Female Sexual Arousal Disorders/Female Orgasmic Disorders

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Disclosures

+Research support: IPSEN (Paris, France),

+Speaker: Sprout

Objectives

+ Definitions
+ Epidimiology
+ Anatomy & Physiology
+ Pathophysiology
+ Treatments available

In Her Words…

+“It’s like a light switch went off.”

+“I feel dead down there.”

+“I’m dry like the Sahara desert.”

+“I want to have sex, but my body doesn’t respond.”

+“I feel like my vagina is no longer connected to my brain.”

+“I can reach orgasm, but it takes FOREVER to get there.”

Definitions & nomenclature

THE JOURNAL OF
SEXUAL MEDICINE

Toward a More Evidence-Based Nosology and Nomenclature for Female Sexual Dysfunctions—Part II

Sharon J. Parish, MD,[1] Andrew T. Goldstein, MD,[2] Sue W. Goldstein, BA,[3] Irwin Goldstein, MD,[4] James Pfaus, PhD,[5] Anita H. Clayton, MD,[6] Annamaria Giraldi, MD, PhD,[7] James A. Simon, MD,[8] Stanley E. Althof, PhD,[9] Gloria Bachmann, MD,[10] Barry Komisaruk, PhD,[11] Roy Levin, PhD,[12] Susan Kellogg Spadt, PhD, CRN, CSC,[13] Sheryl A. Kingsberg, PhD,[14] Michael A. Perelman, PhD,[15] Marcel D. Waldinger, MD, PhD,[16] and Beverly Whipple, PhD, RN, FAAN[17]

ISSWSH Sexual Disorders Nomenclature

- Hypoactive Sexual Desire Disorder (B*)
- Female Sexual Arousal Disorder
  - Female Cognitive Arousal Disorder (expert opinion*)
  - Female Genital Arousal Disorder (B*)
- **Persistent Genital Arousal Disorder (expert opinion*)
- Female Orgasm Disorder (B*)
  - Frequency – diminished; anorgasmia
  - Intensity – muted
  - Timing – delayed; spontaneous; premature
  - Pleasure – anhedonic **Pleasure Dissociative Orgasm Disorder (PDOD) – (expert opinion*)
- **Female Orgasm Illness Syndrome (expert opinion*)

*Level of evidence
**New diagnostic category

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

Female Sexual Dysfunctions: DSM Changes

DSM-IV-TR	DSM-5
Female Sexual Dysfunctions	Female Sexual Dysfunctions
Hypoactive Sexual Desire Disorder*	Female Sexual Interest/Arousal Disorder
Female Sexual Arousal Disorder	Female Sexual Interest/Arousal Disorder
Female Orgasmic Disorder	Female Orgasmic Disorder**
Dyspareunia (not due to a general medical condition)	Genito Pelvic Pain/Penetration Disorder
Vaginismus (not due to a general medical condition)	Genito-Pelvic Pain/Penetration Disorder
Other Sexual Dysfunctions*	Other Sexual Dysfunctions*
Sexual Aversion Disorder*	REMOVED
Sexual Dysfunction Due to a General Medical Condition*	REMOVED
Substance/Medication-Induced Sexual Dysfunction*	Substance/Medication-Induced Sexual Dysfunction**
Sexual Dysfunction Not Otherwise Specified*	Other Specified Sexual Dysfunction*
	Unspecified Sexual Dysfunction*

*Disorders that are the same for male and female
**Unchanged from DSM-IV-TR

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So What are the Definitions of Arousal?

+ Genital Arousal

1.Genital changes in response to sexual stimuli.

2.These changes might or might not be associated with increased heart rate, sweating, pupil dilation, hardening and erection of the nipples, and flushing of the skin, etc.

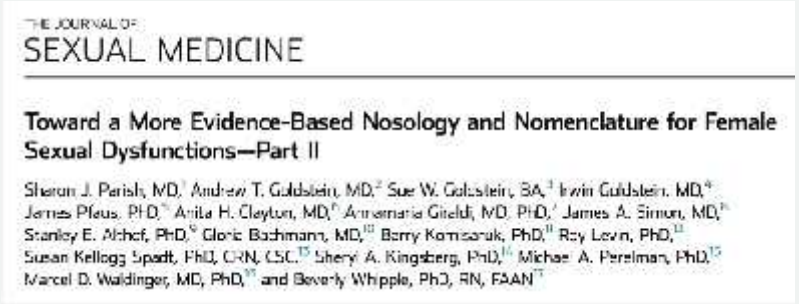
+ **Subjective Arousal**

1.Positive mental engagement and focus in response to a sexual stimulus.

2.There might or might not be awareness of the presence or absence of genital changes or sensations occurring during a sexual event (perceived arousal)

+ Althof et al J Sex Med Nov 2017

Orgasm


THE JOURNAL OF
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Toward a More Evidence-Based Nosology and Nomenclature for Female Sexual Dysfunctions—Part II

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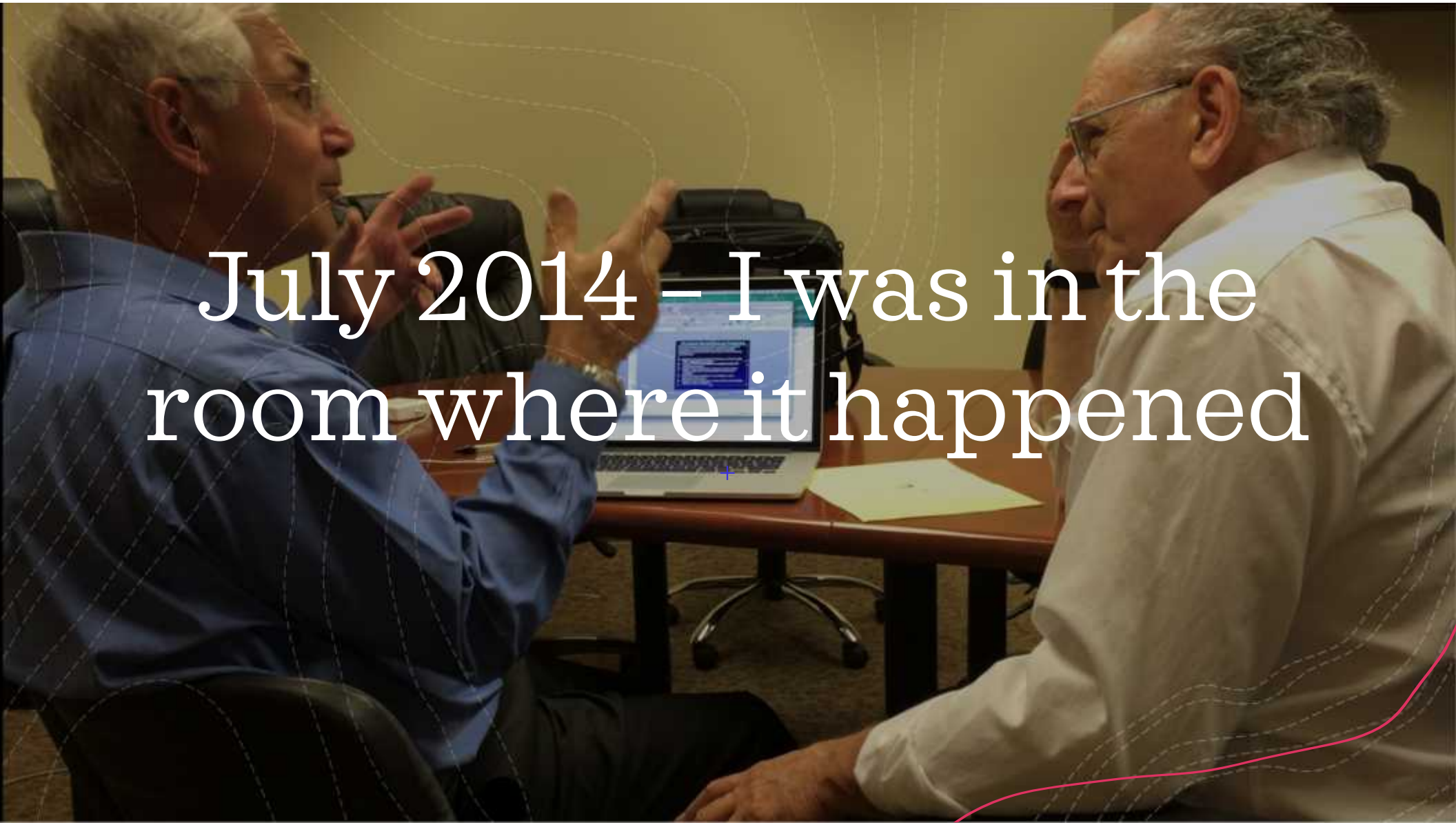
+"An orgasm in women is a variable transient peak sensation of intense pleasure creating an altered state of consciousness, usually with an initiation accompanied by involuntary, rhythmic contractions of the pelvic striated circumvaginal musculature, often with concomitant [vaginal], uterine and anal contractions, and myotonia that resolves the sexually induced vasocongestion [sometimes only partial] and myotonia, generally with an induction of well-being and contentment."

Parish, Sharon J., et al. "Toward a more evidence-based nosology and nomenclature for female sexual dysfunctions—part II." *The journal of sexual medicine* 13.12 (2016): 1888-1906.

