

DISRUPT

PELVICON 2026

VULVAR EXAMS FOR THE PELVIC REHAB PROVIDER

DR. RACHEL RUBIN

PRE-CON 2026



RACHEL RUBIN

Rachel Rubin is changing the way we talk about sexual health.

A board-certified urologist, fellowship-trained sexual medicine specialist, and Assistant Clinical Professor of Urology at Georgetown University, Rachel is a nationally recognized expert in menopause, sexual medicine, pelvic and genital pain, and sexual dysfunction. She is a powerful advocate for bringing better science, education, and evidence-based care to women's sexual health.

www.rachelrubinmd.com
@drrachelrubin

VULVAR EXAMS FOR THE PELVIC REHAB PROVIDER

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Vulvar Exams For Pelvic Rehab Providers

Rachel Rubin, MD



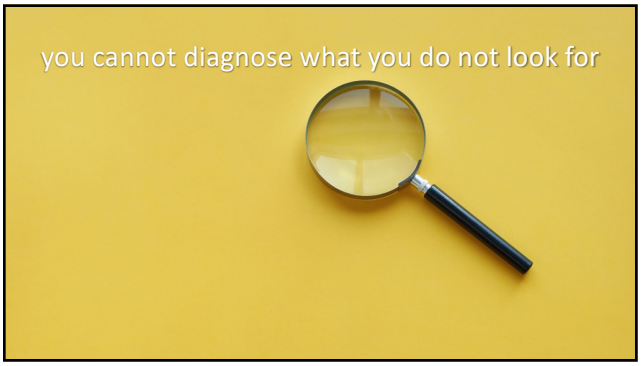
About Me

- Urologist fellowship trained in sexual medicine
- Clinician, Researcher, Advocate, Educator
- Mom to Billie (9) and Ezra (7)
- Created a life where nobody tells her what to do

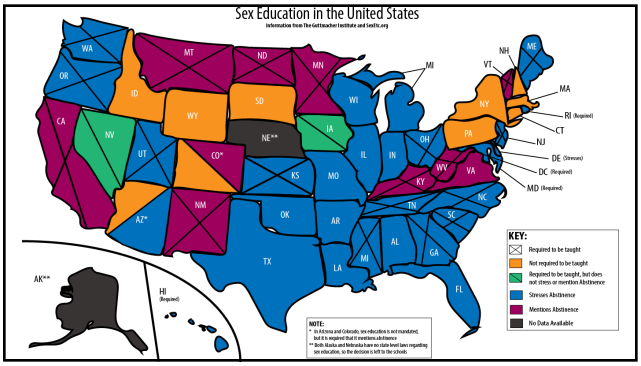


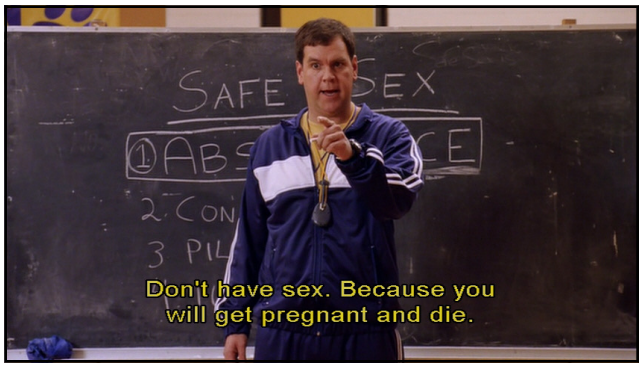
Agenga

- Anatomy
- Physical Exam
- Pathophysiology: Diagnosis/Treatment
  - Vestibulodynia
  - GSM / GSL
  - Lichen Sclerosus
  - Clitoral Adhesions









Where to begin?

The most important part of the physical exam is the…

Where to begin? The most important part of the physical exam is the…

History

The story is essential to begin to understand what you are looking for

How to Get a Good History

Desire

Orgasm

Pain

Arousal

Just Ask

nobody else will

Specific Questions:

"Are you sexually active?"
"Are there sexual concerns you wish to discuss?"
Explain that sexual problems are common
Assure the patient that you are comfortable discussing sexual issues.

"Many women with diabetes…" or "Many women going through menopause…"
Tell me more about it…

Clayton, A. et al. Mayo Clinic Proceedings March 2018

Listen



TIME TIME TIME

Look at the patient and try not to interrupt. Usually the story gives away the diagnosis.

Do not make assumptions

Ask questions after they've had time to talk

Take notes

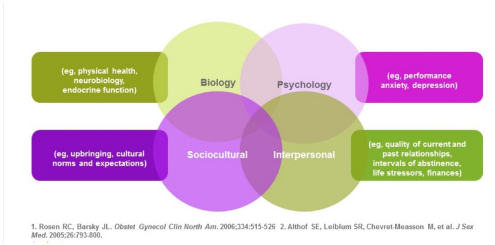
Ask About the Past

Past Medical / Surgical History

Medications past and present: Ask about all forms of birth control, topical yeast infection medications etc

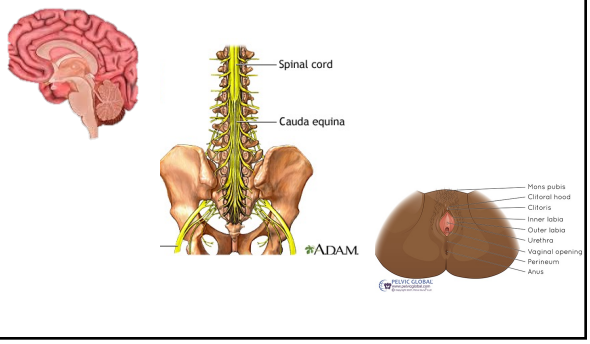
Social history: Ask about relationships past and present, family situation, sexual abuse, stress levels

Goals: simple language from patient. "I will be thrilled if…:"

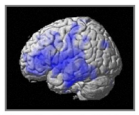


1. Rosen RC, Barsky JL. *Obstet Gynecol Clin North Am.* 2006;334:515-526 2. Althof SE, Leiblum SR, Chevret-Measson M, et al. *J Sex Med.* 2005;26:793-800.

Physical Exam

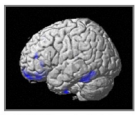






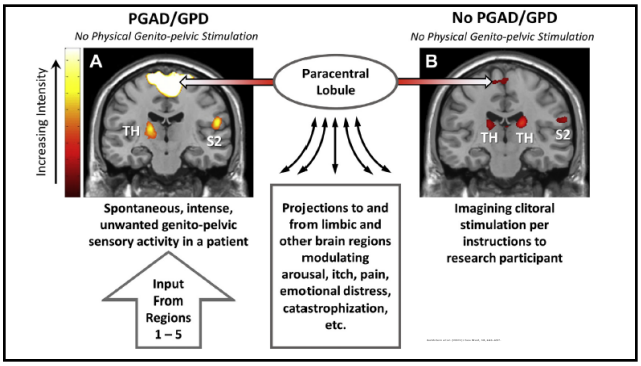
A. Healthy female PET scan

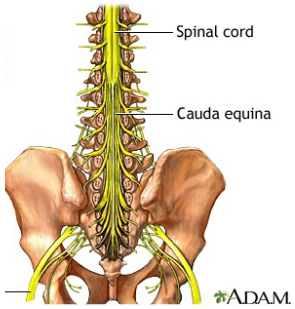
Neuroimaging studies comparing premenopausal women with and without HSDD reveals differences in brain activity patterns when shown erotic stimuli[a,b,c,d,e]

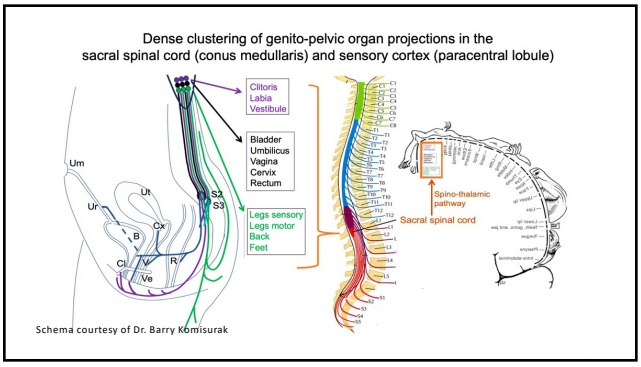


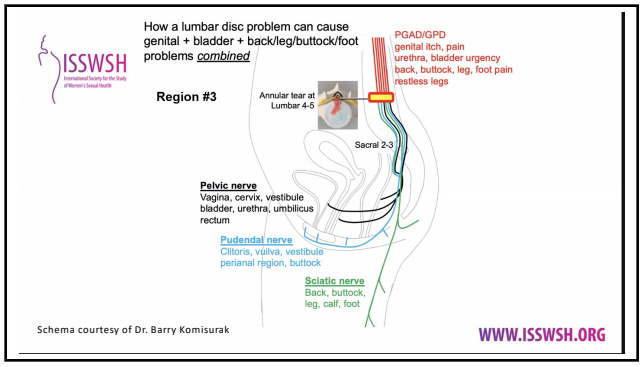
B. HSDD female PET scan

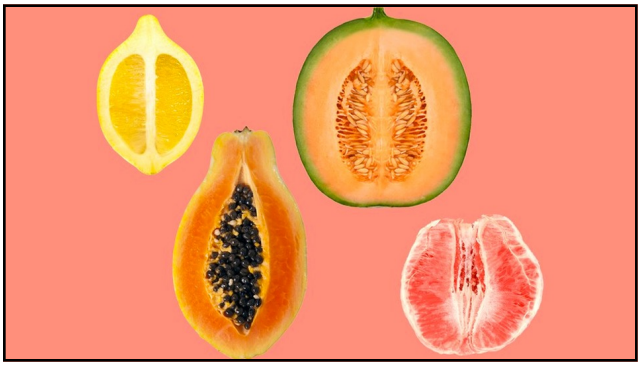
For women with HSDD their prefrontal cortex is unable to deactivate, frustrating their ability to feel sexual desire



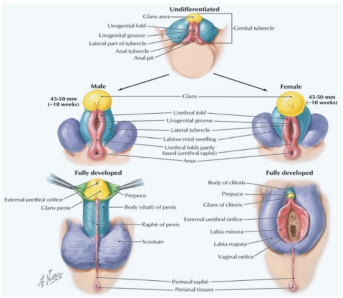




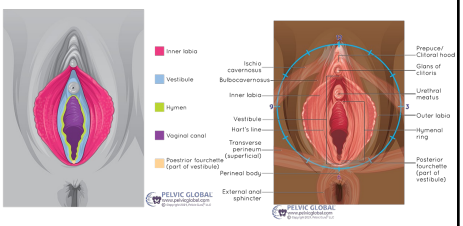


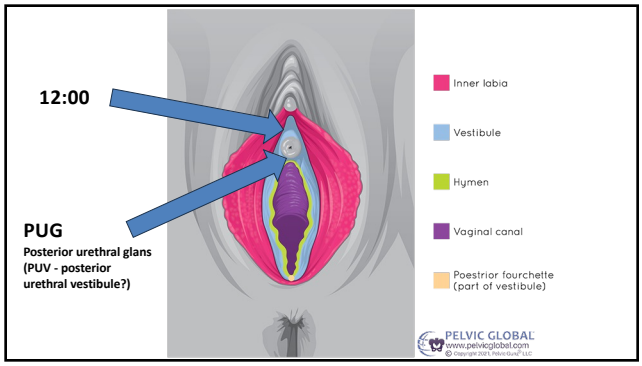


Sexual Organs are all Homologues!



