Female Sexual Health Consensus Clinical Guidelines

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Female Sexual Health Consensus Clinical Guidelines

This clinical practice guideline has been reviewed and approved by the Executive and Council of the Society of Obstetricians and Gynaecologists of Canada.

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Abstract

Objective: To establish national guidelines for the assessment of women’s sexual health concerns and the provision of sexual health care for women.

Evidence: Published literature was retrieved through searches of PubMed, CINAHL, and the Cochrane Library from May to October 2010, using appropriate controlled vocabulary (e.g., sexuality, “sexual dysfunction,” “physiological,” dyspareunia) and key words (e.g., sexual dysfunction, sex therapy, anorgasmia). Results were restricted, where possible, to systematic reviews, randomized control trials/controlled clinical trials, and observational studies. There were no language restrictions. Searches were updated on a regular basis and incorporated in the guideline to December 2010. Grey (unpublished) literature was identified through searching the websites of health technology assessment and health technology assessment-related agencies, clinical practice guideline collections, clinical trial registries, and national and international medical specialty societies. Each article was screened for relevance and the full text acquired if determined to be relevant. The evidence obtained was reviewed and evaluated by the members of the Expert Workgroup established by the Society of Obstetricians and Gynaecologists of Canada.

Values: The quality of evidence was evaluated and recommendations made using the criteria described by the Canadian Task Force on Preventive Health Care (Table 1).

SUMMARY STATEMENTS AND RECOMMENDATIONS

Introduction

Summary Statements
1. Sexual concerns are prevalent in the population. (II-1)
2. Many women have to look outside medicine for solutions to their sexual concerns. (II-1)
3. Many health care providers have the ability to deal with sexual health issues. (II-3)
4. Health care providers need a better understanding of female sexual issues/problems. (II-3)

Chapter 1: Sexuality Across the Lifespan

Summary Statements
5. Children are sexual from birth. Expression of sexuality is a developmental process. (II-2)

J Obstet Gynaecol Can 2012;34(8):S1–S56
6. Most discourse on adolescent sexuality focuses on the potential for adverse consequences such as exploitation, sexual assault, unwanted pregnancy, and sexually transmitted infections, and has generally neglected to communicate to girls that expression of sexuality and sexual experimentation are normal and healthy. (II-2)

7. Age-appropriate sexual expression is a positive part of the development of adolescent girls. Negative, coercive, and discriminatory experiences can detrimentally affect sexual well-being. (II-2)

8. Variations exist in same-sex and opposite-sex sexual behaviour; same-sex and opposite-sex sexual behaviour is not equivalent to self-definition as heterosexual or lesbian or bisexual. Some women who have sex with women may be reluctant to define themselves as lesbian because women who identify themselves or who are identified by others as lesbian or bisexual may experience social discrimination. (II-2)

9. Women express their sexuality in a variety of ways and in a variety of situations, including with a partner and through masturbation. (II-2)

10. Masturbation and self-pleasuring can be important for self-knowledge and as a sexual outlet in themselves for women who have and those who do not have a partner. (III)

11. Relationship factors have a major influence on a woman’s sexual well-being. (II-2)

12. Pregnancy and breastfeeding, as well as experience with infertility, can affect sexual functioning. (II-2)

13. Decline in frequency of sexual activity at menopause does not alter women’s potential for desire, arousal, orgasm, sexual pleasure, or sexual satisfaction. (II-2)

14. Psychological, relationship, social, cultural, and biological factors affect women’s sexual well-being as they age and experience menopause. (II-2)

15. Most women with a partner continue to engage in sexual activity. Women often cease sexual activity not because of lack of interest but because they do not have a partner. (II-2)

16. Women’s sexuality may be affected by biological events (e.g., puberty, childbirth, menopause, and aging), by their own psychological/psychological health, by their ethnicity and culture, and by their sexual orientation. (III)

17. Whether or not women’s sexual desire and activity continue through periods of pregnancy, childbirth, menopause, and aging may depend on the presence of a partner, a partner’s sexual function, the quality of the relationship, and both partners’ general health. (III)

18. There is considerable variation in the patterns of girls’ and women’s sexual expression and experience. (II-2)

Recommendations

1. Health care providers should encourage adolescents to use condoms consistently, and to take other steps to promote sexual health and prevent sexually transmitted infections (e.g., human papillomavirus vaccination), even while they are in a relationship. (II-3A)

2. Health care providers should be well informed about the variability of normal patterns of sexual development before evaluating sexual concerns that pertain to children and adolescents. (II-3A)

3. Health care providers should balance concern about adverse sexual consequences for girls with positive messages about adolescent girls’ expression of their sexuality. (II-3A)

4. Health care providers should consider the effect of the relationship when assessing a woman’s sexual well-being. (III-A)

5. Health care providers should strive to make their offices open and welcoming environments for women of all sexual preferences and practices. (III-A)

6. Health care providers should discuss sexuality at the early prenatal visit, before discharge from the hospital postpartum, and at the postnatal check-up. (III-A)

7. Health care providers should
   - communicate that they are open to discussing sexual concerns;
   - educate patients about normal fluctuations in sexual interest and frequency;
   - discuss the range of non-coital sexual activities if intercourse is difficult, painful, or prohibited for medical reasons; and
   - emphasize the importance of the quality of lovemaking rather than coital frequency to sexual satisfaction. (III-A)

8. Health care providers should provide advice to support sexual adjustment and deal with challenges to sexual function during pregnancy and childbirth (e.g., suggest adapting coital position to accommodate changing body shape, suggest topical lubricant to reduce dyspareunia postpartum). (III-A)

9. Health care providers should help women deal with their concerns related to breastfeeding and sexual activity. This should include providing reassurance about the hormonal causes of erotic feelings during breastfeeding and informing women that if they are distressed by milk ejection during orgasm, this can be reduced by emptying the breast before sexual activity. (III-A)

10. The health care provider should enquire about both the woman’s functioning and her partner’s functioning in assessing changes to sexual activity with menopause and aging. (II-1A)

11. Changes in sexual functioning should be treated only if the woman expresses distress about these changes. (II-3B)

12. Health care providers should recommend the use of a lubricant or estrogen (local or systemic) for problems arising from vaginal dryness. (II-1A)

13. Health care providers should discuss safer sex, particularly with newly single women. (II-2A)

14. Health care providers should understand that all women are sexual and acknowledge that women have sexual needs. (III-A)

15. Health care providers should have an understanding of and respect for diverse individual patterns of sexual behaviour and orientation across the lifespan. (III-A)

16. Couples should be encouraged to include sexual pleasuring without penetration in their activities if penetration is impossible. (III-A)

17. Health care providers should recognize the need for sensitivity to a woman’s life stage, to her individual situation, and to her sexual orientation when they assess sexual health concerns. (III-A)

Chapter 2:
Classification, Causes, and Assessment of Women’s Sexual Dysfunction

Recommendations

18. Health care providers should regard the identification and management of a woman’s sexual health issues as important and legitimate elements of her clinical care (II-2A)
Table 1. Key to evidence statements and grading of recommendations, using the ranking of the Canadian Task Force on Preventive Health Care

<table>
<thead>
<tr>
<th>Quality of evidence assessment*</th>
<th>Classification of recommendations†</th>
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<tbody>
<tr>
<td>I: Evidence obtained from at least one properly randomized controlled trial</td>
<td>A. There is good evidence to recommend the clinical preventive action</td>
</tr>
<tr>
<td>II-1: Evidence from well-designed controlled trials without randomization</td>
<td>B. There is fair evidence to recommend the clinical preventive action</td>
</tr>
<tr>
<td>II-2: Evidence from well-designed cohort (prospective or retrospective) or case–control studies, preferably from more than one centre or research group</td>
<td>C. The existing evidence is conflicting and does not allow to make a recommendation for or against use of the clinical preventive action; however, other factors may influence decision-making</td>
</tr>
<tr>
<td>II-3: Evidence obtained from comparisons between times or places with or without the intervention. Dramatic results in uncontrolled experiments (such as the results of treatment with penicillin in the 1940s) could also be included in this category.</td>
<td>D. There is fair evidence to recommend against the clinical preventive action</td>
</tr>
<tr>
<td>III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees</td>
<td>E. There is good evidence to recommend against the clinical preventive action</td>
</tr>
<tr>
<td></td>
<td>F. There is insufficient evidence (in quantity or quality) to make a recommendation; however, other factors may influence decision-making</td>
</tr>
</tbody>
</table>

*The quality of evidence reported in these guidelines has been adapted from The Evaluation of Evidence criteria described in the Canadian Task Force on Preventive Health Care.
†Recommendations included in these guidelines have been adapted from the Classification of Recommendations criteria described in the Canadian Task Force on Preventive Health Care.


Chapter 4: Health Concerns that Affect Female Sexuality

Summary Statements

23. Despite the many types of gynaecological surgeries, our understanding of the postoperative sexual physiologic changes and consequent effects on sexual function is rudimentary at best. (II-2)

24. Health care providers need to address both the physical and the psychological components of cancer as they relate to sexuality. Pain related to the disease and/or the treatment may inhibit sexual desire, and the disease and/or the treatment may make sexual activity painful. (III)

25. Medical illnesses and their treatment can have effects on the sexuality of both the woman and her partner. (II-3)

26. Chronic illness can cause physical and emotional changes, both of which can affect female sexuality. (II-3)

Recommendations

25. Health care providers should advise women that surgery for benign gynaecologic conditions improves sexual function in the majority of women but that a small group may experience detrimental effects on their sexuality. (II-2A)

26. Health care providers should involve the woman’s partner in addressing sexual issues, with attention being paid to basic sexual adjustments (i.e., timing, positioning, lubrication, non-coital lovemaking). (III-A)

27. Health care providers should consider the implications of medical conditions and their treatment on women’s sexuality. (II-3A)

28. Clinicians caring for women with chronic illnesses should integrate information about sexual care into their medical therapy. (II-3A)
Chapter 5: Coital Pain

Summary Statements
27. Coital pain is common and is likely to have a negative effect on a woman's sexual function. (II)
28. Vulvar pain may arise from visible, intermittently visible, or non-visible lesions. (III)

Recommendations
29. The diagnosis of vulvar pain syndromes should be aided by a focused history that is based on a plausible differential diagnosis and by careful, repeated examinations. (III-B)
30. Women complaining of vulvar pain should be advised to avoid irritants and should be offered symptomatic treatment. (III-A)
31. Directed and empiric therapy should be provided when a specific diagnosis is suspected. (III-B)

Chapter 6: Sexual Desire Disorders

Summary Statements
29. Lowered desire accompanied by distress (hypoactive sexual desire disorder) is highly prevalent and is most common in mid-life. (II-1)
30. Treating medical, psychological, and relationship problems, addressing sociocultural issues, and providing androgen therapy when appropriate can be effective in helping women and their partners dealing with hypoactive sexual desire disorder. (I)
31. Distressing female hypoactive desire is context-dependent, and this needs to be considered in treatment planning. A woman's sense of connection to her partner and her own psychological and physical health are more closely linked to desire than are estrogen and testosterone. (II-2)

Recommendations
32. Health care providers should give women the opportunity to discuss their sexual concerns at the beginning of a therapeutic process. (III-A)
33. Health care providers should consider caring for women with hypoactive sexual desire, rather than referring them, even if they require the assistance of an interdisciplinary team. (III-A)
34. Well-designed and adequately powered studies should be carried out to assess the health benefits and long-term risks of androgen therapies for women with hypoactive sexual desire. (III-L)

This document’s Abstract and Introduction were previously published in:
J Obstet Gynaecol Can 2012;34(8):769–775
“In view of the pervasive gonadal urge in human beings, it is not a little curious that science develops its sole timidity about the pivotal point of the physiology of sex.”

“There is no man or woman who does not face in his or her lifetime the concerns of sexual tensions.”

The World Health Organization in its international human rights and consensus documents recognizes the rights of all persons, free of coercion, discrimination, and violence, to the highest attainable standard of health, including sexual health. This includes among other things, sexual education, sexual and reproductive health care services, and the right to pursue a satisfying, safe, and pleasurable sexual life.

Reproductive health implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when, and how often to do so.

The Society of Obstetricians and Gynaecologists of Canada declares that reproductive and sexual health cannot improve without strategies that empower women in all areas of their lives. The Society promotes an understanding of the impact that social, economic, cultural, and legal factors may have on reproductive concerns. As health professionals, we are well positioned to improve the quality of health care for women and to make a lasting positive impact on women’s sexual and reproductive health.

Female Sexual Health Guidelines are produced by the SOGC to improve both the education of women’s health care professionals and the sexual and reproductive health care of women.

In 1952, Dr Harold Leif of the University of Pennsylvania reported that only one United States medical school provided elective course work in sexuality. During the 1960s, following the initial work of Masters and Johnson, education, counselling, and research in sexuality became a growing multidisciplinary field of interest. In the 1970s medical education and practice in this area experienced a similar growth, and by the mid 1970s virtually all medical schools in the United States and most Canadian medical schools offered instruction in this area. So much so that in 1980 a Canadian Medical Association Journal article stated that “Sex education touching on all aspects—anatomy, contraception, venereal disease, abortion, pregnancy and child bearing—and supervised by the medical profession should be available in every Canadian public school.”

Since the 1980s, there has been a declining interest in this area of medical education. Many of the programs developed in the 1970s no longer exist, and none of those that remain have been expanded. Whether or not there is sexual education for medical students, health care providers deal with women’s sexuality every day in their offices. In his book entitled Sexual Medicine in Primary Care, Maurice reports that “every day, patients seek information and explicit help for sexual concerns, others hope the doctor will ask them about these personal issues, and still others seek with their healthcare provider’s collusion of avoidance, explanations for their symptoms other than a sexual disorder.”

That a health care provider, during a well-woman visit, enquires about the workings of the respiratory and gastrointestinal systems, but fails to enquire about sexual functioning is a strong argument for better sexual medicine education for health care providers. Women’s expectations of their health care providers have changed since the 1970s. Most women now associate sexual problems with physical problems and expect their health care provider will be knowledgeable about these problems and comfortable
managing them. Research reports that the majority of women (70% to 90%) feel that discussing sex with their health care provider is fine and want information from the health care provider. However, most hope the health care provider will take the initiative in these interactions.9,10 Unfortunately, the small number of family doctors, psychiatrists, urologists, and gynaecologists with an interest in sexual medicine has essentially remained the same since the 1970s, and health care providers often look to non-medical therapists for help providing sexual health management in their clinical practice.

In the past, sexual dysfunctions were regarded as manifestations of serious psychopathology and were considered with therapeutic pessimism. They were believed to be amenable (if at all) only to the lengthy and costly treatment procedures based on the psychoanalytic model.11 “Evidence now suggests that sexual problems are not invariably manifestations of profound emotional disturbance, they commonly occur in persons who function well in other areas and have no other psychological symptoms.”11 It appears that for many patients the new model of sexual concerns may be based on personal discomfort, issues of time management, poor remuneration for time invested in counselling, lack of training in sexuality, and a concern about false accusations of inappropriate behaviour. The health care provider’s reluctance to focus on sexual concerns may be based on personal discomfort, issues of time management, poor remuneration for time invested in counselling, lack of training in sexuality, and a concern about false accusations of inappropriate behaviour. The health care provider’s personal discomfort can interfere with the delivery of sexual and reproductive health care, or gaps in their knowledge may make them reluctant to treat women with sexual concerns.13

Very brief enquiry is sufficient to elicit sexual health concerns. Simple management strategies are available that are time efficient and require little effort for brief management of the majority of sexual complaints. For example, the PLISSIT (permission, limited information, specific suggestions, intensive therapy) model14 of assessment and treatment ensures that approximately 70% of sexual complaints can be easily handled in brief visits by the family doctor or gynaecologist, with the remaining 30% requiring referral to appropriate community resources.

If the health care provider is concerned about false accusation of inappropriate behaviour, simply asking permission will clarify the woman’s comfort level. For example, “To complete my assessment, I need to ask you some questions about your sexual relationship. Is that OK?” If the patient consents, it ensures that the questions are seen as part of her comprehensive care. With the health care provider’s knowledge of endocrine, reproductive, and sexual physiology, and some preparatory work with respect to time management, the health care provider can create an environment of privacy where a woman’s concerns can be assessed and addressed in brief office visits.

It seems unlikely that women will change their expectations that sexual medicine is within a health care provider’s scope of practice. Population surveys show that one quarter of one half of women have sexual concerns but, because women are embarrassed and because they assume their health care providers are comfortable with these issues, they hope that the health care providers will initiate the discussion of sexuality. Sexual function and satisfaction is a quality of life issue requiring education and health promotion best delivered by health professionals.

1. Are you sexually active?
2. Are there any problems?
3. Do you have any pain with intercourse?

“In all cases, the simple questionnaire was as effective as the detailed inquiry in detecting a sexual problem.”12
Professional organizations for health care providers and academic health science centres should ensure their students have the knowledge, attitude, and skills to address women's expectations for sexual health.

The present difficulty for women is that there is an unmet need for proper medical assessment of their sexual problems. The lack of “treatment” from their medical doctor results in the majority of women having to seek professional help outside the medical profession and pay for that help out of their pockets because it is not covered by provincial health plans. It is hoped that this guideline will provide an overview of female sexual health issues for the medical profession and help frontline workers develop the knowledge and comfort necessary to identify and evaluate women with sexual concerns.

This document presents an overview of female sexuality, including sexual response, and assessment and management of sexual problems. It includes chapters on “hot topics” such as desire disorders, coital pain, and gynecologic issues (e.g., menopause, and infertility). Much of the evidence included to support these chapters is based on heterosexual women. All practitioners need to remember they also care for lesbian, bisexual, and transgender women, and some of the information presented in this document may not apply. Extra sensitivity will be needed in using this information for assessment and/or education of sex trade workers.

Summary Statements

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REFERENCES

Sexuality Across the Lifespan

Women are sexual from the day they are born to the day they die. However, as with other aspects of development, the way a woman experiences and expresses her sexuality is individual and changes over her lifespan. These changes are influenced by biological factors such as puberty, pregnancy, and menopause. They are also heavily influenced by individual psychological variables and by broader relationship, social, and cultural factors. Women can have a heterosexual, lesbian, or bisexual sexual orientation, all of which are normal and non-problematic. Further, there is a wide range of sexual functioning that is normal and non-problematic. To understand the causes and consequences of the sexual problems women experience, it is essential to have an understanding of normative sexual development, the normative changes women experience over the lifespan, and the diversity of normal sexual expression. Therefore, this chapter provides a brief overview of normative sexuality across a woman’s lifespan.