Meston CM, Levin RJ, Sipski ML, et al. Women's orgasm. Annu Rev Sex Res 2004;15:173-257.


July 2014 – I was in the
room where it happened

Female Sexual Arousal Disorder (FSAD)

- **Female sexual arousal** is a physical state arising from an interaction between **genital response, central nervous system activity and information processing** of sexual stimuli.
- FSAD is a separate and distinct entity and should be classified as such.
- Traditional specifiers (generalized vs situational) and causing or not causing significant intra or interpersonal distress apply.
- **Subjective** and **genital arousal** may not match.

Female Sexual Arousal Disorder (FSAD)

- **Female Cognitive Arousal Disorder (FCAD)**
  - Characterized by the distressing difficulty or inability to attain or maintain ***adequate mental excitement*** associated with sexual activity as manifested by problems ***with feeling engaged and/or mentally turned on or sexually aroused***, for a minimum of six months

- **Female Genital Arousal Disorder (FGAD)**
  - Characterized by the distressing difficulty or inability to attain or maintain ***adequate genital response including vulvovaginal lubrication, engorgement of the genitalia, and sensitivity of the genitalia*** associated with sexual activity, for a minimum of six months
  - Disorders related to: Vascular and neurological injury or dysfunction

Female Orgasm Disorders

- **Female Orgasmic Disorder (FOD)** is characterized by a persistent or recurrent, distressing compromise of **orgasm frequency, intensity, timing, and/or pleasure**, associated with sexual activity for a minimum of six months.
- ***Frequency***: orgasm occurs with reduced frequency (diminished frequency of orgasm) or is absent (anorgasmia)
- ***Intensity***: orgasm occurs with reduced intensity (muted orgasm)
- ***Timing***: orgasm occurs either too late (delayed orgasm) or too early (spontaneous or premature orgasm) than desired by the woman
- ***Pleasure***: orgasm occurs with absent or reduced pleasure (anhedonic orgasm, pleasure dissociative orgasm disorder - PDOD)


Epidemiology

Prevalence of Female Sexual Dysfunction (PRESIDE)

Sexual Complaint	Sexual Problem	Sexual Problem Plus Distress
Desire	38.7%	10.0%
Arousal	26.1%	5.4%
Orgasm	20.5%	4.7%
Any Dysfunction	44.2%	12.0%

- Low desire was the most common of the three sexual problems among women of all ages.
- PRESIDE = Prevalence of Female Sexual Problems Associated with Distress and Determinants of Treatment Seeking

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Distressing Sexual Problems: Age Stratified (PRESIDE)

Age-stratified prevalence	Desire 2,868/28,447	Arousal 1,556/28,461	Orgasm 1,315/27,854	Any 3,456/28,403
18 - 44 years	8.9	3.3	3.4	10.8
45 - 64 years	**12.3**	**7.5**	**5.7**	**14.8**
65 years or older	7.4	6.0	5.8	8.9

Purpose: Estimate prevalence of **self-reported sexual problems, correlates, and personal distress**

Population: 31,581 US female responders > 18 years of age, 50,002 households, phone survey

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Correlates of Sexual Problems with Distress: Results of Multiple Logistic Regression, PRESIDE

Variable	Sexual Problems With Distress			
	Desire	Arousal	Orgasm	Any
Current depression	++	++	++	++
Chronic medical conditions				
Arthritis	+	+	+	+
Anxiety	+	+	+	+
Thyroid problem	+	+	+	+
Inflammatory/irritable bowel disease	+	+	+	+
Urinary incontinence	+	+	+	+

Note: ++ Odds ratio (OR) ≥ 2; + OR > 1 but < 2; – OR < 1; + or – (95% confidence interval for OR includes 1)
Other variables in the models: race, parity, current use of hormone therapy, current use of antihypertensive or cholesterol lowering medications, current smoking, cancer, ulcer, hypertension, asthma, diabetes, heart disease, and chronic pain.

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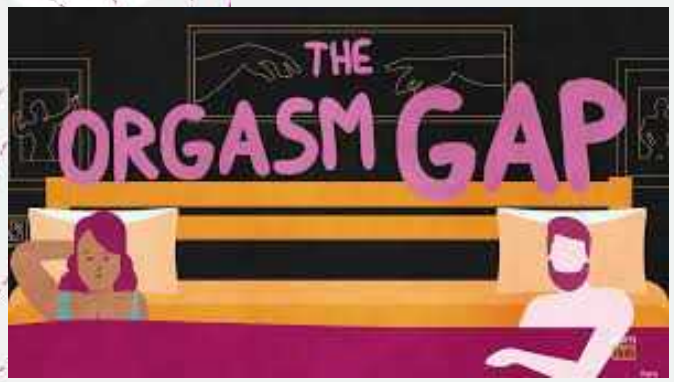
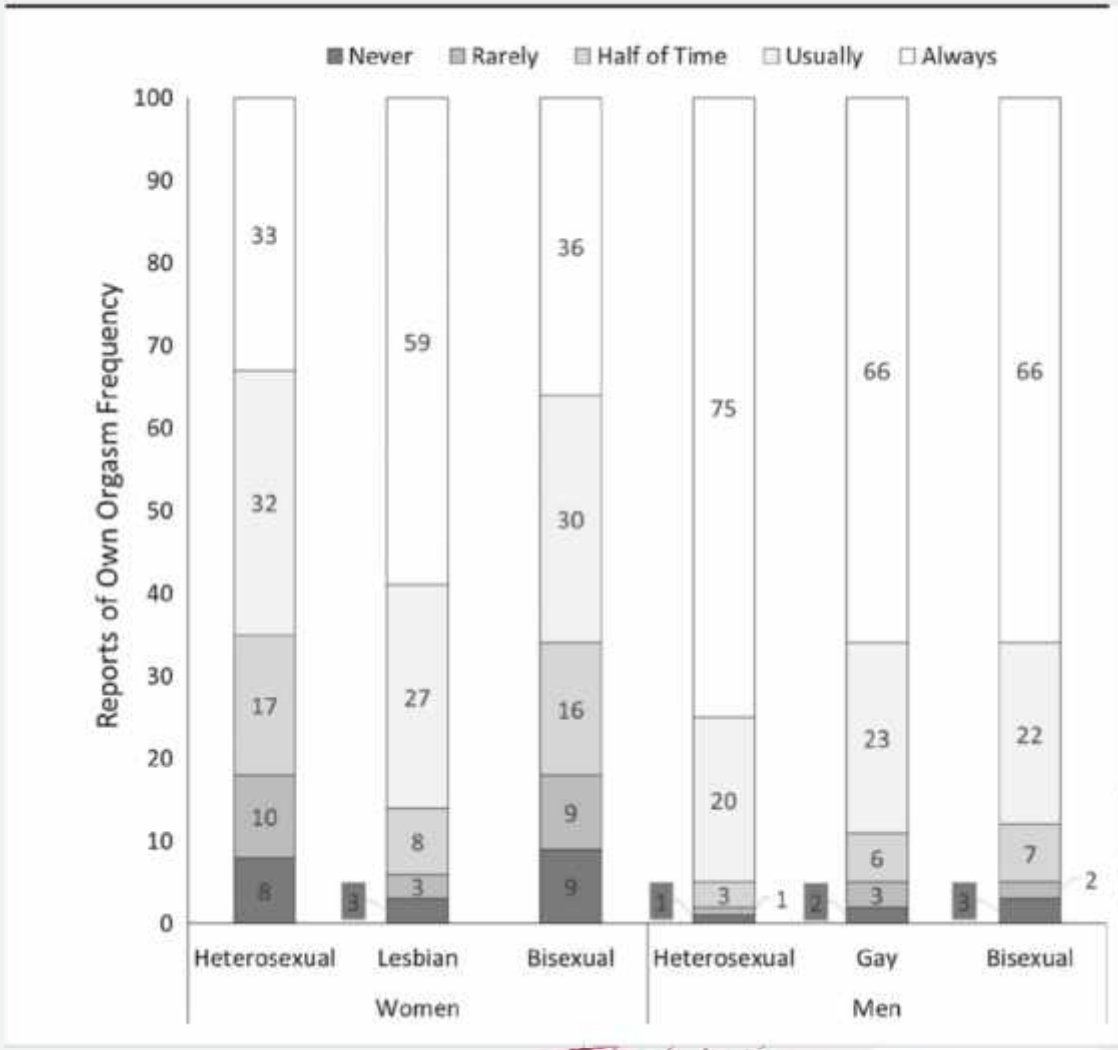


Differences in Orgasm Frequency Among Gay, Lesbian, Bisexual, and Heterosexual Men and Women in a U.S. National Sample



