle and relationship duration [1].

**Subjective Sexual Arousal Disorder.** Absence of or markedly diminished feelings of sexual arousal (sexual excitement and sexual pleasure) from any type of sexual stimulation. Vaginal lubrication or other signs of physical response still occur.

**Combined Genital and Subjective Arousal Disorder.** Absence of or markedly diminished feelings of sexual arousal (sexual excitement and sexual pleasure) from any type of sexual stimulation as well as complaints of absent or impaired genital sexual arousal (vulval swelling, lubrication) [1].

**Genital Sexual Arousal Disorder.** Complaints of absent or impaired genital sexual arousal. Self-report may include minimal vulval swelling or vaginal lubrication from any type of sexual stimulation and reduced sexual sensations from caressing genitalia. Subjective sexual excitement still occurs from nongenital stimuli [1].

**Persistent Sexual Arousal Disorder.** Previously considered extremely rare, the complaint of intrusive spontaneous genital throbbing unrelieved with orgasm is being increasingly encountered in clinical practice. Therefore, the Committee proposed the following provisional definition.

Spontaneous intrusive and unwanted genital arousal (e.g., tingling, throbbing, pulsating) in the absence of sexual interest and desire. Any aware-

ness of subjective arousal is typically but not in variably unpleasant. The arousal is unrelieved by one or more orgasms and the feelings of arousal persist for hours or days [1].

**Women's Orgasmic Disorder.** Despite the self-report of high sexual arousal/excitement, there is either lack of orgasm, markedly diminished intensity of orgasmic sensations or marked delay of orgasm from any kind of stimulation [1].

**Vaginismus.** The persistent or recurrent difficulties of the woman to allow vaginal entry of a penis, a finger, and/or any object, despite the woman's expressed wish to do so. There is often (phobic) avoidance and anticipation/fear/experience of pain, along with variable involuntary pelvic muscle contraction. Structural or other physical abnormalities must be ruled out/addressed [1].

**Dyspareunia.** Persistent or recurrent pain with attempted or complete vaginal entry and/or penile vaginal intercourse [1].

#### **The Importance of Sexual Context in Women's Sexual Function and Dysfunction**

Dysfunction may be associated with medical disease, e.g., neurological conditions affecting the autonomic nervous system [23], with pharmacological treatment, e.g., serotonergic antidepressants [24], with medical therapies, e.g., pelvic radiation, or with surgical procedures, e.g., radical hysterectomies for cancer of the cervix whereby damage to the autonomic nerves between the bladder and anterior vaginal wall is possible [25]. Interestingly, epidemiological studies do not show high correlation between women's sexual dysfunction and medical problems in general [26].

Dysfunction may also be associated with past or current psychological factors that may have influenced psychosexual development. Interestingly, despite medical factors, mood and psychological entities may more strongly correlate with sexual dysfunction. This has been shown to be true for women with diabetes [27], and women with gynecological surgery [28]. It is possible women have variable proneness to sexual excitement and to sexual inhibition that is genetically and/or socially programmed. Early research is suggesting women have more proneness to sexual inhibition than do men [29]. This inhibition may be more about possible untoward consequences of sexual behavior (including pregnancy) than about fear of sexual failure [29]. Finally, dysfunction may be

largely related to contextual factors—evidence of something psychologically or biologically amiss with the woman herself, being absent. Her sexual “dysfunction” is logical and adaptive [12,29]. It is nevertheless possibly highly distressing to her. It is therefore strongly recommended that in addition to considering which aspects of response are dysfunctional and causing distress, clinicians also routinely note the presence of associated factors:

1. predisposing factors in the woman’s past affecting her psychosexual development;
2. precipitating and perpetuating factors in the current context which are disrupting to, and/or consequences of her sexual difficulties; and
3. past and present medical/surgical entities.

If phase(s) of the sex response cycle are the only major criteria governing the diagnosis of dysfunction, scientific proof of benefit of therapeutic intervention will be unlikely—put very simply, medication, for instance, will not ameliorate a problematic context.

Thus the recommended descriptors form part of the diagnostic framework. They include not only generalized or situational, acquired or lifelong, and the degree of distress, but in addition, the presence or absence of relevant factors in the woman’s developmental history, the current societal and interpersonal context, as well as past and present medical factors.