- Outside of Hart's Line – **VULVA**
  - ectoderm
- Between Hart's Line and the Hymen – **VESTIBULE**
  - endoderm
- Between Hymen and the Cervix – **VAGINA**
  - mesoderm





Hormones matter

- Oral contraceptives
- Breast feeding
- Infertility treatments
- Acne medications: spironolactone, finasteride, Accutane
- Menopause
- Oophorectomy
- Breast cancer treatments
  - SERMS: tamoxifen
  - Aromatase Inhibitors: anastrazole

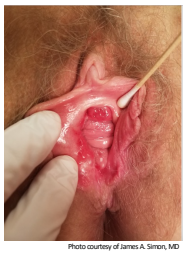
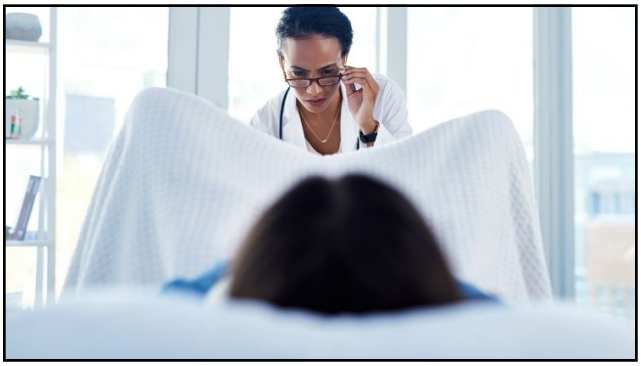


Photo courtesy of James A. Simon, MD

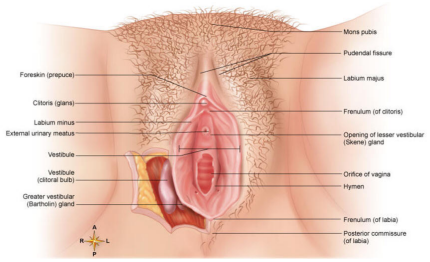








Anatomical Structures



Standardized Step-Wise Approach to examining the vulva

You cannot diagnose it if you don't know it exists!

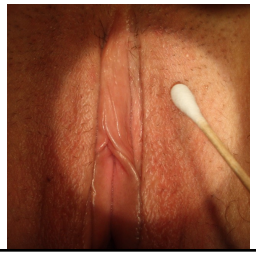
Steps

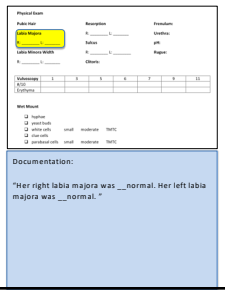
Lateral → Medial
External → Internal
Vulva → Vestibule → Vagina

1. Labia majora
2. Interlabial sulcus
3. Clitoris
4. Labia minora
5. Urethra
6. Vestibule + minor vestibular glands
7. Speculum

Labia majora

- Skin findings
- Pain





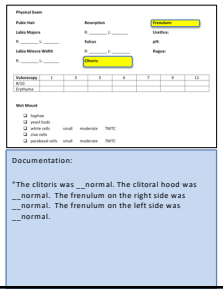
Documentation:

"Her right labia majora was __normal. Her left labia majora was __normal. "

Clitoris

- Glans (size), hood, frenulum
- RETRACTION is CRITICAL
- Use Q-tip to size (ie. 100% Q-tip)



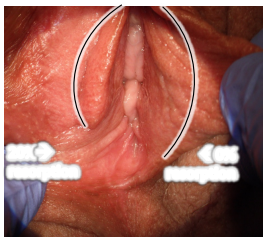


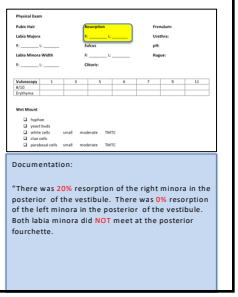
Documentation:

*The clitoris was __normal. The clitoral hood was __normal. The frenulum on the right side was __normal. The frenulum on the left side was __normal.

Labia minora-resorption

- What % of the LENGTH of the labia, were it to reach the posterior fourchette, is missing?



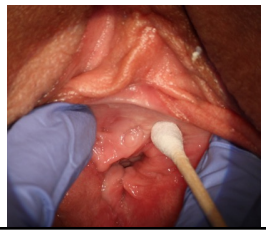


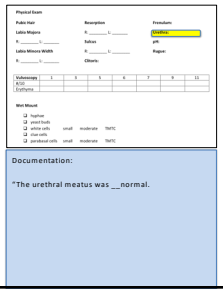
Documentation:

*There was 20% resorption of the right minora in the posterior of the vestibule. There was 0% resorption of the left minora in the posterior of the vestibule. Both labia minora did NOT meet at the posterior fourchette.

Urethra

- Look for abnormalities- telescoping, erythema, pain



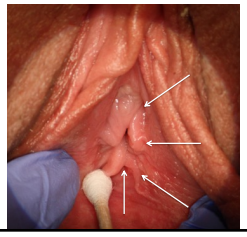


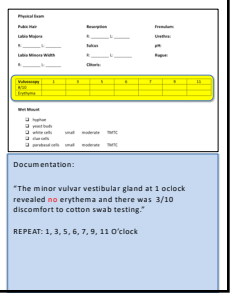
Documentation:

*The urethral meatus was __normal.

Vestibule/minor vestibular glands

- Record a) erythema b) pain to Q-Tip testing at:
  1, 3, 5 ,6, 7, 9,11 O'Clock positions





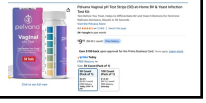
Documentation:

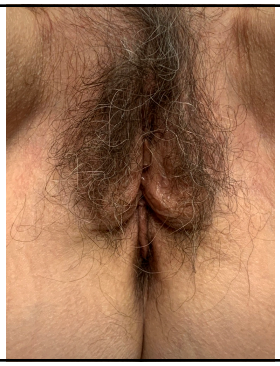
The minor vulvar vestibular gland at 1 oclock revealed no erythema and there was 3/10 discomfort to cotton swab testing.

REPEAT: 1, 3, 5, 6, 7, 9, 11 O'clock

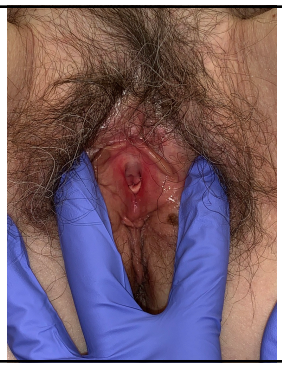








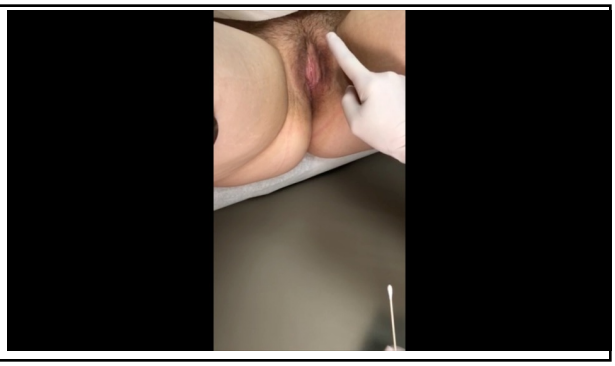


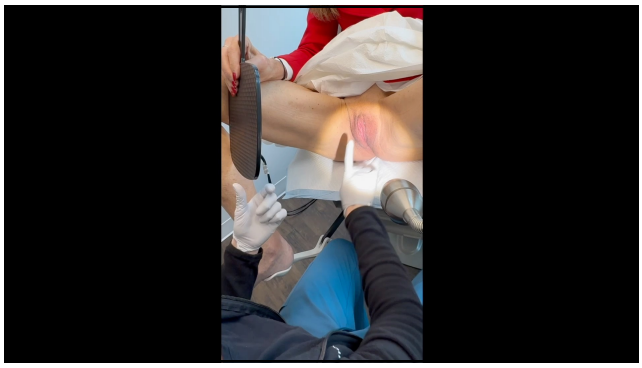





HYDRION
pH 4.5 - 7.5
www.MicroEssentialLab.com
4.5 5.0 5.5 6.0 6.5 7.0 7.5







Peer-Reviewed · Published: November 07, 2024

How to do a Vulvar Exam: A Trauma-Informed Approach

Female Sexual Dysfunction · VJSM Session Videos

Jessica Yih MD, Muhammed A M Hammad, MBBCh, MSc

VJSM 2024 1: 086

04:59

How to do a Vulvar Exam: A Trauma-Informed Approach

Jessica Yih, Muhammed Hammad

Medical or biologic causes vulvodynia:

1. Altered hormone integrity
2. Increased nerve fiber density - genetic susceptibility leading to elevated levels of nerve growth factor substances
3. An injury to, or irritation of, the pudendal nerves that transmit pain and other sensations
4. Abnormal response of tissues to Candida infection, or recognized allergies or non-specific allergies
5. Dermatologic conditions: lichen sclerosus or lichen planus
6. Vulvar granuloma fissuratum
7. Peri-urethral glans pathology
8. Desquamative Inflammatory Vaginitis
9. Bartholin cyst
10. Clitorodynia
11. Pelvic Congestion Syndrome
12. Endometriosis
13. Pelvic Organ Prolapse
14. Interstitial Cystitis
15. Referral from Hip Disease
16. High tone pelvic floor dysfunction

Things you will routinely find on vulva exam



Provoked vestibulodynia (PVD)





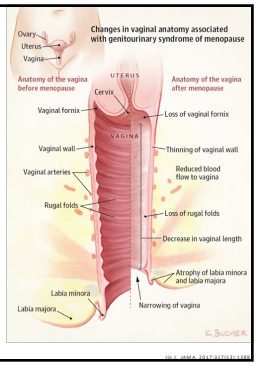
Clitoral phimosis

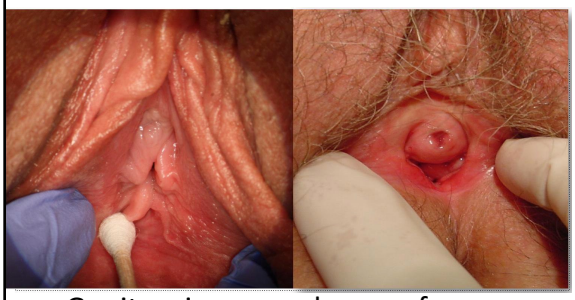
Table 3 Genitourinary syndrome of menopause (GSM): symptoms and signs

Symptoms	Signs
Genital dryness	Decreased moisture
Decreased lubrication with sexual activity	Decreased elasticity
Discomfort or pain with sexual activity	Labia minora resorption
Post-coital bleeding	Pallor/erythema
Decreased arousal, orgasm, desire	Loss of vaginal rugae
Irritation/burning/itching of vulvar or vagina	Tissue fragility/fissures/petechiae
Dysuria	Urethral eversion or prolapse
Urinary frequency/urgency	Loss of hymenal remnants
	Prominence of urethral meatus
	Introital retraction
	Recurrent urinary tract infections

Supportive findings: pH > 5, increased parabasal cells on maturation index, and decreased superficial cells on wet mount or maturation index

Portman et al. The journal of sexual medicine 11.12 (2014): 2865-2872.