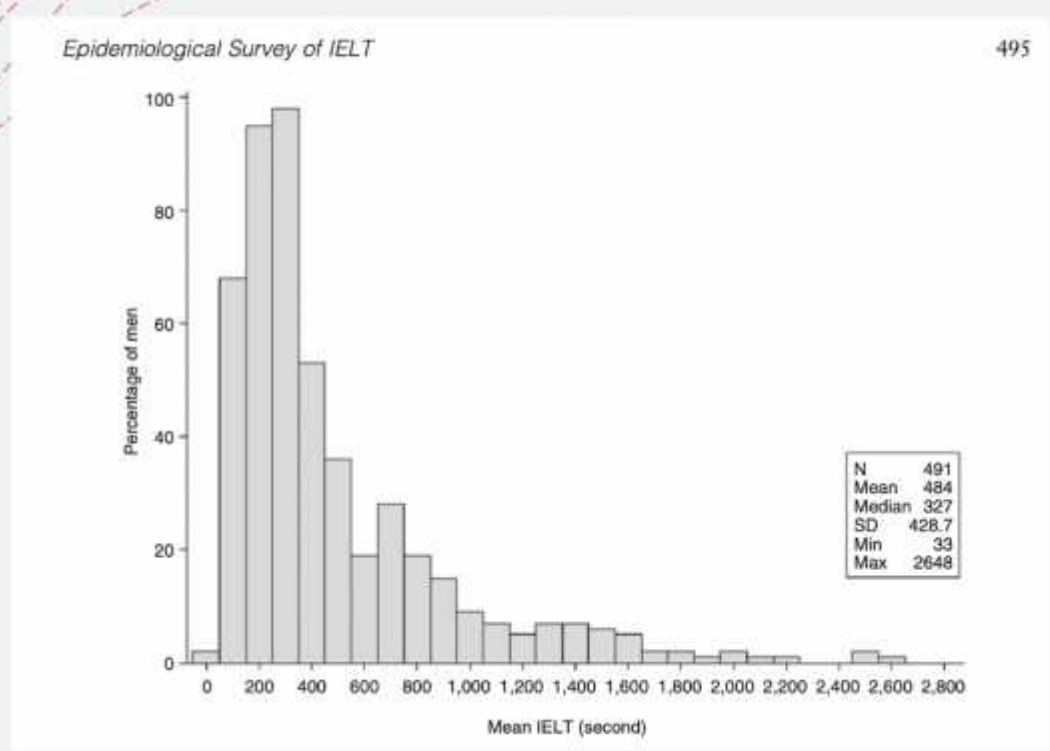
Frederick, David A., et al. *Archives of sexual behavior* 47.1 (2018): 273-288.

Setting expectations

J Sex Med. 2005 Jul;2(4):492-7.

A multinational population survey of intravaginal ejaculation latency time.

Waldinger MD[1], Quinn P, Dilleen M, Mundayat R, Schweitzer DH, Boolell M.



The overall median value was 5.4 minutes but with differences between countries.

The Journal of Sexual Medicine
Volume 17, Issue 4, April 2020, Pages 749-760

Original Research & Reviews

Orgasm

Time to Orgasm in Women in a Monogamous Stable Heterosexual Relationship

Gajanan S. Bhat MCh [1], Anuradha Shastry BAMS [2]

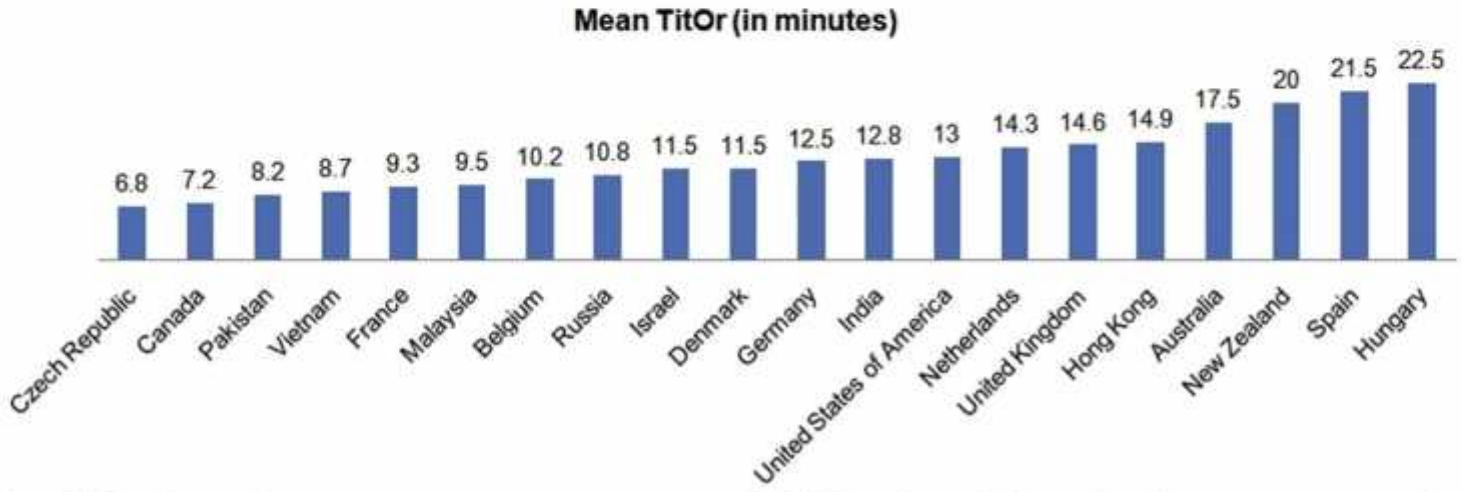


Figure 1. Bar diagram showing countrywise mean time to orgasm (TitOr). Figure 1 is available in color online at www.jsm.jsexmed.org.

The mean reported TitOr was 13.41 ± 7.67 minutes

17% of the participants had never experienced the orgasm.

Penovaginal intercourse was insufficient to reach orgasm in the majority

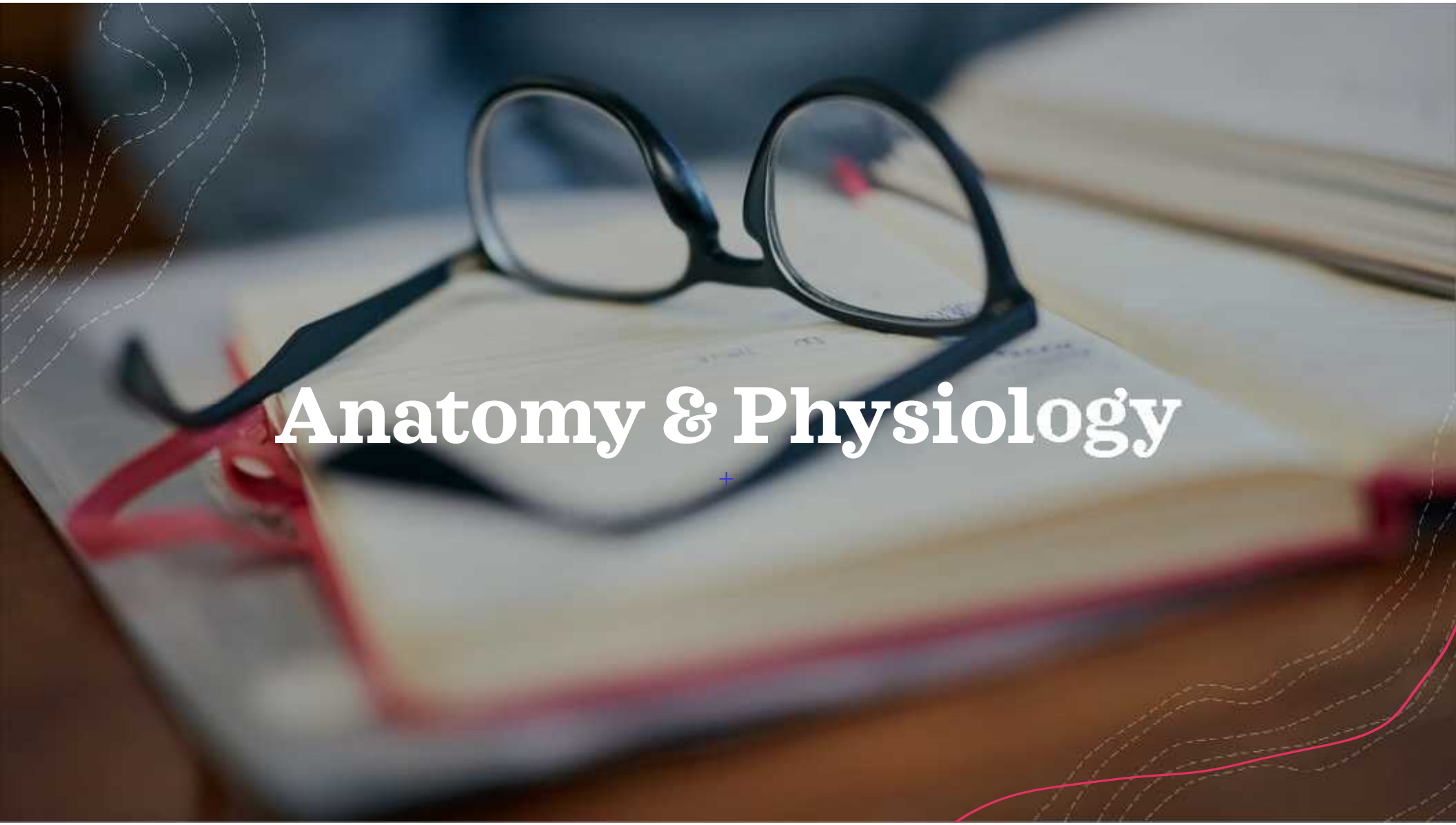
Women's Experiences With Genital Touching, Sexual Pleasure, and Orgasm: Results From a U.S. Probability Sample of Women Ages 18 to 94