### Diagnosis of Women’s Sexual Dysfunction

A comprehensive medical and psychosocial history is necessary. For optimal assessment and management, both partners are seen together and separately—the latter necessary for assessing the past psychosocial development and previous sexual experiences, as well as assessing the sexual response with self-stimulation—see Table 2 for the components of a comprehensive sexual, medical, biopsychosocial history.

Figure 4 Parts 1 and 2 show how the detailed sexual enquiry will point to the dysfunctions that are present.

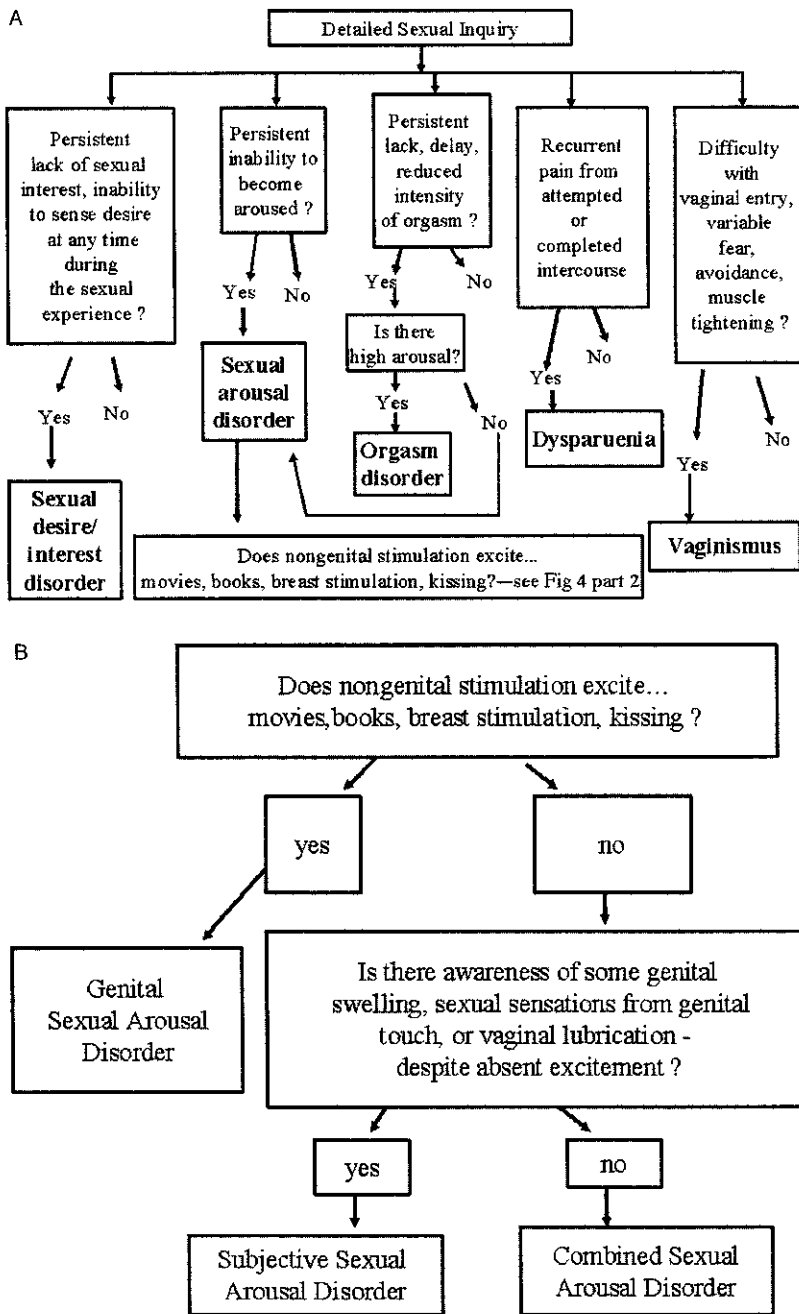
### Conclusion

The recently convened International Committee has recommended a number of fundamental changes to the existing definitions of women’s sexual disorders. Given contextual factors are often relevant, possibly compounding intrapsychological factors, it is recommended that additional descriptors be given within the diagnostic framework. These relate to psychosocial development, current context (sexual, societal, interpersonal), and medical status. Arousal disorders are subdivided by noting if any sexual stimuli are subjectively arousing. When only genital stimulation is problematic, genital arousal disorder is diagnosed.