Genitourinary syndrome of menopause

Vulvar Lichen Sclerosus



Thin, whitish vulvar skin



Loss of labia minora



loss of architecture with the agglutination

The skin has pigment changes and a "parchment paper" crinkled appearance.

Vulvar Lichen planus

- Inflammatory autoimmune disorder that can affect the vulva and the vagina
- Peak incidence between ages 30 and 60
- There are three clinical variants of lichen planus affecting the vulva: erosive, papulosquamous, and hypertrophic
- Rare compared to Lichen sclerosis
- Diagnosis: vulvar biopsy
- Treatment: high-potency topical corticosteroid (clobetasol propionate 0.05% ointment)



T O'CONNELL, *Am Fam Physician*. 2008 Feb 1;77(3):321-326.

Lichen Planus: Classic Presentation

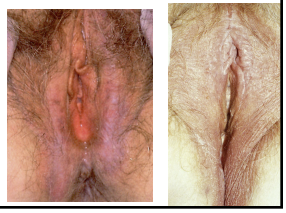
- LP with painful vulvar erosion and irregular white lacy border (Wickham Striae)



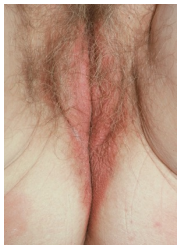
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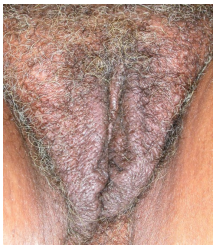
Lichen simplex chronicus

- Chronic eczematous disease characterized by intense and unrelenting itching and scratching
- Skin can progress to a thick leathery appearance
- Treatment is through education and behavioral techniques to prevent scratching and topical corticosteroids and antihistamines



Lichen Simplex Chronicus

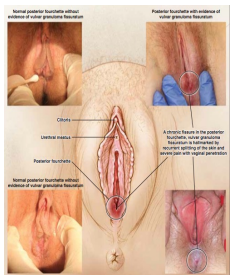




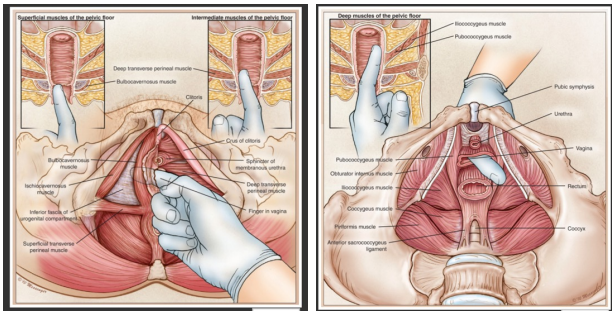
Reprinted with permission of Andrew Goldstein, MD, FACOG, ©

Vulvar Granuloma Fissuratum: Diagnosis

- Chronic fissuring of the posterior fourchette
- May present with:
  - Lichen Sclerosus
  - Genitourinary Syndrome of Menopause/Atrophy
  - Poorly repaired episiotomy



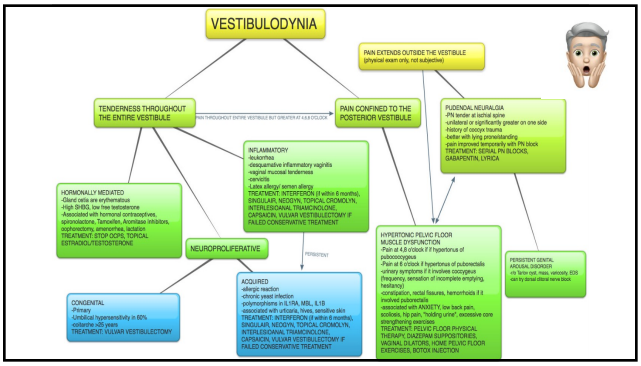
This image was published in the Journal of Sexual Medicine, Vol 8, Goldstein A. Perineoplasty and vaginal advancement flap for vulvar granuloma fissuratum. Copyright Elsevier 2011.

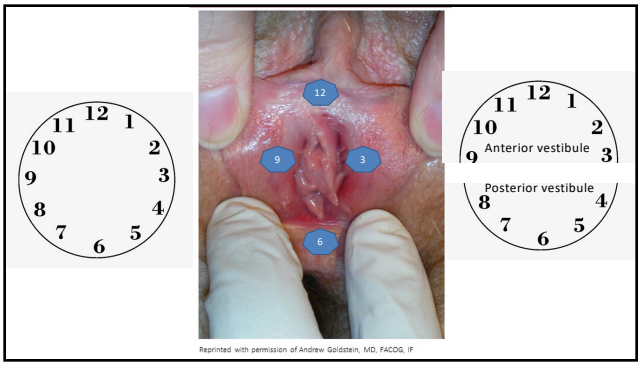


Barton, Julie. "Assessment of the pelvic floor muscles in women with sexual pain." *The journal of sexual medicine* 7.11 (2010): 3526-3529.

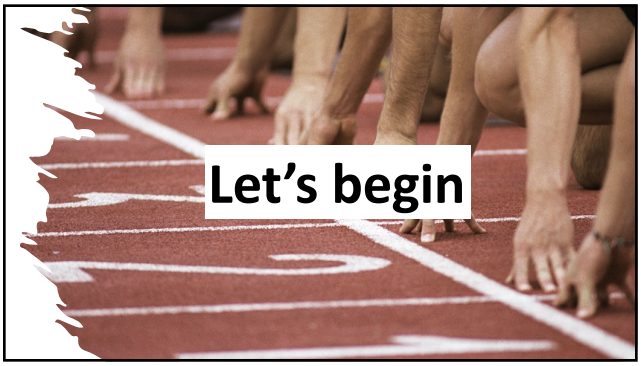
Vulvodynia:
An Algorithmic Approach



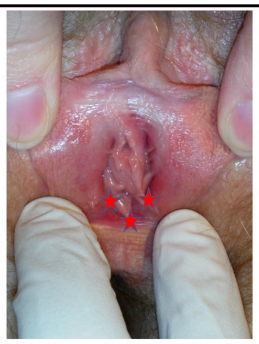




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PAIN



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VESTIBULODYNIA

TENDERNESS THROUGHOUT THE ENTIRE VESTIBULE

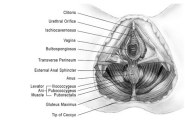
PAIN CONFINED TO THE POSTERIOR VESTIBULE





VESTIBULODYNIA

PAIN CONFINED TO THE POSTERIOR VESTIBULE

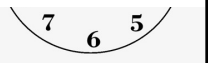


Prendergast Obstetrics and Gynecology Clinics, (2017), 44(3), 509-522.

HYPERTONIC PELVIC FLOOR MUSCLE DYSFUNCTION
-Pain at 4,8 o'clock if if hypertonus of puboccocygeus
-Pain at 6 o'clock if hypertonus of puborectalis
-urinary symptoms if it involves coccygeus (frequency, sensation of incomplete emptying, hesitancy)
-constipation, rectal fissures, hemorrhoids if it involved puborectalis
-associated with ANXIETY, low back pain, scoliosis, hip pain, "holding urine", excessive core strengthening exercises
TREATMENT: PELVIC FLOOR PHYSICAL THERAPY, DIAZEPAM SUPPOSITORIES, VAGINAL DILATORS, HOME PELVIC FLOOR EXERCISES, BOTOX INJECTION



Posterior vestibule



History



- May be associated with urinary frequency, urgency, hesitancy, and sensation of incomplete emptying, constipation, rectal fissures, hemorrhoids.
- Associated with anxiety, lower back pain, scoliosis, hip pain, holding urine and excessive core strengthening exercises



Pelvic Floor Physical Therapy… not just for women!

Common Symptoms of Hypertonic PFMs

- Urinary urgency, frequency, hesitancy, pain
- Constipation and painful bowel movements
- Dyspareunia
- Pain with sitting
- Vulvar, perineal, and/or anal itching, pain or burning
- Inability to achieve orgasm or pain with orgasm
- Clothing and exercise intolerance

Prendergast Obstet Gynecol Clin N Am 2017; 44:509-22

Physical Exam

- Tenderness +/- erythema of the posterior vestibule only
- Tight pelvic floor muscles
- Retracted perineum
- Fissures in the posterior vestibule
- Pain at 5,6,7 o clock



Photo credit: Rachel Rubin MD

Treatment

1. Get a pelvic floor physical therapist on speed dial!
2. Dilator and manual therapy
3. Suppositories: diazepam 5mg 3x week, baclofen 5-10mg 3x week
4. Trigger point injections: anesthetic, steroid, botulinum toxin
5. Mental Health: CBT, mindfulness, yoga

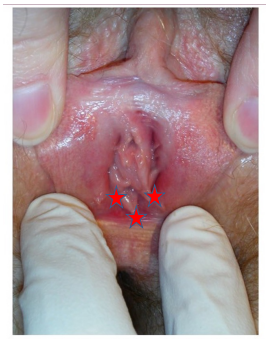






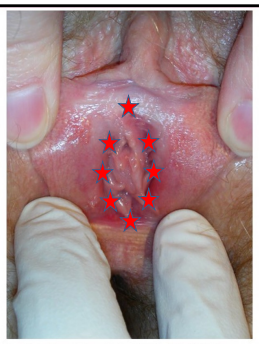
Botulinum Toxin to pelvic floor

- Botox 100 units
- Dysport 300 units
- Placed in 3 cc of normal saline
- I use 30G ½" needles
- Best in conjunction with PT

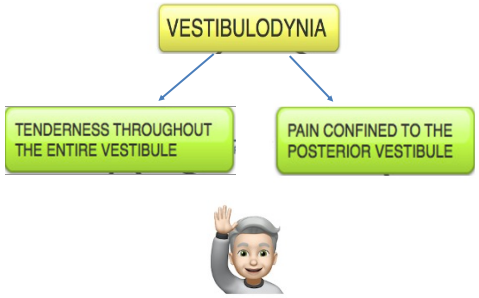


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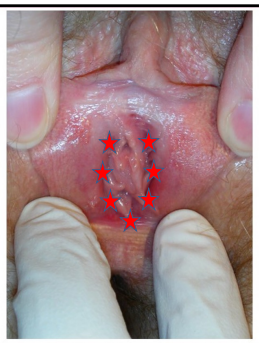
PAIN