Debby Herbenick[a], Tsung-Chieh (Jane) Fu[a], Jennifer Arter[b], Stephanie A. Sanders[c], and Brian Dodge[a]

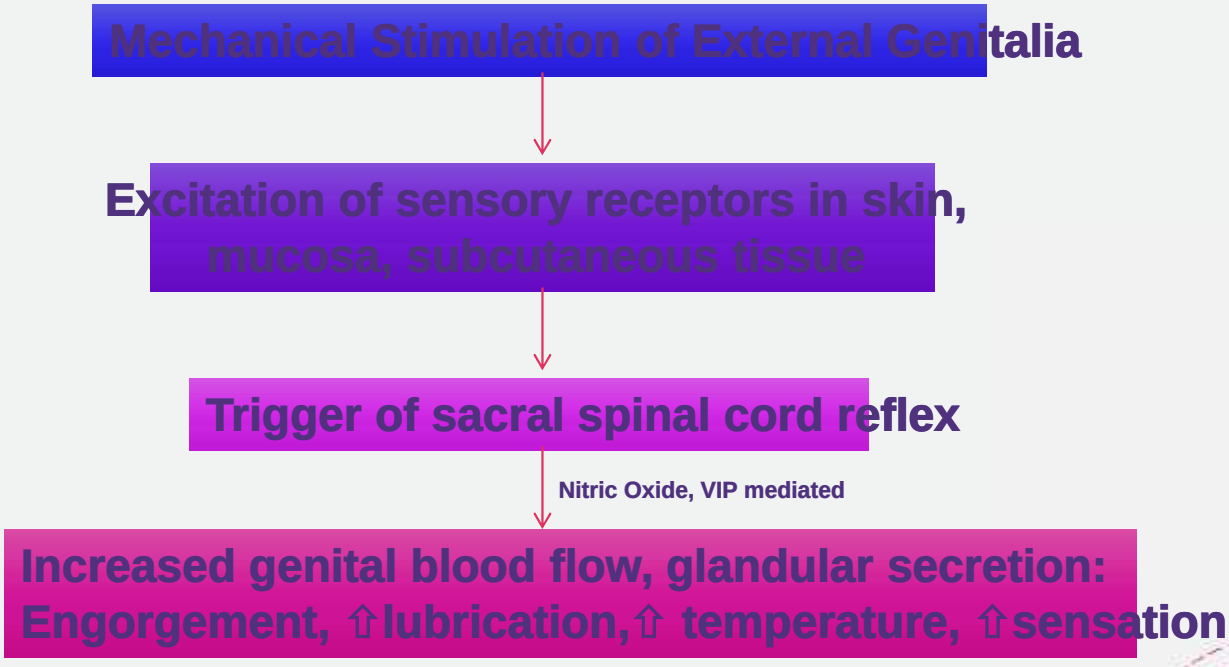
[a]Center for Sexual Health Promotion, Indiana University, Bloomington, IN, USA; [b]OMGYes.com, San Francisco, CA, USA; [c]Kinsey Institute for Research on Sex, Gender, and Reproduction, Indiana University, Bloomington, IN, USA

ABSTRACT

The study purpose was to assess, in a U.S. probability sample of women, experiences related to orgasm, sexual pleasure, and genital touching. In June 2015, 1,055 women ages 18 to 94 from the nationally representative GfK KnowledgePanel® completed a confidential, Internet-based survey. While 18.4% of women reported that intercourse alone was sufficient for orgasm, 36.6% reported clitoral stimulation was necessary for orgasm during intercourse, and an additional 36% indicated that, while clitoral stimulation was not needed, their orgasms feel better if their clitoris is stimulated during intercourse. Women reported diverse preferences for genital touch location, pressure, shape, and pattern. Clinical, therapeutic, and educational implications are discussed.


Anatomy & Physiology

Physiology of Genital Sexual Arousal



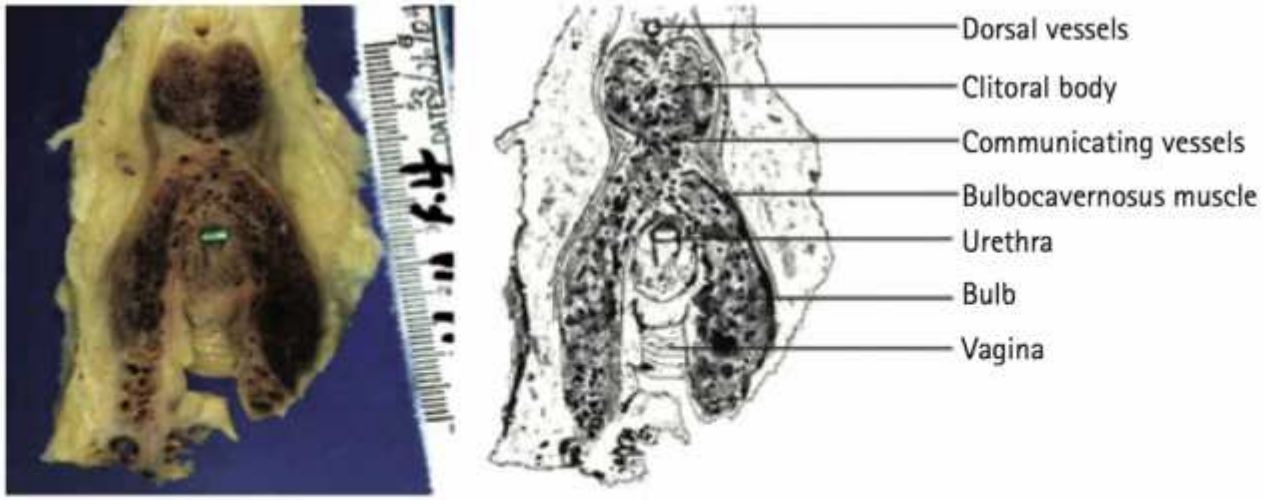

It’s all about the VULVA

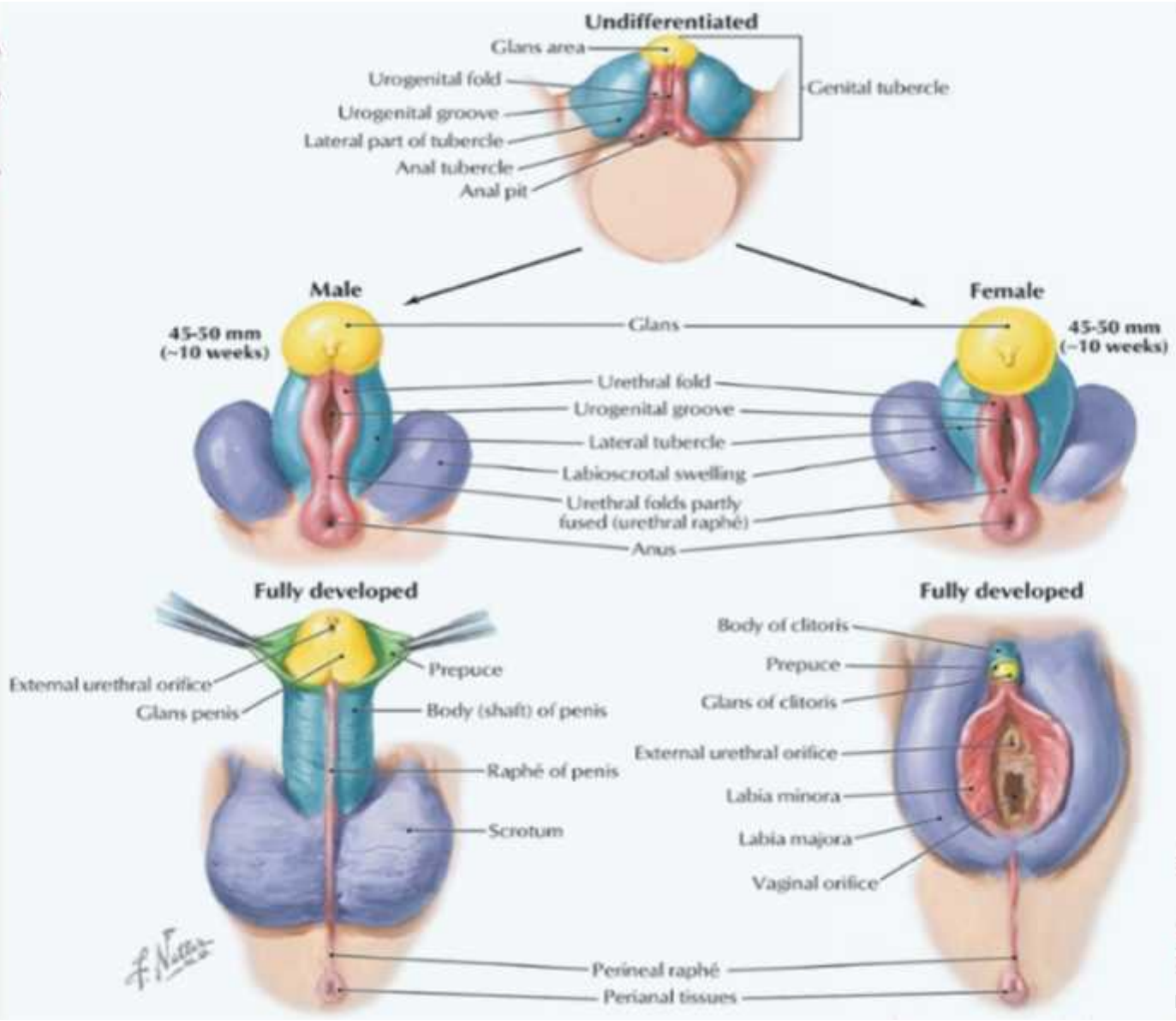
Sexually responsive vascular tissue of the vulva

CLAIRE C. YANG, CHRISTOPHER J. COLD*, UGUR YILMAZ and KENNETH R. MARAVILLA†
*Departments of Urology and †Radiology, University of Washington, Seattle, WA, and *Department of Pathology, Marshfield Clinics, Marshfield, WI, USA*

Accepted for publication 13 September 2005

FIG. 7. The vulva at the level of the distal urethra. There is a green probe in the urethral lumen. The trabecular erectile tissue of the clitoris and bulbs is filled with blood, making it dark brown. The bulbs convene over the distal urethra. The vascular spaces of the clitoral bulbs are more dilated than that of the clitoris. Vaginal wall rugae are visible caudad to the urethra. Marker in centimetres.





