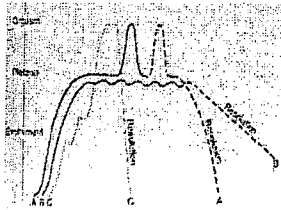


Female Sexuality: What Your Patients Hope You Know

Jillian Romm RN, LCSW
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Masters and Johnson: Physiology of Sexual Response

- Science of sexuality
- Sexual Response Cycle
4-Phase Model:
 - Excitement
 - Plateau
 - Orgasm
 - Resolution

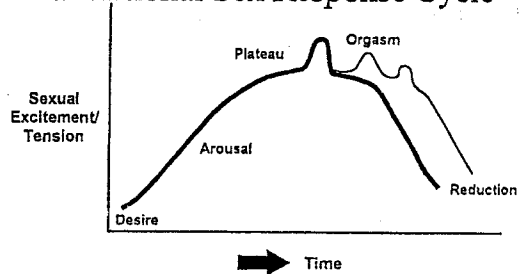


Masters and Johnson
Sexual Response Cycle

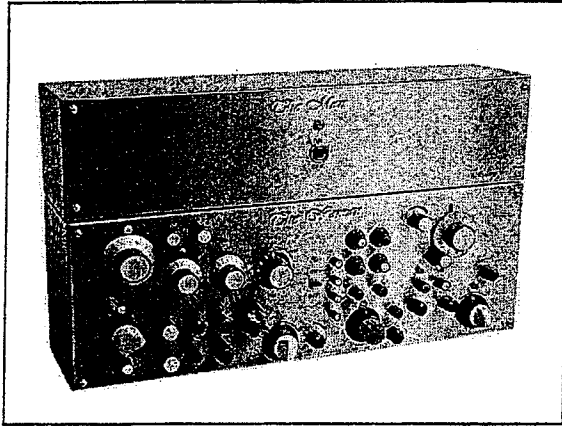
Helen Singer Kaplan

- Psychology and Sexuality
- 3-Phase model:
 - Desire
 - Arousal
 - Orgasm
- Desire

Traditional Sex Response Cycle



Basson R. Obstet Gynecol. 2001;98:350-3.



Female Sexual Dysfunction

- Affects 20% to 50% of women
- Multi-dimensional and multi-causal combining biological, psychological, and interpersonal factors
- Physically and emotionally distressing, socially disruptive
- Increases with age

Goldstein L. Int J Impot Res. 2000;12(Suppl 4):S142-7.

Female Sexual Dysfunction

*Definition and Classification**

- I: Sexual desire disorders:
 - Hypoactive sexual desire disorder HSDD
 - Sexual aversion disorder
- II: Sexual arousal disorder FSAD
- III: Orgasmic disorder
- IV: Sexual pain disorders:
 - Dyspareunia
 - Vaginismus
 - Other sexual pain disorders

*International Consensus Development Conference on Female Sexual Dysfunction.
Basson R et al. J Urol. 2000;163:888-93.

Female Sexual Dysfunction

Sexual Disorders Classification System

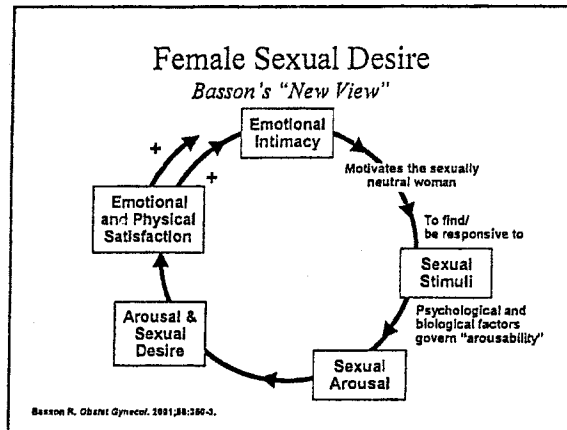
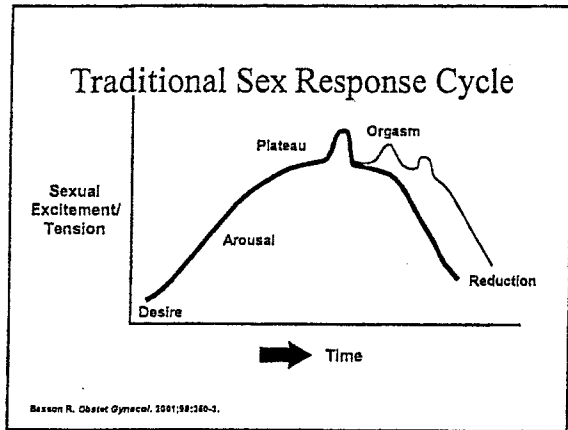
- Classifications expanded
- "Personal Distress"
- Restrictive subtypes:
 - Psychogenic/Organic
- Function/Dysfunction v Continuum of Satisfaction