CHILDHOOD AND ADOLESCENCE

Infancy
The sexual response, including erection and vaginal lubrication, is present from birth, and erection has been observed in utero. In infancy, most children find it pleasurable to fondle their genitals, first in an absent-minded way and then, by about age 2½ to 3 years, more purposefully. Further, infants’ attachment relationships with their parents and their sensual experiences in infancy from being held, stroked, and rocked by their parents appear to play a crucial role in positive sexual development.

Early Childhood
During early childhood (ages 3 to 7), increasing numbers of children gain experience with masturbation. As children develop, they become more social. Of interest to many children is looking at the genitals of other children (children of the same sex and the other sex), and perhaps lightly touching them. Young children also tend to conform to expected gender roles, and most boys and girls demonstrate gender-specific toy preferences and play styles. However, not all children conform to traditional gender roles, and gender role conformity or non-conformity is not an indication of mental health.

Preadolescence
There is great variability in the timing of physical and behavioural developmental changes in sexuality. However, for most children, pubertal changes start in late childhood (also called preadolescence) and lead to increased sexual interest. Adrenarche occurs on average around age 10. It produces some of the pubertal changes and also leads to experiences of sexual attraction. Girls report first experiencing sexual attraction to another person at, on average, around age 10. These first experiences of sexual attraction may lead children to consider their sexual orientation. Regardless of sexual orientation, children’s activities during preadolescence tend to be gender-segregated, and boys and girls relate to their peer groups in different ways. However, most late preadolescents are very interested in romantic relationships. In terms of sexual experiences, many youth have their first experiences of hugging and kissing a boyfriend or girlfriend during preadolescence, especially at ages 11 and 12, although many lesbian youth do not date other girls for fear of harassment. Regardless of the preadolescent’s sexual orientation, sexual exploration often occurs with members of both the preadolescent’s own sex and the other sex. It is quite common for preadolescent girls to experiment with masturbation. A few preadolescents engage in sexual intercourse.

Adolescence
The increased sexual interest that starts in puberty continues through adolescence. Research suggests that testosterone levels, social variables, and cognitive readiness all influence erotic feelings and behaviour. As a girl transitions to womanhood, she must come to terms with her sexuality, make sexual choices, and create a healthy sexual identity. Most adolescents progress from less intimate behaviours, such as flirting and hand-holding, to more intimate sexual activities during this time. Sexual exploration is a healthy part of adolescent development. More than one half of Canadian adolescent girls have masturbated at least once (this percentage is lower among certain ethnocultural
groups such as Asian Canadians. Adolescent relationships allow girls to develop the skills and learn the scripts needed to sustain long-term intimate relationships. However, the lack of generally accepted rules and conflicting messages from family, peers, media, and other members of society can make this confusing for girls. Most discussions of sexual health in adolescence focus on negative outcomes of sexual activity, which affects the way girls feel about their sexuality and sexual activity. The challenge is to communicate to girls that expression of sexuality and sexual experimentation is normal and healthy, while at the same time enhancing their ability to make good decisions, such as delaying or avoiding behaviours that place them at risk, that they are not developmentally equipped to handle, or that are not consensual.

Adolescents display gender differences in sexual roles that are consistent with the cultural expectations for the behaviour of men and women. As a result, female sexual activity tends to be heavily influenced by cultural and social factors such as religion and parental standards.

Most adolescent girls, including girls who go on to develop a lesbian or bisexual identity, engage in heterosexual sexual activity. By Grade 11, more than 80% of Canadian girls have engaged in deep kissing, three quarters have engaged in genital fondling, one half have engaged in sexual intercourse, and one half have engaged in oral sex. The median age of first intercourse for girls (and boys) in Canada is 17. However, age at first intercourse may be different for immigrants to Canada than for those born in Canada. Youth are also engaging in a wide variety of types of sexual activity. Most adolescents engage in sexual activity within the context of a romantic relationship. However, some adolescents are involved in “friends with benefits” relationships and/or they engage in casual sexual encounters with an individual on a single occasion, which is often referred to as “hooking up.” Hooking up may or may not include sexual intercourse. Many adolescents use condoms early in relationships, for both birth control and STI prevention, but many adolescents transition to oral contraception and cease condom use later in romantic relationships. In recent years, an increasing number of adolescents appear to be employing dual protection (condom and oral contraceptive use) and to be quite satisfied with this approach.

Although most adolescent girls engage in consensual sexual activities, many adolescent girls also experience unwanted sexual activity during adolescence, most often in dating relationships. Most youth identify as heterosexual during adolescence. However, some become aware of their attraction to individuals of the same sex. Same-sex sexual experience is not the same as, nor does it necessarily predict, an individual’s self-defined sexual orientation. Further, there is a range of responses to awareness of same-sex attraction from denial to acceptance of sexual feelings to engaging in sexual activity with a same-sex partner to formation of a sexual identity. Adolescent girls who adopt a lesbian sexual orientation or identity may face particular challenges. Some girls may choose not to disclose because of fears of social isolation and the risk of violence and discrimination. However, the decision to keep sexual orientation secret has a number of potential negative ramifications including higher risk of poor self-esteem, depression, alcohol and drug abuse, violence, and suicide. Low self-esteem, depression, and alcohol and drug use are associated with failure to engage in safer sex and thus may increase girls’ risk of acquiring a sexually transmitted infection. Research suggests that social discrimination, not sexual orientation per se, is associated with adjustment challenges that may be experienced by gay or bisexual individuals of both sexes. Sexual minority girls with high self-esteem, family cohesion, positive and supportive family relationships, and other support systems are more likely to be open about their sexual orientation.

Summary Statements

5. Children are sexual from birth. Expression of sexuality is a developmental process. (II-2)
6. Most discourse on adolescent sexuality focuses on the potential for adverse consequences such as exploitation, sexual assault, unwanted pregnancy, and sexually transmitted infections, and has generally neglected to communicate to girls that expression of sexuality and sexual experimentation are normal and healthy. (II-2)
7. Age-appropriate sexual expression is a positive part of the development of adolescent girls. Negative, coercive, and discriminatory experiences can detrimentally affect sexual well-being. (II-2)
8. Variations exist in same-sex and opposite-sex sexual behaviour; same-sex and opposite-sex sexual behaviour is not equivalent to self-definition as heterosexual or lesbian or bisexual. Some women who have sex with women may be reluctant to define themselves as lesbian because women who identify themselves or who are identified by others as lesbian or bisexual may experience social discrimination. (II-2)
Recommendations

1. Health care providers should encourage adolescents to use condoms consistently, and to take other steps to promote sexual health and prevent sexually transmitted infections (e.g., human papillomavirus vaccination), even while they are in a relationship. (II-3A)

2. Health care providers should be well informed about the variability of normal patterns of sexual development before evaluating sexual concerns that pertain to children and adolescents. (II-3A)

3. Health care providers should balance concern about adverse sexual consequences for girls with positive messages about adolescent girls’ expression of their sexuality. (II-3A)

FORMING A LONG-TERM RELATIONSHIP

Heterosexual, lesbian, and bisexual women may be single, cohabiting, married, widowed, or divorced. Most women have the goal of forming a long-term romantic relationship, and most do so. Indeed, more than 90% of Canadian women marry. Because it became legal for same-sex couples to marry only in 2005, we do not yet know what percentage of lesbians will eventually marry. However, compared with mixed-sex couples, same-sex couples have fewer role models after which to pattern their relationships, and they have less access to feedback regarding relationship difficulties. Same-sex couples may struggle with secrecy, isolation, and concerns about coming out to family, friends, and co-workers. Lesbian couples tend to be very close emotionally, and the attempt by one partner to gain increased independence can cause relationship conflict. Internalized homonegativity can lead to guilt, self-hatred, and self-doubt.

Sexual Activity

Most single, married, and cohabiting women engage in sexual activity with a partner. There is wide variation in the frequency of intercourse. Regardless of whether women are in same-sex or mixed-sex relationships, the decline in frequency over time may be due to biological aging or to familiarity of the partner, since age and the length of the relationship tend to co-vary. It is important to note that decreased frequency does not necessarily correspond to decreased sexual satisfaction.

Partner Influences

For women with male partners, several characteristics of the partner may influence sexual functioning and satisfaction. These include the partner’s age, health, empathy, response to sexual requests, and understanding of the female partner’s sexual preferences. Feeling affirmed and emotionally supported improves women’s sexual satisfaction, and Cohen et al. found that relationship satisfaction was a key factor in the sexual satisfaction of sexual minority women.

Sexual Minority Women

Lesbian or bisexual individuals often experience minority stress, additional and unique stressors associated with being part of a sexual minority. This includes being stigmatized, being rejected by family, and being verbally or physically abused. Unless health care providers actively communicate that their office is an open and accepting environment and that they do not assume that all women are heterosexual, sexual minority women may find it difficult to seek preventive care, be open about their lifestyle, and provide a complete medical history.

Summary Statements

9. Women express their sexuality in a variety of ways and in a variety of situations, including with a partner and through masturbation. (II-2)

10. Masturbation and self-pleasuring can be important for self-knowledge and as a sexual outlet in themselves for women who have and those who do not have a partner. (III)

11. Relationship factors have a major influence on a woman’s sexual well-being. (II-2)

Recommendations

4. Health care providers should consider the effect of the relationship when assessing a woman’s sexual well-being. (III-A)

5. Health care providers should strive to make their offices open and welcoming environments for women of all sexual preferences and practices. (III-A)

Clinical Tips

1. It is important to establish a sexual orientation-friendly practice. This involves clinicians sensitizing themselves and their staff to the need to use gender-neutral terms (e.g., partner rather than boyfriend or husband) and to avoid assuming a heterosexual orientation. One way to do this is to establish environmental cues (e.g., a rainbow poster), providing the practice really is open and accepting.

2. It is important not to make assumptions about a woman’s sexuality. Even though a woman’s cultural background may affect her experience and expression, there is significant diversity both within and between cultural groups.

3. Try to be aware of your own biases and social stereotypes and distinguish your own values from scientific evidence about what behaviours fall within a normal range.
4. Talking about sexuality is difficult for both the clinician and the woman. Clinicians need to determine their own comfort level and effectiveness in assessing and treating sexual health problems.

5. It is important to clarify what the woman considers her sexual orientation to be. Sexual orientation involves an individual’s internalized erotic and romantic responsiveness to persons of the same or the opposite sex. The clinician may simply ask “What would you consider your sexual orientation to be?”

6. A woman’s sexual behaviour may or may not match her sexual orientation. Therefore, it is important to clarify the gender of the woman’s sexual partner or partners. The clinician may ask “And do you have sex with men, or women, or both?” Both sexual orientation and sexual partner gender may have significance for sexual function and dysfunction.

PREGNANCY AND CHILD-BEARING

Pregnancy is a time of significant change as a couple transition to their role as parents. One of the most important predictors of sexual function during pregnancy and postpartum is pre-pregnancy functioning.25–27 Couples who do not focus on coital frequency and who do not equate lovemaking with sexual intercourse are most likely to maintain high sexual satisfaction, even with changes in their sexual life.

Physiology

Genital vasocongestion is intensified in the first and second trimester.27 There is significant vasocongestion in the third trimester, which is not increased significantly by sexual excitement.27 Lubrication and orgasm are usually increased.27 Orgasm in the third trimester may cause discomfort.27 Positional difficulties may also require adjustment in the third trimester.27

Most couples experience some sexual problems postpartum.27 More than one half of women experience dyspareunia during the first postpartum intercourse.27 The incidence of postpartum dyspareunia is related to the degree of perineal trauma.27 Assisted vaginal deliveries are associated with the highest risk of dyspareunia.27 Caesarean section is associated with a somewhat earlier resumption of intercourse postpartum than deliveries that result in perineal trauma.27,28

Behaviour

The birth of a baby has a profound effect on the sexual relationship of most couples, at least initially. A woman’s interest in, and the couple’s frequency of, sexual activity during the first few months postpartum is lower than before pregnancy.27 Research has shown that most couples resume intercourse between 6 and 8 weeks postpartum and that for most couples coital frequency remains lower than it was before pregnancy during the first year after the birth.27,28 Breastfeeding mothers report lower sexual frequency and lower sexual satisfaction, likely because breastfeeding suppresses estrogen and androgen production.30 Pre-pregnancy relationship satisfaction and level of comfort with sexuality are important predictors of what is likely to happen after child-bearing.25–27

Breastfeeding

Breastfeeding is associated with less frequent intercourse, decreased desire, and decreased sexual satisfaction.25 Breastfeeding mothers perceive sexual intercourse as less important and resume intercourse somewhat later than women who do not breastfeed.29 Elevated prolactin during breastfeeding decreases ovarian production of estrogen and androgen.28 Low estrogen levels cause decreased vaginal lubrication and vaginal atrophy, which can interfere with arousal and orgasm and cause dyspareunia.27,28 Dyspareunia, which can be treated with topical lubricants, is usually not persistent by 6 months postpartum.28 Breastfeeding can be accompanied by erotic feelings in one third to one half of women; some women enjoy this, but others find it significantly distressing.27

Infertility

For many infertile couples, sexual activity becomes equated with reproduction, pressure, and disappointment. The focus becomes conception rather than pleasure and sharing, which results in reduced desire, arousal, and pleasure.31

Summary Statement

12. Pregnancy and breastfeeding, as well as experience with infertility, can affect sexual functioning. (II-2)

Recommendations

6. Health care providers should discuss sexuality at the early prenatal visit, before discharge from the hospital postpartum, and at the postnatal check-up. (III-A)

7. Health care providers should
   • communicate that they are open to discussing sexual concerns;
   • educate patients about normal fluctuations in sexual interest and frequency;
   • discuss the range of non-coital sexual activities if intercourse is difficult, painful, or prohibited for medical reasons; and
   • emphasize the importance of the quality of lovemaking rather than coital frequency to sexual satisfaction. (III-A)

8. Health care providers should provide advice to support sexual adjustment and deal with challenges to sexual function during pregnancy and...
Female Sexual Health Consensus Clinical Guidelines

During menopause, as during all life stages, life stressors and interpersonal relationships play an important role in sexual functioning. With aging, a woman may believe that she is less attractive, or her partner may see her as less attractive.\textsuperscript{32,33} The effect of aging and menopause on women’s sexual well-being is best understood in the context of contemporary Western society, which equates sexual success and attractiveness with youth, beauty, and material success. Men and women socialized in an era in which sexual activity was accepted primarily for reproductive purposes are confronted with the issue of continued sexual interest, desire, and ability long beyond the end of their reproductive years. Most women are interested in sex for physical pleasure as well as to express love.\textsuperscript{34}

Menopause is characterized by a rapid decrease in estrogen levels, which leads to reduced blood flow, lubrication, and genital sensation.\textsuperscript{35,36} Excitement takes longer to achieve and orgasm is reduced in intensity.\textsuperscript{35} Atrophy, loss of elasticity, introital stenosis, and dyspareunia often occur as a result of menopause and/or aging.\textsuperscript{35} Incontinence can also impair sexual function.\textsuperscript{35,36} Reduction in both estrogen and free testosterone can be associated with menopausal symptoms including hot flashes, night sweats, and low libido.\textsuperscript{36} In women, androgens are produced in the ovary and adrenal glands.

Sexual Activity in Menopause

Women are less likely to engage in sexual activity with a partner with each passing decade. In many cases, this is not because of a lack of interest or desire but rather because women are without a partner after divorce or the death of their spouse. Older women greatly outnumber older men.\textsuperscript{35} The decline in frequency of sexual activity can also be a result of health problems, the effects of aging, vaginal dryness from decreased estrogen production, and/or a noticeable decline in the sexual interest and ability of male partners. Moreover, although with increasing age more women report sexual problems, fewer women are distressed about such problems (Figure 1.1).\textsuperscript{37} Masturbation is a normal part of sexual expression in older women and may constitute an important sexual outlet for women who do not have a partner. Clinical attention may be merited only when a woman is distressed about some aspect of her sexual functioning.

Summary Statements

13. Decline in frequency of sexual activity at menopause does not alter women’s potential for desire, arousal, orgasm, sexual pleasure, or sexual satisfaction. (II-2)

14. Psychological, relationship, social, cultural, and biological factors affect women’s sexual well-being as they age and experience menopause. (II-2)

15. Most women with a partner continue to engage in sexual activity. Women often cease sexual activity not because of lack of interest but because they do not have a partner. (II-2)

Recommendations

10. The health care provider should enquire about both the woman’s functioning and her partner’s functioning in assessing changes to sexual activity with menopause and aging. (II-1A)
11. Changes in sexual functioning should be treated only if the woman expresses distress about these changes. (II-3B)

12. Health care providers should recommend the use of a lubricant or estrogen (local or systemic) for problems arising from vaginal dryness. (II-1A)

13. Health care providers should discuss safer sex, particularly with newly single women. (II-2A)

14. Health care providers should understand that all women are sexual and acknowledge that women have sexual needs. (III-A)

15. Health care providers should have an understanding of and respect for diverse individual patterns of sexual behaviour and orientation across the lifespan. (III-A)

16. Couples should be encouraged to include sexual pleasuring without penetration in their activities if penetration is impossible. (III-A)

17. Health care providers should recognize the need for sensitivity to a woman’s life stage, to her individual situation, and to her sexual orientation when they assess sexual health concerns. (III-A)

REFERENCES


31. Daniluk JC. “If we had it to do over again . . .” Couples’ reflections on their experiences of infertility treatments. The Family Journal 2001;9:122–33.
Patterns of female sexual response are varied, and several useful models of female sexual response capture aspects of this diversity. Physiological models of female sexual response suggest that women may experience a sense of sexual desire as active interest in seeking out sexual contact or as receptivity to sexual contact.1,2 Sexual arousal involves pelvic congestion, myotonia, and subjective feelings of arousal accumulating to sustained, relatively high levels.1 Orgasm, a variably intense neuromuscular and subjectively experienced event, may occur during sexual activity with a partner of the opposite or the same sex or in autosexual activity. Orgasm is generally facilitated by direct stimulation of the clitoris as opposed to the indirect labial traction on the clitoris afforded by vaginal penetration with a penis or other object. Resolution of pelvic vasocongestion, subjective feelings, and other physical changes characterizing the sexual response cycle follow, generally more rapidly after orgasm than after sustained arousal without orgasmic release of sexual tension.