Netter (1989). *Atlas of human anatomy*

Hormones matter

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

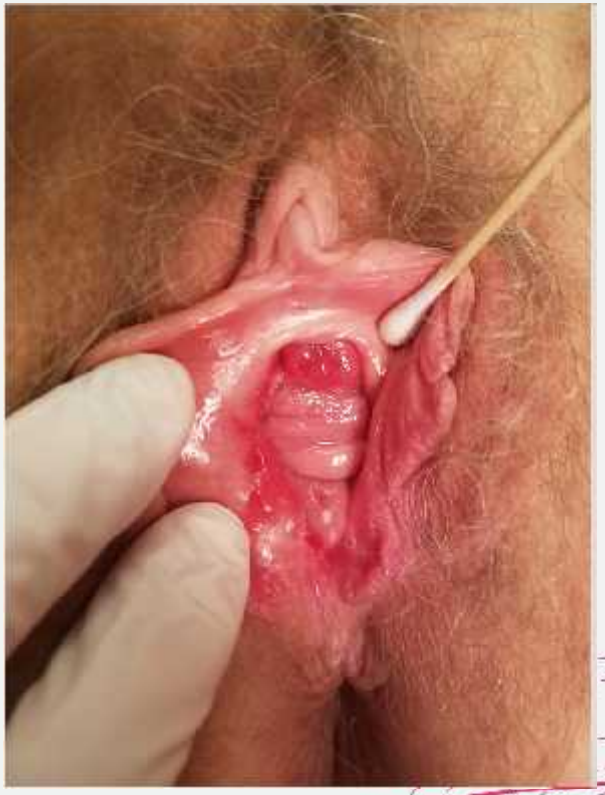
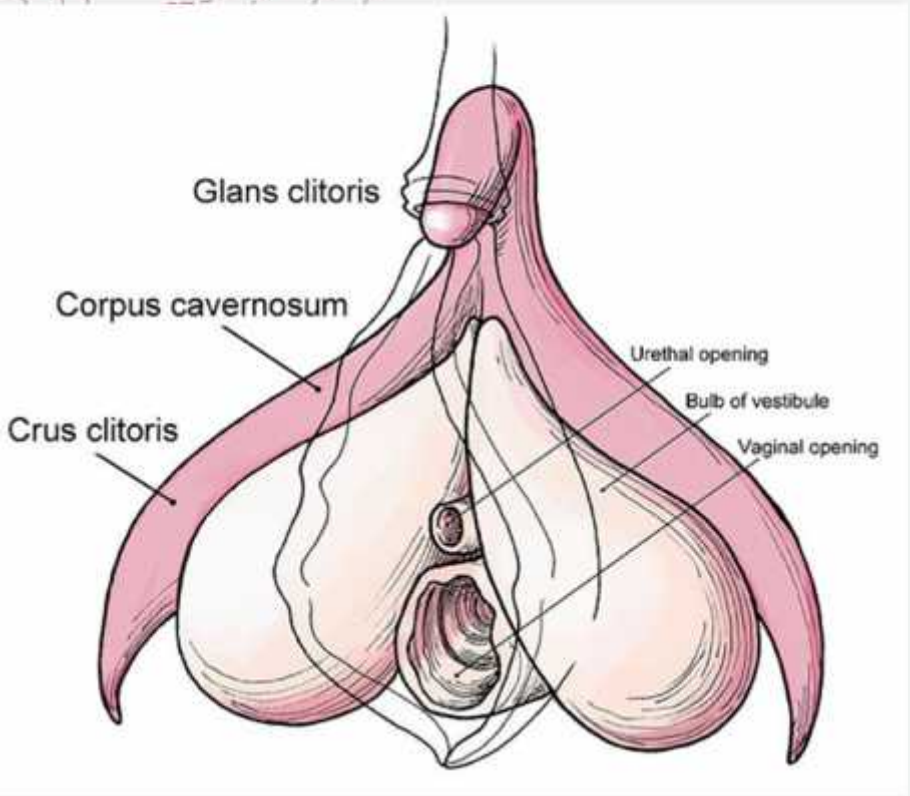
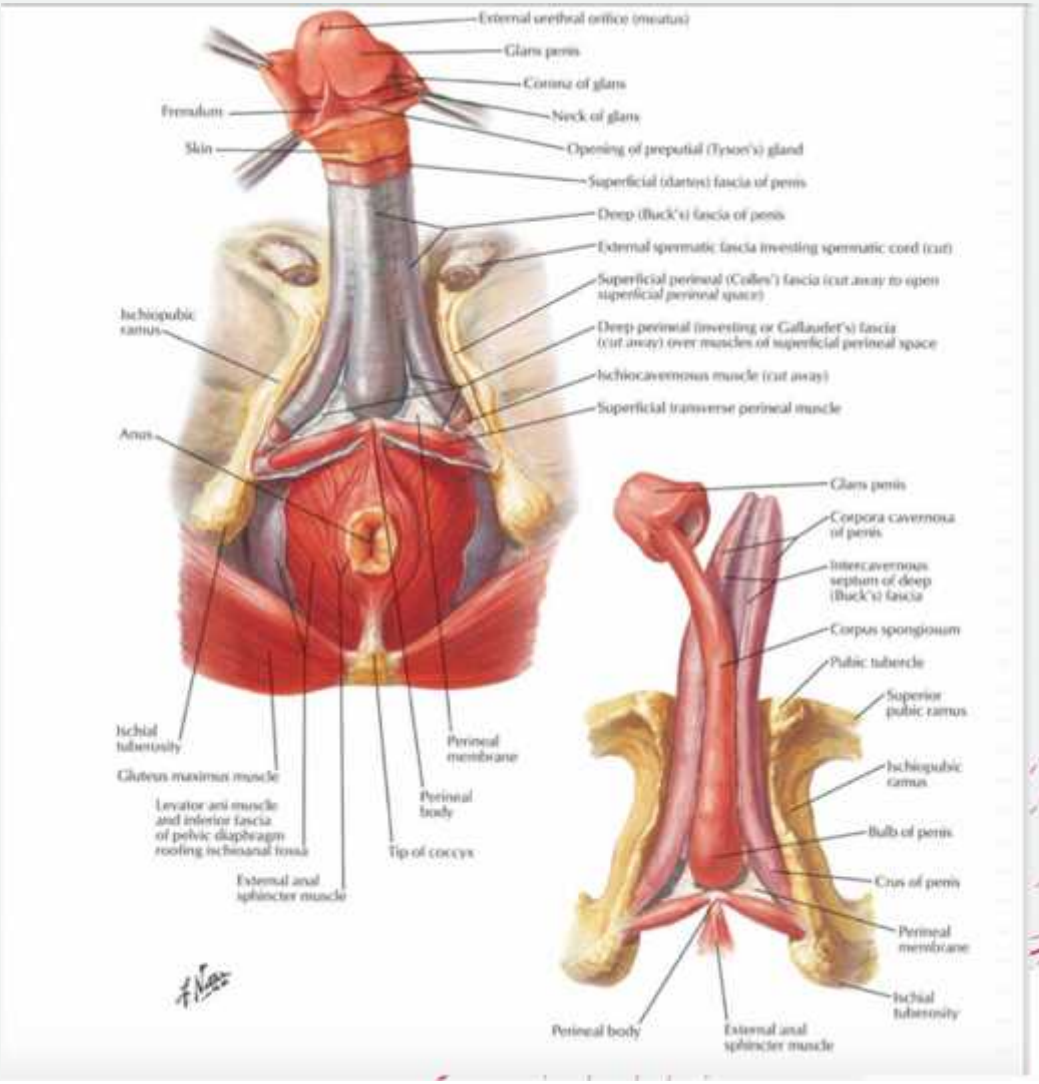
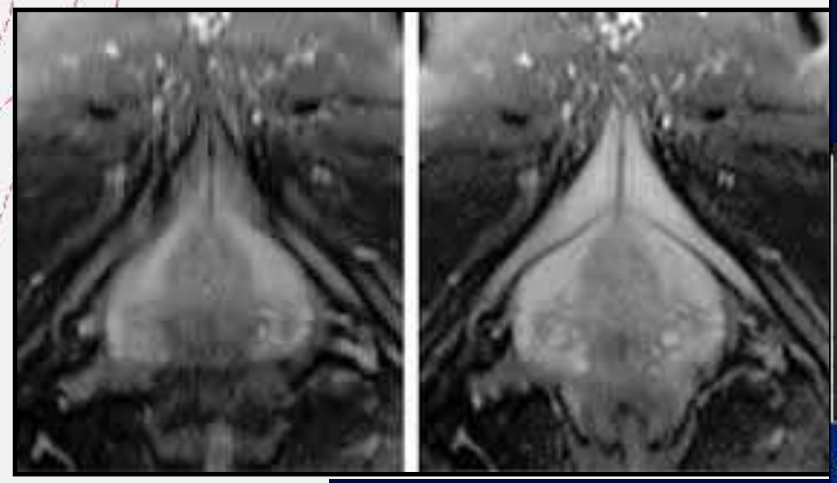


