Lecture: Women's Health, Hormones and Sexuality

Anna M. Cabeca, DO, FACOG, ABAARM
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Name of CME Activity: ACOFP 52nd Annual Convention and Scientific Seminars

Dates and Location of CME Activity: March 12-15, 2015, The Cosmopolitan Las Vegas, Nevada
Lecture: Women’s Health Series
Friday, March 13, 2015
2:00-3:00 pm
Name of Faculty/Moderator: Anna M. Cabeca, DO, FACOG, ABAARM

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<th>Organization With Which Relationship Exists</th>
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Signature: Anna M. Cabeca, DO, FACOG, ABAARM
Date: 1/22/15

Please fax this form to ACOFP at 866-328-1835 or email to jcank@acofp.org as soon as possible

Deadline: Monday, January 12, 2015
Hot Topics in Women's Sexual Health

Anna Cabeca, DO, FACOG, ABAARM
ACOFP Conference, Las Vegas, March 2015
CabecaHealth.com/Docs

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Key Points

- Physiology drives behavior – testosterone and libido and relationships
- Vaginal androgen hormone therapy is restorative
- Stress and the cortisol – oxytocin connection
My Story - BEFORE

- 40 year old with 4 children
- Worked over 80 hrs/week
- Primary bread winner
- Losing hair
- 80 lbs overweight
- Menopausal and infertile
- Depressed

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The soul suffers when the body is diseased or traumatized, while the body suffers when the soul is ailing - Aristotle

My Story - AFTER

- Hair grew back
- Lost over 80 lbs
- Fertile again... meet my miracle - Ava!
- Wake up excited each morning

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DS – Case Presentation

- 1999 – 64 y.o WF h/o DCIS rt breast at age 58
- Cc: Vaginal dryness, decreased libido, diminished orgasm, sex very important to her, relationship suffering as a result
- PMHx: DCIS, FCBD
- PE: 5’ 10” 155 lbs, vulvar atrophy. Clitoral atrophy

1999 Labs:
- E2 < 20, P <1, T 0.0,
- SHBG, DHEA-S wnl

Tx: Estradiol vag cream 2/wk
- Testosterone 2.5 mg sl
- Progesterone cream 20 mg
- EROS ctd
DS – Case Presentation

- 2009 74y – 2/16 OH E ratio 2.85
- Salivary test
  - DHEA low, cortisol nl
- CPM, DHEA 25 mg /day
- Maca and Greens
- Adrenal supplement
- Carnitine 1000mg bid
- MVIT/min, omega, vit D
DS – Case Presentation

• Dexascan results:

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<tr>
<th></th>
<th>2000 (64y)</th>
<th>2009 (73y)</th>
<th>Change</th>
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<tr>
<td>T - Spine</td>
<td>-0.5</td>
<td>-0.4</td>
<td>+0.7%</td>
</tr>
<tr>
<td>T - Hip</td>
<td>0.0</td>
<td>-0.5</td>
<td>-3.0%</td>
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VM – Case presentation

• 62 y.o WF consult re: vaginal pain
• Meds: Klonopin, Crestor, Zetia, Prilosec, Ultram, aspirin, vaginal estrogen 2 x/ week
• PMHx: Migraines, hyperlipidemia, hypertriglyceridemia, GERD
• PShx: TAH/LSO age 30 –endometriosis & ov cyst
• Age 55y. Cysto/recto repair

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VM – Case Presentation

- Labs: Hormones low, TSH 3.85, Free T4 1.0, Free T3 2.6, Trg 245
- PE: vaginal atrophy, diminished clitoris, suture palpable sq.
- Tx: Bi-est 1.25 mg + P 30 mg + T 1 mg vag suppository w/ Emu oil
- Iodine, thyroid support, Omega’s, Krill…

2 mo f/u – no pain, incr. orgasm, no migraines! “feeling frisky”

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Normal Sexual Function

- Good Health
- Hormone Balance
- Comfortable with body
- Able to communicate desires
- Has an interest in sex
- Arousable
- Adequate vaginal lubrication
- Able to achieve orgasm

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Decline of DHEA with aging
Effect of intravaginal dehydroepiandrosterone (Prasterone) on libido and sexual dysfunction in postmenopausal women

Abstract

Objective: The objective of this study was to provide evidence that the transformation of DHEA into androsterone exerts a local beneficial effect on sexual function in postmenopausal women. This was achieved by measuring subjective indexes of sexual function in a placebo-controlled study after the intravaginal application of Prasterone (dehydroepiandrosterone; DHEA) for 12 weeks.