**Table 2** Components of a comprehensive sexual, medical, psychosocial history

	Biological	Psychosocial	Sexual
Symptoms	current general health	current mood, mental health	the sexual difficulties in her own words
Present context (precipitating/maintaining)	medications/substance abuse, fatigue, presence of non-sexual pain	nature and duration of current relationship. Societal values/beliefs impacting the sexual problems	context when activity is attempted—type of sexual stimulation, the woman’s feelings toward her partner, safety and privacy
Past context (predisposing/precipitating)	past medical history	particularly for lifelong problems—developmental history, including relationships with caregivers, siblings; traumas, and losses.	past sexual experiences alone and partnered, wanted, coercive, abusive
Onset (precipitating)	medical, psychiatric details at time of onset of sexual problems	psychosocial circumstances including relationship at time of onset of sexual problems	sexual details at onset of dysfunctions
Full picture of her current sexual response	details re effects of medical condition on sexual activity, e.g., cardiac compromise	personality factors including control issues, ability to express non-sexual emotions	rest of the sexual response cycle including pain
Role of the partner (precipitating/maintaining)	partner’s medical health	partner’s mood and mental health, partner’s reaction to sexual problems	partner’s sexual response cycle
Distress	regarding medical issues	regarding psychosocial issues	regarding sexual difficulties

Adapted with permission from Basson et al. [2].



**Figure 4** Diagnostic algorithm. Adapted with permission from Basson et al. [2].

When all stimuli fail to elicit subjective sexual arousal, combined or subjective arousal disorder is considered—the latter diagnosed when there is some awareness of genital responding (lubrication). The diagnosis of desire/interest disorder rests on an absence of desire at any stage during the sexual experience and comorbidity with combined and subjective arousal disorder is usual. Vaginismus and dyspareunia are still defined as separate entities despite the frequent clinical overlap.

**Corresponding Author:** Rosemary Basson, MD, FRCP (UK), UBC Departments of Psychiatry and Obstetrics & Gynaecology, B.C. Centre for Sexual Medicine, Vancouver General Hospital, 855 West 12th Avenue, Vancouver, BC, Canada V5Z 1M9. Tel: (604) 875-8254; Fax: (604) 875-8249; E-mail: sexmed@interchange.ubc.ca

**References**

- 1 Basson R, Leiblum SL, Brotto L, Derogatis L, Fourcroy J, Fugl-Myer K, Graziottin A, Heiman JR,