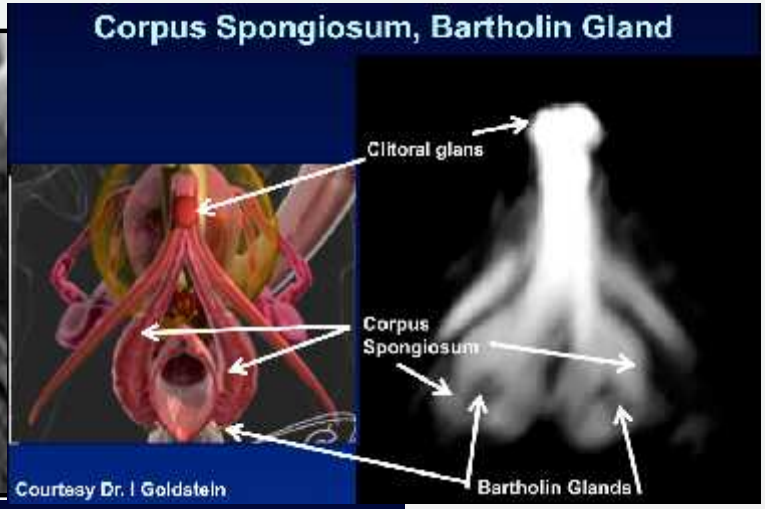
Photo courtesy of James A. Simon, MD

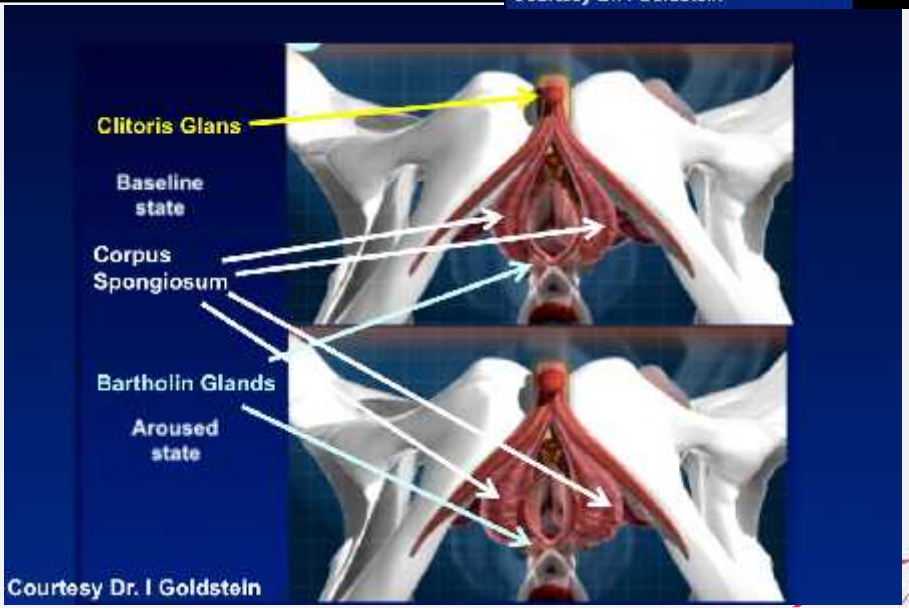

Glans clitoris
Corpus cavernosum
Crus clitoris
Urethal opening
Bulb of vestibule
Vaginal opening


External urethral orifice (meatus)
Glans penis
Corona of glans
Frenulum
Neck of glans
Skin
Opening of preputial (Tyson's) gland
Superficial (dartos) fascia of penis
Deep (Buck's) fascia of penis
External spermatic fascia investing spermatic cord (cut)
Superficial perineal (Colles') fascia (cut away to open superficial perineal space)
Ischiopubic ramus
Deep perineal (investing or Gallaudet's) fascia (cut away) over muscles of superficial perineal space
Ischiocavernosus muscle (cut away)
Superficial transverse perineal muscle
Anus
Ischial tuberosity
Gluteus maximus muscle
Levator ani muscle and inferior fascia of pelvic diaphragm roofing ischioanal fossa
External anal sphincter muscle
Perineal membrane
Perineal body
Tip of coccyx
Glans penis
Corpora cavernosa of penis
Intercavernous septum of deep (Buck's) fascia
Corpus spongiosum
Pubic tubercle
Superior pubic ramus
Ischiopubic ramus
Bulb of penis
Crus of penis
Perineal membrane
Ischial tuberosity
Perineal body
External anal sphincter muscle

Normal engorgement during sexual arousal





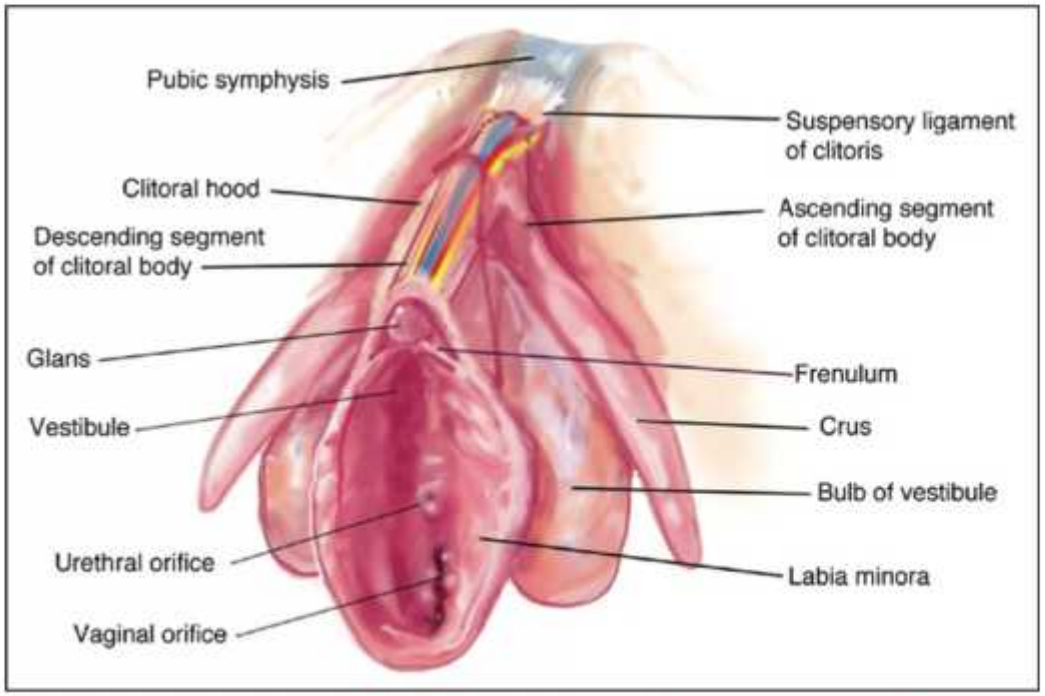


Anatomical Dissection of the Dorsal Nerve of the Clitoris

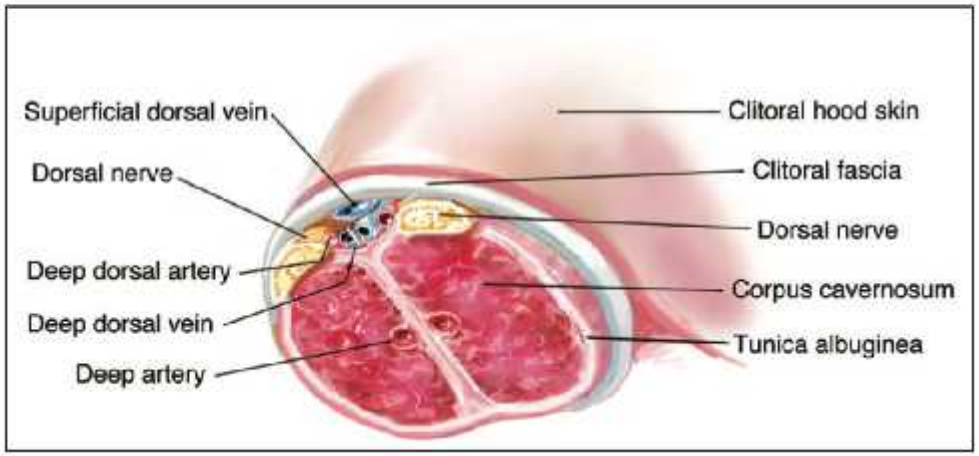
Aesthetic Surgery Journal
2019, 1–7

DOI: 10.1093/asj/sjz330
www.aestheticsurgeryjournal.com
OXFORD
UNIVERSITY PRESS

Joseph A. Kelling, MD; Cameron R. Erickson, MD; Jessica Pin, BS; and Paul G. Pin, MD