Sexual Desire Disorders: Hypoactive Sexual Desire Disorder (HSDD)

- Persistent/recurrent deficiency or absence of sexual fantasies/thoughts
- Non-receptivity to sexual activity
- Personal Distress
- "Receptivity" and "Neutrality"

Sexual Desire Disorders: Sexual Aversion Disorder

- Persistent/recurrent phobic aversion or avoidance of sexual contact
- Personal Distress



- ### Sexual Desire Disorders
- Desire and "Limerence"
 - PEA: Phenylethylamine

- ### Desire Disorders: Associated Factors
- Depression
 - Severe Stress
 - Low Testosterone
 - Medications/Illness
 - Aging Related Concerns
 - S/P Trauma
 - Relationship Problems
- LaPiccola & Friedman 1988*

- ### Desire Disorders: Relationship Causes
- Conflict with partner
 - Changing relationship with partner
 - Fear
 - Conflict with "sexual self"
 - *Low Desire v No Desire*

- ### HSDD: Workup
- Endocrine assessment
 - Medications/ETOH
 - Relationship factors
 - Personal factors

Desire Disorders: Treatment Approaches

- Hormonal Therapy
- Antidepressant Therapy
- Relationship Counseling
- Individual Counseling

Hormones: The Testosterone Debate

- Double-blind, HRT study - N=40
- Postmenopausal women
- Estrogen/Progesterone
- Estrogen/Testosterone
- Placebo
- Testosterone: increased pleasure masturbation
- No difference pleasure from intercourse

Myers 1990 *J Clin Endocrinol Metab*

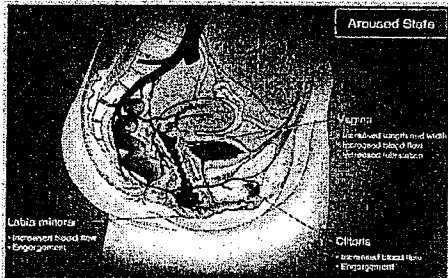
Desire Disorders: Testosterone Patch Research

- Placebo controls/Testosterone Patch (150/300 dose)
- N=65
- Age: 31-56 y
- BSO (ERT)
- Higher dose: increased sexual activity/pleasure-orgasm, general well being
- Strong placebo response rate
 - Shifren, *NEJM* 2001

Sexual Arousal Disorders: Female Sexual Arousal Disorder (FSAD) Erectile Disorder (ED)

- Persistent or recurrent inability to attain/maintain sexual excitement
- Lack of subjective excitement/genital lubrication/swelling response
- Personal Distress

Arterial Blood Supply to Vagina, Labia, Corpus Spongiosum, and Clitoris Are Derived Primarily From Ilio-hypogastric-pudendal Arterial Bed



Ilio-hypogastric-pudendal artery is significant to female sexual physiological function

Female Erectile Tissue: Glans of Clitoris Crura of Clitoris Vestibular Bulbs



FSAD: Arousal DO

- 13-19% premenopausal women
- 44% postmenopausal women

Female Sexual Arousal Disorder: FSAD

- *Treatment Approaches*
 - Hormone replacement
 - Lubrication (Astroglide)
 - Education
 - Couples communication

FSAD: Treatment *Arousogenic Agents*

- Viagra
- Phentolamine ("Vasomax");
adrenergic agonist
- Apomorphine: dopamine agonist
- Herbal Remedies

Nitric Oxide Needed for Arousal

- Nitric Oxide acts through messenger (cGMP) in development of vasocongestion
- Nitric Oxide vulnerable to some antidepressants
- ? Enhanced with Estrogen?

