Sexual function among women with disabilities

Data from the 2000 US Census revealed that of almost 50 million Americans with disabilities, more than 25 million were women. Some of these women are born with disabilities. In other women, the disabilities develop during childhood (eg, cerebral palsy, spina bifida) or are acquired later in life as a result of accident or illness (eg, chronic pain, multiple sclerosis, spinal cord injury, stroke). The present article focuses on women with physical disabilities and the concerns of these women regarding sexuality.

Sexual function is an important domain of quality of life and is vulnerable to disruption and dysfunction when a physical disability is present. Healthy sexuality is difficult to define, partly because of cultural, religious and personal values, all of which contribute to one’s expression of sexuality. Sexuality does not comprise only intercourse; it also comprises physical and verbal expressions of warmth, tenderness, love and affection.

Lack of communication with patients

The reasons for altered sexuality after a disability are complex, and they are rarely discussed with patients. In a study by Teal and Athelstan about sexuality after spinal cord injuries, sexuality was found to be a universal concern and an unexpressed anxiety of the women in the study. However, 85% of the women stated that they had never discussed sexuality with their physicians, and 65% of the women stated that they had not discussed sexuality with anyone, including their partners.

Women with congenital disabilities also report a lack of communication about sexuality. Studies suggest that few adolescents and young adults with spina bifida report having discussed sexual relationships with a health professional or counselor, although most of these young people would have appreciated such counseling. Although sexual dysfunction is not restricted to persons with disabilities, physical disabilities substantially raise the incidence of sexual dysfunction. Zorzon et al reported that the incidence of sexual dysfunction is 73% in individuals with multiple sclerosis, 39% in those with chronic disease, and 13% in the general population.

The personal and private nature of sex produces a reticence among patients to discuss their sexual concerns with physicians. Furthermore, health care professionals typically lack training in how to address sexuality with their patients. Therefore, even when we discuss these issues with our patients, we might not have enough knowledge to adequately answer their questions or provide appropriate counseling.

Congenital versus acquired disabilities

Development of sexuality in individuals who have had disabilities since birth can be expected to be substantially different than development of sexuality in persons who become disabled as adults. Social and
environmental barriers—such as inadequate social skills, social isolation, lack of opportunity, or lack of sexual knowledge—among individuals with early-onset disabilities lead to decreased sexual activity compared with the level of sexual activity among the able-bodied population. Individuals who have late-onset physical disabilities resulting from such conditions as multiple sclerosis, spinal cord injury, and stroke report various changes in their sexual behaviors. These changes typically include decreased sexual interest, sexual satisfaction, and self-esteem, as well as physiologic dysfunction.

**Four stages of sexual response**

Normal sexual function can be divided into four stages: 1) excitement, 2) plateau, 3) orgasm, and 4) resolution.

The excitement (ie, sexual arousal) stage is characterized by increased heart rate, blood pressure, and respiration—responses that can result from either touch (ie, reflexogenic) or imagination (ie, psychogenic). In women, the excitement stage is also defined by vaginal lubrication, swelling of the labia, and clitoral erection. The duration of this stage can range from a few minutes to a few hours.

The plateau stage is described as a pleasurable sense of well-being. This stage can be brief or prolonged.

The orgasm stage is defined as supreme pleasure followed by a feeling of well-being and satiation. Orgasm arises from the brain's limbic system. In women, orgasm includes a motor response involving sympathetic contractions.

Resolution is the important bonding stage of the sexual response, helping to develop and maintain emotional intimacy between partners. This stage lasts about 5 to 15 minutes and is followed by return to the pre-arousal state.

**Causes of sexual dysfunction**

Normal sexual function depends on the interaction between libido and potency. The sudden onset of disability and associated issues, such as medical illness, pain and stress, can contribute to decreased libido. Although the potential causes of sexual dysfunction after a disability are broad, they can be separated into organic causes (resulting from disability or illness) and psychosocial causes. No list can account for every type of disability, but some causes of sexual dysfunction include the following:

**Organic causes**

- Neurogenic regulation difficulties caused by brain or spinal cord injury
- Pain
- Spasticity
- Bladder or bowel incontinence
- Cognitive challenges (eg, anger, distractibility, inattention)
- Fatigue
- Weakness
- Sensory changes

**Psychosocial causes**

- Depression/anxiety
- Personality changes
- Fear
- Communication issues

**Effects of sexual dysfunction on sexual response**

During the excitement stage, female sexual arousal disorder is associated with inability to attain or maintain the lubrication and swelling response. This disorder can stem from emotional causes, such as anger or fear, as well as physical changes associated with the disability, such as insensate erogenous zones or low estrogen levels.

Interestingly, the demarcation between insensate and sensate skin may become a new erogenous zone, which patients should be encouraged to explore either themselves or with a partner. Difficulties achieving vaginal lubrication may be addressed by increased stimulation or by use of lubrication jelly.