Alternative models highlight other perspectives on female sexual response. For example, an intimacy-based, circular model of female sexual response has been articulated by Basson3 (Figure 2.1). This model suggests that for many women in established relationships spontaneous sexual desire may be uncommon and that many women are in a state of sexual neutrality in their relationship. With the experience of emotional intimacy, however, women may be receptive to sexual overtures or stimulation, and may consequently experience sexual arousal, which can lead to further desire for subjective and physiological sexual arousal, orgasm, and feelings of emotional intimacy. Many women have been reassured by a health care provider’s acknowledgement that not all women in relationships commonly experience spontaneous sexual desire.4

A third approach to understanding sexual response5 (Figure 2.2) highlights the fact that both male and female sexual response are influenced by multiple biopsychosocial factors. Sexual function and dysfunction in both sexes are the result of physiological, psychological, interpersonal, and sociocultural factors, all of which are implicated in patterns of sexual response.

Patterns of female sexual dysfunction are described in the Diagnostic and Statistical Manual of the American Psychiatric Association,6 in relation to the desire, arousal, and orgasm axes described in the physiological models. According to DSM-IV-TR, women may experience sexual difficulties in relation to problems in sexual desire, sexual arousal, and/or orgasmic experience; they also may experience sexual pain disorders, including dyspareunia and vaginismus (Table 2.1). Sexual dysfunctions may be lifelong or acquired, and may be general (in all situations) or specific (in some situations) (Table 2.2). It should be emphasized that a sexual dysfunction is diagnosed only if the difficulty causes marked personal or interpersonal distress for the woman (although it is important to determine if the problem is primarily a sexual or primarily a relationship problem) and if the difficulty cannot be better accounted for by another medical or other condition. Many more women experience low sexual desire, low arousal, and orgasmic difficulties than are distressed by these occurrences. Generally, low sexual desire, low arousal, and orgasmic difficulties are less likely to occur among premenopausal than postmenopausal women, but when they do occur, they are more likely to be distressing among premenopausal than postmenopausal women.7

There are a number of controversies concerning the DSM-IV approach to diagnosis of female sexual dysfunction, and our understanding of sexual problems in women is evolving. For example, the Working Group on a New View of Women’s Sexual Problems has criticized the DSM-IV approach to classifying women’s sexual problems as being too medical and mechanical, and not corresponding to women’s experience.8 The American Psychiatric Association is considering changes to the diagnostic categories and criteria for female sexual dysfunction in the forthcoming DSM-5.

Female sexual dysfunctions are common. They are often consequential for the woman, and clinicians may fail to screen for, diagnose, or treat them, and may not make appropriate referrals. The prevalence of female sexual function concerns and associated distress in a nationally representative sample in the United States is shown in Figure 2.3,7 and the prevalence
Figure 2.1. An intimacy-based model of female sexual response

![Intimacy-based Model of Female Sexual Response](image1)

Figure 2.2. A biopsychosocial model of female sexual function and dysfunction

![Biopsychosocial Model of Female Sexual Function and Dysfunction](image2)

Table 2.1. DSM-IV-TR definitions of female sexual dysfunctions

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypoactive sexual desire disorder</td>
<td>Persistent or recurrent deficiency (or absence) of sexual fantasies and desire for sexual activity</td>
</tr>
<tr>
<td>Sexual aversion disorder</td>
<td>Persistent or recurrent extreme aversion to, or avoidance of, all (or almost all) genital sexual contact with a sexual partner</td>
</tr>
<tr>
<td>Sexual arousal disorder</td>
<td>Persistent or recurrent inability to attain, or to maintain until completion of the sexual activity, an adequate lubrication-swelling response of sexual excitement</td>
</tr>
<tr>
<td>Orgasmic disorder</td>
<td>Persistent or recurrent delay in, or absence of, orgasm following a normal sexual excitement phase</td>
</tr>
<tr>
<td>Dyspareunia</td>
<td>Recurrent or persistent genital pain associated with sexual intercourse</td>
</tr>
<tr>
<td>Vaginismus</td>
<td>Recurrent or persistent involuntary contraction of the perineal muscles surrounding the outer third of the vagina when vaginal penetration with penis, finger, tampon, or speculum is attempted</td>
</tr>
</tbody>
</table>

The disturbance must cause marked distress or interpersonal difficulty and must not be better accounted for by the effects of another (non-sexual) psychiatric disorder, medical disorder, or substance.

Table 2.2. Subtypes of female sexual dysfunctions described by the DSM-IV-TR

<table>
<thead>
<tr>
<th>Defined by Onset</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifelong</td>
<td>Sexual dysfunction has been present since the onset of sexual functioning</td>
</tr>
<tr>
<td>Acquired</td>
<td>Sexual dysfunction develops only after a period of normal functioning</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Defined by Context</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generalized</td>
<td>Sexual dysfunction is not limited to certain types of stimulation, situations or partners</td>
</tr>
<tr>
<td>Situational</td>
<td>Sexual dysfunction is limited to certain types of stimulation, situations or partners</td>
</tr>
</tbody>
</table>
of female sexual function concerns in a series of 403 women attending outpatient obstetrics and gynaecology clinics in Canada is shown in Table 2.3. In the Canadian sample, only 16% of women with a sexual concern had ever spoken to their physician about it.

**CAUSES OF SEXUAL DISORDERS**

Causes of sexual problems vary from person to person and from one disorder to another. According to the biopsychosocial model, biological, psychological, interpersonal, and cultural factors may all play a role in the development and perpetuation of sexual disorders. For example, disorders that are largely due to biological or medical factors may have secondary effects on people's feelings about themselves and on their relationships, and they may cause conflict with cultural expectations. This cascade of events may perpetuate a sexual problem or

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**Figure 2.3. Prevalence of female sexual function concerns with associated distress in a nationally representative United States sample**

![Graph showing prevalence of female sexual function concerns by age and associated distress](image)


---

**Table 2.3. Prevalence of female sexual function concerns in a series of 403 women attending outpatient gynaecology clinical care in Canada**

<table>
<thead>
<tr>
<th>Sexual function concerns during the past year, sexually active women and their partners</th>
<th>Married</th>
<th></th>
<th>Married</th>
<th></th>
<th>Single</th>
<th></th>
<th>Single</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-pregnant</td>
<td>Pregnant</td>
<td>Non-pregnant</td>
<td></td>
<td>% (n = 140)</td>
<td>% (n = 181)</td>
<td>% (n = 59)</td>
<td>% (n = 23)</td>
<td>% (N = 403)</td>
</tr>
<tr>
<td>My sexual desire is often much lower than I would like it to be</td>
<td>52.6</td>
<td>48.0</td>
<td>34.8</td>
<td>26.1</td>
<td>46.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My partner's sexual desire is often much lower than I would like it to be</td>
<td>23.5</td>
<td>20.3</td>
<td>15.9</td>
<td>30.4</td>
<td>21.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My partner and I often have serious disagreements about how often we want to have intercourse</td>
<td>21.8</td>
<td>23.3</td>
<td>27.3</td>
<td>26.1</td>
<td>23.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My vagina often does not become lubricated enough when I have intercourse</td>
<td>33.8</td>
<td>24.4</td>
<td>26.1</td>
<td>26.1</td>
<td>28.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I often experience pain when I have intercourse</td>
<td>26.7</td>
<td>18.6</td>
<td>37.8</td>
<td>21.7</td>
<td>23.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I usually do not have an orgasm during intercourse</td>
<td>31.6</td>
<td>33.9</td>
<td>41.3</td>
<td>43.5</td>
<td>34.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My partner often ejaculates too quickly for me</td>
<td>22.0</td>
<td>21.5</td>
<td>22.0</td>
<td>50.0</td>
<td>23.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My partner often has problems getting an erection</td>
<td>11.4</td>
<td>1.1</td>
<td>6.8</td>
<td>4.3</td>
<td>5.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have never had an orgasm from any kind of sexual activity (including intercourse, masturbation, petting)</td>
<td>5.4</td>
<td>5.6</td>
<td>8.98</td>
<td>9.1</td>
<td>6.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexually active women experiencing at least one of the above problems, %</td>
<td>85.0</td>
<td>72.9</td>
<td>80.4</td>
<td>82.6</td>
<td>78.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Of women experiencing at least one of the above problems, % who have discussed with their doctor</td>
<td>25.5</td>
<td>6.3</td>
<td>27.0</td>
<td>5.6</td>
<td>16.0</td>
<td></td>
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</tbody>
</table>
make the problem worse. Conversely, disorders that are primarily due to psychological or social factors nonetheless affect physiological response.

**Biological Causes**

Sexual function is influenced by physiological factors, illness, and many medications. Healthy sexuality depends on the interaction of neurological, endocrine, and vascular responses in a psychological context that allows a woman to respond positively to sexual stimuli. Disturbances in any of these can lead to sexual disorders.

Women's sexuality involves their entire bodies and not just their genitals. Systemic medical illnesses affect sexual function (Table 2.4). The prevalence of sexual concerns, spanning desire, arousal, and orgasmic dysfunction, is 2 to 3 times greater in women with diabetes that in women in control groups (75% vs. 30.6%). Women with hypertension may be twice as likely as normotensive women to experience sexual dysfunction (42.1% vs. 19.4%). This can be reduced by effective treatment of their blood pressure.

Medication side effects may be associated with up to 25% of sexual concerns. Common drug classes causing sexual dysfunction are listed in Table 2.5. More than 50% of patients taking medication for a major mood disorder will

<table>
<thead>
<tr>
<th>Table 2.4. Medical systemic illnesses that affect women's sexual function10–12,14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular disease</td>
</tr>
<tr>
<td>Hypertension</td>
</tr>
<tr>
<td>Coronary artery disease</td>
</tr>
<tr>
<td>Endocrine disorders</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
</tr>
<tr>
<td>Thyroid disorders</td>
</tr>
<tr>
<td>Hyperprolactinemia</td>
</tr>
<tr>
<td>Adrenal disorders</td>
</tr>
<tr>
<td>Hypopituitarism</td>
</tr>
<tr>
<td>Gastroenterological</td>
</tr>
<tr>
<td>Hepatic dysfunction</td>
</tr>
<tr>
<td>Autoimmune/arthritic disorders</td>
</tr>
<tr>
<td>Systemic lupus erythematosis</td>
</tr>
<tr>
<td>Fibromyalgia</td>
</tr>
<tr>
<td>Arthritis (osteo, rheumatoid, etc.)</td>
</tr>
<tr>
<td>Infections</td>
</tr>
<tr>
<td>Systemic Infections</td>
</tr>
<tr>
<td>STIs (hepatitis B &amp; C, HIV, syphilis, etc.)</td>
</tr>
<tr>
<td>Cancers</td>
</tr>
<tr>
<td>Affecting body image (breast cancer, etc.)</td>
</tr>
<tr>
<td>Affecting hypothalamic–pituitary–ovarian axis</td>
</tr>
<tr>
<td>Neurological disease</td>
</tr>
<tr>
<td>Epilepsy</td>
</tr>
<tr>
<td>Multiple sclerosis</td>
</tr>
<tr>
<td>Stroke and trauma</td>
</tr>
<tr>
<td>Degenerative diseases</td>
</tr>
<tr>
<td>Parkinson's disease</td>
</tr>
<tr>
<td>Dementias</td>
</tr>
<tr>
<td>Hypothalamic disorders</td>
</tr>
<tr>
<td>Psychological disorders</td>
</tr>
<tr>
<td>Mood disorders</td>
</tr>
<tr>
<td>Unipolar depression</td>
</tr>
<tr>
<td>Bipolar disorders</td>
</tr>
<tr>
<td>Post-traumatic stress disorder</td>
</tr>
<tr>
<td>Childhood sexual abuse</td>
</tr>
<tr>
<td>Sexual assault</td>
</tr>
<tr>
<td>Addictions</td>
</tr>
<tr>
<td>Schizophrenia</td>
</tr>
<tr>
<td>Intellectual disability</td>
</tr>
<tr>
<td>Anxiety disorders</td>
</tr>
<tr>
<td>Personality disorders</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2.5. Drugs causing sexual dysfunction11,14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychotropics</td>
</tr>
<tr>
<td>Antidepressants</td>
</tr>
<tr>
<td>SSRIs</td>
</tr>
<tr>
<td>Tricyclics</td>
</tr>
<tr>
<td>MAOIs</td>
</tr>
<tr>
<td>Trazodone</td>
</tr>
<tr>
<td>Mood stabilizers</td>
</tr>
<tr>
<td>Lithium</td>
</tr>
<tr>
<td>Minor tranquilizers</td>
</tr>
<tr>
<td>Antipsychotics</td>
</tr>
<tr>
<td>Antiepileptics</td>
</tr>
<tr>
<td>Antihypertensives</td>
</tr>
<tr>
<td>β-blockers</td>
</tr>
<tr>
<td>Centrally active agents</td>
</tr>
<tr>
<td>Diuretics</td>
</tr>
<tr>
<td>Oral Contraceptives (hyponadrogenic)</td>
</tr>
<tr>
<td>Others</td>
</tr>
<tr>
<td>H2-blockers</td>
</tr>
<tr>
<td>Non-steroidal anti-inflammatories</td>
</tr>
<tr>
<td>Steroids</td>
</tr>
<tr>
<td>Antineoplastic agents</td>
</tr>
</tbody>
</table>

MAOI: Monoamine oxidase inhibitors
have sexual dysfunction, with 32% of women experiencing treatment-emergent sexual problems.\textsuperscript{15,16} Health care providers’ enquiring about negative sexual side effects of drugs gives patients permission to bring up concerns and the possibility of making a change in medication, such as substituting one birth control pill for another.

The pelvis is a constricted space with complex relationships to multiple organ systems that can contribute locally to sexual problems (Table 2.6). Hysterectomy may decrease sexual desire and responsiveness in one third of women. This is most common when younger women have a concomitant bilateral oophorectomy. Women who have a hysterectomy for non-sexual pain and/or bleeding tend to improve their sexual function, while those with preoperative depression or sexual problems do worse.\textsuperscript{12}

Pelvic symptoms, such as pain, often come from non-gynaecological structures or from more than one cause. Assessment of sexual concerns needs to take into account a woman’s complete medical history. At times this will require multi-disciplinary evaluation.\textsuperscript{17}

### Psychological and Social Causes

Psychological sources of sexual disorders can be separated into predisposing factors and maintaining factors.\textsuperscript{18} Predisposing factors involve prior life experiences that have produced vulnerability to sexual dysfunction; maintaining factors perpetuate the sexual dysfunction. Predisposing factors can include a history of sexual violence, unpleasant early sexual experiences, and growing up in a family or society that communicates either no information about sexuality at all or projects negative messages about women’s sexuality or women’s bodies. These early events may result in negative attitudes, misinformation, cognitive interference with focus on sexual pleasure, difficulty communicating, and/or poor sexual technique, which create vulnerability to dysfunction. When such a dysfunction occurs, relationship distress, guilt, shame, and other sequelae of sexual dysfunction may maintain or exacerbate the sexual disorder. Maintaining factors may also include ongoing life circumstances, personal and relationship characteristics, and characteristics of lovemaking.

### Maintaining factors

There are 7 general factors that frequently maintain a sexual disorder\textsuperscript{19}

1. Myths or misinformation
2. Negative attitudes
3. Anxiety and cognitive distraction
4. Mental health issues
5. Behavioural and lifestyle issues
6. Failure to engage in effective sexual stimulation
7. Relationship distress

In most cases, a sexual disorder is a result of several of these factors, not just one. These factors apply equally to women in same-sex and those in mixed-sex relationships.\textsuperscript{18} Moreover, the causes of sexual problems may reside in the woman, her partner, their relationship, or all three.\textsuperscript{4}

### Myths or misinformation

Lack of information that is important to sexual functioning or beliefs about sexual functioning that are incorrect and antagonistic to sexual function can interfere with sexual response. For example, some women who report arousal difficulties are not aware of the location of the clitoris and/or its role in sexual arousal and orgasm. This type of misinformation or lack of information can lead to sexual activities that do

---

**Table 2.6. Organ systems and the pelvis: local effects on sexual function**

<table>
<thead>
<tr>
<th>Organ system</th>
<th>Disease examples affecting sexuality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>Dermatitis (atopic, contact), herpes simplex, psoriasis, lichen sclerosis, carcinoma</td>
</tr>
<tr>
<td>Musculoskeletal</td>
<td>Arthritis (osteo, rheumatoid, psoriatic), mechanical back pain, spinal stenosis, hip fracture, pelvic muscle spasm</td>
</tr>
<tr>
<td>Neurological</td>
<td>Nerve entrapment syndromes, chronic pain disorders</td>
</tr>
<tr>
<td>Vascular</td>
<td>Peripheral vascular disease, coronary artery disease</td>
</tr>
<tr>
<td>Urological</td>
<td>Recurrent bacterial cystitis, interstitial cystitis, bladder cancer, chronic renal failure</td>
</tr>
<tr>
<td>Gynaecological</td>
<td>Vaginitis, vestibulodynia (vaginismus, vestibulitis), vulvodynia, pelvic floor dysfunction, endometriosis, premature ovarian failure, menopausal atrophy, ovarian masses, uterine fibroids, adenomyosis, prolapse, gynaecological malignancies</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>Inflammatory bowel disease (ulcerative colitis, Crohn’s disease), irritable bowel syndrome, colon cancer</td>
</tr>
</tbody>
</table>

This is not an exhaustive list.
not enhance sexual arousal and pleasure and, over time, to frustration, low sexual desire, and withdrawal from sexual activity. Similarly, believing myths about sexuality and aging, or about what constitutes “normal” sexual behaviour, may result in anxiety and interfere with sexual response. A partner’s myths and misinformation may similarly contribute to women’s experience of sexual problems. Erroneous beliefs may cause women to place unrealistic expectations on themselves or their partner (e.g., “A normal woman has an orgasm from stimulation of the vagina with a penis”) or assign negative meanings to common sexual experiences (e.g., “If you do not get an immediate erection, it means that you don’t find me desirable”).