CLITORIS



PENIS

Clitoris

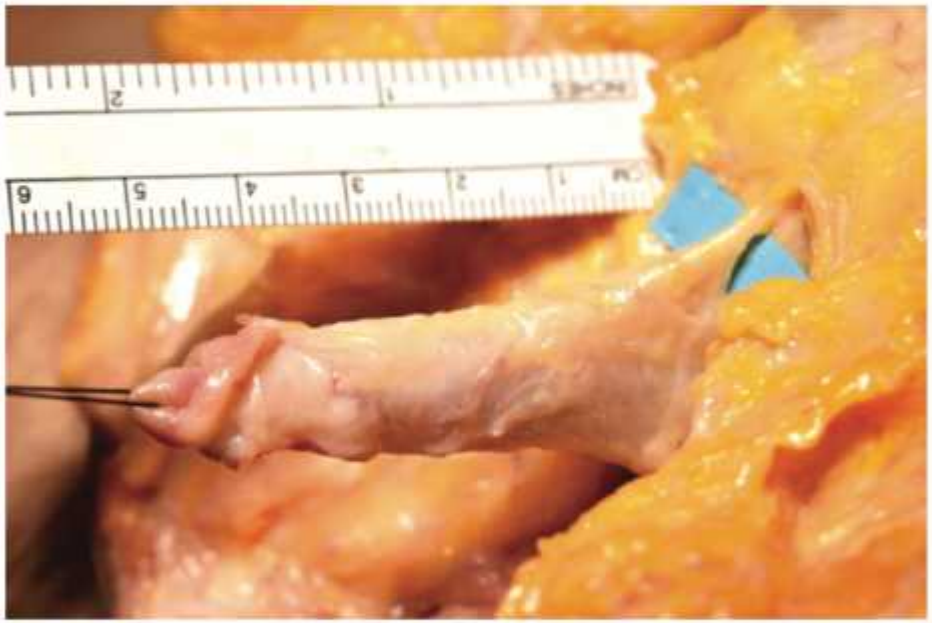


Figure 7. Attachment of the deep suspensory ligament to the clitoral body in a 65-year-old female cadaver. Suture is through the glans clitoris. This image is from prior to dissection of the DNC. Superficial fascia is covering the DNC in this image. DNC, dorsal nerve of the clitoris

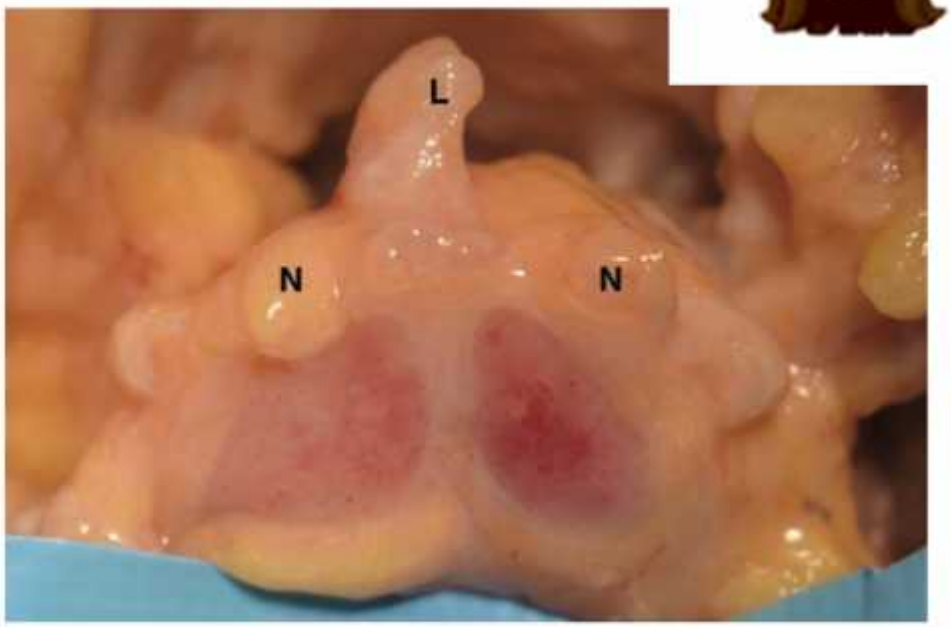
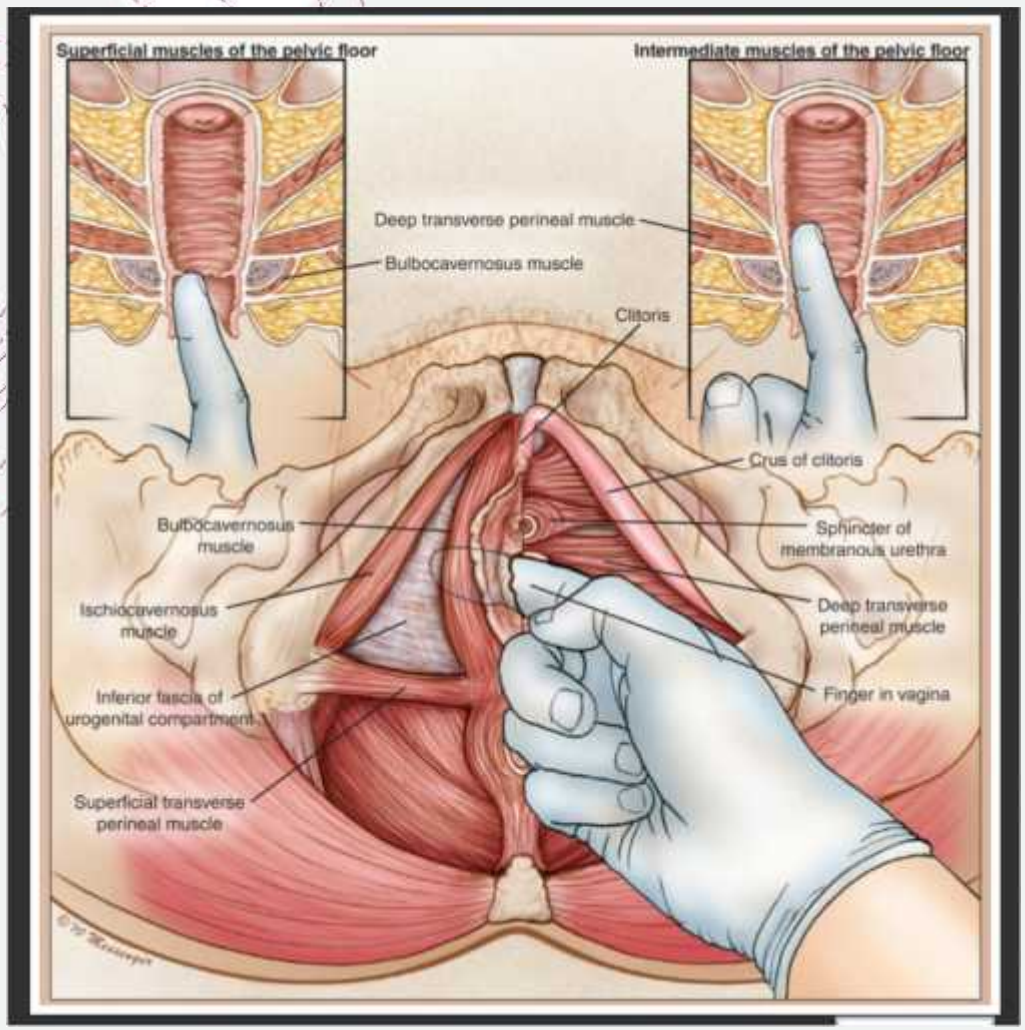
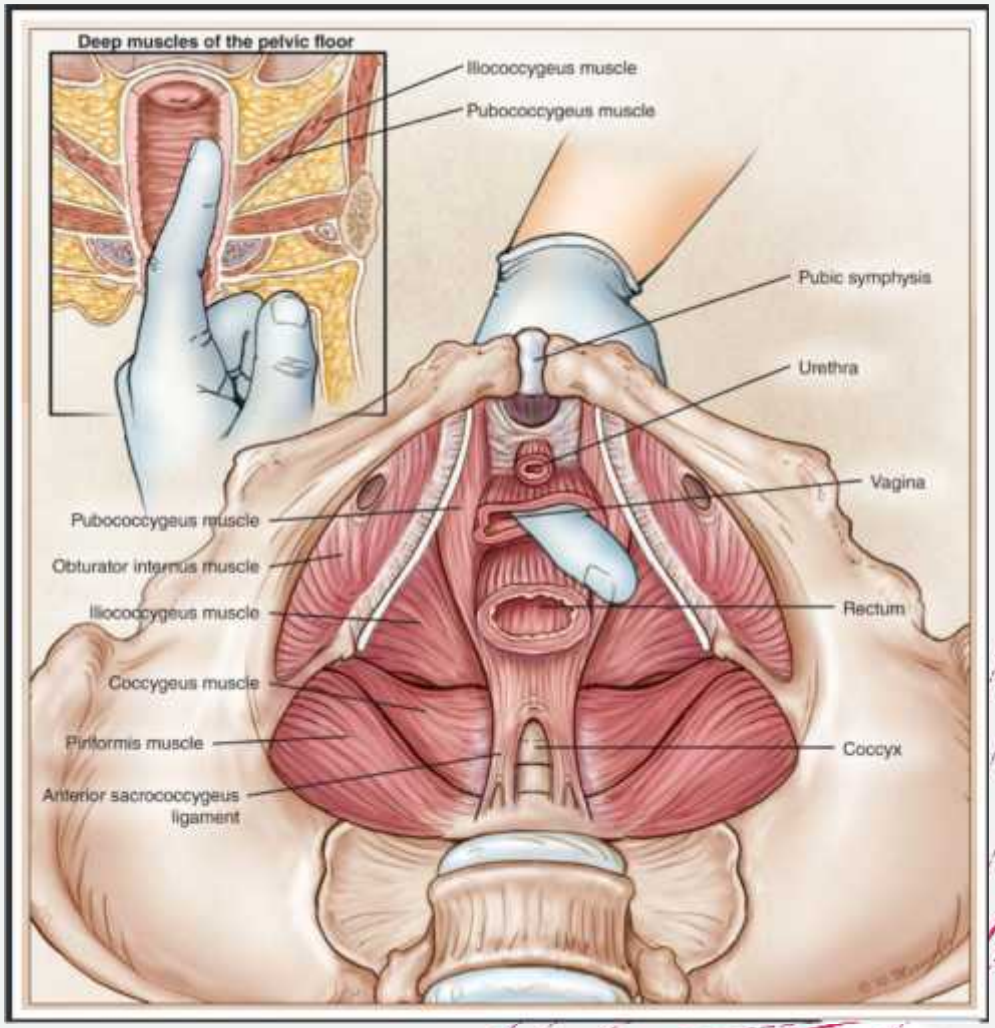