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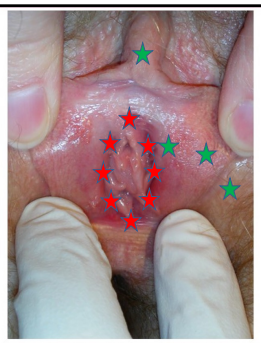
PAIN



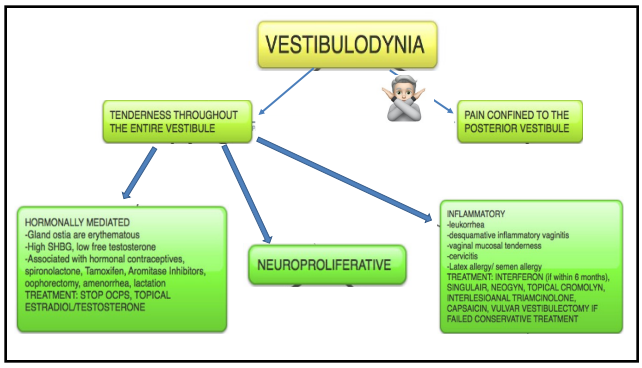
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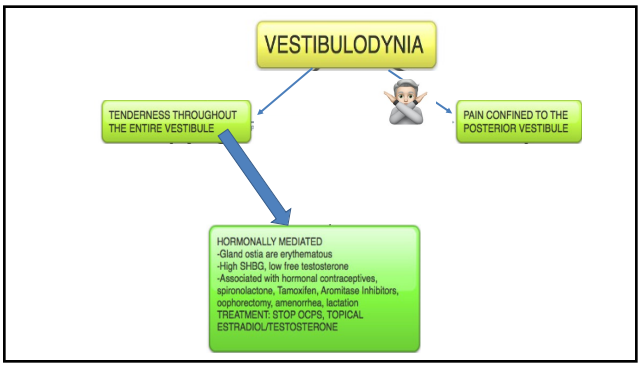
PAIN

NO PAIN



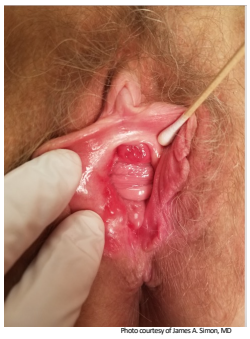
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History

- Pain started when taking combined hormonal birth control
- Can be associated with spironolactone, tamoxifen, menopause, lactation, amenorrhea

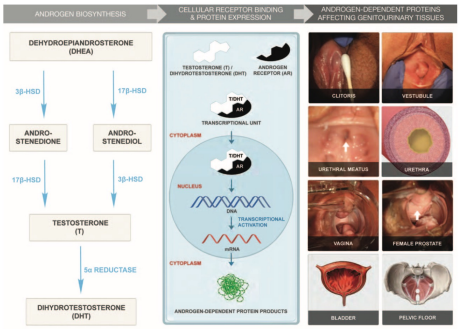

Photo courtesy of James A. Simon, MD

Menopause: The Journal of The North American Menopause Society
Vol. 25, No. 7, pp. 000-000
DOI: 10.1097/GME.0000000000001138
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REVIEW ARTICLE

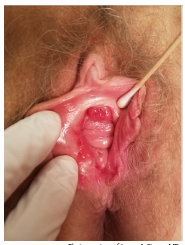
The role of androgens in the treatment of genitourinary syndrome of menopause (GSM): International Society for the Study of Women's Sexual Health (ISSWSH) expert consensus panel review

James A. Simon, MD,[1] Irwin Goldstein, MD,[2] Noel N. Kim, PhD,[3] Susan R. Davis, MBBS, PhD,[4] Susan Kellogg-Spadt, PhD,[5] Lior Lowenstein, MD,[6] JoAnn V. Pinkerton, MD,[7] Cynthia A. Stuenkel, MD,[8] Abdulmaged M. Traish, PhD,[9] David F. Archer, MD,[10] Gloria Bachmann, MD,[11] Andrew T. Goldstein, MD,[12] Rossella E. Nappi, MD,[13] and Linda Vignozzi, MD[14]

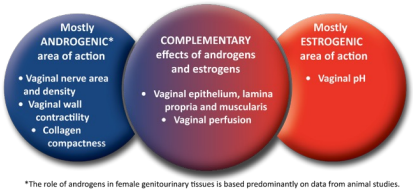


Hormones matter

- Oral contraceptives
- Breast feeding
- Infertility treatments
- Acne medications: spironolactone, finasteride, Accutane
- Menopause
- Oophorectomy
- Breast cancer treatments
  - SERMS: tamoxifen
  - Aromatase Inhibitors: anastrazole


Photo courtesy of James A. Simon, MD

Pre-clinical data suggest that androgens and estrogens have both overlapping and distinct roles in maintaining vaginal health[1–4]

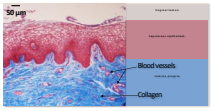


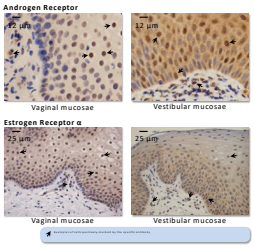
*The role of androgens in female genitourinary tissues is based predominantly on data from animal studies.

1. Traish *et al., Sex. Med. Rev.*, 6(4):559-571, 2018. 2. Labrie *et al., Menopause*, 24(4):412–461, 2017. 3. Goldstein *et al., Sex. Med.*, 1(2):44–53, 2013. 4. Berger *et al., J. Ster. Biochem. Mol. Biol.*, 96:201-215, 2005.

Characterization of vaginal and vulvar vestibule biopsies on healthy premenopausal women

Immunohistochemistry of androgen and estrogen receptors in the vestibule mucosae of the same patient.





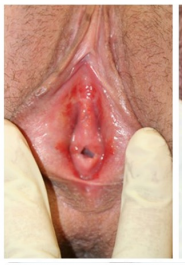
- All the enzymatic machinery necessary to the conversion of adrenal precursors such as DHEA into active sex steroids was detected both in the vaginal and vulvar vestibule's mucosae.
- Both the androgen and the estrogen receptors were expressed in the vaginal and the vulvar vestibule's mucosae
- As previously reported[1], AR had a robust expression in the vulvar-vestibule.

1. Bouchard C. Poster presented at the 19th world congress of Gynecologyl Endocrinology, Dec. 2020 2. Palacios S, Menopause. 2020 Nov;27(11):1336-42

Physical Exam / Labs

- Erythema and pain over the gland openings
- Decreased size of labia minora
- Pallor with overlying erythema

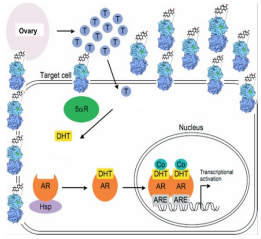
Labs
- High sex hormone binding globulin (SHBG), low free testosterone



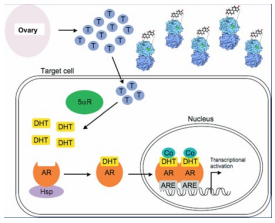
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Hormones – The birth control story

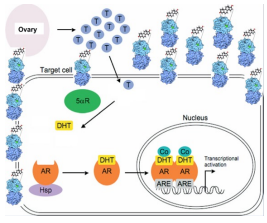
- Ovary's produce less estrogen and testosterone
- Liver increases SHBG production
- SHBG eats up free testosterone
- Synthetic progestins block testosterone from binding to their receptors.



Puka E. et al. *The Journal of Sexual Medicine*. 2016;13(3):291-306
Burrows LJ, et al. *The Journal of Sexual Medicine* 2012;9(9):2213–2223.



SHBG = 25 nmol/L



SHBG = 168 nmol/L

Courtesy Dr. I. Goldstein

Treatment: Hormonally Mediated Vestibulodynia

1. Stop offending medication if possible (consider IUD)
2. Compounded estradiol 0.01% and testosterone 0.1% in methylcellulose base twice daily
   - can also consider FDA approved nightly vaginal DHEA
3. 50% improvement at 12 weeks



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Puka E. et al. *The Journal of Sexual Medicine*. 2016;13(3):291-306.
Burrows LJ, et al. *The Journal of Sexual Medicine* 2012;9(9):2213–2223.
Goldstein, S., et al. *The Journal of Sexual Medicine* 17.1 (2020): 58-69.

For_____
Address_____ Date
℞



COMPOUNDED pharmacy only
Estradiol 0.01% &
Testosterone 0.1%
in a methylcellulose or versa base
1 click or pea size to vestibule 1-2x daily

REFILL____ TIMES _____, M.D.
DEA NO. _____ Address _____

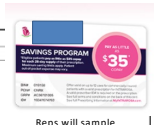


Dr. R Tips:
- RUB it in. don't just dab on.
- TAKE the time to show patients with a mirror. They will put this on the wrong place
- Initial JSM publication had an error. It's 0.1% testosterone! Not 0.01%
- Examine in 6 weeks and warn them they will not be cured!

For_____
Address_____
℞

Any local pharmacy
Vaginal DHEA 6.5mg
1 suppository in the vagina nightly

REFILL____ TIMES _____, M.D.
DEA NO. ____



Reps will sample





Dr. R Tips:
- Costco $85/mo cash price

Sexual Medicine, 2023, 11, 1–10
https://doi.org/10.1093/sexmed/qfad028
Original Research

ISSM OXFORD

Vestibular tissue changes following administration of intravaginal prasterone: a vulvoscopic open-label pilot study in menopausal women with dyspareunia

Sue W. Goldstein, BA, CCRC, CSE[1,*], Irwin Goldstein. MD[1,2], Noel N. Kim. PhD[3]
[1]San Diego Sexual Medicine, San
[2]Sexual Medicine, Alvarado Hosp
[3]Institute for Sexual Medicine, Sa
*Corresponding author: San Diego Se

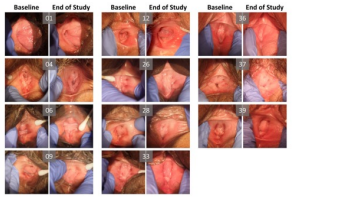


Figure 6. Representative vulvoscopic photographs from each participant (N = 11) taken at baseline and after 20 weeks of daily 6.5-mg prasterone intravaginal therapy (end of study). Photographs were graded by the Vulvoscopic Genital Tissue Appearance scale, demonstrating reduction in vestibular erythema and pallor.

DHEA vs. ESTRADIOL CREAM



Maturitas
Available online 20 March 2026, 108924
In Press, Journal Pre-proof What's this?



