

Women's Mid-Life Sexual Health

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Menopausal Sexual Health

- 80 % of menopausal women report concerns of decreased sexual satisfaction.
- 60% of women 40y/o to 50y/o are unhappy with their sex lives.
- “I have no sex drive any more.”
- “Sex is the last thing on my to do list.”
- “It hurts when we have sex now.”
- “ My orgasms aren’t what they used to be.”
- **“Relationship discord is a major predictor for lowered sexual responsiveness”**

Medicalization of Maturing Sexual Health

- FSD-Female Sexual Dysfunction
- HSDD-Hypoactive Sexual Desire Disorder
- SAD- Sexual Arousal Disorder (ED)
- GSM-Genitourinary Syndrome of Menopause
- Orgasmic Disorder

Questions to ask about sexual health

In the context of reproductive health history:

- Do you have any sexual health concerns?
- How's your sex drive?
- Have you ever had a strong sex drive? When did your sex drive change?
- Is this a problem in your relationship?
- How has sex changed for you?

Are you not as interested?

Does your body not respond like it used to?

Is there any discomfort when your having sex?

Assessment

Pertinent ROS Questions

- General: **sleep, fatigue, energy, body temperature**
- Mental/Emotional: depression, anxiety
- Cardiovascular: blood pressure, cold hands/feet
- Musculoskeletal: pain, weakness, **ROM problems of spine , hips, PF**
- Neurological: numbness/tingling of extremities
- Urological: **bladder sensitivity**, incontinence, cystocele
- Reproductive: menstrual changes, menopause, STDs, vaginitis, **pelvic or vaginal pain /discomfort**, lichenification
- Lifestyle: present stress level, **emotional health of relationship**, fitness, alcohol, cigarette smoking, other drugs and medications

Assessment

Physical Exam

- Cardiovascular: BP, circulation, distal pulses
- Musculoskeletal: ROM back/hips, **SI joints**, lumbar spine
- Neurological: DTRs, vibratory senses
- Reproductive: pelvic muscle tone, Kegel strength, pelvic floor trigger points, mucosal condition, vaginal flora environment, rugae, normal ph(3.5-4.5)
- Lab: CBC, COMP, ferritin, thyroid, D3, B12, DHEA-S, estrogen (estradiol and total estrogens) ,progesterone, testosterone, SHBG
- Google : Free Testosterone Calculator (www.issam.ch/freetesto)
Uses total Testosterone and SHBG to calculate Free T
ISSWSH ideal range for woman is 0.6-0.8 ng/dL

Conditions that Affect Female Sexual Function

- Fatigue, depression, anxiety, insomnia
- Thyroid, adrenal, pituitary, Diabetes
- Spinal cord injuries, lumbar disk dz, Parkinson's, M.S.
- Arthritis
- Menopause
- Endometriosis, fibroids, cystocele, rectocele, uterine prolapse, chronic vaginitis, vulvodynia, vestibulodynia, vaginal atrophy, dyspareunia, vaginismus, lichen sclerosis
- Sensitive bladder, interstitial cystitis, hyperactive bladder

Medications that Affect Female Sexual Function

- Antihypertensives : beta blockers, calcium channel blockers
- Anticholinergics: bentlyl, ditropan, elavil, benedryl
- Antipsychotics: risperodol, zyprexa, seroquel
- Benzodiazapines: xanax, ativan
- Opiates: hydrocodone, vicodin, oxycontin
- Oral contraceptives : ethinyl estradiole >>>SHBG
- Chemotherapy

Medications that Affect Female Sexual Function

Antidepressants

- Tricyclics: amitriptyline, elavil
- SSRIs: prozac, zoloft, paxil, celexa, lexapro
- ? SNRIs: effexor, serzone, cymbalta
- + effect: wellbutrin = norepinephrine and dopamine re-uptake inhibitor, nicotinic receptor agonist

Conventional FSD Treatment

- Medical specialists in sexual medicine including gynecologists, urologists, sex therapists, primary care practitioners, ND, DC, DO.
- ISSWSH - International Society for the Study of Women's Sexual Health
- Treatment to determine and address the nature of women's sexual dysfunction, distress, dissatisfaction or discomfort.
- Extensive hormone profiles and hormonal therapies
- May offer counseling/sex therapy, pelvic floor therapy, medications
- "Osphena" ospemifene SERM for dyspareunia
- "Addyi" flibanserin for HSDD is a serotonin antagonist, and an agonist norepinephrine and dopamine. 6 month study of 2,400 women taking daily Addyi found they had 0.5-1 more satisfying events than women on placebo. Can not be taken with ETOH. Approved by FDA 2015
- Research for "hard" data, may measure vaginal pulse amplitude (VPA) and vaginal blood flow (VBF), vulvoscopy, vestibular biothesiometry