Dysfunction in the plateau stage may be prolonged or abbreviated by being insensate in the genital region or other regions of arousal. Dysfunction in this stage may also be associated with anxiety—and even with distractibility in individuals with brain injury or stroke. Sexual dysfunction in women who do not progress through the plateau stage is a form of anorgasmia.

The brain is the most important organ in achieving orgasm. Multiple loci responsible for sexual activity arise from the brain's limbic system. Women with conditions that affect the brain (eg, multiple sclerosis, stroke, traumatic brain injury) may have difficulty achieving orgasm. Women with these conditions may also experience orgasm differently than they did before the conditions developed. For example, they may experience increased spasticity followed by prolonged relaxations, or they may experience an unusual warm sensation.

Libido is decreased by serotonin and increased by dopamine. Thus, medications that affect the levels of these substances can also affect sexuality. For example, selective serotonin reuptake inhibitors have a 50% to 70% chance of delaying orgasm, even if no neurologic disease is present.

Difficulty achieving orgasm after developing a disability is a common source of sexual dysfunction. Sipski et al compared women with spinal cord injuries to able-bodied women in terms of their ability to achieve orgasm in a laboratory setting. Patients used audiovisual erotica with and without manual stimulation. Results showed that 52% of the women with spinal cord injuries were able to achieve orgasm, compared to 100% of the able-bodied women. Of note, the rate of arousal in each group was similar.

Dysfunction in resolution occurs when the sexual interaction is unsatisfying. This dissatisfaction may result from a number of reasons, such as pain, a demanding partner, and feelings of shame because of the disability.

**Special considerations**

Sensitivity of a woman's pelvic floor and adductor muscle can restrict penile penetration. Premedication with benzodiazepine can reduce such spasticity. Patients with neurogenic bowel or bladder should empty the bowel and bladder before sexual activity in order to avoid incontinence during intercourse.

Patients with spinal cord injuries should void or self-catheterize after coitus to reduce the risk of urinary tract infection.

For most women with disabilities, sexual interaction is safe. Many patients who have had strokes are fearful that participating in sexual activities might lead to another stroke, but findings from a study by Ebrahim et al suggest sexual intercourse is not likely to result in substantial increase in risk of strokes. However, if a patient had...
a hemorrhagic stroke from an aneurysm and is awaiting surgery, sexual interactions should be avoided until after surgery.

For women with spinal cord injuries higher than the level of the T6 vertebra, a potentially life-threatening condition can occur after orgasm. Autonomic dysreflexia is an acute syndrome of massive sympathetic discharge resulting from increased autonomic activity after a stimulus. Such a stimulus could be sexual intercourse and orgasm, extended bladder or bowel evacuation, or any painful stimuli that does not cause injury. Signs of autonomic dysreflexia include pounding headache, sweating, nasal congestion, facial flushing, piloerection and reflex bradycardia. Autonomic dysreflexia is a serious condition that can lead to confusion, visual disturbance, loss of consciousness, encephalopathy, intracerebral hemorrhage, seizure, atrial fibrillation, flash pulmonary edema and even death.

A patient should be informed of the signs of autonomic dysreflexia and advised that, if it occurs, she should sit upright with her feet over the side of the bed. If possible, she should also monitor her blood pressure and catheterize her bladder. If symptoms persist, the patient should contact emergency response.

Contraception

Women with disabilities make their decisions about having children in the same manner as do able-bodied women. For women who are of childbearing age and are not ready for children, clinicians should discuss birth control options. In many cases, women with disabilities are not offered contraception because their physicians erroneously presume them to be asexual. The following special considerations must be taken into account when discussing birth control options with disabled women.

- **Coitus interruptus**
  The literature does not support the use of this method, also known as withdrawal, as an effective means of birth control.

- **Condom**
  Condoms are a popular contraceptive choice because they are readily available. For a woman who has an indwelling catheter, this birth control method would not be recommended because the device could tear the condom. Condoms are one of the few contraceptive methods that confer protection against sexually transmitted diseases.

- **Contraceptive foam**
  Foam is a readily available and accepted contraceptive method. However, contraceptive foam is only moderately effective at preventing pregnancy, and it does not protect against sexually transmitted diseases.

- **Diaphragm**
  A woman requires dexterity to place a diaphragm, though her partner can be trained to insert the diaphragm before intercourse. If a woman has weakened pelvic floor muscles, the diaphragm may not hold in place, rendering it ineffective as a birth control option. In addition, diaphragms are associated with increased risk of urinary tract infections, which may be of special concern for women with disabilities, particularly those who are predisposed to autonomic dysreflexia.