Original article

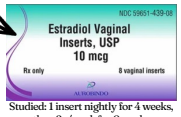
Effects of vaginal dehydroepiandrosterone and estradiol on dyspareunia, a symptom of vulvovaginal atrophy in postmenopausal women - a randomized controlled trial

Moa Strandberg [a b], Anna Cockin [c], Angelica Lindén Hirschberg [a c]

87 women
80 women



Studied: 1 insert nightly for 4 weeks, then 2x/week for 8 weeks



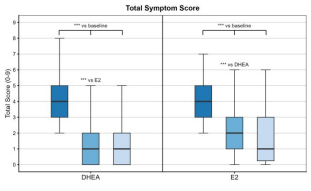
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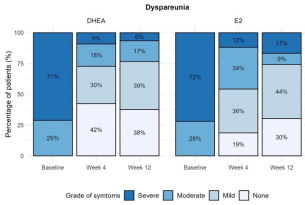
Strandberg, Moa, et al. "Effects of vaginal dehydroepiandrosterone and estradiol on dyspareunia, a symptom of vulvovaginal atrophy in postmenopausal women - a randomized controlled trial." Maturitas, 20 Mar. 2026, https://doi.org/10.1016/j.maturitas.2026.108924.

Rachel Rubin, MD
Urologist & Sexual Medicine Specialist

DHEA vs. ESTRADIOL CREAM

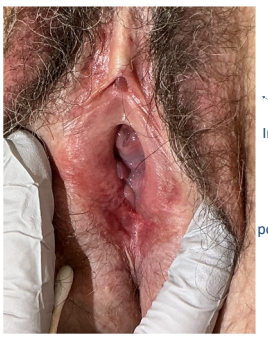
- Randomized trial in Sweden (n = 170)
- Postmenopausal women (40–80 years old)
- Randomized to **DHEA 6.5 mg** or **E2 µg vaginal tablets** daily for 4 weeks, then twice weekly for 8 weeks
- Assessed vaginal pH, vaginal smear, vulvovaginal symptoms, dyspareunia symptoms





Strandberg, Moa, et al. "Effects of vaginal dehydroepiandrosterone and estradiol on dyspareunia, a symptom of vulvovaginal atrophy in postmenopausal women - a randomized controlled trial." Maturitas, 20 Mar. 2026, https://doi.org/10.1016/j.maturitas.2026.108924.

Rachel Rubin, MD
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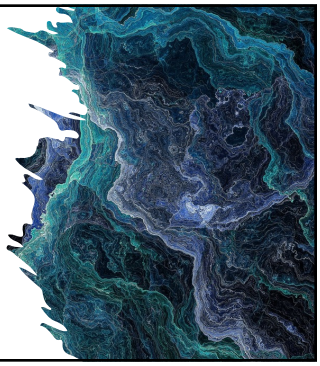


Initial visit

6 weeks post E/T gel



If you don't routinely examine the vulva or the pelvic floor you should **not** give patients a diagnosis of IC



Fascinating Case

30yF presents with Urinary Urgency since age 18

Sent by Pelvic Floor Physical Therapist

Tried:

- Cystoscopy and urodynamics – normal
- Vesticare
- Oxybutynin
- Mybetriq
- Hydroxazine
- Amitryptiline
- Trimethoprim
- Bladder botox – caused severe flare

- Symptoms: urgency and frequency more in the urethra. Feels like a fullness that twinges. Feels the constant urge. Sex aggravates the symptoms. Feels like she has flares. When not in a flare feels ok.

Other items from my note

- **Birth control history:** Has been on ortho-tri-lo since age 17 for heavy periods.
- **Orgasm:** Unsure. Feels that clitoral stimulation makes it worse and aggravates symptoms. Thinks she has gotten close with clitoral stimulation.
- **Libido:** would be fine if she didn't have symptoms.
- **Cultural:** Mom is family practice doc



For_____
Address_____ Date_____

℞

COMPOUNDED pharmacy only
Estradiol 0.01% &
Testosterone 0.1%
in a methylcellulose or versa base
1 click or pea size to vestibule 1-2x daily

REFILL ____ TIMES _____, M.D.
DEA NO. _____ Address _____

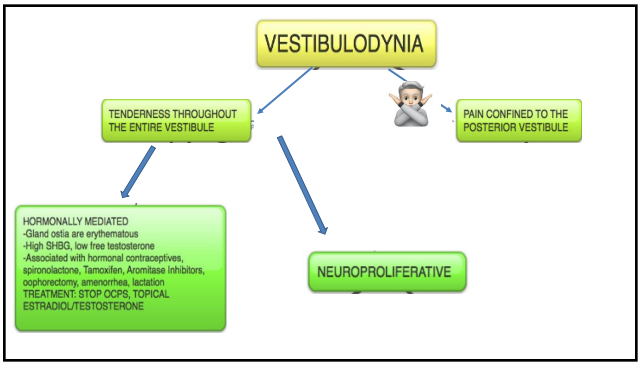


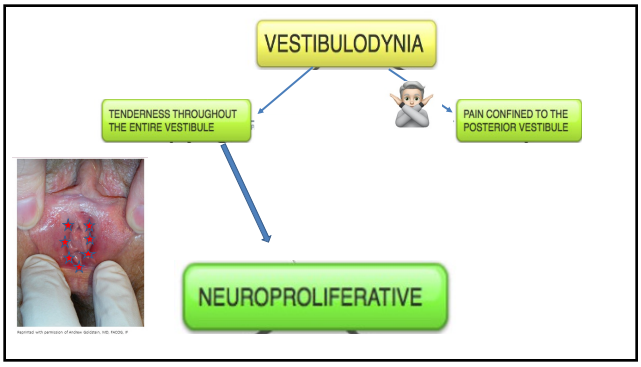


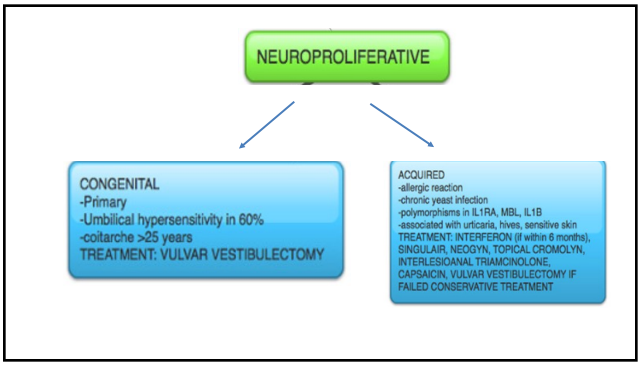
Dr. R Tips:

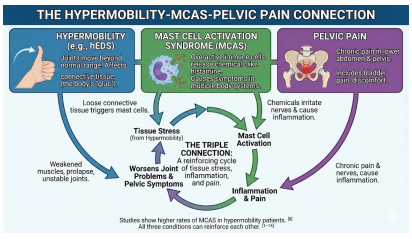
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Review > Sex Med Rev. 2023 Sep 27;11(4):323-332. doi: 10.1093/sxmrev/qead033.

Neuroproliferative dyspareunia in endometriosis and vestibulodynia

Agnes N Mwaura [1], Nisha Marshall [1], Michael S Anglesio [1], Paul J Yong [1]

Affiliations + expand

PMID: 37544766 DOI: 10.1093/sxmrev/qead033

Abstract

Immunohistochemical Staining with CD117 and PGP9.5 of Excised Vestibular Tissue from Patients with Neuroproliferative Vestibulodynia

Neuroproliferative vestibulodynia (NPV) - a provoked genital pain characterized by severe allodynia/hyperalgesia.

NPV cannot be histologically confirmed by H&E.

Instead, the parameter used is >8 CD117 positive immunostained cells per 100x microscopic field.

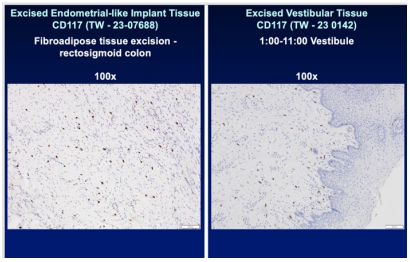
65 NPV patients (median age 26 years), 45 lifelong and 20 acquired, had severe pain documented by PROs and vulvoscopy, and had >8 CD117-immunopositive cells/100x microscopic field.

63% of the patient cohort reported having additional conditions associated with aberrant mast cell activity.

Conditions Associated with Mast Cell Activation Syndrome	
Total (≥1 condition)	41 (63.1)
Migraines	14 (21.5)
Endometriosis	12 (18.5)
Food Allergies	11 (16.9)
Interstitial cystitis	10 (15.4)
Irritable Bowel Syndrome	8 (12.3)
Asthma	7 (10.8)
Chronic Sinusitis	5 (7.7)
POTS	2 (3.1)

1) COMPLETE VESTIBULECTOMY (12:00 and 1:00 - 11:00) AND 2) EXCISION OF ENDOMETRIAL-LIKE IMPLANT TISSUE (FIBROADIPOSE TISSUE - RECTOSIGMOID COLON)

AND HAD BOTH EXCISED TISSUES STAINED WITH CD 117 AND PGP9.5



History – neuroproliferative vestibulodynia

Acquired

- Allergic reaction
- Persistent yeast infection
- Urticaria
- Hives
- ”sensitive skin”





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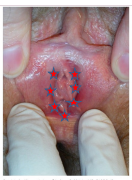
Congenital

–Pain since the first tampon, speculum or penetration

Physical Exam – neuroproliferative vestibulodynia

Acquired

- Pain all over vestibule



Reprinted with permission of Andrew Goldstein, MD, FACOG, IF

Congenital

–Pain all over vestibule

–60% with umbilical hypersensitivity



Treatment – neuroproliferative vestibulodynia

Congenital

–Surgery – vulvar Vestibulectomy has highest success rate



Acquired

- ? MAST cell therapies? Ketotifen current being studied
- capsaicin 0.025% 20 min qhs for 12 weeks (ouch)
- Topical gabapentin 4%
- Surgery if conservative treatment fails

Brown, Candace. "Treatment of Neuroproliferative-associated Provoked Vestibulodynia with Topical Medications." *Female Sexual Pain Disorders: Evaluation and Management* (2020): 171-176.

Photo courtesy of Irwin Goldstein, MD

Surgery – will my patient benefit?