Not Quite so Conventional FSD Treatments

- **O shot**- PRP injections into vaginal mucosa under the clitoris and urethra that stimulates tissue regeneration. May improve orgasm intensity and decrease urinary incontinence. Effects may last up to 14 months. \$1,200/shot
- **Vaginal laser** “Mona Lisa Tough” FDA approved 2014
Tx takes 1 minute. Creates “tiny holes” in vaginal mucosa that stimulates new vasculature and tissue growth. Appropriate for post menopausal women, women who can’t take estrogens, and for lichen sclerosis. Usually requires 3 treatments 6 weeks apart. Recommended to be done annually. \$1,300 -\$2,500
- Nasal oxytocin
- Vaginal steaming....

FSD

- Sexual desire disorders:
hypoactive sexual desire disorder (HSDD)
sexual aversion disorder
- Sexual arousal disorder
- Sexual pain disorders:
dyspareunia, vaginismus, vulvodynia
- Orgasmic disorder

Sexual Desire Disorder -HSDD

- Diminished feelings of sexual interest, absent sexual thoughts and lack of responsive desire... beyond normative lessening with life cycle and relationship duration.
- 50% of women 42y/o-52y/o loose interest in sex, have less frequent/intense orgasms

The Female Brain - L.Brizendine,M.D.

Sexual Arousal Disorder

- No excitement/no response
“combined arousal disorder”
- No excitement / +objective genital response
“subjective arousal disorder”
- “+ excitement/ no objective genital response
“ physical arousal disorder” = female ED

Neurotransmitter and Hormone Effects on Female Sexual Function

	desire	arousal	receptivity	vasocongestion	orgasm
Estrogen	+	+		+	
Progesterone			+		
Testosterone	+				+
Oxytocin			+		+
Prolactin	-				
Nitrous oxide				+	
Serotonin	+/-	+/-			
Norepinephrine				+	
Dopamine	+	+			

Am Family Physician.2008

Role of Sympathetic Nervous System on Female Arousal

- VBF is > if women watch a scary movie before erotic stimulation (film).

J Abnormal Psych, 1977

- VPA is > if women do 20 minutes intense biking before erotic stimulation (film).

Am J Cardiology 2000

- Brain scans studies of female orgasm show women need to be comfortable, and have their feet kept warm, before they feel like engaging in sex.

The Female Brain – L. Brizindine M.D.

Hormone Ranges

Pre-menopausal	Menopausal	“Ideal”
Total Estrogens pg/ml 70-900	50 - 170	?
Estradiol (E2)pg/ml 212-480	<32 (<40%)	60-100
Progesterone ng/ml 1.4-28	<0.7 (< 60%)	10-20
DHEA-S mg/dl 44-615	39-183	150 - 200

Hormone Equivalents

- **0.625 CEE (Premarin) = 1.0mg estradiol (E2)**
= 0.05 estradiol patch 2x/wk
- **Estriole(E3) 1.0mg =E2 0.25mg**
- **E3 1.0mg / E2 0.25mg /oral micronized progesterone (Prometrium) 50mg bid = CEE (Premarin)0.625mg / MPA (Provera) 2.5mg qd**
- **Note : Need at least 50mg of OMP for 0.5m estradiol qd or 0.625mg Premarin for endometrial protection**
- **OMP 100mg qd for 30 days = 2.5 MPA QD**
- **USP Testosterone 4-6mg=Methyltestosterone 1.25mg**

Bezwecken Hormone Formulations

info@bezwecken.com

Transdermal

- “Ostaderm” E3 2mg ,P 40mg per ¼ tsp, qd – bid
- “Ostaderm V” same as above but used on vulva tissue
- “Progonal” P 40 mg per ½ tsp

liquid

- “PhytoB-L 4x” E3 2mg, P 40mg in 10 gtt
- “ProgonB-L 4x” P 40mg in 10gtt

Transmucosal

- “Hydration Cubes” E3 1mg, “Hydration cubes 2X” E3 2mg
- “DHEA Cubes” DHEA 13mg
- “E.P. Cubes” E3 1mg, Progesterone 40mg