- **Fertility awareness (rhythm method)**
  Contraceptive methods based on monitoring of body temperature will not be reliable in women who have spinal cord injuries.
Nor will such methods be reliable in women who are at risk for frequent infections, which can affect body temperature. ¹

- **Hysterectomy**
  This surgical procedure is another permanent birth control option. Women with disabilities are more likely to undergo hysterectomy than are women without disabilities. Hysterectomy, rather than tubal ligation, is used for sterilization in those women who have trouble managing their menstrual hygiene.¹

- **Intrauterine device**
  The use of intrauterine devices may be considered for women with disabilities, but women with decreased sensation should be carefully evaluated before they use this contraceptive method because they may not feel symptoms of pelvic infection or ectopic pregnancy. Irregular bleeding with the use of intrauterine devices can pose difficulties with menstrual hygiene.¹

- **Medroxyprogesterone injection**
  Medroxyprogesterone injection is a popular contraceptive option among women with disabilities. Its use may initially involve some irregular bleeding, which can be of concern for patients who have difficulties with menstrual hygiene. However, amenorrhea occurs after the first few menstrual cycles. An increased risk of osteoporosis must also be considered with medroxyprogesterone injection.¹

- **Oral contraceptive**
  The most cited concern regarding use of oral contraceptives by women with recent-onset immobility is the risk of thromboembolism or deep vein thrombosis. With the use of pills containing low-dose estrogen, there is a low incidence of deep vein thrombosis; although cigarette smoking aggravates the risk of deep vein thrombosis and thromboembolism. Use of progestin-only pills can be considered for patients in whom estrogen is contraindicated, with the understanding that these pills are not as effective as pills containing estrogen and that there is little margin for error in the dosage schedule.¹

  Patients must be able to maintain dosing and have sufficient manual dexterity to open medication packaging to take oral contraceptives. Continuous cycling by eliminating the placebo week of the contraceptive medication to avoid menstruation can be considered for patients who have difficulty with menstrual hygiene.¹

- **Tubal ligation**
  This surgical procedure is a permanent birth control option. Women will continue to menstruate after tubal ligation, and this option may not be appropriate for women who have difficulties with menstrual hygiene.¹

- **Vasectomy**
  For a woman who has only one sexual partner and who wants permanent birth control, vasectomy may be considered as a contraceptive option.¹

**Physical and sexual abuse issues**
Health care providers should not assume that women with disabilities are no longer targets for physical or sexual abuse, and the providers need to be aware of the physical and psychological signs of trauma in their patients. In one national mail survey, no difference was found between the proportion of women with physical disabilities and the proportion of able-bodied women who reported being physically abused (35% in both groups) or sexually abused (40% in both groups).¹ Eighty-one percent of the women with physical disabilities reported being sexually abused, compared to 75% of able-bodied women.¹ Eighty-four percent of the women with physical disabilities reported being physically abused, compared to 75% of able-bodied women.¹ Intimate partners were the primary offenders in both groups of women. However, women with physical disabilities
were more likely to experience physical or sexual abuse by attendants or caregivers than were able-bodied women. In addition, women with physical disabilities experienced abuse for significantly longer periods than did women without physical disabilities.

Standard abuse assessment tools that focus on physical or sexual abuse from intimate partners are insufficient for assessing abuse in women with disabilities. Abuse to women with disabilities more likely will be identified if disability-specific questions are added to the assessment. Compared with use of the standard questions, the use of the following questions, consisting of two standard physical and sexual assault questions and two disability-specific questions, revealed an additional 2% of women with disabilities who suffered abuse.18

\textbf{Within the past year have you been bit, slapped, kicked, pushed, shoved, or otherwise physically hurt by someone?}\n
\textbf{Within the past year has anyone forced you to have sexual activities?}\n
\textbf{Within the past year has anyone prevented you from using a wheelchair, cane, respirator, or other assistive device?}\n
\textbf{Within the past year have you depend on refused to help you with an important personal need, such as taking your medicine, getting to the bathroom, getting out of bed, bathing, getting dressed, or getting food or drink?}\n
Clinic visits are typically the only time that disabled women come into contact with health care providers. Thus, there is a need for disability-specific routine assessment for physical and sexual abuse in all women with disabilities.

In many states, if a physician suspects that a patient with a disability is a victim of abuse or neglect, the physician is legally obligated to report the case to state law enforcement authorities. A disabled person, for such legal purposes, is defined as any person who is totally or partially dependent on other people for activities of daily living, which include dressing and undressing, eating, mobility (as opposed to being bedridden), personal hygiene, transferring from bed to chair and back to bed, and voluntarily controlling urinary and fecal discharge.

\textbf{Final notes}\n
Sexual function among women with disabilities is complex. Sexuality is an important domain of quality of life. Women with physical disabilities often do not discuss sexuality with either their physician or their partner. Physicians should start the dialogue with patients. Psychological, social and physical factors exert a strong impact on the sexual functioning of women with physical disabilities.3 A better understanding of the barriers to fulfilling sexual interactions will allow physicians to discuss these issues with their patients and help address issues as they arise.

\textbf{References}\n


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