- Consider a vestibular anesthesia test in the office
- Place compounded BLT to the vestibule
- Diagnostic only- will be considerably flared once it wears off
- No data for long term use

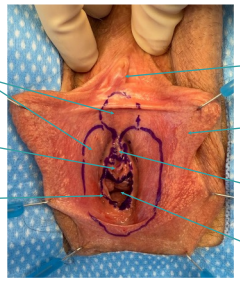
Compounded BLT:
Benzocaine (20%)
Lidocaine (8%)
Tetracaine (8%)



Photo courtesy of Irwin Goldstein, MD

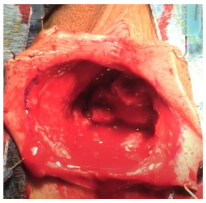
Vestibulectomy

Surgical Anatomy

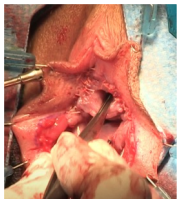


Rachel Rubin, MD
Urologist & Sexual Medicine Specialist

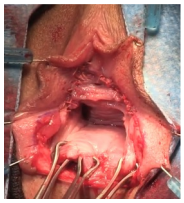
Surgical Process



Vestibule removed



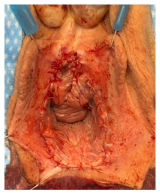
Attachment of vulva to urethra



Attachment of vulva to vagina

Rachel Rubin, MD
Urologist & Sexual Medicine Specialist

Surgical Process, continued



Post-vestibulectomy, pre-Exparel injection



Excised vestibular tissue



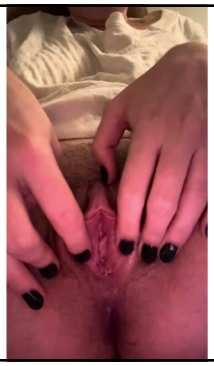
Final repair with injection of Exparel for pain control

Rachel Rubin, MD
Urologist & Sexual Medicine Specialist

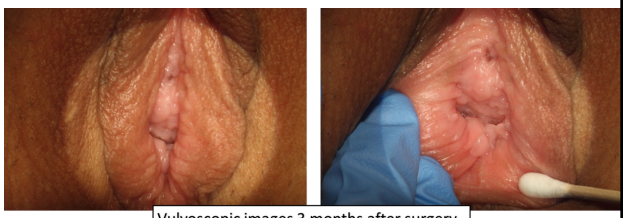
Post Operative Bruising



6 weeks post op

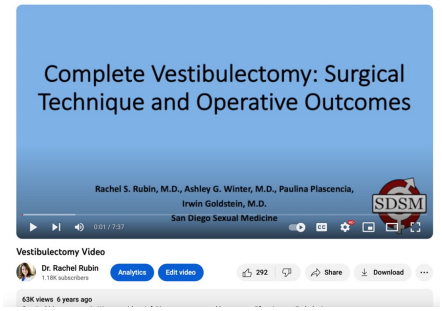


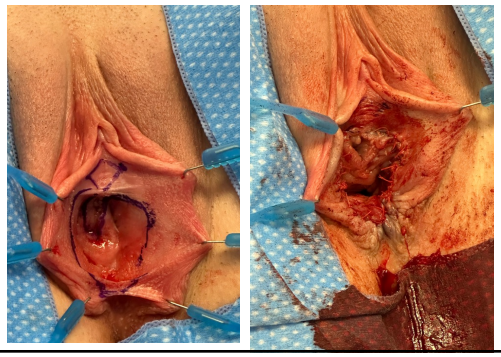
Rachel Rubin, MD
Urologist & Sexual Medicine Specialist

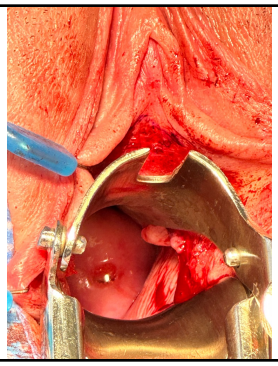


Vulvoscopic images 3 months after surgery

Rubin et al *The Journal of Urology*, 2017. 197(4), e1056

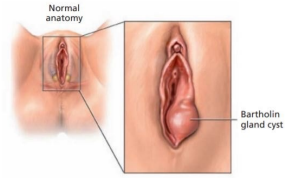






Complications

- Pelvic floor dysfunction
- Bartholin's cysts
- Residual pain



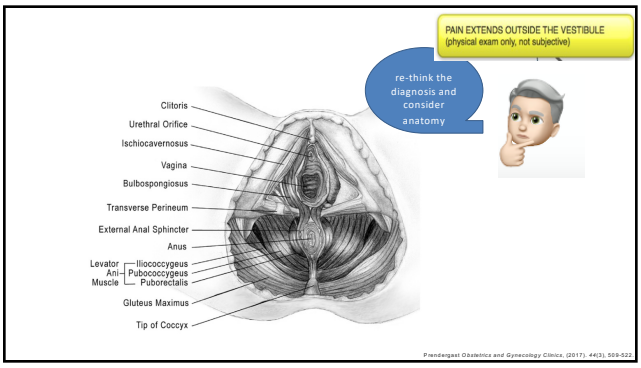
Bartholin's Cyst

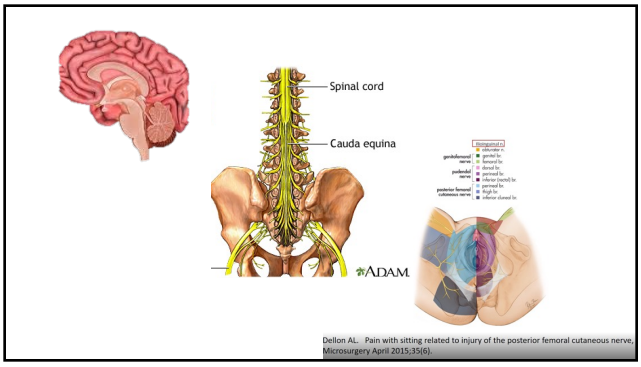


5 years post-vestibulectomy	In-office insertion of drainage tube	10 days post-drainage procedure

Rachel Rubin, MD
Urologist & Sexual Medicine Specialist



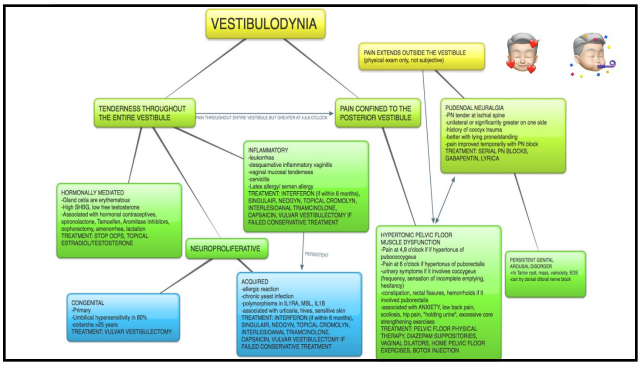




F. PUDENDAL NEURALGIA
HISTORY: Trauma to the coccyx, torn hip labrum, traumatic childbirth, straddle injury of the perineum, excessive bike riding. Pain is exacerbated when sitting on hard surfaces and is improved when lying prone or standing. Pain of the rectum, perineum, labia, and clitoris.
PE: Severe tenderness when palpating the pudendal nerve at the ischial spine (transvaginally and trans-rectally), most commonly unilateral or significantly greater on one side, tenderness and hypertonus of obturator internus muscle.
LABS: Diagnostic pudendal nerve block should cause temporary resolution of pain. 3 Tesla MRI may show entrapment or scar tissue adjacent to the pudendal nerve in Alcock's canal.
TREATMENT: Serial pudendal nerve blocks with anesthetic and corticosteroids, pelvic floor physical therapy gabapentin, pregabalin, pudendal nerve neuromodulation, pudendal nerve radio-frequency nerve ablation, pudendal nerve neurolysis.

G. SPINAL PATHOLOGY/VULVAR DYSTHESIA
HISTORY: Vulvar pruritus, burning or soreness without any physical finding. May be associated with low back pain, sciatica.
PE: May have allodynia of affected area without any other observable physical findings. The symptoms may be hard to distinguish from pudendal neuralgia. However, a pudendal nerve block should be able to relieve the symptoms of pudendal neuralgia. If, after a diagnostic pudendal nerve block, the patients has numbness of her vulva and perineum but she still has her dysesthesia, it is likely that her symptoms are caused by spinal pathology.
LABS: MRI of the lumbar spine and sacrum. Findings on MRI may include annular tear, disc herniation, or Tarlov (perineural) cyst. Diagnostic epidural nerve block at the spinal level of the identified pathology should temporarily relieve symptoms.
TREATMENT: Physical therapy, epidural steroid injection, gabapentin, pregabalin, spinal neuromodulation. Spinal surgery if conservative treatment fail.

H. PERSISTENT GENITAL AROUSAL DISORDER
HISTORY: Very disturbing sensation of arousal without sexual desire. Can cause depression/suicidal ideation. Sometimes begins when starting or stopping psychotropic or anti-epileptic medication but more commonly related to pudendal neuralgia or that increase dopamine or epinephrine
PE: Allodynia of clitoris, sometimes tenderness of the pudendal nerve at the ischial spine.
LABS: MRI of sacrum may reveal Tarlov cyst, MRI of lumbar spine may show disc herniation or annular tear. Try ascending nerve blocks to find location of "lesion": dorsal nerve of the clitoris → pudendal nerve block → epidural.
TREATMENT: Treat overactive pelvic floor muscle dysfunction (see above), treat pudendal neuralgia (see above), treat spinal lesions. Varenicline, zolpidem, SSRI's





The Story in her words

58yoF with painful intercourse and low libido.

Found true love late in life. Met husband 4 years ago.

Had pain with sex which she would push through. Always had painful sex.

Feels pleasure, trust, comfort, gratitude. But had more pain as time went on. Entrance was the worst pain.

Has clitoral orgasms and a lot of pleasure.

Had classic catholic upbringing. Late to experiment.

Diagnosed by 2 biopsies with lichen sclerosus.

Tried:

- increased frequency of sex
- CO_2 laser (MonaLisa)
- NeuEve moisturizer
- Soul Source dilators

Wasn't getting better and begged her doctor for a second opinion.

Past Medical History
- Anxiety
- Hypothyroid
- Rosacea

Past Surgical History
- None

Allergies:
- NKDA

Current Medications:
- Levothyroxine

- **Social history:**
- Clinical psychologist:
- Prior smoker

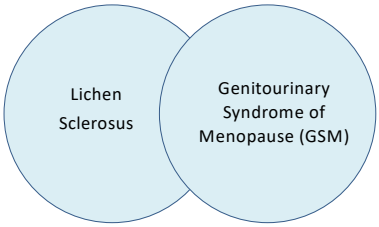
Family history:
- Father had bone cancer

Health Maintenance
- Mammogram – Normal
- Pap smear- Normal
- Colonoscopy- Normal
- Dexa – Normal









The vulva: hormones matter! Estrogen and androgens

- Oral contraceptives
- Breast feeding
- Infertility treatments
- Menopause
- Oophorectomy
- Breast cancer treatments
  - SERMS
  - Aromatase Inhibitors

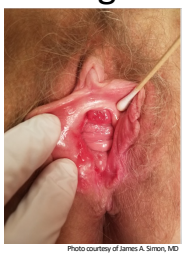


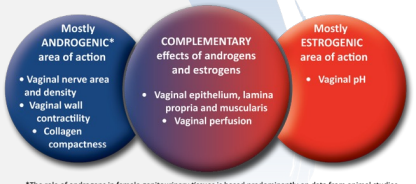
Photo courtesy of James A. Simon, MD

Pre-clinical data suggest that androgens and estrogens have both overlapping and distinct roles in maintaining vaginal health[1–4]

Stimulation of the surface area of the nerve ending of rat vaginas appears to be exclusively androgenic[2]

Testosterone, independently from oestradiol, has been shown to modulate vaginal wall contractility in rats[3]

DHEA also stimulates collagen fiber compactness of the lamina propria (second layer)—an effect essentially due to an androgenic effect

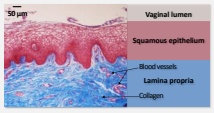


Oestrogen stimulates glycogen production by vaginal epithelium. Epithelial cells are shed into lumen. Glycogen is hydrolysed to glucose and metabolised by *Lactobacilli* into lactic acid, which maintains pH at 3.5–4.5[4]

*The role of androgens in female genitourinary tissues is based predominantly on data from animal studies.