**Negative attitudes.** A woman’s negative attitudes about sexual activity, about her own body, and about her partner’s body may interfere with sexual response. For example, women who have negative body image may experience anxiety or other negative feelings during sexual activity that affect their sexual functioning. Similarly, the belief that “good” people do not enjoy sex or that men exploit women (or vice versa), may result in negative feelings or thoughts during sexual activity. These feelings may interfere with women’s sexual response. Often negative attitudes from childhood continue to affect women emotionally even though as adults they no longer hold them.

**Anxiety and cognitive distraction.** Anxiety during sexual activity can contribute to sexual disorders. Women may experience a general feeling of anxiety while thinking about or engaging in sexual activity. This type of anxiety is often linked to negative attitudes that may have been caused by negative or traumatic experiences in the past, such as child sexual abuse or sexual victimization women have experienced as adults. Sexual anxiety may also be caused by fear of failure—that is, fear of not responding sexually or of not enjoying the sexual activity. Anxiety is most likely to cause a sexual disorder when it results in cognitive distraction. Cognitive distraction occurs when the woman has non-erotic thoughts or feelings, such as fear of not getting aroused during sexual activity or concern that her partner does not find her attractive. The woman may focus on these non-erotic thoughts or may engage in “spectatoring,” that is, monitoring and judging her own appearance and behaviour during sexual activity. Focusing on these types of thoughts typically interferes with the woman’s ability to become absorbed with erotic thoughts and feelings that are important for sexual arousal. Having non-erotic thoughts, particularly non-erotic thoughts that cause distress, has been shown to interfere with the sexual response and is linked to poorer sexual functioning.

**Mental health issues.** Mental health issues and/or general psychological distress may also cause sexual disorders. For example, women who are depressed, have an anxiety disorder or post-traumatic stress disorder, or who are experiencing significant stress in their lives often experience low sexual desire or have difficulty becoming aroused. Emotions such as anger, sadness, and anxiety associated with mental health problems can interfere with sexual response.

**Behavioural and lifestyle issues.** Behavioural and lifestyle factors can affect sexual functioning. Smoking, alcohol consumption, and obesity are associated with higher rates of sexual disorders. Stresses such as a difficult work environment, long work hours, or a lack of privacy in the home, may also affect relationship well-being and sexual functioning. Surprisingly, women often fail to recognize how their life stresses affect their sexual functioning. As with other causes of sexual problems, responses to these issues are individual: although stress interferes with some women’s sexual functioning, many women with busy and sometimes stressful lives maintain satisfying sexual relationships.

**Failure to engage in effective sexual stimulation.** The cause of the sexual disorder may lie in the “sexual script” that the woman and her partner adopt when they engage in sexual activity. That is, the activities they engage in may not be sufficiently stimulating for her. For example, limited sensual (as opposed to genital) fondling and caressing may result in low sexual satisfaction or reduce desire for sexual activity in the future; limited or ineffective genital caressing and stimulation may result in low sexual arousal and/or anorgasmia. In addition, a routine and predictable sexual script that lacks variety and spontaneity, no matter how stimulating the first time, can become boring and reduce arousal. Failure to engage in effective sexually stimulating behaviour may be the result of simple ignorance—that is, myths and misinformation. However, more often, it is a result of poor communication about sexual preferences and desires between the partners. Women may have difficulty being assertive about their sexual needs, may expect their partner to know what they like or don’t like without being told or shown, or may not be aware of their own sexual preferences. As a result, they may not clearly communicate their sexual desires to their partner or may not provide him or her with information about the techniques they find particularly arousing. In fact, a survey of more than 3000 Canadian men and women found that only 28% had engaged in even one serious discussion about sex in their relationship in the previous year. This is unfortunate, as research has shown that the more women (and men) disclose about their sexual preferences, the more they and their partner report sexual activities during lovemaking that are mutually...
pleasing, and the more sexually satisfied they are.\textsuperscript{31,42} Poor sexual technique may also be the responsibility of a partner who is not responsive to the woman’s requests, perhaps because of his or her own myths and misinformation.

In addition, the partner’s sexual difficulties may affect the sexual script and the woman’s sexual functioning, and women whose male partner experiences sexual problems report lower sexual satisfaction.\textsuperscript{43,44} This may be in part because couples in which one partner has a sexual difficulty often alter their behaviour to accommodate the sexual difficulty without considering how this affects the other partner. Indeed for women with male partners, treatment of the man’s erectile difficulties may improve the woman’s sexual functioning.\textsuperscript{45,46} This may be because many of these couples have engaged in sexual intercourse as soon as the man has an erection (reducing or eliminating foreplay) out of fear that he will lose and not regain his erection. Similarly, couples in which the man has rapid ejaculation may eliminate foreplay in hopes of increasing the length of intercourse. These approaches are not only not effective in resolving the man’s erectile or ejaculation difficulties but also will likely reduce the woman’s arousal, likelihood of reaching orgasm, and subjective satisfaction.

\textbf{Relationship distress.} The non-sexual aspects of the relationship may affect the woman’s sexual functioning. For example, relationship distress is a major cause of sexual disorders and low sexual satisfaction for women.\textsuperscript{8,47} Frequent arguments, anger and resentment toward one’s partner, lack of trust, poor communication, and lack of quality couple time may interfere with the feelings of closeness and intimacy that are important to quality lovemaking and to being able to respond sexually.\textsuperscript{3,31,47,48}

\section*{ASSESSMENT OF SEXUAL CONCERNS IN A GENERAL CLINICIAN’S OFFICE}

As noted earlier, sexual dysfunctions in women are common, consequential, and clinically neglected.\textsuperscript{7,9,49} Many women would like to talk about their sexual function concerns with their physician, but would like the physician to initiate the discussion. Physicians accept the importance of the subject, but for many reasons (limited time, expertise, comfort, compensation, litigation fears, etc.) often avoid it. The net effect is that less than one sixth of women with sexual function concerns may have spoken with their physician about their concern;\textsuperscript{4} less than one fifth of women in menopause have had a conversation with their doctor about their sexuality. Moreover, women in a United States study who raised sexual concerns with their physicians were very often dissatisfied with the clinical attention they received. Fifty-two percent of respondents felt the physician did not want to hear about the problem, 76% said the physician did not examine them thoroughly, 85% received no diagnosis, and 87% said the physician did not follow up on the complaint.\textsuperscript{49}

Acknowledging that a woman’s concerns are valid makes her feel heard, and is therapeutic, even if the issue cannot be immediately resolved. In uncovering an issue, the physician and patient can jointly decide on a management plan that can include treatment with the physician or referral to a sexuality specialist. Many common sexual problems can be handled by an interested and prepared physician without the uniform need for referral. Maurice\textsuperscript{50} has 10 suggestions for how to deal appropriately with a patient’s sexual concerns (Table 2.7).

Making sexual health an integral part of a women’s medical care involves a 2-step process. The first step is to normalize sexual function screening as a regular part of a woman’s health care by asking question such as “On a related women’s health topic, many people have sexual concerns. Do you have any sexual concerns that you might like to discuss?” or “Many people with your health issues have sexual concerns. Would you like to discuss any questions that you might have?”

Once a problem is identified, the next step is to characterize the problem further. This can be done informally, in relation to the DSM-IV-TR diagnostic axes referred to earlier, or more formally, by having a woman complete a validated self-report assessment of her sexual functioning before a second visit to provide some direction for clinical management. There are a number of women’s sexual health questionnaires, including the Female Sexual Function Index\textsuperscript{51} and the Female Sexual Distress Scale,\textsuperscript{52} which assess sexual dysfunction and associated distress respectively.

\begin{table}[h]
\centering
\caption{Sexual history taking}
\begin{tabular}{l}
1. Ask permission. \\
2. Assume the initiative. \\
3. Use professional language (rather than slang). \\
4. Convey a sense of trust and confidentiality. \\
5. Use a form of questioning that involves providing information, followed by a question. \\
6. Display a non-judgemental attitude. \\
7. Delay inquiry into obviously sensitive areas. \\
8. Provide information by way of explanation. \\
9. Ask questions about feelings in addition to experiences. \\
10. Promote an optimistic attitude. \\
\end{tabular}
\end{table}

\begin{verbatim}
Adapted with permission of the author from Maurice WL. Sexual medicine in primary care. Toronto: Mosby; 1999:41.\textsuperscript{50}
\end{verbatim}
At a minimum, the clinician needs to assess the domains of sexual desire, arousal, orgasm, and pain for both the patient and her partner, as both are involved in the sexual function concern.

This information will help the clinician to understand what the sexual concern means for the patient and to make a diagnosis that takes into account medical, psychological, and relationship factors. The clinician must then determine whether the problem is being maintained by medical, psychological, relationship, and/or social factors. A management plan can then be made.

An example of an integrated assessment is shown in Table 2.8.

Once a tentative diagnosis is made and factors maintaining the problem(s) are identified, management approaches may be considered within the level of comfort and expertise of the clinician. The PLISSIT approach to management of sexual function concerns (Tables 2.9 and 2.10) suggests that many patients may be assisted if they are simply given permission to engage in or adapt their sexual behaviours. Clinicians may also help patients by addressing their possibly limited store of information about sexual function (“A lot of women have vaginal dryness while breastfeeding. It’s normal”) and by providing specific suggestions to facilitate sexual function (“Can I suggest that you try some water-based lubricant. You can find it in the drugstore.” The PLISSIT model reminds the clinician that only a small number of patients may require referral for intensive therapy. Clinicians can identify available referrals and assess their quality, waiting lists, and costs as part of preparing for practice in this area. A ready-made list of referrals, when available, for specialized treatment in domains ranging from sex or marital therapy to urogynaecology and for specialists such as vulvar disease consultants and pelvic floor physiotherapists is valuable and can increase a clinician’s comfort in “opening the door” to patients’ sexual concerns.

The ALLOW model also provides some guidance for initial management of sexual concerns: it suggests Asking about sexual concerns, giving Legitimacy to the problem, identifying Limitations to dealing with the issue, and Opening up the discussion, including the potential for referral, and ends with the doctor and patient Working out a joint plan (Table 2.10).

### Recommendations

18. Health care providers should regard the identification and management of a woman’s sexual health issues as important and legitimate elements of her clinical care. (II-2A)

19. Health care providers should ensure they have and apply the skills and knowledge necessary to assess and manage a woman’s sexual health problems. (III-A)

20. Health care providers should provide a clinical environment in which women feel they can discuss their sexual concerns. (III-A)

21. Health care providers should establish a list of clinical sexual health resources in the community for referral when necessary. (III-A)
### Table 2.9. The PLISS IT model of behavioural treatment of sexual problems

<table>
<thead>
<tr>
<th>Level</th>
<th>Types of questions/presentation</th>
<th>Example</th>
<th>Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permission (P)</td>
<td>Am I normal?</td>
<td>“My husband and I have sex once a week. We love each other and enjoy our sex together but I need an orgasm more often so I masturbate 2 or 3 times in between. Is it harmful?”</td>
<td>Provide reassurance. Normalize thoughts/feelings/behaviour</td>
</tr>
<tr>
<td></td>
<td>Is my partner normal?</td>
<td>“I think my husband masturbates. Is that normal for a married man?”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Is what I do harmful?</td>
<td>“Sometimes I fantasize about having sex with a stranger. Is that normal? Does that mean I’m going to cheat on my husband?”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Is it OK to have these thoughts or feelings?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Do other people have these thoughts or feelings?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>What causes …?</td>
<td>A nursing woman wonders why she is not that interested in sex.</td>
<td></td>
</tr>
<tr>
<td>Specific suggestions (SS)</td>
<td>How can I …?</td>
<td>A young couple has frequent successful sexual play, but she has not been able to experience an orgasm with her partner.</td>
<td>Take a focused history of the problem. Then provide a suggestion for something the client can do to address their specific concern. May require bringing the partner in to the session. May involve “bibliotherapy” recommendation of one of the self-help guides listed in the appendix that have been useful in self-treatment of specific sexual concerns such as anorgasmia.</td>
</tr>
<tr>
<td></td>
<td>What’s the best way to …?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>What can you suggest for …?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensive therapy (IT)</td>
<td>Multiple issues, usually long-term, and accompanied by strong emotion.</td>
<td>A couple presents with a discrepancy of sexual desire. Both are able to experience desire, arousal, and orgasm, but strongly disagree on the frequency of lovemaking. Significant conflict and unresolved anger is evident during the first interview.</td>
<td>Take an in-depth and multi-faceted history. Then either refer for therapy or, if skill set and comfort level exist, provide therapy (e.g., cognitive-behavioural, relationship, sex therapy with homework assignments) that addresses the multiple factors affecting the sexual problem(s) or concern(s). Typically involves a minimum of 10 to 20 sessions and almost always requires inclusion of the partner (if there is one).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A woman who was sexually abused as a child has a strong aversion to sex.</td>
<td></td>
</tr>
</tbody>
</table>

### Table 2.10. Models for initiating discussion and treatment of female sexual dysfunction

<table>
<thead>
<tr>
<th>ALLOW</th>
<th>Ask the patient about sexual function and activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Legitimize problems, and acknowledge that dysfunction is a clinical issue</td>
</tr>
<tr>
<td></td>
<td>Identify limitations to the evaluation of sexual dysfunction</td>
</tr>
<tr>
<td></td>
<td>Open up the discussion, including potential referral</td>
</tr>
<tr>
<td></td>
<td>Work with the patient to develop goals and a management plan</td>
</tr>
<tr>
<td>PLISSIT</td>
<td>Obtain permission from the patient to discuss sexuality (e.g., “I ask all my patients about their sexuality, is that okay to do with you now?”)</td>
</tr>
<tr>
<td></td>
<td>Give limited information (e.g., inform the patient about normal sexual functioning)</td>
</tr>
<tr>
<td></td>
<td>Give specific suggestions about the patient’s particular complaint (e.g., advise the patient to practice self-massage to discover what feels good to her)</td>
</tr>
<tr>
<td></td>
<td>Consider intensive therapy with a sexual health subspecialist</td>
</tr>
</tbody>
</table>

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REFERENCES


Management of Sexual Concerns

Women may identify a range of sexual disorders, either proactively or in response to a general question about their sexual functioning from their health care provider. Women may proactively, or in response to a question, identify subclinical sexual concerns that arise in the course of normal life events such as pregnancy, childbirth, aging, and menopause (Chapter 1). Concerns may also result from illness, medication, or surgery, or they may arise from concerns about the normality or appropriateness of their own and/or their partner’s sexual interests and/or behaviour. When these concerns create anxiety or distress, they warrant assessment and treatment by a health care professional.

Subclinical concerns can evolve into major psychological issues or sexual disorders or can result in chronic dysphoria and relationship dissatisfaction.

Women generally view their sexual concerns as a physical and medical issue and thus direct their questions to their primary health care provider or gynaecologist. Health care providers need to develop an approachable manner. They should respond to questions and concerns in a way that communicates their openness to discussing sexual issues, and create an office environment that enables discussion of sexual issues.

Given the prevalence of sexual morbidity and concerns, all health professionals should include questions about the patient’s sexual life as a standard of practice. This questioning invites patients to discuss any sexual questions or problems they might have and tells them that they can acknowledge and discuss sexual concerns as legitimate health issues. This counselling environment sets the scene for further development of a management plan. The assessment may require only a few simple focused questions, it may require a complete history and physical examination, it may require something in between, or it may require consultation with a colleague to address the issues. The goal of the assessment is to clarify the patient’s need and degree of distress and to suggest directions for management. Many clinicians have the knowledge they need to do the assessment but may lack awareness of the prevalence of the problems, of the patient’s expectation, or of how the sexual issue fits into the bigger picture of women’s health care.

The idea of managing patients’ sexual concerns creates anxiety for many health professionals and may cause them to avoid a full discussion and assessment of the patients’ sexual concerns. In addition, health care providers may have practical concerns about time management and lack of adequate remuneration, and they may not be confident that they have the knowledge and skills to fully address the range of concerns patients may identify. That is, health care providers are prepared through their training and experience to manage during brief office visits the majority of sexual concerns that are related to illness, medication, endocrinology, and sexual and reproductive physiology (Chapter 4). However, most have received little training in taking the biopsychosocial approach that is essential to the successful management of women’s sexual concerns. A biopsychosocial approach requires not only medical investigation and treatment but also individual education, counselling, or therapy, and it must also address partner and relationship issues, and/or mobilization of community resources. Even when a medical treatment is available, many women need education, counselling, and support to adequately resolve their sexual concerns.

The practical concerns inherent in providing counselling and support can be dealt with by considering possible levels of intervention (Table 2.9) or by adopting the approach described in a guide to brief psychotherapy for health care providers entitled “The Twenty-Minute Hour” (Table 3.1). This approach is problem-focused, interactive, and fits well in the schedule of busy health care professionals who hope and plan to manage time effectively. In this model, the professional keeps the woman focused on her problem, helps her set goals and discuss her thoughts and feelings, and makes suggestions for next steps. Setting goals and booking the next appointment set up an expectation that work will be done in preparation for the next discussion.

A GENERAL APPROACH TO MANAGEMENT

Management of a woman’s sexual concerns after the cause has been identified can range from simple to complex. Effective management requires both medical and counselling skills.
### Medical Management of Sexual Concerns

The medical skills a health care provider uses in managing general health and illness play an important role in managing sexual concerns. Knowing how diabetes, hypertension, cardiovascular disease, cancer diagnosis and treatment, surgery, and problems with mobility and chronic pain affect sexual function is essential. It is important that any chronic illness or disability be assessed appropriately in exploring and establishing a management plan for sexual complaints.

A major issue in terms of sexual desire, arousal, and orgasm relates to the effect of medication on physiologic sexual response. An awareness of the effects of serotonin reuptake inhibitors, anti-hypertensives, and other medication (Chapter 4) is useful in assessing etiology and planning the management of a woman’s sexual problems.

In building a comprehensive management plan, it is useful for health care providers to be aware of the benefits and risks of using estrogen, testosterone, or phosphodiesterase type 5 inhibitors for women with sexual concerns (Chapter 6).

### Counselling Component of Management of Sexual Concerns

Many of a woman’s needs can be addressed with simple, focused therapy that provides information and counselling well within the scope of the health professional. The PLISSIT approach provides a useful framework for the levels of possible intervention: P stands for permission, LI for limited information, SS for specific suggestions, and IT for intensive therapy. Health care professionals should intervene at the lowest level that is effective in resolving the patient’s sexual concerns. A description of each of the levels of the PLISSIT model and information about and examples of the types of concerns that are most amenable to each level of intervention can be found in Table 2.9. The depth of the assessment required generally increases with the level of the intervention.