DHEA-S Levels in Women

AGE (years)	RR(mcg/dL)	Ideal (ISSWSH)
18 – 29	62 – 615	176-214
30 – 39	52 – 400	139 - 170
40 – 49	44 – 352	124 - 156
50 – 59	39 – 183	
> 60	11 - 150	

note: I find DHEA-S levels 150 - 200 mcg/dL

helpful for my postmenopausal pts with < libido

Dehydroepiandrosterone(DHEA)

- Study: 10 women(50-55y/o)
10 women(60-56y/o)
- Given 25 mg x 12 months
- Results: < FSH, LH, cortisol
> GH, IGF1, dihydrotestosterone,
betaendorphin, androstenedione, estradiole,
estrone, progesterone, allopregnanolone
Genazzani, Fertil Steril 2003

DHEA

- Inhibits gamma amino butyric acid (GABA)
- >Dopamine and norepinephrine synthesis
- >Firing of serotonin neurons
- Antagonizes cortisol
- Circulates in bloodstream as DHEA-S(half life=7-10 hours vs DHEA half life =15-30 mins)
- Dosages: 10-25 mg qd in the morning

Testosterone

- In mid-30's, women's testosterone and androgen levels < 2% per year.
- By 70y/o, women have < 5% of the testosterone they had in their 20's.

Note: Nursing home studies show 25% of women 70y/o to 90y/o still masturbate.

The Female Brain – L. Brizendine M.D.

Women's Testosterone (T) Levels

- Testosterone, total 20-67 ng/dL
- Testosterone, free 1-21 pg/ml
- Testosterone, bioavailable 3-29 pg/dL
- Sex hormone binding globulin(SHBG) 17-220 nmol/L
- High estrogen(E) suppresses T production
- High E > SHBG which < free T

note: transdermal Estrogen does not tend to > SHBG as much as oral Estrogen.

- Bio-identical hormone replacement goal:

Free testosterone to 2-4 pg/mL

ISSWSH: 0.6-0.8 ng/dL or 6-8 pg/mL 1ng/dL=10pg/mL

- Free testosterone calculator www.issam.ch/freetesto uses SHBG and total testosterone for calculation

Testosterone(T) Therapies

- Estratest :1.25 mg esterified E
2.5 mg methyl T (synthetic)
- Methyl T : 1.25-2.5mg (synthetic)
- Natural micronized T: 0.25-5mg (compounded)
- transdermal micronized T(1-2%):0.25-10mg
typical dose: 2.0gm-5.0gm in 1.0 ml qd
- Testim 1% testosterone gel (off label for women)

Note: transdermal T does not tend to convert to dihydrotestosterone as much as oral T

Benefits of T therapy

- > Bone mineral density
- <hot flashes
- improves libido
- Improves pelvic vasodilation/vasocongestion
- Lowers triglycerides
- Helps maintain muscle mass
- No stimulatory effect on breast cancer cell lines, but...

Risks to T Therapy

- Acne, alopecia, hirsutism
- Fluid retention
- Weight gain
- Irritability
- Lower HDL, > total cholesterol
- T doesn't appear to increase risk for endometrial hyperplasia, but endometrial cells do exhibit aromatase activity
- ? Behavior changes

GS 52 y/o postmenopausal x 5 years

- 2016 pt. on daily oral E2 1mg, P 75mg, DHEA 10mg, topical Testosterone 2.5mg

serum: E2 28pg/mL, Total Estrogen 240pg/mL, P 3.9 ng/mL, total T 31ng/dL, free T 1.7pg/mL, DHEAS 155mcg/dL

- 2017 while taking: Sublingual E3 1.6mg, P 76mg, DHEA 10mg po, vaginal E3 1mg, PR 20mg, DHEA 6mg once weekly

Serum: E2 15, total Estrogen 91, PR 2.2, total T 56, Free T 3.5, DHEA 164

Hormone Ranges

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Integrative Approaches to FSD

- Physical, emotional, social, spiritual awareness and well being
Self-understanding of how sexual health affects personal health and the quality of intimate relationships.
- Stress management
- Diet/Nutrition
- Exercise/Fitness
- Botanical, vitamin, mineral supplements and other integrative modalities for good health and vitality. Address menopausal symptoms, especially fatigue and insomnia.
- Hormone and Neurotransmitter balance
- Mind/body methods for consciously embracing a new sensual self.