Viagra/Sildenafil: Contraindication

- Nitrate therapy

Limits of Arousogenic Agents

- Will not alter level of desire
- Require sexual stimulation
- Orgasm effect?



Ingredients: Menthol, L-arginine

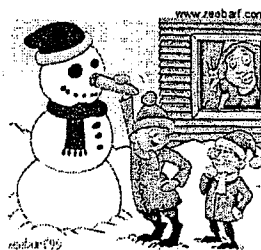
Female Orgasmic Disorder

- Persistent/recurrent difficulty, delay, absence of attaining orgasm following sufficient stimulation and arousal
- Personal Distress

Orgasmic Disorders

- Primary
- Secondary
- Situational
- Coital

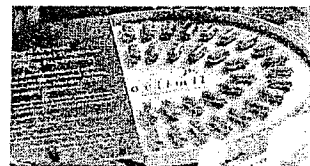
EROS-CTD Clitoral Therapy Device



"I couldn't find any carrots for the nose, so I grabbed this from my moms drawer..."

Avlimil Proprietary blend 756mg*

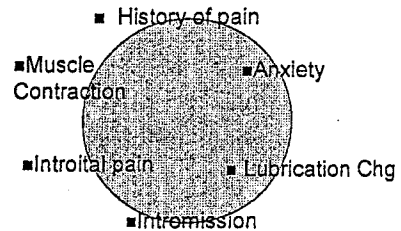
* Salvia officinalis (Sage leaf), Rubus idaeus (Red raspberry leaf), Isoflavones from Pueraria montana (kudzu root extract) and Trifolium pratense (red clover extract), Capsicum annuum (Capsicum pepper), Glycyrrhiza glabra (Licorice root), Morella cerifera (Bayberry fruit), Turnera diffusa (Damiana leaf), Valeriana officinalis (Valeriana root), Zingiber officinale (Ginger root), Actaea racemosa (Black cohosh root).



Sexual Pain Disorders

- *Dyspareunia*: Recurrent/persistent genital pain associated with sexual intercourse
- *Vaginismus*: Recurrent/persistent involuntary spasm of the musculature of vagina
- Interferes with penetration
- Personal Distress

Vaginismus: Vicious Cycle Lamont Model



Lubrication



Medications that may adversely affect sexual function

Class	Examples
Antihypertensive agents	α_1 - and α_2 -blockers (clonidine, reserpine, prazosin) β -blockers (metoprolol, propranolol) Calcium channel blockers (diltiazem, nifedipine) Diuretics (hydrochlorothiazide)
Chemotherapeutic agents	Alkylating agents (busulfan, chlorambucil, cyclophosphamide)
Central nervous system agents	Anticholinergics (diphenhydramine) Anticonvulsants (carbamazepine, phenobarbital, phenytoin) Antidepressants (MAOIs, TCAs, SSRIs) Antipsychotics (phenothiazines, butyrophenones) Narcotics (oxycodone) Sedatives/anxiolytics (benzodiazepines)
Agents that affect hormones	Antiandrogens (cimetidine, spironolactone) Antiestrogens (tamoxifen, raloxifene)

MAOIs = monoamine oxidase inhibitors; TCAs = tricyclic antidepressants;
SSRIs = selective serotonin reuptake inhibitors.
Adapted from Berman JR, Goldstein I. *Urologic Clinics of North America*. 2001;28:408-16.