---

**Table 3.1. The Twenty-Minute Hour**

| Overview | • Ten 10- to 20-minute appointments.  
|          | • Modest, supportive short-term goals.  
|          | • Deal with the present/plan for the future  
|          | • Listen, interact, converse.  
|          | • Discuss alternatives and give feedback.  
| Why 20 minutes? | • To provide the general health care provider with a planned, realistic, and systematic approach to help the patient with emotional difficulties.  
|          | • Definable methods and short range goals to deliver SUPPORTIVE psychotherapy.  
|          | • Time-limited format helps maintain focus on the present.  
| Goals | • Help the patient focus on the current concern(s) and develop a plan to achieve symptomatic relief.  
|          | • Avoid dwelling on the past, except to understand the present (e.g., understand the social context: work, family, friends) of the concerns and stresses.  
|          | • Focus specifically on what the patient is troubled about.  
|          | • Focus on possible present actions and plan for the future.  
| Health care provider’s role | • Form an alliance with the patient to problem-solve.  
|          | • Be interactive, direct and sincere.  
|          | • Share an interest and responsibility for the outcome.  
|          | • Work within the patient’s value system.  
|          | • Listen to the patient and convey a sense of caring.  
|          | • Ensure the patient’s privacy.  
| Skills | • Facilitative remarks to encourage communication.  
|          | • Redirecting discussion to ensure the conversation stays on track.  
|          | • Clarification: restate and rephrase the patient’s comments in order to summarize and/or sharpen the focus of the discussion.  
|          | • Appraise: emphasize the patient’s positive, healthy and constructive behaviour.  
|          | • Educate: clarify the patient’s misinformation about a point of fact.  
|          | • Skills to avoid unless you have a deep understanding of the patient’s problem: advice giving, psychological interpretation, reassurance. Keep the focus on the here and now and the conscious.  

---
The highest level of intervention, intensive therapy, requires specific training in providing psychotherapy, relationship therapy, and/or sex therapy. Thus, if the lower levels of intervention are not effective, the clinician should consider referring the patient or couple to a specialist in sexual medicine or sex therapy. Only a small number of women are likely to require referral for intensive therapy.

Management of Couple Issues
Typically, sexual problems and concerns are identified by one member of the couple. Nonetheless, a thorough assessment may determine that management of the sexual concern requires the involvement of both members of the couple. In some cases, it is more effective to impart information directly to the partner rather than to expect the patient to convey it. In other cases, it is important that there is buy-in from both partners before specific suggestions can be implemented. In still other cases, if a woman is comfortable in her relationship with her health care provider, she may see this as the best option for her to address concerns about her partner. A partner who is reluctant to address the sexual issue can often be engaged by an invitation to come in as an information source. If the sexual problem is complex, the health care provider may need to refer the couple for intensive therapy. Unfortunately, many communities lack resources to deliver sexual therapy. The assessment may also determine that sexual dysfunction is secondary to the relationship dysfunction, which would require referral for relationship therapy that does not have a primary sexual focus.

Regardless of the level of intervention, it is crucial that the clinician arrange follow-up appointments to determine whether the management strategy is effective. If the original management strategy is not effective, the clinician may need to provide support to the woman in implementing needed changes, engage in more in-depth assessment of the problem than he or she originally thought necessary, and/or change the type of management strategy (e.g., from permission to limited information). As part of the management plan, the clinician should provide resources for the woman and her partner (Appendix).

Summary Statements
19. Effective management of sexual concerns requires a biopsychosocial approach that includes both medical and counselling skills. (II-3)
20. A limited problem-focused approach, sometimes called the Twenty-Minute Hour, can be used to assess and manage sexual concerns effectively without disruption of the office schedule. (II-3)
21. The PLISSIT (permission, limited information, specific suggestions, intensive therapy) approach can be used to determine the level of intervention required. (II-3)
22. Involvement of the partner can often enhance outcomes in managing sexual health concerns. (II-3)

Recommendations
22. All health care providers should include screening questions regarding sexual well-being as a standard of practice. (II-3A)
23. Health care providers who lack confidence in taking a biopsychosocial approach to counselling on sexual health concerns should seek additional training. (III-B)
24. Health care providers should involve the woman’s partner in the assessment and treatment of sexual health concerns when it is appropriate and safe to do so. (III-A)

REFERENCES
Health care providers must be aware of the medical conditions seen in the routine gynaecological practice that affect, directly or indirectly, the sexual health of women.

INFERTILITY

Worries about infertility can contribute to the development of sexual problems, but it is also true that some sexual problems can be important contributing factors in infertility. Along with the various biomedical causes of infertility, intrapsychic and/or interpersonal conflicts can also be causative or contributing factors.1

Failure to conceive a planned and wanted pregnancy creates profound stress on the relationship. This stress may strengthen the bond between the partners and ensure mutual support through the grief and sadness, or it may create emotional separation because of feelings of guilt, anger, embarrassment, and resentment.

Each phase of the investigation and treatment of infertility can affect sexual function. Although the sexual activity may already have been focused on achieving pregnancy, once the problem is acknowledged, the activity may lose its pleasure and bonding function. Scheduling sexual activity to aid in the investigation or to facilitate treatment can heighten performance anxiety and create problems achieving arousal. This distressing invasion of privacy and expectation of performance on demand may result in significant intrapsychic or interpersonal conflicts.

Male or female sexual dysfunction can result in infertility. Male problems that interfere with conception include failure to obtain or maintain erections sufficient for insertion, situational retarded ejaculation, or premature ejaculation, which occurs before penile insertion. Female problems include vaginismus and dyspareunia. The most common presentation of primary vaginismus is the unconsummated relationship. On occasion, intercourse is prevented by secondary vaginismus. Accompanying the vaginismus may be a lack of sexual response, with no lubrication or vaginal expansion, resulting in dyspareunia. In women who have severe dyspareunia the use of artificial lubricants to achieve intromission may in fact adversely affect sperm motility and be a contributing factor to the infertility.

Finally, the reaction to the failure to conceive may contribute to sexual problems. At this point the couple begin to mourn the loss of the child that was never conceived. This may be viewed by the couple as their failure because the infertility clinic has done all it could to help them conceive. Unfortunately these couples often mourn their losses in private because they cannot easily be appreciated by those around them who have not had an infertility problem. In a study of couples undergoing IVF, nearly 50% of the women and 15% of the men reported that their infertility was the most upsetting experience of their lives.2 In 2 studies of couples, the majority reported sex was less pleasurable after infertility treatment.3,4

BENIGN Gynaecological Concerns

It is possible that both benign and malignant conditions could have an effect on sexuality. Treatments for pathologic conditions will therefore inevitably affect sexuality. Health care providers should be prepared to counsel women in advance of treatment with respect to the potential for changes in their sexuality. Unfortunately, there is little good quality evidence that health care providers can offer to patients, and a good deal of the evidence is contradictory, both between studies and within individual studies.5 Using the original Masters and Johnson physiological model for the female sexual response, it is possible to speculate how some conditions and their treatment might affect sexual function.

Any phase of sexual response can be affected by benign conditions or surgery for these conditions. Theoretically, any neuromuscular disruption in the pelvis caused by disease, a vulvar disorder, or gynaecologic surgery affecting pelvic organs or nerves can have an effect on sexual response.

Fibroids

A study by Ertunc suggested that fundal and posterior fibroids are associated with pain, but only posterior fibroids affected the results of their sexuality questionnaire.6 Arousal and orgasm were not affected by fibroids.6 Only large fibroids > 200 cm² negatively affected overall scores for sexual satisfaction and pain during intercourse.6 Myomectomies or uterine artery embolization can improve sexual function.6–8
Dysfunctional Uterine Bleeding

Although management of abnormal uterine bleeding is a significant portion of a gynaecological practice, there has been little research on how this symptom affects sexuality. Kupperman reported that 42% of patients found that abnormal uterine bleeding negatively affected their sex life.3 However, it would appear that the effect on sexuality is varied.

Pelvic Prolapse

There are no definitive data to suggest that pelvic prolapse itself causes sexual dysfunction; however, much of the research suggests that urinary or fecal incontinence, rather than the prolapse, plays a significant role with respect to sexual dysfunction.10,11 One study noted that women with anterior prolapse were likely to have been abstinent for longer than women with posterior prolapse.11 In a retrospective study, Bouchet et al. found a statistically significant difference in sexual satisfaction in favour of abdominal surgery versus vaginal surgery for prolapse.12

Urinary Incontinence and Pelvic Floor Prolapse

Of women with urinary incontinence, 26% to 47% report sexual dysfunction, and the PRESIDE study reported a high correlation between reports of distressing sexual problems and incontinence.13,14 Among women with incontinence, 11% to 45% experience incontinence during intercourse.15,16 Coital incontinence occurs in two thirds of the women during penetration and in the remaining third during orgasm.15,17 According to urodynamic studies, coital incontinence with penetration is correlated with stress urinary incontinence, and coital incontinence with orgasm is correlated with an overactive bladder.15 Women with overactive bladder reported decreased enjoyment of sexual activity compared with those with normal bladder function. As well, urge incontinence, or the sudden painful urge to void, which may be caused by painful bladder syndrome or interstitial cystitis, is often associated with dyspareunia.17

In women with urinary incontinence and sexual dysfunction, surgery might resolve the incontinence but not necessarily the sexual dysfunction.18 The rate of sexual complaints for women with both pelvic floor prolapse and urinary incontinence seems to be higher than with either condition alone.19 While some women report improvement following repair of the pelvic floor, others report no change or the development of dyspareunia.20,21 In one study, sexual function was unchanged following vaginal reconstructive surgery despite anatomic and functional improvements; the lack of benefit may be attributable to postoperative dyspareunia.22

As fear of incontinence may adversely affect women's sexual function, emptying the bladder before intercourse, performing Kegel exercises, and anticipating incontinence during intercourse can help alleviate some of the associated stress. A 2009 study showed that women with coital incontinence had a significantly higher improvement in sexual function after surgery for stress urinary incontinence than did women without coital incontinence.23 In contrast to most of the literature, a study by Barber et al. found that sexual satisfaction was independent of the diagnosis and treatment of urinary incontinence.24

Surgery for Prolapse and Incontinence

As mentioned in the previous section, prolapse itself does not seem to be a cause of sexual dysfunction. In some studies incontinence was a major factor in sexual dysfunction, while other studies reported age to be the predominant factor.11,25–28 However, there are multiple studies to show that surgery for prolapse and incontinence diminish sexual dysfunction.11,26–31 Maher et al. in a Cochrane Review found that abdominal sacral colpopexy was associated with a lower rate of recurrent vault prolapse and dyspareunia than was vaginal sacrospinous colpexy.30 The majority of the literature on this topic shows some benefit for sexuality regardless of the surgical approach.30–34

Hysterectomy for Benign Gynaecologic Conditions

Given the physiology of the sexual response cycle it is difficult to imagine how a hysterectomy, performed for any reason, would not affect sexuality. Recent studies show positive outcomes.35–38 A study by Roovers et al. showed that hysterectomy, by any method of access, improves sexual pleasure significantly. However, it is worth noting that this study also quotes a 39% to 43% rate of 1 or more bothersome sexual problems 6 months after surgery.35

In a 2006 review, Ghielmetti et al. sought to determine whether gynaecological operations have an effect on sexual function.37 In 36 articles detailing the results from 4534 patients, only 13 studies used a validated questionnaire.37 They found prolapse operations, particularly posterior repair with levator placation, seemed to cause deterioration in sexual function.37 Incontinence procedures had a worsening effect on sexual function, and hysterectomy improved sexual function.37 The paper concluded that “gynaecological operations do influence sexual function. However, little validated data are available to come to this conclusion.”37 In stark contrast, other studies show a significant improvement after surgical treatment for prolapse and incontinence.32,33,36,39

Questions are also raised about hysterectomy versus hysterectomy plus bilateral salpingo-oophorectomy with
respect to sexual function. Sudden loss of ovarian hormones can have a negative effect on sexuality. A Cochrane Review states that “Until more data become available, prophylactic oophorectomy should be approached with great caution.”

Patients commonly ask whether preservation of the cervix affects sexual function. A Cochrane Review concluded that there is no difference between subtotal and total hysterectomy as it pertains to sexual function.

There is very little reported in the way of vaginal cuff dehiscence with either procedure. The risk of vault dehiscence (which some feel is under reported) is 0.06 to 3.42, depending on the surgical approach to hysterectomy. This can cause sexual dysfunction both physiologically and emotionally, while with a subtotal hysterectomy this is a not an issue.

DERMATOLOGICAL CONDITIONS OF THE VULVA AND VAGINA

Vulvar pain is a common presenting complaint. Common vulvar dermatologies such as lichen sclerosus and lichen simplex chronicus can cause dyspareunia because of decreased elasticity in the skin, fissures, and diminished calibre of the introitus. Lichen sclerosus can cause the labia to fuse over the clitoris, reducing sensation in the area so that orgasm cannot be achieved. Goldstein and Burrows, in a small study, demonstrated the successful surgical treatment of clitoral phimosis secondary to lichen sclerosus, leading to the restoration of sensation in the area and the achievement of orgasm by all operative subjects. Crohn’s disease can also result in ulcerative or granulomatous lesions in the vulvar area causing pain on intromission. The list of vulva dermatologies is extensive, and when the patient presents with sexual pain, it is essential that dermatological conditions of the vulva are investigated as a potential cause. The signs can be subtle, but often if the dermatological condition is controlled, the sexual dysfunction is eliminated.

VAGINAL COSMETIC SURGERY

Hypertrophy of the labia is not a pathological condition; therefore, decisions about surgery should be based on patient discomfort, which may involve coital pain. The patient should be made aware of the possibility that the surgery may have deleterious effects on sexual function, mostly because of painful scarring or loss of sensation. The largest study to date, undertaken in 1999, involved 163 women, of whom 96% reported functional improvement. Marchitelli et al. looked at 32 women who underwent vulvovaginal esthetic surgery, mostly reduction labioplasty, and found that 94% felt that their postoperative sexual satisfaction was optimal. Ali and Thabet compared clitoro-labioplasty with clitoro-labiectomy and found significant differences in sex scores and sexuality in the labioplasty group and thus recommended this surgery over the labiectomy. The limited research that exists on the topic mostly indicates favourable outcomes; however, whether this is due to mechanical improvement or psychological effects is unknown.

Vaginal tightening surgery or vaginal rejuvenation has also increased in popularity recently. Goodman looked at labiaplasties, clitoral hood reductions, combined labiaplasty/clitoral hood reductions, vaginoplasties and/or perineoplasties, and combined labiaplasty and/or reduction of the clitoral hood plus vaginoplasty/perineoplasty. A total of 91% of patients undergoing such procedures were satisfied with the outcomes, and there was a statistically significant subjective enhancement in sexual functioning for both the woman and her partner.

Summary Statement

23. Despite the many types of gynaecological surgeries, our understanding of the postoperative sexual physiologic changes and consequent effects on sexual function is rudimentary at best. (II-2)

Recommendation

25. Health care providers should advise women that surgery for benign gynaecologic conditions improves sexual function in the majority of women but that a small group may experience detrimental effects on their sexuality. (II-2A)

GYNAECOLOGIC CANCERS

Surgery for gynaecologic cancer (cervical, uterine, ovarian, vulvar, and vaginal cancers) can cause anatomical, physiological, and psychological changes that affect sexuality. In a 2009 study by Aerts et al., significantly more women with gynaecologic cancer than control subjects reported sexual dysfunction (83% vs. 20%). Hormonal changes as a result of loss of the ovaries may cause such problems as atrophic vaginitis and decreased lubrication (42% vs. 9%), while radiation and/or chemotherapy may result in shortening or stenosis of the vagina causing sexual discomfort. Fibrosis of walls of the vagina and destruction of the epithelium can be seen with radiation therapy, causing extremely sensitive, friable mucous membranes that may produce a burning sensation on contact with semen. The Aerts et al. study reported that “Pelvic surgery was specifically related to
reduced vaginal sensitivity (38%), vaginal elasticity (30%), superficial dyspareunia (27%), vaginal narrowing (26%) and shortening (22%)." 59 The treatment of cancers of the reproductive organs may cause pain during sex and/or a loss of sensation and sensitivity in the pelvic area, and thus a decrease in sexual arousal.60,61 In the Aerts et al. study, 43% reported changed quality of orgasm and 76%, versus 14% in the control group, indicated reduced desire.69 These changes can be the result of anatomic changes from the surgical treatment of cancer (e.g., decreased fat/tissue cushioning in the pelvis may cause pain on intromission). As well, disruption of the sensory nerves in the pelvic area as a result of extensive surgical procedures may lead to altered feelings of sexual arousal.60,61 It is also notable that the cancer patients in the study by Aerts et al. cited “significantly lower marital cohesion” relating to their sexual dysfunction.59

Combined Gynaecologic and Colonic Cancer
Pelvic exenteration performed to increase patient survival has an enormous effect on body image. In its most extensive form, radical pelvic surgery removes the bladder, urethra, uterus, ovaries, fallopian tubes, vagina, colon, and rectum As the recovery period is prolonged (at least a few months), and the fear of death is present, resuming sex is not the highest priority for the patient in the short term.62 Most women will have a urinary ostomy and colostomy, and most are very self-conscious because of these ostomies.60,62

Addressing Sexual Concerns Related to Gynaecological Cancers
The mechanical aspects of sexual dysfunction in patients with gynaecologic cancer may be addressed in a number of ways, depending on their etiology. Vaginal lubricants can be used to reduce friction associated with intromission. In some cases, estrogen or testosterone therapy (cream/pill/patch) may also be used to increase vaginal moisture and distensibility.60,62

Pelvic radiation therapy can cause the normal tissue of the vagina to become irritated and sore. It may also cause scar tissue to form in the vagina, which can cause vaginal stenosis. Patients should be instructed to have sex and/or instructed how to use vaginal dilators during the course of treatment so that the vagina stays flexible and open. Even if the patient does not want to have intercourse and is unlikely to do so in the future, there is a need for the vagina to remain open for examinations and health reasons. Chemotherapy can also cause vaginal irritation, which usually clears after a few days; however, severe herpes blisters can also occur because of the cancer therapy’s immunosuppressive effects.60-63

Ostomies present both physical and psychological problems for the patient. There are covers to use while having sex if the patient prefers to remove the collection bag. There are also smaller bags for short-term purposes, and the patient may want to bathe regularly to remove odour.60,62 Patients may prefer to remain covered during sex because of discomfort with the sight of the ostomy. They may also need to reduce fluid and food intake and avoid gassy foods before having sex. Sexual relations, thus, will need to be planned, and this lack of spontaneity can create its own set of problems. As well, non-verbal communication between the partners may need to be better developed so that the patient feels more comfortable during sex.62

The medical treatment of cancer can produce many side effects that can hinder sexual function. Chemotherapy can affect mood and cause fatigue and nausea, further decreasing sexual functioning.60,62 The use of medications such as antidepressants, analgesics, antiemetics, and anxiolytics may assist the patient in overcoming some of the negative effects of these therapies. Fatigue is a common side effect of radiation and may significantly affect sexual drive.60,62 Sleep aids and exercise can be recommended for fatigue. As well, medications to address the symptoms of surgically or medically induced menopause, such as thermoregulatory problems, may also improve the patient’s overall feeling of wellness and enhance her interest in sexual relations.64

As many women with cancer experience chronic pain in relation to sex following treatment, a systematic approach to lovemaking may be needed.62 This approach can include adopting a routine in preparation for sex. This might include the use of a transcutaneous electrical nerve stimulation unit or warm bath, stretching exercises to encourage deep muscle relaxation, and imagery or meditation.60,65 It is important that the patient be well rested for sex, and it may be appropriate to time pain medications for maximum effectiveness during sex. Encourage patients to focus away from the pain during sex by thinking of sexual fantasies, trying different positions to find the most comfortable ones, and using vaginal lubricants liberally.60,62,65,66

The psychological effect of cancer on a patient’s sexuality, however, can be more difficult to address. Changes in a patient’s sexual self-concept or identity, body image, and relationship are common after gynaecologic cancer.64 Sex therapy focusing on body image and sensate focus exercises may help the patient recover the sexual feelings she had before treatment.