Methods: The sample consisted of 200 postmenopausal women with severe symptoms of sexual dysfunction and with serum sex steroids remaining within normal postmenopausal levels. The Abbreviated Sexual Function Questionnaires were completed at baseline and after 12 weeks, either during the use of DHEA (1.0% to 3.0%) or placebo, in a randomized, double-blind, placebo-controlled study. A Student's t-test was applied to test hypotheses of normality, and Student's t-tests for independent samples were performed on the within-group analysis.

Results: During the 12-week intravaginal application of Prasterone (DHEA), there was a significant improvement of sexual dysfunction in the desire domain (82% vs. 49%, P = 0.0014) and orgasm (75% vs. 49%, P = 0.047). The dryness during sexual intercourse was improved by 57% (P = 0.0001). The Function arousal/sensation domain was improved by 68% (P = 0.006), the arousal/lubrication domain by 39% (P = 0.0061), and all other domains remained unchanged or unchanged by 39% (P = 0.0061).

Conclusions: By a local action in the vagina, DHEA applied daily at doses at which serum steroids remain well within normal postmenopausal values exerts relatively potent beneficial effects on all four aspects of sexual dysfunction. Such data indicate that combined androgenic/estrogenic stimulation in the three layers of the vagina exerts important beneficial effects on sexual function in women without systemic action on the brain and other extra-vaginal tissues.

Endocrine and intracrine sources of androgens in women: inhibition of breast cancer and other roles of androgens and their precursor dehydroepiandrosterone

In clinical studies, DHEA has been found to increase bone mineral density and to stimulate vaginal maturation without affecting the endometrium, while improving well-being and libido with no significant side effects.
DHEA and the intracrine formation of androgens and estrogens in peripheral target tissues: its role during aging.


Furthermore, the inhibitory effect of DHEA on the growth of human breast cancer xenografts in vivo in nude mice supports the beneficial use of DHEA as hormone replacement therapy in women.

Psychological Causes of Sexual Dysfunction

- What are their ideas about sex?
- How were they raised?
- What were their early sexual messages?
- Were they victims of sexual abuse?
- What are their religious and cultural beliefs?
- How is their relationship with their partner?
- Are they able to communicate their needs?

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Physical Causes of Sexual Dysfunction

- Inflammatory diseases
- Elevated cholesterol, ADMA, —affecting arterial blood flow
- History of pelvic surgery
- History of episiotomy or child birth trauma
- Trauma
- Fatigue
- Headaches/Pain
- Medications

Medication Induced Sexual Dysfunction

- Anti-Androgen drugs: flutamide, GNRH analogues, cytotoxic chemotherapeutic agents
- Psychoactive drugs and mood stabilizers
- Sedative-hypnotics: alcohol, benzodiazepines, sleeping pills
- Antidepressants: SSRIs, Tricyclics
**Medication Induced Sexual Dysfunction**

- Antihypertensive Agents: Hydrochlorothiazide, beta blockers
- Drugs that bind with testosterone or increase SHBG levels: Tamoxifen, hormonal contraceptives, oral estrogens
- Others: Cimetidine, steroids, aldosterone, lovastatin

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**Statin tx lowers libido**

- April 16, 2010 -- Statin therapy prescribed to lower cholesterol also appears to lower testosterone, according to a study that evaluated nearly 3,500 men who had erectile dysfunction or ED.
- "Current statin therapy is associated with a twofold increased prevalence of hypogonadism," - Giovanni Corona, MD, PHD, a researcher at the University of Florence in Italy
Sexual Dysfunction During Menopause

- Decline in progesterone age 35-40
- Estrogen Dominance
- Testosterone insufficiency
- Elevated SHBG
- Thyroid Hormone abnormality
- Decline in DHEA
- h/o childhood trauma, lack of bonding, PTSD

Hormonal Causes of Sexual Dysfunction

- Estrogen
- Progesterone
- Testosterone
- DHEA
- Cortisol
- Thyroid hormones
- Oxytocin
- Vitamin D
Do Hormones Help More than Hot Flashes?