SSRI-Induced Sexual Problems

- Serotonin
- Dopamine

Strategies: SSRI Induced Sexual Dysfunction

- Switch to :
 - Mirtazapine (Remeron) 5HT-2c Blocker
 - Nafazodone (Serzone) 5HT-2c Blocker
 - Bupropion (Wellbutrin)
- Add:
 - Mirtazapine or Bupropion
- Yohimbine
- Sildenafil

Basic Sexual Questions

- 1. Are you sexually active? Does this include intercourse?
- 2. Do you have pain with sexual activities/touch? Describe...
- 3. Do you have any questions?



Effect of Menopausal Transition on Parameters of Sexual Functioning

• Cross-sectional data reported from a longitudinal, population-based cohort of Australian women, 45-55 yrs

- ↓ Sexual responsivity*
- ↓ Sexual frequency*
- ↓ Libido*
- ↑ Vaginal dyspareunia*
- ↑ Partner problems*

*P < .05.
Dennerstein L, et al. *Obstet Gynecol*. 2000;94:361-8.

Sexuality and Aging

- Changes in desire, arousal, orgasm
- Lubrication
- Male partner? Changes in partner's health, sexual function?

AARP/Modern Maturity Sexuality Study 1999

- First study Americans >45y
- Improved on prior studies
 - Separated partnered/single

Falloff in frequency

AARP/Modern Maturity Sexuality Study 1999

- Begins with the aging process
 - Drugs, disease, relationship problems add to evolutionary shift
- After 50, quality of sex depends on overall quality of relationship

Satisfaction with Physical Relationship with Partner

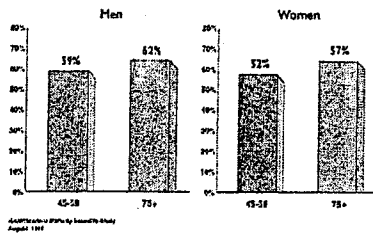
AARP/Modern Maturity Sexuality Study 1999

- Extremely/very satisfying
 - 67% of men
 - 61% of women
- Correlates with high satisfaction with emotional relationship
 - 70% of men
 - 62% of women

AARP/Modern Maturity

Attractiveness Over Time

Over half of Americans 45+ find their mates physically attractive, and as time goes on, more attractive.



Coital Activity in Older Women

AARP/Modern Maturity Sexuality Study 1999

- NOT Associated with:
 - Estradiol
 - Testosterone Androstenedione
 - FSH
 - LH

What Determines Sexual Activity in Older People?

AARP/Modern Maturity Sexuality Study 1999

- Strength of relationship
- Physical condition of partners
- Women: functional/available male partner
- Culture & attitudes
- Rate of sexual activity in early life

ED Adaptation

- Avoidance of sexual encounters
- Non-genital sexual exchanges
- Companionship/closeness without sensuality
- Continuing attempts at intercourse

Reintroducing Sexual Exchanges

- “It’s going to take more than an erection”
 - Even if sex was missed/is welcome
- Couples need to talk
 - may need assistance/support
- Physical affection may have been interrupted
 - needs to be reintroduced

Reintroducing Sexual Exchanges

- Consider a “date” around Viagra
- Set the scene
- Honest/open dialogue
- Go slowly
- Deal with both partner’s anxieties
- Lubrication
- De-emphasize genital-based sexuality

Questions for the older woman:

1. Are you sexually active?
2. Do you have a healthy partner?
3. Is there any change in your level of desire?
4. Is there any discomfort with sexual activity?
5. Is vaginal dryness a problem?
6. Is there any difficulty achieving orgasm?
7. Do you have any questions?

Bryn & Speroff

Sexual Organ



Sexuality After Hysterectomy

Farrel & Kieser OKGyn 2000

- Literature review 18 studies
- Study Design Criticisms:
 - Confounding factors
 - Unblinded
 - Retrospective
- Hysterectomy: neutral/enhancing effect on sexuality

Sexual Dysfunction Following Stress Incontinence Surgery

Lemack & Simmern Urology 2000

- 20% women s/p vaginal surgery less satisfaction (pain)
- Partner discomfort "rare"
- Frequency of sexual dysfunction no change
- ERT: twice as likely to be sexually active after surgery