Depression and anxiety can exist for both partners,60,62,65 but the support of a partner can be an essential element in the patient’s healing. It has been shown, for instance,
that a partner’s support can greatly assist in a patient’s adjustment to an ostomy. As well, the emotional toll that cancer diagnosis and treatment has on the patient and her partner and on their sexual relationship should not be underestimated.

**Summary Statement**

24. Health care providers need to address both the physical and psychological components of cancer as they relate to sexuality. Pain related to the disease and/or the treatment may inhibit sexual desire, and the disease and/or the treatment may make sexual activity painful. (III)

**Recommendation**

26. Health care providers should involve the woman’s partner in addressing sexual issues, with attention being paid to basic sexual adjustments (i.e., timing, positioning, lubrication, non-coital lovemaking). (III-A)

### BREAST CANCER

Sexual dysfunction is common after diagnosis and treatment of breast cancer. Each step, from diagnosis through treatment to follow-up, can have an adverse impact on sexual function. Each treatment—surgery, radiation treatment, chemotherapy, and follow-up drug therapy—can produce specific sexual morbidities and can contribute to general fatigue and other physical symptoms.

Chemotherapy affects all domains of sexual interaction, including desire, arousal, and orgasm, and it can make intercourse uncomfortable. The fatigue associated with chemotherapy and premature ovarian failure due to the effect of chemotherapy on ovarian function also contributes to sexual dysfunction.

The effect of surgery on sexual function depends on the degree of conservation of breast tissue. The more conservative the surgery, the more likely the couple are to engage in breast caresses. Women who have only surgical treatment are more likely to return to the same coital frequency and ease of orgasm and satisfaction they had before cancer.

The effect of radiation treatment on the breast may result in loss of normal sensation in the breast, discoloration of the skin, thickening and fibrosis of the skin, and range of motion difficulties in the shoulder and chest wall.

Treatment of breast cancer has more profound effects on premenopausal women because chemotherapy destroys ovarian function and fertility, and causes menopausal side effects. A drop in estrogen production causes cessation of menses, hot flashes, and vaginal dryness. The sexual consequences, which include loss of desire and arousability, and painful intercourse, are often long lasting and related to treatment choices. The only 2 factors predictive of sexual outcomes are relationship function and chemotherapy as a choice of treatment. Multiple treatments have a cumulative effect on sexual morbidity and resumption of a normal sex life after therapy. Lubricant or topically applied estrogen may be recommended for the vaginal dryness.

Breast cancer treatment can have a major impact on a woman’s relationship. Younger couples seem to be affected more. The pre-morbid quality of the relationship and pre-existing sexual problems can predict the outcome and resumption of sexual interaction.

Poor quality relationships and partners who are reluctant to learn about the disease or support the woman through her treatment are predictive of poor outcomes and lower likelihood that sexual interaction will be resumed.

Mood disorders can also affect sexual function in women with breast cancer. It has been estimated that 17% to 25% of the hospitalized cancer population could be diagnosed as clinically depressed.

A partner’s reaction to a woman’s depression may be profound. Partners who were involved in decision making rated their sexual satisfaction higher. The better the men felt about the relationship, the less disrupted the sexual interaction. Sexual function and depression independently affected relationship satisfaction. This study also found that the quality of the first sexual experience after treatment was predictive of the couple’s later sexual adjustment.

In summary, the prognosis for the sexual relationship after cancer treatment depends on pre-treatment levels of sexual function, treatment choices and number of treatments, the quality of the partner relationship, age at diagnosis, and the partner’s response to diagnosis and treatment.

### CHRONIC CONDITIONS

The effect of chronic disease on sexuality is highly relevant in the aging population, but chronic disease also causes distress in a percentage of younger patients. During the acute phase of illness, sexual function may have low priority for the patient. As disease becomes chronic, it can have a significant effect on sexual activity. When the patient experiences pain or fatigue on a daily basis, sexual activity may seem like too much effort. Medications prescribed
for the illness may have a negative effect on sexual function.\textsuperscript{65,71,72} As well, anxiety, anger, and depression are more prevalent in patients with debilitating illnesses, and patients experience a “normal sadness” with respect to the illness and their loss of function. They may express concern about their ability to perform sexually, and pain experienced during sex may elicit health fears and cause avoidance and withdrawal.\textsuperscript{65,70,73}

Some illnesses, such as amputations, paralysis, arthritis, and chest, back, and arm pain, directly impair sexual ability. Some diseases can cause long-term disfigurement and physical disability and can be devastating to self-confidence. Chronic illness can create an impaired body image, depending on how much emphasis the patient places on physical beauty and, as a person needs to feel desirable as a sexual partner, it can impair sexual functioning. The reaction of the public to the illness (e.g., do people stare?) and the partner’s reaction to the disease (e.g., does the partner initiate sex?) also affect the patient’s self-esteem.\textsuperscript{65}

Relationship problems associated with the disease may arise.\textsuperscript{65,74} In some cases, the healthy spouse may become angry with the unhealthy one and resent the parental/caregiver role. It can be difficult for the partner to change from the caregiver to the lover role when needed and to see the patient in that light. The patient and the partner may need to adjust to awkward preparations for lovemaking. For example, bowel or bladder care may need to be considered in advance, it may be necessary to arrange pillows/support on the bed, sexual activity may need to be timed for when pain is decreased, and it may be necessary to alter preferred sexual positions.\textsuperscript{65,74,75}

**MEDICAL CONCERNS**

**Medications and Sexual Function**

**Psychotropics**

Psychiatric disorders frequently impair sexual response in women. The prevalence of sexual dysfunction in depression is between 35% and 70%.\textsuperscript{76} Although treatment with psychotropics improves mental status, their use may lead to a sexual dysfunction. Unfortunately few clinical randomized controlled trials using antidepressants have been done on this subject, especially in women.

**Serotonin reuptake inhibitors, serotonin and noradrenergic reuptake inhibitors, noradrenergic reuptake inhibitors, and noradrenergic and specific serotonergic antidepressants**

**Serotonin reuptake inhibitors:** A meta-analysis presented by Serretti and Chiesa\textsuperscript{77} on the impact of SSRIs on treated female patients demonstrates that the rate of sexual dysfunction is very high in this population (Table 4.1). Desire dysfunction was present in approximately 70% of women treated. More women than men experience arousal dysfunction at a rate of 80%. Orgasm dysfunction is also frequent, at around 40%. According to type and doses, all the products of this group of antidepressants will have variable effects on sexual function.

**Serotonin and noradrenergic reuptake inhibitors:** A study comparing venlafaxine with bupropion found that bupropion had a more favourable sexual side-effect profile than venlafaxine.\textsuperscript{78} Desvenlafaxine is expected to have the same sexual side-effects profile as venlafaxine because is a major metabolite of venlafaxine. Duloxetine was associated with lesser effect on sexual function than SSRIs.

**Noradrenergic reuptake inhibitors:** Roboxetine is a selective norepinephrine reuptake inhibitor. Norepinephrine reuptake inhibitors appear to have less detrimental effect on sexual function than the SSRIs.\textsuperscript{79}

**Melatonergic drugs:** Agomelatine, a melatonergic agonist (MT1 and MT2 receptors) and 5-HT2C antagonist, is a novel antidepressant with a more favourable sexual side-effect profile than paroxetine.

**Management of sexual side-effects with SSRIs**

Comprehensive patient education, sex therapy, and modification of antidepressant treatment or reduction of dosage can help patients to manage sexual side effects of antidepressants. In a randomized controlled trial, adding sildenafil to treatment of women with sexual dysfunction with SSRIs seemed to reduce adverse sexual effects and reversed associated anorgasmia.\textsuperscript{80}

**Antipsychotics**

In a trial, after 12 months of treatment with antipsychotics, the onset of new sexual dysfunction in schizophrenia patients (male and female) was as follows: with olanzapine 29%, with quetiapine 34%, with risperidone 43%, and with haloperidol 45%. This trial was self-reported and funded by the manufacturer of olanzapine.\textsuperscript{81} Very limited data are available concerning sexuality and schizophrenic women.

**Non-Therapeutic Drugs and Sexual Dysfunction**

**Alcohol**

Alcohol acts as a disinhibitor, making people more receptive to their partner. However, in alcoholic women, sexual dysfunction can manifest as loss of desire, decreased arousal, and orgasmic difficulties. Alcohol also inhibits the hypothalamic–pituitary–adrenal axis and results in reduction of estradiol levels in women, which may interfere with vaginal lubrication.
Cannabis
Tetra-9-tetrahydrocannabinol, the active component of cannabis, acts on the brain and can improve sexual performance mainly by increasing disinhibition and encouraging erotic fantasies. In a study done on cannabis users, 76% of females reported increased pleasure and 30% an improvement of quality of orgasm.82

Opioids
Opioid abuse leads to decreased libido. In a population of heroin addicts, 68% of women reported decreased interest in sex, and 60% reported reduced arousal and anorgasmia.83 “Pharmacogenic orgasm,” the rush of euphoria and the subsequent period of relaxation brought on by heroin reduces the interest in sex.

Cocaine
Chronic cocaine users report negative effects on their sexual life. Women using crack also report high levels of sexual dysfunction, contradicting the notion that these substances have aphrodisiac properties.84

Methamphetamine
Methamphetamine is a powerful stimulant that enhances well-being and excitement, increasing the likelihood that users will engage in high-risk sexual activities. This drug acts as an aphrodisiac, reducing sexual inhibitions and increasing sexual satisfaction.

Ecstasy
Ecstasy (3,4-methylenedioxymethamphetamine) is structurally related to amphetamine and to mescaline. All users report increased sexual desire, and 93% of women, an increase in satisfaction. Arousal is enhanced in 80% of women, and orgasm is perceived as more intense in 53% of female users.85

“Date rape drugs”
The “date rape drugs,” gamma-hydroxybutyric acid (GHB), flunitrazepam, and ketamine, when mixed with alcohol, produce disinhibition and lasting anterograde amnesia.

Psychiatric Concerns
Depression
Many sexual problems (e.g., pelvic pain, dyspareunia) can result in depression, and non-sexual causes of depression can affect sexual function in the individual.86,87 Menopausal women may present with a decrease in sexual functioning, which may or may not be associated with depression.88,89 In studying women with chronic pelvic pain, Ter Kuile et al. found that their sexual problems were associated with...
both anxiety and depression and that the level of anxiety and depression mediated the effect that chronic pelvic pain had on their sexual problems.90

Both depression and anti-depressants have been associated with sexual dysfunction; however, there are discrepancies between studies with respect to the frequency and quality of this sexual dysfunction.86,90,91 Most of the commonly prescribed antidepressants are associated with sexual side effects, which have often been cited as the reason for non-adherence to the pharmacological treatment of depression.86,91–93 Cohen et al. studied psychiatric inpatients and found that the most severe and frequently reported sexual dysfunctions were in those taking antidepressants versus other psychiatric medications (e.g., antipsychotics, opioids).94 Some antidepressants appear to have fewer sexual side effects, and switching medications, temporarily stopping medications (drug holidays), lowering drug dosages, or administering a phosphodiesterase-5-inhibitor may alleviate sexual problems.77,86,91–93

Schizophrenia

The frequency of sexual problems associated with schizophrenia and the degree of distress they cause may be underestimated.95 A study by Kokoszka et al. reported 93% of schizophrenic patients exhibited symptoms of at least one sexual dysfunction.96 Another study reported that these disorders do not resolve and that they appeared more severe in young adults.97 Sexual dysfunctions associated with schizophrenia may be due to depression and low libido, the effects of psychosis, and limbic system abnormalities.97,98 As well, Hariri et al. reported that female patients with schizophrenia and bipolar disorder suffered more from vaginismus than a control group.99 Kokoszka et al. also reported that 93% of schizophrenics had symptoms of at least one sexual dysfunction96 secondary to an ongoing psychopathologic process, such as schizophrenia. Sexual risk taking is also more prevalent in those with mental health disorders, and people with schizophrenia are more likely to engage in unprotected sex with HIV-positive partners and are more likely to experience relationship violence when pregnant.97,100

It may also be difficult to determine what components of the problem are caused by the condition versus psychotropic medications.95,97,101,102 The causes of medication-related sexual dysfunction in schizophrenia include elevation of plasma prolactin levels (second-generation anti-psychotics), sedation owing to antihistaminergic effects, adrenergic effects, and serotonergic blockade.97,103,104 The effects of atypical antipsychotics on sexual function are frequent, and they are to blame for 50% of patient non-adherence to treatment.104,105 In a study by Rosenberg et al., 38.5% of female patients with severe mental illness felt that their psychiatric medications were causing sexual side effects, and 15.4% of women in the study “admitted that they had stopped their medications at some point during their treatment because they believed they were experiencing sexual side effects.”101

However, 80% of women in the study who experienced sexual side effects failed to discuss their dysfunction with their primary mental health provider.103 As well, Hariri et al. reported that patients in their study were unaware of the effect of psychotropic medications on their sexual functioning.90 This suggests that health care professionals should talk to every patient with schizophrenia about their sexual functioning throughout the treatment period, not only because of its possible effect on adherence to pharmacotherapy but also to achieve total mental wellness and to address quality of life issues.98,99,101 Addressing sexual dysfunction in schizophrenia includes a thorough assessment for physical pathology, medication changes, dose reduction, and referrals to specialists.101

ISSUES IN TRANSGENDER SEXUALITY

The DSM-III used the diagnosis of transsexualism for gender dysphoric patients. The DSM-IV replaced this with gender identity disorder.106 Terminology among professionals and the public is non-specific, and transsexual, transgender, and other terminology tend to be used interchangeably.

In a study of female-to-male transsexuals in North America, Bockting found that transgender individuals have a developmental process similar to that of non-transgender individuals but that they also have unique experiences, which, according to the author “signals the emergence of transgender sexuality.”107 Some studies describe transsexuals as individuals who experience the physical functioning of their sex organs as estranged from their selves and who seek a reassignment to the desired sex.107 Transgender individuals who want to rid themselves of the natal sex without seeking reassignment to the opposite sex or who want only partial adaptation to the opposite sex, seek to have an in-between sex status.108 Some individuals may choose to present as the opposite sex in social situations, at least part of the time. Regardless of the terminology, individuals in this population may identify themselves as belonging anywhere along the traditional gender continuum, and some may feel they are not on the continuum at all. With the help of hormones and/or surgery, they can be anywhere along the continuum physically and/or emotionally.108–110
In a long-term assessment of transsexual women, Weyers et al. found that they “functioned well on a physical, emotional and psychological and social level.” Sexual dysfunction in this population includes both positive and negative effects of hormonal manipulation, structural issues of the vagina, vaginal lubrication, pain with sex, arousal, and sexually transmitted infections. These problems can occur in any population, and management principles are consistent. However, in a 2008 study of female-to-male transsexuals, Dutton identified 4 issues that might help health care providers caring for transsexual patients: (1) patients perceived gynaecologic care as important; (2) breasts caused the most gender identity conflict; (3) transgender men struggle with revealing their gender identity to health care providers; and (4) the male/female boxes on health intake forms, as well as pronoun use by medical staff, were barriers to receiving health care.

Summary Statements

25. Medical illnesses and their treatment can have effects on the sexuality of both the woman and her partner. (II-3)
26. Chronic illness can cause physical and emotional changes, both of which can affect female sexuality. (II-3)

Recommendations

27. Health care providers should consider the implications of medical conditions and their treatment on women’s sexuality. (II-3A)
28. Clinicians caring for women with chronic illnesses should integrate information about sexual care into their medical therapy. (II-3A)

REFERENCES


Coital Pain

APPROACH TO THE PATIENT WITH DYSpareunia SECONDary TO CHRONIC VULVAR PAIN

The patient with chronic vulvar pain often experiences profound frustration, guilt, anger, and a sense of helplessness, which significantly affect her sexual life. A history of multiple health care provider visits and multiple treatment interventions is common. It is critical to provide a strategic approach that will offer hope for symptom control and, if possible, symptom relief. It is important to keep in mind an organized differential diagnosis of vulvar pain and to use this differential to focus the history and physical examination.