- 257 women studied over a 10 year period.
- All domains of sexual function declined significantly in the decade studied. Women using hormone therapy had significantly greater responsivity and higher frequency of sexual activities than nonusers.
- Hormone therapy helps women maintain sexual function and response.
- Sexual distress as determined on the Sexual Distress Scale was associated with higher incidence of depression and relationship conflicts.


- Decreased androgen concentrations and diminished general and sexual well-being in women with premature ovarian failure.
- Department of Obstetrics and Gynaecology, Meander Medical Center, Amersfoort, The Netherlands. jg.vander.stege@meandermc.nl
- OBJECTIVE: To describe general and sexual well-being in women with premature ovarian failure (POF) and to investigate whether there is a relationship between androgen levels and sexual functioning.

Design:
Women with POF and healthy volunteers with regular menstrual cycles participated. Participants completed a written questionnaire and underwent hormonal screening. The questionnaire included standardized measures: the Questionnaire for Screening Sexual Dysfunctions, the Shortened Fatigue Questionnaire, and the Symptom Check List-90. Serum hormone measurements included estradiol, total testosterone, bioavailable testosterone, androstenedione, dehydroepiandrosterone, and dehydroepiandrosterone sulfate.

Results:
Eighty-one women with POF and 68 control women participated in the study. Compared with control women, women with POF reported more complaints of anxiety, depression, somatization, sensitivity, hostility, and psychological distress. Overall women with POF were less satisfied with their sexual life. They had fewer sexual fantasies and masturbated less frequently. Sexual contact was associated with less sexual arousal, reduced lubrication, and increased genital pain. However, the frequency of desire to have sexual contact and the frequency of actual sexual contact with the partner did not differ between women with POF and control women. Women with POF had lower levels of estradiol, total testosterone, and androstenedione. Multiple regression analysis revealed that androgen levels had only a weak influence on sexual functioning; higher total testosterone levels were associated with increased frequency of desire for sexual contact, and higher androstenedione levels were associated with elevated frequency of sexual contact.

Conclusions:
Women with POF have diminished general and sexual well-being and are less satisfied with their sexual lives than control women. Although women with POF had lower androgen levels, we did not find an important independent role for androgens in various aspects of sexual functioning.

Multiple regression analysis revealed that androgen levels had only a weak influence on sexual functioning; higher total testosterone levels were associated with increased frequency of desire for sexual contact, and higher androstenedione levels were associated with elevated frequency of sexual contact.
Oxytocin – Stress – Cortisol Connection
BETTER THAN AN APPLE A DAY!

CHRONIC STRESS AND CORTISOL

- Cortisol is actually what wakes the brain up in the morning.
- AF is mediated by a constant ON signal from the circadian circuitry in mitochondria connecting to the brain.
- AF is a electromagnetic disease of having no OFF switch for light or high powered photons.
- Chronic lowered cortisol is not a symptom but the reaction of the brain to this stimulus.
- This is why the PVN down regulated cortisol over time to stop the potential short circuiting of mitochondria.
Oxytocin
The Love and Bonding Hormone

Nurturing-Attachment-Relationship
Pleasure
Mood enhancing, happiness, kindness
Appetite reduction
Pain relief
Orgasm, increase in clitoral/penile sensitivity to sexual arousal
Increases muscles
Anti-aging effects
Oxytocin Calms the Effects of Stress

- In Stress, oxytocin concentrates at the CNS areas rich in cortisol (hippocampus).
- Oxytocin binds to receptors, inhibiting specific neurons, lowering levels of Oxytocin and ACTH.
- Less responsive to Stress.
- Over time there is depletion and disintegration of oxytocin.
Monday Morning Practice