5- Hydroxy Tryptophan (5-HTP)

- Intestinal absorption is about 70% of oral dose, does not require a transport molecule, and is not effected by presence of other amino acids.
- Crosses blood-brain barrier to > CNS serotonin
- 5-HTP also > CNS melatonin, endorphins, dopamine and norepinephrine (levels of catecholamines may drop w/o L-tyrosine supplementation)
- Doses: 5-HTP 50 – 100 mg qd to qid
Take with food

5-HTP Toxicology

- Does not cause EMS
- ? In combination w/ other antidepressants
- May antagonize migraine meds: “Sansert” methysergide (synthetic ergot) 5-HT_{2B} antagonist, “Periactin” cyproheptadine antagonist to several 5HT receptors and anticholinergic
- Not with serotonin receptor agonists
“Amalg” naratriptan, “Imitrex” sumatriptan,
“Zomig” zolmitriptan

Libido Support formula

- Panax quinquefolium “American ginseng”
- Rhodiola rosea “Rhodiola
- Tunera diffusa “Damiana”: aphrodisiac
- Urtica dioica “Nettles” root : binds SHBG
- Ginkgo biloba “Ginkgo”: peripheral dilator

- Dosage: 1-2 caps qd in the am

Biodrive Survey

2. How did your sex drive change ?

★ More interests in having sex... no ____, slightly 6, moderately 5, greatly 1

More easily aroused... no 2, slightly 4, moderately 6, greatly ____

More pleasure with sex... no 1, slightly 6, moderately 3, greatly 2

Improved ability achieving orgasm... no 5, slightly 4, moderately 3, greatly 1

Increased intensity of orgasm... no 7, slightly 1, moderately 3, greatly 1

Maca/Elk Velvet Antler formula

- Review of 4 RCT Maca studies: 2 studies showed + effects on sexual function and libido in women, 1 study found improvement for men with ED

BMC Complementary and Alternative Medicine 2010;10:44

- *Lepidium meyenii* : Post menopausal women given 3-5 gr qd for 6 weeks. Showed no change in E,FSH, LH, SHBG but significant reduction in sexual dysfunction reported.

Menopause 2008;15(6)1157-1162

- Elk Velvet Antler “EVA”

Contains AAs, minerals that can increase serum testosterone in males.

- Formula dose 1-2 caps qd-bid, for women add DHEA 10-25qd

GSM -Vulvovaginal Changes

- Mucosa – thinner, less elastic, produces less secretions, vagina has fewer rugae
- Reabsorption of labia minora
- Shift of pH towards alkaline (normal pH : 3.5-4.5)
- Flora imbalance increase frequency of yeast, bacterial vaginitis and UTIs

- Note : with menopause, all mucus membranes seem to get thinner and drier – eyes, gums, tongue, sinuses

Urogenital Changes

- Incontinence –stress, spastic, urgency
- Less bladder capacity – increased frequency
- More frequent urinary tract infections
- Increased bladder sensitivity
- Higher incidence of Interstitial Cystitis(IC)

Genital / Urinary Tract Therapies

- Therapeutic Hygiene Practices – post coital cold water/epsom salt rinse H₂O 16-24oz/ Epsom salt 1 TBS
no perfumes/chemical irritants/panty liners (gladrags.com)
- Address vaginal ph and flora imbalances
probiotic: Lactobacillus rhamnosus and reuteri
- Mannose- 1cap or ½ tsp (1gr) in water bid for 3 days post sex
- Topical Coconut oil prn
- Vaginal Hyaluronic acid gel “Hyalofemme” 5gr q 3days x 1 mo
improvement: Hyalofemme - 84.4%, E3 0.5mg-89.4%

JSM 6/2013 ;10 (6) pp 1575-1584

- Localized hormonal therapy :
Vaginal coco butter E3 (1-2mg), E3/P (1mg/40mg), DHEA(6-13.5mg)
Conventional Rx: Estrace cream E2 0.1mg/gr, Vagifem E2 10 mcg pill

AB 72y/o-Precipitous Urge Incontinence

- Pt presents with concern she has an UTI. On rising from sleep the previous mid-evening, she had a total loss of bladder control on the way to the bathroom, which again occurred after awakening this am. She's had normal urination without dysuria, polyuria since the morning. Her visit with me was later that afternoon.
- Normal UA dip, normal internal exam pelvic exam, vag. ph 8, erythemic urinary caruncle and splayed urethral meatus.
- TX: probiotic *L. ruteri* and *rhamnosus* 1 cap HS x1 month
Mannose 1000mg bid x 1 week, and for 3 days after sex
Therapeutic external cool H₂O/Epsom salt rinses prn

Vaginal DHEA for GSM

Menopause 12/2015;22(12):1289-1295

- Study of women using daily vaginal DHEA cream of either 6.5mg, 13mg or 23.5mg.
- 422 women on 6.5mg for 12 weeks had < vag. ph, <dyspareunia, >vag. secretions, thicker mucosa
- Endometrial bx before and 52 weeks after treatment, showed no estrogenic endometrial changes and stable atrophy.
- Serum estradiol > 2-5x in 1st week, but by 24 weeks, only 2% of women had estradiol above menopausal levels
- DHEA is a precursor for extra gonadal biosynthesis of estrone by aromatization and testosterone via 5 alpha reductase.
- Daily DHEA 23.5mg restored serum DHEA to pre-menopause range, but other sex steroids stay in post-menopause range.