A telephone survey conducted in the United States and published in 2007 showed a prevalence of chronic vulvar pain of 9.9%. Forty-five percent of the respondents with pain stated that their sexual function had been adversely affected. On the basis of a 2-year prospective study, Reed et al. concluded that each year 1 in 50 women would develop vulvar pain, and 1 in 10 women would report remission of symptoms. The International Society for the Study of Vulvovaginal Disease classifies vulvar pain into 2 groups:

1. Vulvodynia (pain with no visible abnormalities)
2. Vulvar pain secondary to underlying conditions

Common underlying conditions giving rise to dyspareunia include atrophic vaginitis, dermatological diseases, and infections such as genital herpes and candidiasis, as well as visible and non-visible lesions.

Focused History

The patient should be asked about the history, chronicity, and characteristics of the pain, as well as aggravating and relieving factors. It is important to take a few minutes to document the response to previous therapies, even if they were only partial or temporary. This information can provide direction for diagnosis and rational treatment.

Every woman with vulvar pain should be asked about past and present medical and surgical conditions and whether she has a history of mood disorders, and past obstetrical and gynaecologic history should be reviewed. It is essential to take a sexual history, and, in particular, it is important to know whether or not symptoms of vulvar pain are provoked by vaginal penetration.

Examination

A careful examination of the patient is essential in seeking a diagnosis or assessing response to therapy. Good communication is also essential, and the conscientious health care professional must respect the concerns of the patient during the examination. Careful inspection, examination with magnification, Q-tip test, speculum examination, and a single-digit bimanual examination are needed for a complete assessment of the pelvis.

Therapy

Therapy should be specific to conditions suggested by history or discovered at the time of examination. In the case of undiagnosed vulvar pain, empiric therapy is worthwhile. In particular, a trial of regular antifungal and/or antiviral therapy for 3 to 6 months is reasonable. Discontinuation of oral contraception may be helpful. Symptomatic therapies should be offered to all women suffering from distressing symptoms. It is important to reassure the patient that many women can expect resolution of their vulvar pain. Regardless of treatment plan, an ongoing, supportive discussion of sexuality is important for a positive outcome.

VESTIBULODYNIA AND SEXUAL FUNCTION

As defined by the International Society for the Study of Vulvovaginal Disease, provoked vestibulodynia is a subtype of vulvodynia with pain exclusively localized to the vulvar vestibule. PVD is one of the most common causes of dyspareunia in the younger female population. The pain is provoked by any direct contact with the vestibule. Estimated prevalence rate of this disorder ranges from 12% in the general population to 15% among patients at gynaecologic clinics.

Vulvar pain from PVD is characterized as sharp and burning. PVD is classified as primary or secondary according to the onset of pain. In primary vestibulodynia, the pain has been present since first attempt at insertion of anything, including a tampon, a speculum, or a penis.
In the secondary subset, the pain gradually appears after a time of painless sexual activities (or examination and/or tampon insertion in women who are not sexually active).

The etiology of PVD is still unclear and probably of multifactorial origins. Many hypotheses have been reported in the scientific literature to explain this syndrome, such as congenital disorders, genetic and immunologic factors, hormonal factors like oral contraceptive use, central neuropathic pain, nociceptors proliferation, and myofascial hypertonicity. Most clinicians reject psychosexual dysfunction as a significant cause of PVD; however, health care providers recognize that psychological and sexual distress in women is frequently associated with chronic sexual pain.

According to Friedrich, PVD is characterized by severe pain upon vestibular touch or attempted vaginal entry, acute pain during cotton swab palpation of the vestibular area, and vestibular erythema. However, the third criterion is not based on reliable scientific evidence and is no longer considered in the diagnostic process. Differential diagnosis includes vulvar dermatosis, vulvovaginal infections, atrophy, and pudendal nerve entrapment.

A wide variety of therapeutic approaches have been proposed, but no consensus has yet been reached. Management includes topical, oral, surgical, behavioural, and cognitive-behavioural treatments. This guideline concentrates on the 3 treatments most frequently adopted by the large majority of health care providers dealing with this entity: medical treatment, vestibulectomy, and biofeedback. Counselling women with PVD about hygiene and care of vulvar skin (avoiding vulvar irritants, using mild soaps, and maintaining adequate lubrication during sexual activity) is not specific to the syndrome but can help to reduce pain.

Medical treatments are divided between topical and oral therapy. The most commonly prescribed topical medication is lidocaine or xylocaine gel 2% or ointment 5% applied to the vestibule 15 to 30 minutes before intercourse to reduce pain during sexual activity. In an open-label trial reported by Zolnoun et al., use of lidocaine ointment 5% applied on the vestibule at bedtime for 7 weeks has also been shown to reduce pain by at least 50%. There have been no randomized trials to confirm the efficacy of this therapy. Corticoid creams are frequently prescribed but rarely effective in reducing the vulvar pain. Moreover, the chronic use of high potency steroid ointment increases redness and atrophy of the vestibule mucosa already present in PVD.

Tricyclic antidepressants are frequently used in chronic pain syndromes. A randomized placebo controlled trial did not demonstrate benefits of tricyclic antidepressant use in PVD.

Oral fluconazole once weekly did not achieve significant improvement of this condition in a randomized placebo controlled clinical trial for pain relief.

Biofeedback is very effective in controlling dyspareunia. A large proportion of women with PVD demonstrate hypertonicity of the levator ani. Exercises of pelvic floor muscles using sequences of contraction and relaxation are very helpful to treat vaginismus, which is often associated with PVD.

Surgery is rarely suggested as first-line therapy because of its invasiveness. However, vestibulectomy, a surgical approach described by Woodruff et al. in 1981, still represents one of the most efficacious treatments. Success rates of about 80% were reported in 28 out of 32 scientific publications reviewed by Goldstein in 2006. Vestibulectomy is a minor surgery with few related complications. Wound infection, such as dehiscence (1% to 3%), decreased lubrication (20%), and Bartholin’s duct cyst (1% to 3%) are the most frequently quoted. Vaginal dilators or biofeedback are often recommended after surgery as supportive measures.

In conclusion, PVD is a frequently occurring syndrome among younger women, but it is not always recognized by health care providers. The etiology is still unclear, and optimal treatment has not yet been established. Randomized controlled trials to obtain scientific evidence are urgently needed.

**CHRONIC PELVIC PAIN**

Bachmann and Phillips feel that chronic pelvic pain, organically and psychosocially, is generated through organ systems and neural pathways similar to those involved in the sexual response cycle and that the 2 may therefore be interrelated. Deep dyspareunia is most commonly associated with chronic pelvic pain, and endometriosis appears to be the most common cause of deep dyspareunia. There can be many causes of chronic pelvic pain, including endometriosis and vaginal, bladder, or bowel disease. As chronic pelvic pain and sexual dysfunction often co-exist, health care providers should be attentive to that possibility. Ripps and Martin showed that in the presence of 2 of 3 symptoms (pain, dysmenorrhea, deep dyspareunia), the relative risk of finding endometriosis is 3:1.

A retroverted uterus has been proposed as a cause of sexual dysfunction, and despite studies showing relief of symptoms with uterine suspension the topic remains...
controversial. There is suggestion that a retroverted uterus in combination with co-existing pathology is more likely to be the cause of the problem. The concept of adhesions causing chronic pelvic pain is controversial, but studies undertaken in the early 1990s showed a 75% improvement in deep dyspareunia after lysis of adhesions. As well, conditions affecting the bladder, particularly interstitial cystitis, are often linked to sexual dysfunction associated with chronic pelvic pain. There are multiple theories, such as vasodilatation being common to both, and bladder wall trauma or the release of neurotransmitters as contributors to both interstitial cystitis and sexual dysfunction. Health care providers should keep this in mind when assessing sexual dysfunction. Pelvic congestion also remains a consideration for sexual dysfunction, and a moderate amount of research has been done with respect to pelvic congestion syndrome and chronic pelvic pain.

VAGINISMUS

Vaginismus is the involuntary contraction of the pelvic musculature surrounding the outer third of the vagina. The incidence of vaginismus is unknown, and the ranges quoted in the literature vary widely. Vaginismus may be lifelong (primary), acquired (secondary), complete, partial, and/or situational. Most often, the etiology for vaginismus is never delineated. On occasion it might follow a specific precipitating event such as painful intercourse, a painful pelvic examination, a sexual assault, pelvic inflammatory disease, gynaecologic surgery, urogenital atrophy, vulvar dermatology, or childbirth. However, levels of generalized anxiety are elevated in patients suffering from vaginismus, and one study concluded that “although vaginismus is a multidimensional condition, it may have common predisposing factors with anxiety disorders.” Maintaining factors must also be considered. When a couple continue trying to have intercourse despite the pain, it will reinforce the anticipatory spasm of the musculature.

An accurate diagnosis can be made on the basis of the patient’s history and a physical examination. The most common presenting symptom is pain with intercourse, and the description of the discomfort often includes burning, tearing, the sensation of a cut in the vagina, and the sensation of sandpaper rubbing the vagina. The pain might lead to the inability to have penetrative intercourse or the actual contraction of the muscle might prevent intromission. Pelvic examination might be difficult or impossible for the patient to tolerate. If it can be tolerated, pelvic examination enables the classification of vaginismus:

- First degree: perineal and levator spasm, relieved with reassurance
- Second degree: perineal spasm, maintained throughout pelvic examination
- Third degree: levator spasm and elevation of buttocks
- Fourth degree: levator and perineal spasm, elevation; adduction and retreat.

Vaginismus can be difficult to delineate from provoked vestibulodynia (formerly vestibulitis), and they often occur together.

Treatment

A Cochrane Review states that no studies have compared treatments with no treatment, so it is not possible to draw conclusions about how well treatments for vaginismus work. Uncontrolled reports suggest that sex therapy may be helpful. Further studies are needed to confirm this. The therapeutic process has begun when the woman makes the commitment to attend the appointment. The next part of treatment begins with educating the woman and her partner about her symptoms and the underlying physiology of the problem. If vaginismus is occurring when the patient has a partner, emphasizing to the woman and her partner that the problem is not in her head but in her vagina goes a long way to alleviating the burden she has been carrying with respect to their sexual relationship. Efforts should be made to educate the couple on how to approach intercourse, or, preferably, outercourse. Learning to associate sexuality with pleasure rather than pain should be a focus of treatment. This is achieved by maintaining sexuality but eliminating the painful stimuli. Cognitive-behavioural therapy techniques are useful. Short-term therapy focuses on reversing the symptoms. Intrapsychic issues that interfere with physiologic sexual response or create vaginismus based on inhibition, fear, or trauma respond best to this approach.

The mainstay of treatment for vaginismus has been systematic desensitization to vaginal penetration exercise. The aim is to gain control over and relaxation of the levator ani muscles. The exercise often used for this process has been called reverse Kegel exercises. This entails the contraction of the levator ani muscles for 1 second and relaxation of the muscles for 10 seconds. This is done repetitively, and over time the introduction of the woman's fingers or a dilator is undertaken. When she has become comfortable with this process, her partner’s
fingers are introduced. The insertion of dilators or digits is a slow and graduated process and can take weeks of nightly exercises. These exercises should be accompanied by work on and attention to other issues such as sexual responsiveness. The final step involves intercourse, and once this has become a pain-free process attention can be paid to other issues, such as sexual responsiveness. A pelvic floor physiotherapist can help with these exercises and can also show the patient how to use technical aids to facilitate these exercises.\textsuperscript{38–40}

Other modalities include couples therapy, electromyography, benzodiazepines, neuro-modulators, antidepressants, such as amitriptyline, hypnotherapy, botulinum toxin type A injections, and traditional Chinese medicine and acupuncture.\textsuperscript{37} None of these modalities have been tested in robust trials. However, while evidence is minimal, alternative treatments such as traditional Chinese medicine and acupuncture are used by many practitioners, and anecdotal reports seem positive. Local anaesthetic, applied topically as a jelly, injected into trigger points, or in the form of a pudendal block, is not considered to be a treatment for vaginismus.

With respect to botulinum toxin, although there have been few studies, all with small numbers, the results of these studies are promising.\textsuperscript{41–47} Most of the success was seen after 1 treatment, but occasionally repeat treatments were required. However, while there were no reports of any major side effects in these studies, clinicians using this modality have reported fecal and urinary incontinence lasting 3 to 4 months, as well as unusual pressure pain in the vagina separate from the vaginismus pain.\textsuperscript{40} The discrepancy between the findings of the studies and these anecdotal reports might be a result of the very small sample sizes in the studies. Use of botulinum toxin to treat vaginismus is experimental at best. It should not be used as a quick-fix substitute for appropriate multi-factorial management of sexual medicine issues.

DEEP DYSPAREUNIA

Deep dyspareunia is pain associated with deep penetration. It may be

- primary (lifelong) or secondary
- present every time penetration is attempted or sporadic
- cyclical in nature
- restricted to vigorous intercourse
- include any sexual position or be restricted to those positions facilitating deeper penetration.

Like most pain, deep dyspareunia can be nociceptive or neuropathic. Prevalence data for dyspareunia in general are poor and have widely varying results. There is no good evidence that allows delineation of deep dyspareunia epidemiology from dyspareunia as a broad category.\textsuperscript{48}

Causes

Deep dyspareunia can be caused by endometriosis, interstitial cystitis, adnexal pathology, retroverted uterus, shortened vagina, pelvic floor hypertonicity, over-vigorous penetration, post-surgical scarring of vault or intraperitoneal scarring, prolapse, excessive penile length, pelvic congestion syndrome, constipation, or other bowel issues.

It remains unclear whether uterine myomas and adenomyosis are causes of deep dyspareunia.\textsuperscript{49,50}

When partner roughness or poor sexual technique is a factor, it is important to stress that no one should be required to tolerate sexual pain and to clarify the patient’s goals for the relationship.\textsuperscript{51}

Treatment

Treatment needs to be aimed at the causative factors.

Endometriosis

Although medical therapies may improve deep dyspareunia in women with endometriosis, “laparoscopic excision of deep endometriotic lesions has been demonstrated to improve not only deep dyspareunia but also the quality of sex life.”\textsuperscript{49} A Cochrane Review showed that a GnRH analogue-treated group had a slight decrease in dyspareunia associated with endometriosis compared with a group treated with an oral contraceptive, but at 6 months post treatment, there was no statistical difference in improvement.\textsuperscript{52} Another Cochrane Review found that patients who had laparoscopic excision of the cyst wall of endometriomas > 3 cm had significantly less dyspareunia than those having surgery to ablate the endometrioma.\textsuperscript{53}

Interstitial cystitis

Interstitial cystitis can be debilitating and can have a devastating effect on sexuality secondary to severe dyspareunia. In a small study looking at intravesical bacillus Calmette-Guerin, dyspareunia resolved in 86% of the patients (6 of 7). This study would suggest that interstitial cystitis is indeed responsible for some deep dyspareunia.\textsuperscript{54} Unfortunately there is no consensus on the best treatment option for interstitial cystitis.

Pelvic congestion

The diagnosis of pelvic congestion is controversial in some circles, but as dilated veins with congestion in other parts of the body have been shown to cause pain, it seems likely that
dilated veins in the pelvis could also cause pain. Duncan and Taylor found that there was a correlation between emotional stress and blood flow to the vaginal wall, but Osofsky and Fisher found these same changes in control subjects, which suggests that pain from pelvic varicosities/congestion was fictitious. There is no good evidence on what constitutes dilated vasculature in the pelvis and no good evidence to support pelvic vein embolization, but some patients have had success with this modality. Metzgar compares ligation, embolization, and total abdominal hysterectomy–bilateral salpingo-oophorectomy for treatment of pain related to congestion. Eleven studies with a total of 136 patients were compared. Surgery was by far the most successful; however, these are very small numbers and the design of studies questionable. There is also expert opinion that most post coital pain has at least some vascular component to it and exercises aimed at “draining” the pelvis after intercourse are helpful in relieving post-coital pelvic pain.

**Lysis of adhesions**
Nerve fibres have been identified in adhesion tissue. Laparoscopic lysis of adhesions has been shown to relieve deep dyspareunia in 75% of women if there is no history of chronic pelvic pain.

**Hypertonicity**
Hypertonicity can include some or all of the pelvic musculature. It can lead to deep dyspareunia from direct muscle contracture of from the development of trigger points that have referred pain. Treatment is multi modal, including physiotherapy and medications (non-steroidal anti-inflammatories, neuromodulators, local anaesthetics to trigger points, and botulinum toxin), as well as acupuncture. Physiotherapists who have an interest in pelvic floor relaxation can be very helpful.

**Retroverted uterus**
A retroverted uterus can cause deep dyspareunia, presumably related to the uterus being trapped between the bony pelvis and the penis with deep thrusting. Perry et al. showed that suspending a retroverted uterus can significantly decrease deep dyspareunia.

**Vaginal apical pain after hysterectomy**
This is a known entity and may be related to granulation tissue that is painful. Occasionally a fallopian tube may be caught in the vault. Vaginal apical pain may be due to persistent disease such as endometriosis, or it may be neuropathic pain. It may also be related to neuroma, fibroma in the scar, or mesh erosion. Removing disease and using local anaesthetic and or neuro-modulators can often be helpful.

**Ovarian pathology**
There is no evidence showing that ovarian pathology can cause deep dyspareunia, but if that is the presumed cause then removal of the pathology should be helpful in resolving the pain.

**Pelvic prolapse**
Pelvic prolapse can cause dyspareunia, and reparative surgery is helpful for this type of dyspareunia. It is unclear whether surgeries using mesh result in less dyspareunia than non-mesh surgeries, because mesh provides better support, but eroding mesh can cause pain. A study by Wald and Heaton showed new onset apical dyspareunia from Prolift mesh was relieved by excision of the apical mesh.