- Address sexual health concerns and validate them (Treat the couple!)
- Discuss vaginal changes
- Offer vaginal hormone therapy
  - Vaginal DHEA
  - Vaginal estrogen
  - Compounded combinations
- Refer to virtual education programs patients can do on their own time and privacy of their home
Vaginal hormonal treatment options

- Compounded DHEA vaginal suppositories/tablets or topical cream
  - 5-10 mg
- Testosterone
  - 0.5 – 10 mg suppository (higher doses with incontinence)
- Estriol/Estradiol
- Progesterone
- Oxytocin
- Ex: Bi-est 0.5 mg + T 2mg + DHEA 3mg combined

Non-hormonal treatments for vaginal dryness

- Coconut oil
- Ayurvedic Ghee
- Yes
Monday Morning Takeaways

• Stress causes NT, hormone, and cell membrane Δ’s
  • ↑ Progesterone (bonding), ↑ CL- efflux from cell and Ca++ into cell
  • ↑ Cortisol… eventually downreg by PVN (revving engine)
  • ↑ Glutamine synthetase ↑ glutamate availability (excitatory aa)
  • Disrupt neuronal energetics, ↑ oxidative damage
  • ➔ Inflammation
  • Telomere attrition
  • ↓ Oxytocin
  • ➔ Disconnect

• Sense that body/brain betrays you… mind betrays you… your soul suffers

Key tests:
• DHEA-S
• Vit D 25-hydroxy
• Hs CRP
• HgbA1c
• Salivary cortisol
• AA/EPA ratio
• Comprehensive hormonal panel
Monday Morning Takeaways

- Nutrients to decrease inflammation, support cell membrane integrity and function and adrenal function
  - DHA
  - Maca
  - Quercetin
  - Resveratrol
  - Grape Seed extract
  - Turmeric

- Supplements
  - Vit D
  - Progesterone and/or Pregnenolone
  - DHEA

Treatment Approaches

- Hormonal
- Nutrition—reduce processed foods, increase whole, organic free range foods
  - Herbal/botanicals
- Increase omega-3 intake
- Exercise—increases circulation and strength
  - Kegel Exercises
- Detoxification—cleanse liver, heal gut
Herbal/Botanical Treatments

- wild yam,
- damiana,
- standardized tribulis,
- epimedium (horny goat weed),
- DIM
- Maca
- red clover,
- urtica dioca,
- Korean ginseng,
- deer antler,
- gingko biloba,


MACA


- Beneficial effects of Lepidium meyenii (Maca) on psychological symptoms and measures of sexual dysfunction in postmenopausal women are not related to estrogen or androgen content.
- Brooks BM, Wiltse B, Walker CA, Austin JP, Cox NK, Stojanovska L.
- School of Biomedical and Health Sciences, Victoria University, St. Albans, Victoria, Australia.
- OBJECTIVE: To examine the estrogenic and androgenic activity of Lepidium meyenii (Maca) and its effect on the hormonal profile and symptoms in postmenopausal women. DESIGN: Fourteen postmenopausal women completed a randomized, double-blind, placebo-controlled, crossover trial. They received 3.5 g/day of powered Maca for 6 weeks and matching placebo for 6 weeks, in either order, over a total of 12 weeks. At baseline and weeks 6 and 12 blood samples were collected for the measurement of

CONCLUSIONS: Preliminary findings show that Lepidium meyenii (Maca) (3.5 g/d) reduces psychological symptoms, including anxiety and depression, and lowers measures of sexual dysfunction in postmenopausal women independent of estrogenic and androgenic activity.
Top 11 Ways to Increase Oxytocin

1. Orgasm
2. Contraction/Labor/Breast Feeding (nipple suckling)
3. Sexual Contact, Vaginal Distention
4. Love
   - romantic
   - maternal/paternal
5. Laughter
6. Playfulness
   - Music, dance, movement, singing
7. Massage
8. Hugging, caressing, physical contact
9. Charity
10. Partnership/Family/Community
11. Food Intake - distention of the stomach stimulates the vagus nerve, allow time between meals.

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Life lived fully is

- Love
- Learning
- Lessons
- Legacy
- Laughter

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Healthy Mom & Strong Healthy Baby
&
Teaching Tots to Swim

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