Kegels-(PF) Pelvic Floor Exercise

- Kegels : goal of 5 x 5 x 5 x 5 daily, 2 sets daily
5 seconds contract, 5 seconds relax, 5 repetitions
5 “quicks” quick contract/relax,
at (red lights, phone calls, standing, sitting, walking...)
- Kegel scale: 0(absent)-no palpable contraction, 1 (trace)-flicker or pulsation, 2 (poor) contraction no lift, 3(fair) contraction and lift post.PF > ant. PF, 4(good) contraction and lift ant., post., and side walls, 5(strong) contraction lift with cephalic lift of finger
- Weak Kegels- woman doesn't know how to contract PF, PF muscle weakness/ hypertonicity
- Pelvic floor muscle physical therapy
www.womenshealthapta.org
- Vaginismus.com – for support literature and dilators

Vaginal Lubricants

- High osmolality vaginal lubricants/ moisturizers cause mucosal damage that makes women more susceptible for STIs, and bacterial/yeast vaginitis.
- 2010 Richard A. Cone Ph.D, a biophysicist at John Hopkin's: vaginal mucosa is a very permeable osmotic membrane, vaginal secretions osmolality: 260-290 osm/Kg
Chemical and Engineering News 12/12;90(50):46-47
- KY Warming 10,300 osm/Kg, Astroglide 6,100 osm/Kg, KY Jelly 2,500 osm/Kg, Replens 1491 osm/Kg- glycerin, mineral oil, polycarophil, carbomer homopolymer, hydrogenated palm oil, **methyparaben**, sorbic acid, NaOH
- Good Clean Love 270 osm/Kg ph 3.4, GLC naked-ph4
Sliquid Sea-ph4, Sliquid Satan-ph 6
Coconut oil 180-340 osm/Kg, ph-3.5-5.5

Fact or Fantasy

- 70-80% of women don't orgasm from penetration intercourse
- Heterosexual intercourse typically lasts 3-7 minutes before the male orgasms
- 90% of women orgasm from receiving oral sex
- 10% of women surveyed have never had an orgasm
- Women are likely to conceive after an orgasm
- Some women ejaculate and produce PSA
- The G spot exists
- Bartholin glands named by Kasper Bartholin in 17th century
- Fallopian tubes named by Gabriel Fallopius in 1546
- Skene's glands named by Alexander Skene in 1880

Mid-life Sexuality

The Next Erotic Frontier

- Mating in Captivity by Esther Perel sex therapist
www.estherperel.com, TED talks
- The Clitoral Truth- The Secret World at Your Finger Tips
by Rebecca Chalker
- CPR for your Sex Life-How to Breath Life Into a Dead, Dying
Or Dull Sex Life by Mildred L Brown and Stephen L Braveman
- Women's sexual desire improved after 8 weekly mindfulness-
cognitive therapy sessions.

JSM 7/2008: 7:1646-1659

Intimate Body Mapping

Home Sexercise

- Partners privately map on a body diagram the locations of their partners erogenous zones.
- Partners take turns exploring each other's bodies to create a more (hopefully) comprehensive map.
- An intimate opportunity to open a door to mutual sexploration.

Women's Sexual Health Concerns Summary

- Determine the nature/cause of a women's sexual health issue
- Address contributing factors that effect women's sexual vitality: Causes of fatigue; cardiac, endocrine, neurological, musculoskeletal, gynecological and hormonal conditions.
- Treat women's sexual concerns with individualized botanical, nutritional , hormonal, and emotional support integrative care plans.
- Resources:

AASECT- American association of Sexuality Educators, Counselors and Therapists

ISSWSH.org > find a provider

www.womenshealthapta.org - for pelvic physical therapy

vaginismus.com – information about vaginal pain

goodcleanlove.com , sliquid.com - source for safe vaginal lubricants

smittenkittenonline.com, lelo.com- adult toys and paraphernalia

Mid-Life Good Sex Summary

Good health

Good mood

Good sleep

Good fun

Good partner