Sexuality in the Aging Female

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Disclosures

• None
Objectives

• Review the physiology and neurobiology of sexual functioning in women
• Review changes of sexual functioning related to aging
• Review the effect of chronic diseases on sexual functioning
• Discuss assessment of sexual functioning
• Discuss sexual wellness in aging women
Which of the following is the greatest predictor of sexual desire in aging women?

• Menopausal hormone levels
• Beliefs/values related to sex
• Interpersonal factors regarding impacting the relationship with a sexual partner
79 year old female with dyspareunia. The most common cause in this patient would be:

- Genitourinary syndrome of menopause
- She doesn’t want to have sex with her husband
- Pelvic floor dysfunction
- Osteoarthritis
Myth and bias

- One’s parents do not enjoy sexual activity
- Older people are incapable of sexual activity
Sexual Life in Older Adults

• U.S. adults (1550 women and 1455 men)  
  57-85 years of age

• The prevalence of sexual activity decline with age
  
  73% among respondents who were 57-64
  53% among respondents who were 65-74
  26% among respondents who were 75-85

• Women were significantly less likely than men at all ages to report sexual activity

Global Study of Sexual Attitudes and Behaviors

Prevalence of specific sexual dysfunctions in the female population of Global Study of Sexual Attitudes and Behaviors, 2001 to 2002 (“periodic” and “frequent” sexual problems among sexually active women)

29 Countries

- Highest prevalence of at least one sexual problem was in South East Asia (55%), the Middle East (46%) and East Asia (47%)

- The frequency of sexual problem correlated with the degree of satisfaction with sexual life

Prevalence of Sexual Problems Associated With Sexually Related Personal Distress

Decreased sexual desire with distress

N=31,581 women.

Sexual pain not measured in this survey

Shifren JL et al. Obstet Gynecol. 2008;112(5);970-978.
Components of the clitoral complex

- Labia majora
- Prepuce / hood
- Glans
- Crus
- Urethra
- Bulb
- Labia minora (cut edge)
- Bartholin’s gland
- Introitus
- Suspensory ligament
- Body
- Root
- Ischiopubic ramus
Innervation of the Vulva
Perineal blood supply
Neurobiology of sexual dysfunction

**Reward centre circuitry**
- Prefrontal cortex evaluates reward within milliseconds
- Stimulus-behavior outcome is encoded for future reference
Female Sexual Dysfunction: Changes from DSM-IV to DSM-5

- Hypoactive Sexual Desire Disorder (HSDD)
- Female Sexual Arousal Disorder (FSAD)
- Female Sexual Interest/Arousal Disorder (FSAID)
Age related factors that impact sexual functioning

- Declining estrogen levels effect the epithelial lining of the vagina
- Vascular, muscular and connective tissue changes occur over time
- Vagina loses elasticity
- Engorgement and lubrication become more difficult
- Decrease in touch perception, vibratory sensation and reaction time
- Decreased muscle tension may increase the time it takes for arousal to lead to orgasm
Healthy Vagina

Vaginal lining is thick and moist
Vaginal walls are elastic
Vaginal lubrication is present

Vaginal Atrophy

Vaginal lining is thin and dry
Vaginal elasticity decreases
Vaginal dryness
Shortening of the vaginal canal
Sexual disorders in older women

- Female sexual interest/arousal disorder
- Female orgasmic disorder
- Genito-pelvic pain disorder related to lubrication
  - vaginal atrophy
  - pelvic floor dysfunction
Aging and sexual desire

• Components of desire

  Drive-biologic component impacted by declining testosterone levels

  Beliefs/values-Positive beliefs about sex relate to increased willingness to engage in sexual activity

  **Motivation**-Emotional or interpersonal factors regarding willingness to behave sexually with a given partner

  *Greatest impact on desire-not a simple biologic theory
Basson model

Female Sexual Response Cycle: Intimacy – based model

- Emotional intimacy
- Emotional and physical satisfaction
- Spontaneous sexual drive
- Sexual stimuli
- Arousal and sexual desire
- Sexual arousal

Seeking out and being receptive to

Domains of female sexual function

Physiological
- Neurological problems
- Cardiovascular disease
- Cancer
- Urogenital disorders
- Medications
- Fatigue
- Hormonal loss or abnormality

Psych/emotional
- Anxiety, stress
- Self-image
- Depression
- Hx of abuse or trauma
- Alcohol/substance abuse