**Summary Statements**
27. Coital pain is common and is likely to have a negative effect on a woman’s sexual function. (II)
28. Vulvar pain may arise from visible, intermittently visible, or non-visible lesions. (III)

**Recommendations**
29. The diagnosis of vulvar pain syndromes should be aided by a focused history that is based on a plausible differential diagnosis and by careful, repeated examinations. (III-B)
30. Women complaining of vulvar pain should be advised to avoid irritants and should be offered symptomatic treatment. (III-A)
31. Directed and empiric therapy should be provided when a specific diagnosis is suspected. (III-B)

**CLINICAL TIPS**
The following is the differential diagnosis of chronic vulvar pain.

1. No visible lesions
   - Essential vestibulovulvodynia
   - Vaginismus
   - Interstitial cystitis
   - Fibromyalgia
   - Sjogren’s syndrome
   - Constipation
   - Depression
   - Anxiety
   - Adverse life events

2. Visible Lesions (may be intermittent)
   - Herpes
   - Candida infection
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- Atrophic vaginitis
- Dermatological conditions (lichen sclerosus, lichen planus, scleroderma)
- Allergic/irritant dermatitis
- Behçet disease and other genital ulcer diseases
- Vulvar intraepithelial neoplasia or carcinoma
- Obstetrical scarring
- Gynaecological surgery (transvaginal tape procedures, vaginal repair, etc.)
- Female genital cutting/mutilation

A three-pronged approach is suggested for symptomatic treatment for chronic vulvar pain

1. Local measures
   - Using non-alcohol/non-perfumed soothing creams, barrier creams, Udder Balm, petroleum jelly, lubricants, topical corticosteroid cream, topical anti-histamine cream
   - Applying topical anaesthesia
   - Avoiding irritants: washing genitals with water only (no soap), wearing cotton underwear, avoiding pantiliners and tight garments, washing underwear in hypoallergenic detergent and rinsing thoroughly, minimizing penetrative intercourse
   - Soaking in a sitz bath or bidet. Using a hand-held shower.
   - Vestibulectomy or vestibuloplasty

2. Down-regulation/denervation/desensitization of sensory nerves
   - Imipramine
   - Gabapentin (locally or systemically administered)
   - Trigger point injection (saline, local anaesthesia, botulinum neurotoxin)
   - Pudendal nerve excision/ablation, injections
   - Perineal massage, digital or electric vibrator

3. Cognitive therapy
   - Cognitive-behavioural therapy, systematic desensitization
   - Physiotherapy
   - Graduated vaginal dilators
   - Exploration of non-intercourse sexual intimacy
   - Self-pleasuring
   - Negotiation of reasonable expectations and therapeutic goals

REFERENCES

CHAPTER 5: Coital Pain


A study published in 1999 found that up to 30% of women aged 18 to 59 experience lack of sexual interest. Low sexual desire in women is strongly associated with women's decreased physical and emotional satisfaction with their sexual relationship, as well as with lowered general happiness with their partners (adjusted odds ratios ranging from 2.61 to 4.31, \( P < 0.05 \)).

The DSM-IV defines hypoactive sexual desire disorder as consisting of “persistently, or recurrently deficient (or absent) sexual fantasies and desire for sexual activity” that cause “marked distress or interpersonal difficulty” for the woman and that is not better explained by another medical, psychological, substance-related, or other sexual diagnosis. In the PRESIDE study, it was found that 8.9% of American women aged 18 to 44, 12.3% aged 45 to 64, and 7.4% of those over 65 years reported decreased sexual desire accompanied by such distress. HSDD symptoms in the PRESIDE study correlated with age, race, marital status, partner status, employment, and educational level. For example, older women were more likely than younger women to report lack of interest in sex, but younger women were more likely to be distressed by lack of interest. Medical conditions associated with HSDD included depression, thyroid problems, anxiety, and urinary incontinence. Women under age 45 who had undergone oophorectomy had the highest prevalence of HSDD at 20% to 26%.

Sexual desire problems strongly correlate with decreased arousal, orgasm, and pleasure, indicating that low desire is often associated with and overlaps with other sexual difficulties. Decreased sexual desire correlates strongly with chronic pelvic pain.

**ASSESSMENT OF WOMEN’S HYPOACTIVE SEXUAL DESIRE DISORDER**

**Models**

Sexual desire is initiated in the brain, which has been primed with sex steroids, including androgens, estrogens, and progestins. The limbic system, with its connections to the hypothalamus, medial pre-optic area of the thalamus, amygdala, tegmentum, and anterior cingulated and medial frontal cortex, is core to normal sexual function.

The main models of female sexual response are described in Chapter 2. While the DSM-IV has separate categories for HSDD, (female sexual arousal disorder), and female orgasmic disorder, these distinctions are frequently blurred clinically, and HSDD and female sexual arousal disorder often coexist, as do female sexual arousal disorder and female orgasmic disorder. As HSDD often coexists with other sexual concerns, deciding which is primary, and taking into account other contributing factors, is an important diagnostic challenge.

An appropriate management plan requires a comprehensive assessment of a woman’s current health and life, the history of her concern, the role of her partner(s), and her level of distress in addition to medical and laboratory examinations.

Although many scales have been validated for assessment of women’s sexual concerns, few are designed for use by health care providers who are not experts in managing female sexual dysfunction. The Decreased Sexual Desire Screener is one such tool that specifically focuses on HSDD (Appendix). The woman is asked 4 questions to determine whether she potentially meets the criteria for the DSM-IV diagnosis, and a fifth question to assess other factors that would preclude the diagnosis of HSDD (including other medical and psychological conditions; medications, drugs, and alcohol; reproductive life stages, including pregnancy and menopause; other sexual dysfunctions, including dyspareunia; relational and/or partner’s sexual problems; and other stressors). A positive screen has an 85% sensitivity and specificity when compared with a standard interview by an expert, and non-expert clinicians thought it adequately diagnosed HSDD in 93% of patients.

When distressing low desire is diagnosed, the next step is to determine the factors that might be contributing to the problem. The following biological, psychological, relational, and sociocultural factors can all be at play.

**Biological Factors Affecting Women’s Sexual Desire**

- General medical illness and medications
- Cardiovascular problems
CHAPTER 6: Sexual Desire Disorders

• Endocrine disorders
  – Diabetes\textsuperscript{21,27}
  – Thyroid disorders\textsuperscript{26}
  – Hypothalamic–pituitary–ovarian disorders
  – Menopause\textsuperscript{3,5,11,28–30}
• Neuropsychopharmacology\textsuperscript{31,32}

Psychological Factors Affecting Women's Sexual Desire\textsuperscript{14,22,33–42}
There are many lifestyle and health issues that can affect a woman’s level of interest in sexual activity. Past sexual trauma, mood disorder, stress, fatigue, and medication can have an effect on desire. Treatment of depression often contributes to decreased desire, especially if SSRIs are prescribed.

Relationship Factors Affecting Women's Sexual Desire\textsuperscript{43–48}
The quality of a woman’s relationship can affect her sexual interest and function. The level of intimacy, the partner’s sexual interest and function, as well as his or her physical and mental health can affect the woman’s sexual interest and function.

Role of Testosterone in Treating Women’s HSDD
Testosterone therapy has been used for the treatment of sexual disorders in women since 1938.\textsuperscript{49} A quarter century has gone by since Sherwin et al.\textsuperscript{50} in Montreal showed that androgens help maintain sexual function in surgically menopausal women. Alexander et al.\textsuperscript{51} reviewed available RCTs of hormonal therapies, including testosterone, on female sexual function. Hubayter and Simon\textsuperscript{52} have reviewed potential testosterone formulations for women with postmenopausal HSDD that include pills, patches, creams, gels, transdermal sprays, and vaginal rings. A Cochrane Review\textsuperscript{53} showed that adding testosterone to hormone therapy improves sexual function for postmenopausal women.

Testosterone can help premenopausal women’s HSDD\textsuperscript{54}; however, trials to date have been small, and safety data are sparse.

Controversies in Measuring Testosterone Levels in Women
The measurement of testosterone, free-testosterone, and sex hormone binding globulin, and their role in the assessment of low sexual desire are a source of controversy in sexual medicine.

In the peripheral blood, 66% of testosterone has high affinity binding to SHBG, 30% is loosely bound to albumin, and only 2% to 3% is free testosterone. The combined albumin-bound and free portion of testosterone is called bioavailable testosterone and is thought to be the fraction that is able to enter target cells and exert its biological activity through binding to intracellular androgen receptors.\textsuperscript{55} The SHBG bound fraction is not easily available to the tissues. There is good correlation between free testosterone and bioavailable testosterone, except in acute illness, pregnancy, and chronic illness, such as cirrhosis of the liver.

Investigators are concerned about the accuracy of measuring these levels in women using currently available assays, which vary by 77%.\textsuperscript{56} Measurement is unreliable in the low levels seen in women’s sera, leading to overestimation of testosterone concentrations by 46%. None of the immunoassays were felt to have sufficient reliability to be used for children and women.\textsuperscript{57} A more sensitive technique may be the free androgen index, which measures testosterone/SHBG × 100.\textsuperscript{58–60}

Testosterone Therapy for Women with HSDD
The North American Menopause Society issued a position statement in 2005 regarding the role of testosterone in postmenopausal women. They stated that “postmenopausal women may be candidates for testosterone therapy if they present” with HSDD “and have no other identifiable cause for their sexual concerns.”\textsuperscript{61} The North American Menopause Society recommended transdermal patches or gels may be preferred to prevent first-pass liver damage. Because of the lack of safety and efficacy trials, they could not recommend the use of testosterone without concomitant estrogen (and if indicated, progesterone) therapy.

No level of serum testosterone is considered diagnostic for HSDD. Many questions remain about the use of androgen therapy for women, including premenopausal women with HSDD,\textsuperscript{62} and about the role of androgens in natural menopause.

The Women’s Health Initiative study raised questions about the safety of estrogen and progestin therapy in menopause\textsuperscript{63} and has created anxiety by extrapolation, without evidence, to possible adverse effects of androgens. At this point, no testosterone products are currently licensed for the treatment of female sexual dysfunction in North America.\textsuperscript{64} Testosterone patches developed for women who have HSDD associated with bilateral oophorectomy have been licensed in Europe and elsewhere.\textsuperscript{3}

The Endocrine Society published a clinical practice guideline on androgen therapy in women in 2006.\textsuperscript{65} At that time, they recommended “against making a diagnosis of
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androgen deficiency, because there is neither a well-defined clinical syndrome nor normative data on testosterone or free testosterone concentrations in blood in women across their lifespans that can be used to define the disorder.” While acknowledging that “evidence exists for short-term efficacy of testosterone in selected populations, such as surgically menopausal women,” they “recommend against the generalized use of testosterone by women because the indications are inadequate and evidence of safety in long-term studies is lacking.” They emphasized that female sexual dysfunction results from the interplay of “personal, interpersonal, contextual and medical factors” and that in a particular woman it may, or may not be, due to changing androgen levels. Dennerstein et al. showed that prior sexual function and relationship factors were more important than androgen levels in women transitioning through natural menopause. They cautioned that assays used to measure the lower range of women’s testosterone levels lack sensitivity and precision.

Naturally menopausal women with HSDD have benefited from transdermal testosterone along with estrogen (and progestin as needed for endometrial protection). Given the concerns expressed in the Women’s Health Initiative study, many women are reluctant to take estrogen therapy. A trial, with 814 women, of testosterone patches without progestin as needed for endometrial protection showed benefit across all of the domains of sexual function. In the treatment arm, breast cancer was diagnosed in 4 women over the 2 years of the trial (1 had symptoms before randomization, and another developed breast cancer within 4 months of starting the trial), and in the control group, no breast cancer was diagnosed. This was within the realm of a chance result. The accompanying editorial acknowledged a dose-response benefit from the use of the testosterone patch, but expressed caution, and a need for further elucidation of whether there is a link between testosterone therapy and breast cancer.

Female-to-male transsexuals have been treated with supraphysiological testosterone in the male range for decades. Although their situation is not directly comparable to that of women treated within the female range, these patients can provide data regarding potential safety issues. Most female-to-male transsexuals show endometrial atrophy, but increased endometrial hyperplasia has been shown in some; however, no increase was observed in total cancer mortality. Abnormal bleeding patterns need to be investigated. A long-term European study of 365 female-to-male transsexuals on male levels of testosterone therapy for more than a decade showed no increased mortality when compared with the general population. In a 2010 review of the literature on testosterone safety in female-to-male transsexuals, Traish and Gooren concluded that pharmacological doses of testosterone had no serious adverse effects, including breast cancer and cardiovascular disease, and suggested that the risks associated with the much lower physiological doses of testosterone used in the treatment of women with HSDD would be even more minimal.

In 2009, the Third International Consultation on Sexual Medicine updated recommendations on the use of testosterone for postmenopausal women with HSDD. The International Consultation on Sexual Medicine suggested that testosterone therapy can be effective for HSDD, that the decision to implement testosterone therapy needs to be individualized with patients making an informed choice, and that transdermal delivery is best to reduce adverse effects. They noted that data were not adequate to support use of testosterone for pre- and perimenopausal women. As long-term safety data were lacking, the International Consultation on Sexual Medicine did not support long-term therapy. They recommended annual health monitoring, with breast and pelvic examinations and mammograms.

The British Society for Sexual Medicine guidelines support the use of testosterone in appropriate patients. They recommend lipid and metabolic monitoring, and routine breast screening, including mammography, for patients taking androgens, but do not suggest increased cervical screening.

Data on the safety and risks of the use of testosterone therapy continue to accumulate. Table 6.1 lists some of these risks for oral, parenteral, supraphysiological (female-to-male transsexuals compared with patients with polycystic ovary syndrome), and transdermal therapies treating to the premenopausal physiological range.

Testosterone therapy for women with HSDD is “off label” in Canada. Women need to understand possible benefits and risks and give informed consent to the use of any such therapies. No androgens are licensed in Canada for the treatment of women with HSDD.

Integrating Treatment for Women’s Hypoactive Sexual Desire Disorder

Therapies integrating medical, psychological, and relational treatments for a woman’s decreased desire hold promise for helping women and their partners better deal with HSDD. Neither medical nor psychological therapies alone have been able to provide a lasting solution for many women. Integration of the 2 may lead to better outcomes.
CHAPTER 6: Sexual Desire Disorders

Summary Statements

29. Lowered desire accompanied by distress (hypoactive sexual desire disorder) is highly prevalent and is most common in mid-life. (II-1)

30. Treating medical, psychological, and relationship problems, addressing sociocultural issues, and providing androgen therapy when appropriate can be effective in helping women and their partners dealing with hypoactive sexual desire disorder. (I)

31. Distressing female hypoactive desire is context-dependent, and this needs to be considered in treatment planning. A woman's sense of connection to her partner and her own psychological and physical health are more closely linked to desire than are estrogen and testosterone. (II-2)

Recommendations

32. Health care providers should give women the opportunity to discuss their sexual concerns at the beginning of a therapeutic process. (III-A)

33. Health care providers should consider caring for women with hypoactive sexual desire, rather than referring them, even if they require the assistance of an interdisciplinary team. (III-A)

34. Well-designed and adequately powered studies should be carried out to assess the health benefits and long-term risks of androgen therapies for women with hypoactive sexual desire. (III-L)

Table 6.1. Adverse effects of androgen therapy for women

<table>
<thead>
<tr>
<th>Risk</th>
<th>Supraphysiological (female-to-male transsexuals)</th>
<th>Physiological treatment (transdermal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hirsutism</td>
<td>100%</td>
<td>7% Tt patch vs. 5% placebo, up to 30%</td>
</tr>
<tr>
<td>Acne</td>
<td>–</td>
<td>9% 300 µg vs. 7% placebo</td>
</tr>
<tr>
<td>Skin rash (patches)</td>
<td>–</td>
<td>30% mild</td>
</tr>
<tr>
<td>Virilization clitoromegally</td>
<td>+</td>
<td>&lt; 1%</td>
</tr>
<tr>
<td>Vocal cord changes</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Metabolic syndrome &amp; insulin resistance</td>
<td>Increased in PCOS, but NOT FTM transsexuals</td>
<td></td>
</tr>
<tr>
<td>HDL decrease</td>
<td>_73 +76</td>
<td>_73</td>
</tr>
<tr>
<td>Cardiac</td>
<td>_86.67</td>
<td>_66.67</td>
</tr>
<tr>
<td>Breast cancer</td>
<td>_80.76</td>
<td>_80.86.77</td>
</tr>
<tr>
<td>Endometrial stimulation</td>
<td>+/-60 _78</td>
<td>_62.86.76</td>
</tr>
<tr>
<td>Emotional lability/hostility</td>
<td>_78</td>
<td></td>
</tr>
</tbody>
</table>

+ : increased risk – : no increased risk

REFERENCES


Tool Box: Resources

READINGS


BOOKS ABOUT FEMALE SEXUALITY

- For Yourself. Lonnie Barbach
- For Each Other. Lonnie Barbach
- Shared Intimacies. Barbach L, Levine L.
- Women’s Experience of Sex. Kitzinger S.
- My Secret Garden. Friday N.
- Forbidden Flowers. Friday N.

BOOKS ABOUT MALE SEXUALITY

- The New Male Sexuality. Zilbergeld B.

BOOKS ABOUT SEXUAL COUNSELLING

- In Touch: Putting Sex Back into Love and Marriage. Chernick B, Chernick N.

BOOKS ABOUT RELATIONSHIPS


AGING AND SEXUALITY

- Love and Sex After Sixty. Butler RN, Lewis M.
- Sexual Health in Later Life. Walz TH, S. Blum NS.

BOOKS FOR PROFESSIONALS

- The New Sex Therapy. Singer-Kaplan H.
- Disorders of Sexual Desire. Singer-Kaplan H.
- Women Discover Orgasm. Barbach L.
Female Sexual Health Consensus Clinical Guidelines


SEXUALITY INFORMATION WEBSITES

http://www.SIECCAN.ORG
(Sexuality in Canada) and BESTCO.INFO
(Sex therapists in Ontario)

http://www.sexualityandu.com
Society of Obstetricians and Gynaecologists of Canada
  - Comprehensive sexual health information for teens, parents, teachers and health care professionals.
  - Downloadable game and information sheets

http://www.sexualhealth.com
Sexual Health Network is about sexuality issues for people with disabilities.

http://www.aasect.org
American Association of Sexuality Educators, Counselors and Therapists
  - Searchable databases of sex educators, counselors and therapists
  - Certification standards and procedures for sexuality professionals.

http://www.siecus.org
Sexuality Information and Education Council of the U.S.
  - Comprehensive sexuality education books, pamphlets
  - Downloadable and free information sheets
  - Numerous bibliographies of articles arranged by topic

http://www.tandf.co.uk/journals/WIJS


OTHER RESOURCES

http://www.myleasure.com — This company was founded by a group of sex therapists.

http://www.goodvibes.com — This company is called Good Vibrations and is located in San Francisco.

http://www.omyonline.com (O’My products) — This company provides many lubricating gels and sex toys.

http://www.bettersex.com (Sinclair Intimacy Institute) — Good quality videos demonstrating various sexual techniques.

http://www.ourpleasure.ca — Canadian sexual health store.