- Laan E, Meston C, Schover L, van Lankfeld J, Weijmar Schultz WCM. Definitions of women's sexual dysfunctions reconsidered: advocating expansion and revision. *J Psychosom Obstet Gynecol* 2003;24:221-9.
- 2 Basson R, Weijmar Schultz WCM, Brotto LA, Binik YM, Eschenbach DA, Laan E, Utian WH, Wesselmann U, van Lankfeld J, Wyatt G, Wyatt L. Second international consultation on sexual medicine: men and women's sexual dysfunction. Paris: Health Publications Limited; 2004.
  - 3 Basson R. Human sex response cycles. *J Sex Marital Ther* 2001;27:33-43.
  - 4 Lunde I, Larson GK, Fog E, Garde K. Sexual desire, orgasm, and sexual fantasies: a study of 625 Danish women born in 1910, 1936 and 1958. *J Sex Educ Ther* 1991;17:111-5.
  - 5 Hill CA, Preston LK. Individual differences in the experience of sexual motivation: theory and measurement of dispositional sexual motives. *J Sex Res* 1996;33:27-45.
  - 6 Galyer KT, Conaglen HM, Hare A, Conaglen JV. The effect of gynecological surgery on sexual desire. *J Sex Marital Ther* 1999;25:81-8.
  - 7 Weijmar Schultz WCM, van de Wiel HBM, Hahn DEE. Psychosexual functioning after treatment for gynecological cancer and integrated model, review of determinant factors and clinical guidelines. *Int J Gynecol Cancer* 1992;2:281-90.
  - 8 Regan P, Berscheid E. Belief about the states, goals and objects of sexual desire. *J Sex Marital Ther* 1996;22:110-20.
  - 9 Klusmann D. Sexual motivation and the duration of partnership. *Arch Sex Behav* 2002;31:275-87.
  - 10 Cain VS, Johannes CB, Avis NE, Mohr B, Schocken M, Skurnick J, Ory M. Sexual functioning and practices in a multi-ethnic study of midlife women: baseline results from SWAN. *J Sex Res* 2003;40:266-76.
  - 11 Cawood HH, Bancroft J. Steroid hormones, menopause, sexuality and well being of women. *Psychophysiol Med* 1996;26:925-36.
  - 12 Bancroft J, Loftus J, Long JS. Distress about sex: a national survey of women in heterosexual relationships. *Arch Sex Behav* 2003;32:193-211.
  - 13 Garde K, Lunde I. Female sexual behaviour: the study in a random sample of a 40-year-old woman. *Maturitas* 1980;2:225-40.
  - 14 American Psychiatric Association. DSM-IV TR: diagnostic and statistical manual for mental disorders. 4th edition. Washington DC: American Psychiatric Press, 2000.
  - 15 Kaplan HS. Disorders of sexual desire. New York: Brunner Mazel; 1979.
  - 16 World Health Organization. The ICD-10 classification of mental and behavioral disorders: clinical descriptions and diagnostic guidelines. Geneva, Switzerland; 1992.
  - 17 Morokoff PJ, Heiman JR. Effects of erotic stimuli on sexually functional and dysfunctional women: multiple measures before and after sex therapy. *Behav Res Ther* 1980;18:127-37.
  - 18 Laan E, Everaerd W. Determinants of female sexual arousal: psychophysiological theorian data. *Annu Rev Sex Res* 1995;6:32-76.
  - 19 Laan E, van Driel E, van Lunsen RHW. Seksuele reacties van vrouwen met een seksuele opwindingsstoornis op visuele seksuele stimuli [Sexual responses of women with sexual arousal disorder to visual sexual stimuli]. *Tijdschrift voor Seksuologie* 2003;27:1-13.
  - 20 Basson R, Brotto L. Sexual psychophysiology and effects of sildenafil citrate in estrogenized women with acquired genital arousal disorder and impaired orgasm. *Br J Obstet Gynecol* 2003;110:1014-24.
  - 21 Reissing ED, Binik YM, Khalifé S, Cohen D, Amsel R. Vaginal spasm, pain and behaviour: an empirical investigation of the diagnosis of vaginismus. *Arch Sex Behav* 2004;33:5-17.
  - 22 Meston CM. Validation of the female sexual function index (FSFI) in women with female anorgasmic disorder and in women with hypoactive sexual desire disorder. *J Sex Marital Ther* 2003;29:39-46.
  - 23 Zorzon M, Zivadinov R, Bosco A, Bragadin LM, Moretti R, Bonfigli L, Morassi P, Iona LG, Cazzato G. Sexual dysfunction in multiple sclerosis: a case-control study. I. Frequency of comparison groups. *Mult Scler* 1999;5:418-27.
  - 24 Kennedy SH, Eisfeld BS, Dickens SE, Bacchiochi JR, Bagby RM. Antidepressant induced sexual dysfunction during treatment with moclobemide, paroxetine, sertraline and venlafaxine. *J Clin Psychiatry* 2000;61:276-81.
  - 25 Bergmark K, Avall-Lundqvist E, Dickman PW, Henningsohn L, Steineck G. Vaginal changes and sexuality in women with a history of cervical cancer. *N Engl J Med* 1999;340:1383-9.
  - 26 Laumann EL, Paik A, Rosen RC. Sexual dysfunction in the United States: prevalence and predictors. *JAMA* 1999;281:45-53.
  - 27 Enzlin P, Mathieu C, van DenBriel A, Bosteels J, Vanderschueren D, Denyttenaere K. Sexual dysfunction in women with type 1 diabetes. *Diabetes Care* 2002;25:672-7.
  - 28 Barber M, Visco AG, Wyman JF, Fantl JA, Bump RC. Sexual function in women with urinary incontinence in pelvic organ prolapse. *Obstet Gynecol* 2002;99:281-9.
  - 29 Bancroft J. The medicalization of female sexual dysfunction: the need for caution. *Arch Sex Behav* 2002;31:451-5.