Sociocultural influences
- Limited sex education
- Conflict with religious, personal or family values
- Societal taboos

Interpersonal relationships
- Partner performance and technique
- Lack of partner
- Relationship quality, conflict, communication
- Logistics, lack of privacy

Female Sexual Dysfunction
Vaginal atrophy and genital vascular response in Postmenopausal (PM) women

- Vaginal pulse amplitude (VPA) is the most sensitive and specific measure of vaginal vasocongestion.
- Healthy PM women with moderate vaginal atrophy had significantly lower VPA compared to healthy premenopausal women.
- During visual sexual stimulation, both groups showed similar increase in VPA.

Genital responsiveness comparing premenopausal and postmenopausal women

- MRI study found smaller vaginal rugae, thinner vaginal wall, smaller labia minora width, vestibular bulb width and cervical diameter in PM women
- No difference in nonaroused clitoral volume
- With sexual arousal, measurements of vaginal wall, vaginal mucosa, clitoris, femoral vein signal intensity, regional blood volume and clitoral volume increased in both groups


Relation between genital response and subjective sexual experience in women

- Pelvic MRI during viewing of an erotic film
- Increased vaginal vasocongestion within seconds after the onset of visual stimuli even when sexual stimuli are negatively evaluated

Evaluation & Management of Sexual Dysfunction in Chronic Medical Illness

- **Direct**
  - Vascular
  - Neurologic
  - Hormonal
  - Psychosocial
  - Psychiatric
  - Anatomical damage

- **Indirect**
  - Changes in perception, sensory, motor
  - Incontinence
  - Tremor
  - Fatigue
  - Anxiety
  - Pain

- **Iatrogenic**
  - Medication
  - Radiation
  - Surgery

- **Contextual**
  - Social & situational factors
### Medical Conditions that Potentially Impact Sexual Functioning

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<th>Condition</th>
<th>Desire</th>
<th>Arousal</th>
<th>Orgasm</th>
<th>Pain</th>
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<td>CAD</td>
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<tr>
<td>Arthritis</td>
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<tr>
<td>Diabetes</td>
<td>+</td>
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<td>Hypothyroid</td>
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<tr>
<td>Neuromuscular</td>
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<td>Spinal cord, MS</td>
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<td>Parkinson disease</td>
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<tr>
<td>Dementia, head trauma</td>
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<tr>
<td>Renal failure (?)</td>
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<tr>
<td>Urinary Incontinence</td>
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<tr>
<td>Cancer</td>
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</tbody>
</table>
Diabetes and Genital Arousal

- Impaired vaginal capillary engorgement in response to erotic stimuli (VPA)
- Higher vibration perception threshold (less sensitivity)
- Delayed or reduced orgasm due to:
  - Insufficient clitoral engorgement
  - Neuropathy
Cardiovascular disease in women

Up to 63% of women with CVD experience sexual dysfunction
- Decreased libido
- Vaginal dryness
- Painful intercourse
- Decreased genital sensation
- Decreased ability to achieve orgasm

- 1/3 of women and <1/2 men received discharge instructions about resuming sexual activity
- Absence of counseling at hospital discharge was a significant predictor of loss of activity for both men and women
- Mortality was not significantly increased in patients who were sexually active in the first month following AMI

Lindau ST, Abramsohn E. Patterns and loss of sexual activity in the year following hospitalization for AMI (US National Multisite Observational Study). Am J Cardiol 2012; 109: 1439-1444
Medications and Sexuality

- CNS effects:
  - Selective serotonin reuptake inhibitors
  - Benzodiazepines
  - Barbiturates
  - Lithium
  - Antipsychotics
  - Tricyclic antidepressants
- Histamine H2-receptor blockers
- Promotility agents
- Anticholinergics
- Antihistamines
- Antihypertensives
• Men and women who rated their health as being poor were less likely to be sexually active and, among respondents who were sexually active, were more likely to report sexual problems.

• A total of 38% of men and 22% of women reported having discussed sex with a physician since the age of 50 years.