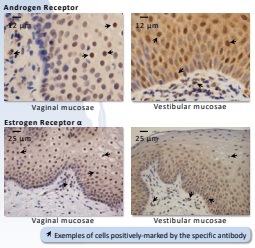
1. Traish *et al*., *Sex. Med. Rev.*, 6(4):558-571, 2018. 2. Labrie *et al*., *Menopause*, 24(4):452–461, 2017. 3. Goldstein *et al*., *Sex. Med.*, 1(2):44–53, 2013. 4. Berger *et al*., *J. Ster. Biochem. Mol. Biol.*, 96:201-215, 2005.

Characterization of vaginal and vulvar vestibule biopsies on healthy premenopausal women



- All the enzymatic machinery necessary to the conversion of adrenal precursors such as DHEA into active sex steroids was detected both in the vaginal and vulvar vestibule's mucosae.
- Both the androgen and the estrogen receptors were expressed in the vaginal and the vulvar vestibule's mucosae
- As previously reported[2], AR had a robust expression in the vulvar-vestibule.

Immunohistochemistry of androgen and estrogen receptors in the vaginal vs vulvar-vestibule mucosae of the same patient.



Exemples of cells positively-marked by the specific antibody

1. Bouchard C. Poster presented at the 19th world congress of Gynecologal Endocrinology, Dec. 2020 2. Palacios S, Menopause. 2020 Nov;27(11):1336-42

You cannot diagnose what you do not look for

Lichen Sclerosus: General Information

- Probably autoimmune
  - Association with auto-immune disorders (thyroid disease, alopecia areata, vitiligo, pernicious anemia, lichen planus)
  - Proliferation of monoclonal T lymphocytes
  - High levels of circulating auto immune antibodies
- Prevalence 1 in 70 women
- Females, any age
  - Young children, toddlers and infants
  - Most common is postmenopausal women (median age 51)

  *But this may be a detection bias as women without estrogen have more symptoms.

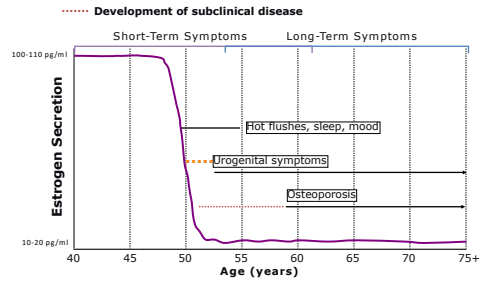
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Lichen Sclerosus: General Information

- Childhood LS usually does not resolve at puberty though symptoms may decrease because of estrogen
- Often misdiagnosed (yeast infections, herpes, vitiligo)
- 3-6% risk of developing vulvar squamous cell carcinoma
- Women with LS are less likely to be sexually active (vaginal intercourse, oral intercourse, masturbation)

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Estrogen Loss and Manifestation of Health Risks Over Time



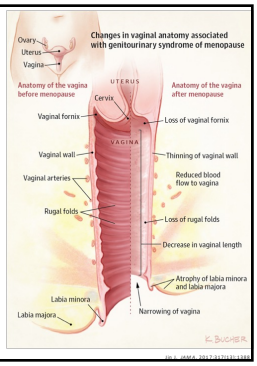
Thacker HL. *The Cleveland Clinic Guide to Menopause*. New York, NY: Kaplan; 2009.

Table 3 Genitourinary syndrome of menopause (GSM): symptoms and signs

Symptoms	Signs
Genital dryness	Decreased moisture
Decreased lubrication with sexual activity	Decreased elasticity
Discomfort or pain with sexual activity	Labia minora resorption
Post-coital bleeding	Pallor/erythema
Decreased arousal, orgasm, desire	Loss of vaginal rugae
Irritation/burning/itching of vulvar or vagina	Tissue fragility/fissures/petechiae
Dysuria	Urethral eversion or prolapse
Urinary frequency/urgency	Loss of hymenal remnants
	Prominence of urethral meatus
	Introital retraction
	Recurrent urinary tract infections

Supportive findings: pH > 5, increased parabasal cells on maturation index, and decreased superficial cells on wet mount or maturation index

Portman et al, The *journal of sexual medicine* 11.12 (2014): 2865-2872.



JAMA. 2017;317(21):2180

Education is ESSENTIAL for adherence

Hot off the press!!!

AUA GSM GUIDELINES, 2025

American Urological Association

American Urological Association | Membership | Meetings & Education | Guidelines & Quality | Leadership & Business | Advocacy | Research & Data

Guidelines
Guideline Statement
Consultants

Genitourinary Syndrome of Menopause: AUA/SUFU/AUGS Guideline (2025)

To cite this guideline:

Kaufman MR, Ackerman LA, Amin KA, et al. The AUA/SUFU/AUGS Guideline on Genitourinary Syndrome of Menopause. J Urol. 0(0). doi:10.1097/JU.0000000000004589.
https://www.auajournals.org/doi/10.1097/JU.0000000000004589

Panel Members

Melissa R. Kaufman, MD, PhD; A. Lenore Ackerman, MD, PhD; Katherine A. Amin, MD; Marge Coffey, MSW; Stephanie S. Faubion, MD, MBA; Anne Hardart, MD; Irwin Goldstein, MD; Giulia M. Ippolito, MD, MS; Gina M. Northington, MD, PhD; Charles R. Powell, MD; Rachel S. Rubin, MD; O. Lenaine Westney, MD; Tracey S. Wilson, MD; Una J. Lee, MD

Rachel Rubin, MD
Urologist & Sexual Medicine Specialist

Treatment	Product Name	Dose
Vaginal Cream		
17-beta- estradiol cream	Estrace, generic	1gm daily for 2 weeks then 1gm 2x per week
Conjugated estrogens cream	Premarin	1gm daily for 2 weeks then 1gm 2x per week
Vaginal Inserts		
Estradiol	Vagifem, Yuvafem,	10mcg inserts daily for 2 weeks and then 2x per week
17-beta-estradiol soft gel caps	Imvexxy	4 OR 10 mcg inserts daily for 2 weeks and then 2x per week
DHEA (prasterone)	Intrarosa	6.5mg capsules daily
Vaginal Ring		
17-beta-estradiol ring	Estring	1 ring inserted every 3 months
SERM		
Ospemifene	Osphena	60mg oral tablet daily

Treatment	Product Name	Dose
Vaginal Cream		
17-beta- estradiol cream		daily for 2 weeks then 0.5- er week
Conjugated estrogens cr		for 2 weeks then 0.5-
Vaginal Inserts		
Estradiol		ily for 2 weeks and
17-beta-estradiol so		ts daily for 2 weeks eek
DHEA (prasterone)		daily
Vaginal Ring		
17-beta-estradiol ring		rted every 3 months
SERM		
Ospemifene	Osphena	60mg oral tablet daily

A DAB OF ESTROGEN CREAM IS NOT ENOUGH!

For_____
Address_____ Date _____
℞
Estradiol 0.01% cream or conjugated estrogen vaginal cream
1 gram nightly in vagina for 2 weeks and then 1 gram 2x per week
Dispense 3 month
Refill: forever
REFILL ____ TIMES _____, M.D.
DEA NO. _____ Address _____





Dr. R Tips:

Applicator is reused. Don't let them throw it away

GoodRx <$10/month



Cost Plus Drugs Online Mark Cuban Pharmacy

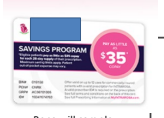


For_____
Address_____ Date _____
℞
Estradiol vaginal tablets 10mcg
1 tablet vaginally daily for 2 weeks then twice per week
Dispense: 3 month supply
Refill: forever
REFILL ____ TIMES _____, M.D.
DEA NO. _____ Address _____

GoodRx ~40-50/month



Cost Plus Drugs Online Mark Cuban Pharmacy



Reps will sample

For_____
Address_____ Date _____
℞
Vaginal DHEA 6.5mg
1 suppository in the vagina nightly
Dispense 3 month
Refill: forever
REFILL ____ TIMES _____, M.D.





Dr. R Tips:

- Use the applicator to decrease discharge
- Only 2 ingredients palm oil and DHEA for your 'natural folx'
- $85/mo at Costco



For_____
Address_____ Date _____
℞
Estradiol 4 or 10mcg soft gel caps
1 insert vaginally daily for 2 weeks then twice per week
Dispense: 3 month supply
Refill: forever
REFILL ____ TIMES _____, M.D.
DEA NO. _____ Address _____



Reps will sample



Dr. R Tips:

- 4mcg for very nervous patients
- No applicator! Good for environment





For_____
Address_____ Date _____
℞

Estradiol 2mg ring
1 ring in vagina for 3 months
Dispense: 1 ring
Refill: forever

REFILL ____ TIMES _____, M.D.
DEA NO. _____ Address _____



Dr. R Tips:

- Great for patients with poor dexterity or dementia
- May fall out if prolapse



Only oral option!



For_____
Address_____ Date _____
℞

Ospemifene 60mg
1 tab po daily
Dispense: 90
Refill: forever

REFILL ____ TIMES _____, M.D.
DEA NO. _____ Address _____



Dr. R Tips:

- Only oral option
- Since oral SERM more possibility of systemic side effects and benefit



Dr. R Tips:

- Nobody tries and fails vaginal hormones. You may need to change delivery system.
- Vaginal hormones are the foundation. Doesn't matter how pretty the furnishings are if the foundation is weak
- PATIENCE! It takes time to start working. Tissue doesn't regenerate over night. Encourage them to wait 2 months for maximal benefit



Dr. R Tips:

- How long do I need to take this?
  - EASY! Forever! Til Death Do you part
    - When do you stop brushing your teeth?
    - When do you stop washing/moisturizing your face?
    - When do you stop wearing your seat belt?