Single-item screener for self-reporting sexual problems in U.S. adults

- In the past 12 months, has there ever been a period of 3 months or more when you had any of the following problems or concerns? Check all that apply.
  - You wanted to feel more interest in sexual activity
  - Your vagina felt too dry
  - You had pain during or after sexual activity
  - You had difficulty having an orgasm
  - You felt anxious about sexual activity
  - You did not enjoy sexual activity
  - Some other sexual problem or concern
  - No sexual problems or concerns

PLISSIT Model for Addressing Sexual Health in Women

- Permission to talk about sexual issues, reassurance and empathy
- Limited Information
  e.g., educational resources, partner dysfunction, resources, realistic expectations
- Specific Suggestions
  e.g., use of lubricants, altering position, date night, novelty, plan sexual activity when energy is highest and pain is lowest.
- Intensive Therapy
  e.g., referral for psychotherapy/sex therapy
Sexual Wellness

- Sleep Hygiene
- Exercise
- Physical Therapy
- Cognitive behavior therapy
- Mindfulness, imagery relaxation techniques
- Planned spontaneity
- Pain medications
- Lubricants, Moisturizers
- Sexual positioning, Liberal Use of pillows
Vaginal health and sexual response

• 20-30% postmenopausal women report vaginal dryness

• Coitally active PM women have less vaginal atrophy in comparison to abstinent women

• No difference in vaginal atrophy in women with and without FSAID (Leiblum et. al)
Atrophic vaginitis

External genitalia show scarce pubic hair, diminished elasticity and turgor of the vulvar skin, decreased introital moisture, and fusion of the labia minora.

*Courtesy of Aron Schuftan, MD.*
Lubricants

- Sexual aid-minimize friction and irritation
- Short acting
- Women ages 18-68
  - 96% “greater sexual comfort”
  - 94% “greater sexual pleasure”
  - “Increased ease of orgasm”


- Pink (silicone based), Jo for Women (water-based)
Vaginal Moisturizers

• Long term aid for vaginal dryness

• Attaches to mucin and epithelial cells on the vaginal wall

• Carries up to 60 times its weight in water

• Holds water in place on the vaginal epithelial surface until it is sloughed off

• Requires 2-3 applications per week

• Satin (organic), Replens, Luvena (probiotic), Hyalogyn (hyaluronic acid)
Vaginal estrogen

- Exogenous estrogen promotes the revascularization and thickening of the vaginal epithelium, resulting in increased lubrication and elasticity
- Local estrogen preparations have been shown to decrease symptoms of atrophy, including vaginal dryness, irritation, pruritus, and dyspareunia
- May also improve sexual desire, arousal, and orgasmic function through increased blood flow and lubrication
Pelvic Floor Therapy

PELVIC FLOOR MUSCLE PT
| Core stabilization
| Internal release
| Graduated dilators
| Therawand home program

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Therapeutic Vibrators
Assisted living is the “new” college campus

- Between 2007 and 2011, chlamydia infections among Americans 65 and over age 50
- 11-15% of U.S. AIDS cases occur in people
- Transmission risks: Unprotected sexual activity
- Low perception of risk of HIV exposure
Nursing Home Policies

- National survey of 366 Nursing Home DON’s
- 71.2% reported issues regarding sexual activity
- 56.6% required a family or designated representative to approve sexual activity in cognitively impaired patients
- 12.4% have the same requirement for cognitively intact patients
- 63.4% do not have policies dealing with sexual activity
- 11.2% require a physician order to allow sexual activity
- 9.5% require a physician order to restrict sexual activity

Lester PE, Kohen I, Stefanacci RG. Sex in nursing homes: a survey of nursing home policies governing resident sexual activity. JAMDA 2016;17: 71-74
Staying out of the closet in old age

• 1.5 million gay, lesbian and bisexual people living in the US currently

• 20% of LGBT seniors in long-term facilities said they were comfortable being open about their sexual orientation

• More likely to be single without children

http://www.ncbi.nlm.nih.gov/pmc/articles/PM3698220/
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Conclusion

• There are physiologic changes that may affect sexual function in aging women
• Emotional or interpersonal factors have the greatest impact on sexual desire
• Sexual health effects quality of life
• Many elderly patients are reticent to report sexual health concerns
• Simple open ended questions can start the conversation
Women’s Health Clinic
Team
5 Physicians
Sex Therapist
NP Psychologist
Pelvic Floor PT
Nurse Educators

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Women’s Health Clinic
Mayo Clinic
Rochester, MN
The Menopause Solution

A DOCTOR’S GUIDE TO:
relieving hot flashes
enjoying better sex
sleeping well
controlling your weight
and being happy!

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