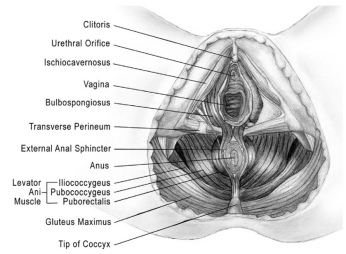


Dr. R Tips:

- If your patient is on systemic estrogen therapy PLEASE continue to strongly screen for GSM.
- Often systemic treatment doesn't get enough to the local tissue
- If the vestibule is still painful after GSM therapy thing you can also consider using vaginal DHEA or compounded estradiol 0.01% and testosterone 0.1% in methylcellulose base

Pukall et al. *The Journal of Sexual Medicine*. 2016;13(3):291-304.
Burrows LJ, et al. *The Journal of Sexual Medicine* 2012;9(9):2213–2223.
Goldstein, S., et al. *The Journal of Sexual Medicine* 17.1 (2020): 58-59.

Don't forget about the pelvic floor!



For_____
Address_____ Date ___
℞

COMPOUNDED pharmacy only
Estradiol 0.01% &
Testosterone 0.1%
in a methylcellulose base
1 click or pea size to vestibule 1-2x daily

REFILL ____ TIMES _____, M.D.
DEA NO. _____ Address _____



Dr. R Tips:
- RUB it in. don't just dab on.
- TAKE the time to show patients with a mirror. They will put this on the wrong place
- Initial JSM publication had an error. It's 0.1% testosterone! Not 0.01%

- Examine in 6 weeks and warn them they will not be cured!

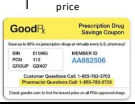
For_____
Address_____ Date _____
℞ **Clobetasol 0.05% OINTMENT**
Apply daily to affected area after 15 min tub
Once all active disease gone decrease to 1-2x week for maintenance
Dispense: 60 grams
Refill: forever w monitoring

____ TIMES _____, M.I
_____ Address _____



Always confirm biopsy with pathologist

$26 per tube Cash price

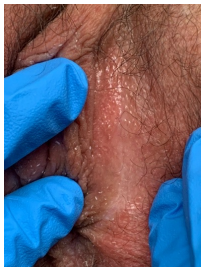


1 MONTH LATER

In her words

- You've cured me. So much gratitude.
- Feeling great!
- Not using clobetasol
- Itching and white area has almost completely resolved
- Intercourse is still painful and stretching has been hurting.





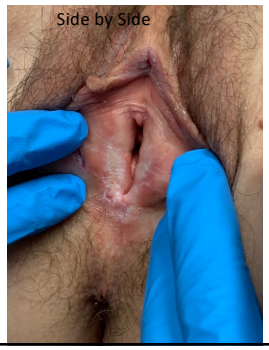








Side by Side





Education is ESSENTIAL for adherence



For _____
Address _____ Date _____

℞ **Clobetasol 0.05% OINTMENT**
Apply daily to affected area after 15 min tub
Once all active disease gone decrease to 1-2x week for maintenance
Dispense: 60 grams
Refill: forever w monitoring

_____ TIMES _____, M
_____ Address _____





Always confirm biopsy with pathologist

$26 per tube Cash price



1 MONTH LATER

In her words

- Feeling so good.
- Has been religious about treatments. I think the lichen is gone. Still feels pressure but I don't feel pain.
- Able to have an orgasm.





Side by Side

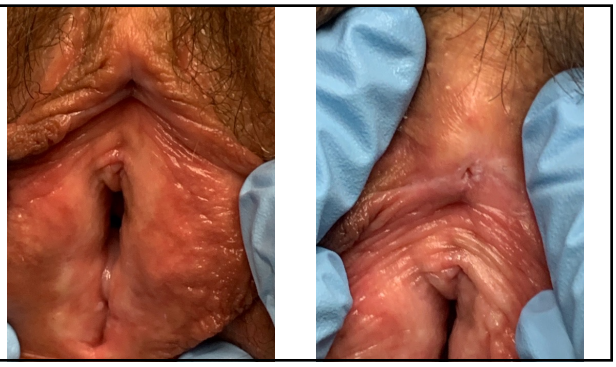


1 MONTH LATER

In her words

- There is no pain!
- Due for annual with original GYN. Feels apprehensive and upset with him.
- Feels life changing results





Side by Side

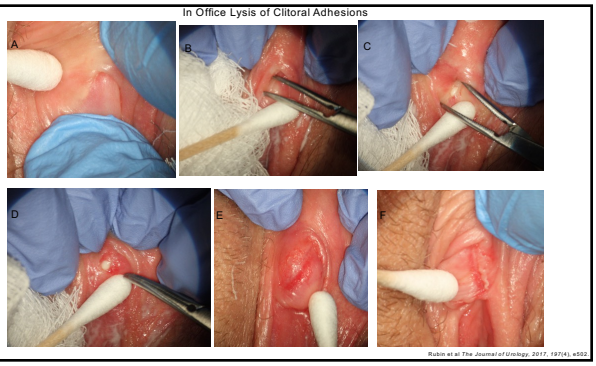


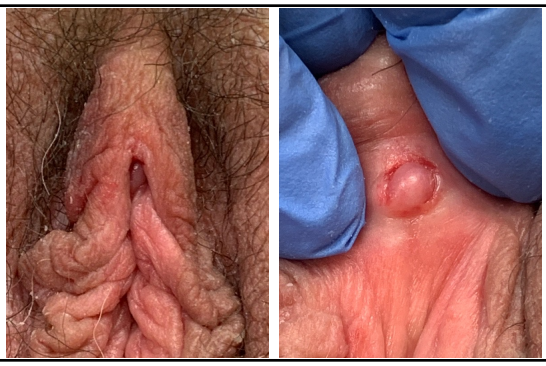
BUT YOUR CLITORIS!

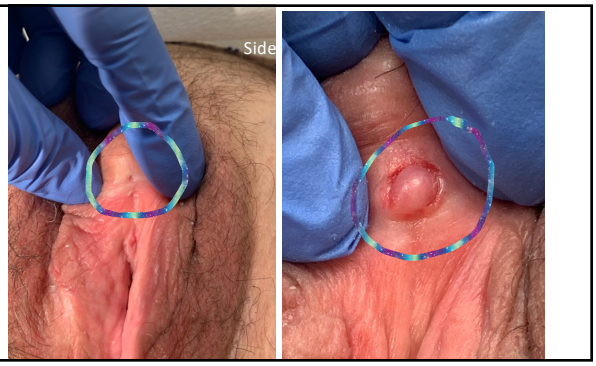


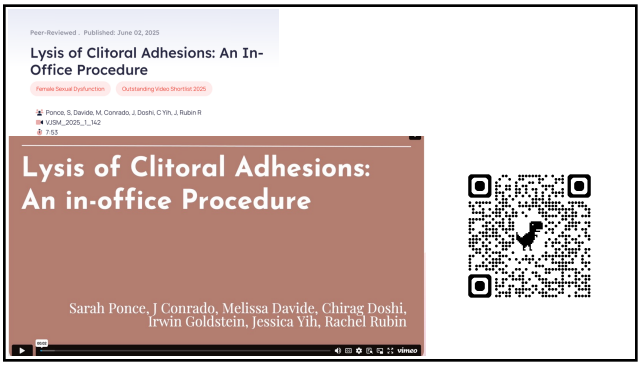
In-office lysis of adhesions











In her Words

- The procedure we did has only helped.
- No harm.
- Some improvement in sensitivity.
- Mostly just feels good doing all the things

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THE JOURNAL OF
SEXUAL MEDICINE

ORIGINAL RESEARCH & REVIEWS

FEMALE SEXUAL FUNCTION

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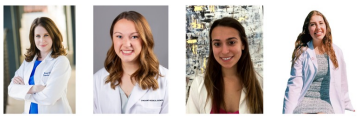
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Our Team



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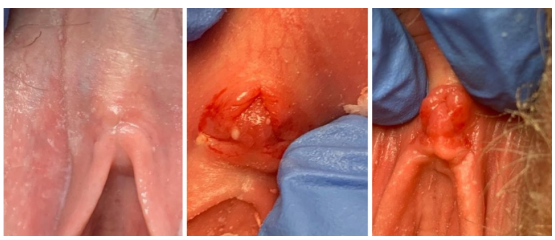
Elsa Nico
University of Illinois College of Medicine at Chicago

Phimosis





A clitoris with severe adhesions and keratin pearls before lysis and after lysis.





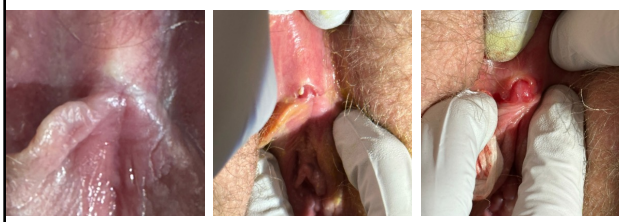
Starting Point



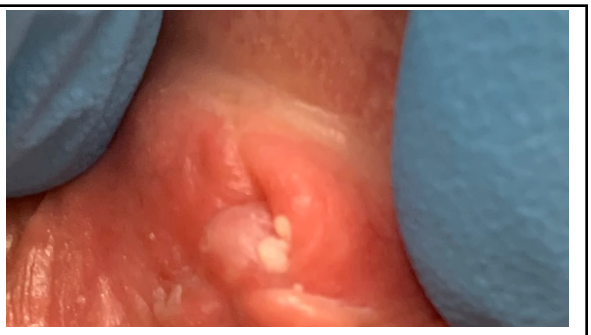












Patient Satisfaction and Efficacy of Procedure

- 76% of women (n=19) reported improvement in **pain**.
- 71% of women (n=41) reported improvement in **satisfaction with sex**.
- 63% of women (n=40) reported improvement in **sexual arousal**.

No patients reported worsening of symptoms.

Patient Satisfaction and Efficacy of Procedure

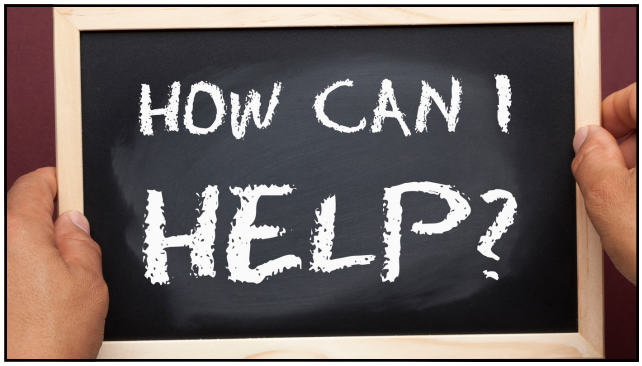
- 64% of women (n=39) reported improvement in their **ability to achieve orgasm.**

No participants reported any worsening in their ability to achieve orgasm.

- 16 participants reported that they were unable to orgasm from **external clitoral stimulation** prior to the procedure.

6 (38%) of these women gained this ability after the procedure.





ISSWSH
International Society for the Study of Women's Sexual Health



3 Takeaways

DISRUPT
PELVICON 2026

Takeaway 1

- Biopsychosocial
  - History
  - Physical exam
- Let it GUIDE you

Takeaway 2

- Multidisciplinary approach is the only approach.
- Make friends

Takeaway 3

- Repetition
- Confidence comes with reps
- True confidence is being able to know we don't know anything
- Be playdough. Growth mindset