Figure 8. Cross-section of clitoral body at the angle in a 65-year-old female cadaver. Note the deep suspensory ligament (L) and the 2 dorsal nerves (N).

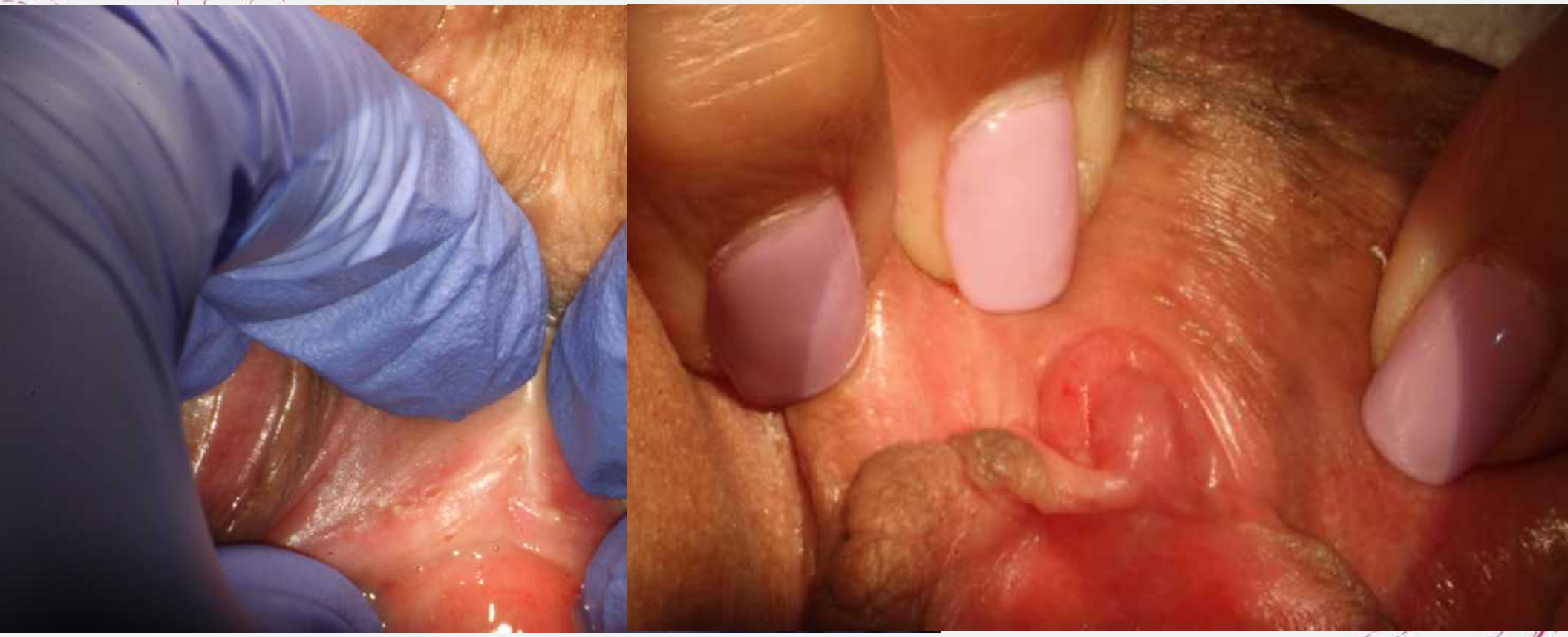




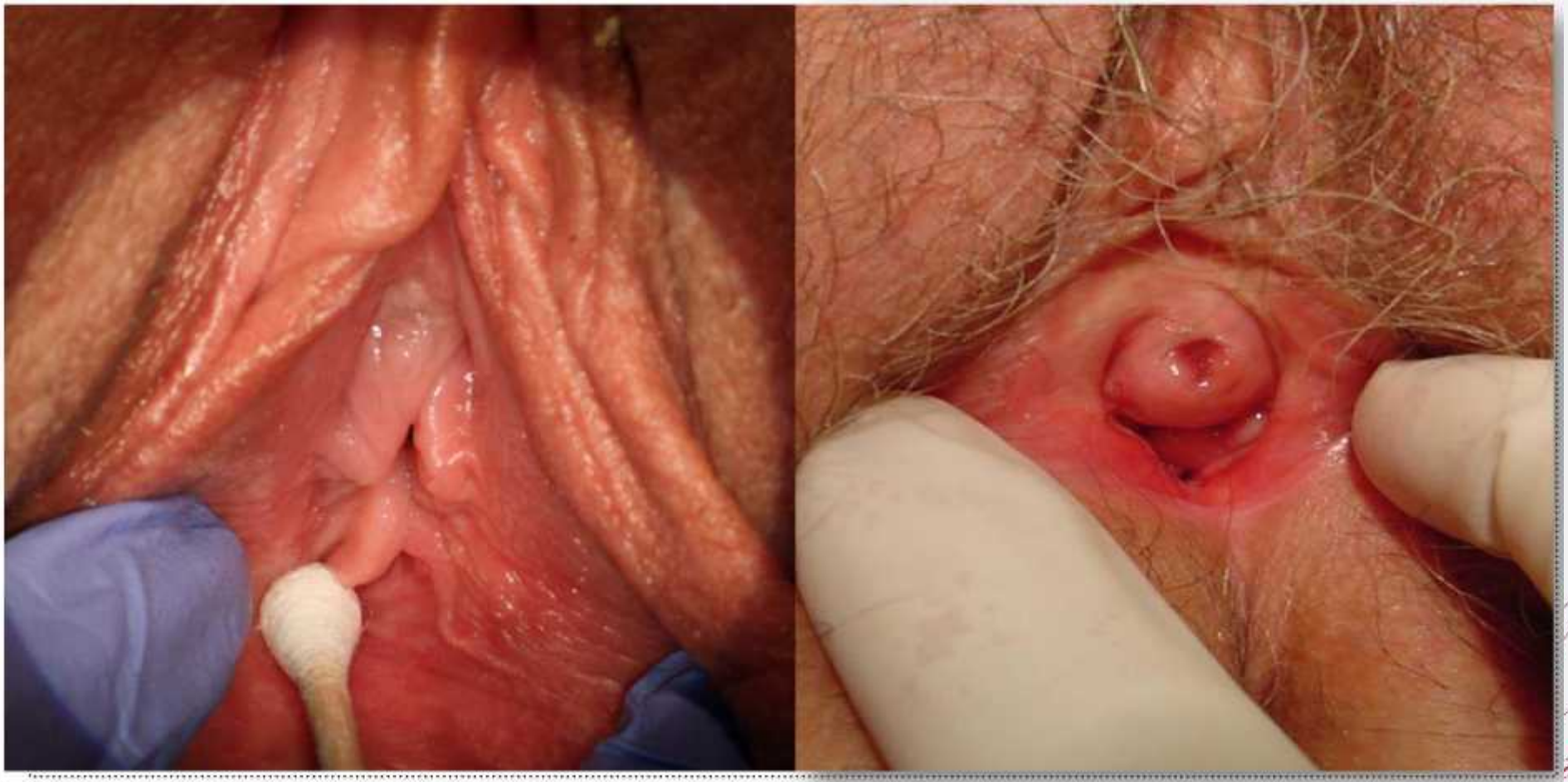
Sarton, Julie. "Assessment of the pelvic floor muscles in women with sexual pain." *The journal of sexual medicine* 7.11 (2010): 3526-3529.

Things you will routinely find on vulvar exam that may affect arousal and orgasm

Provoked vestibulodynia (PVD)

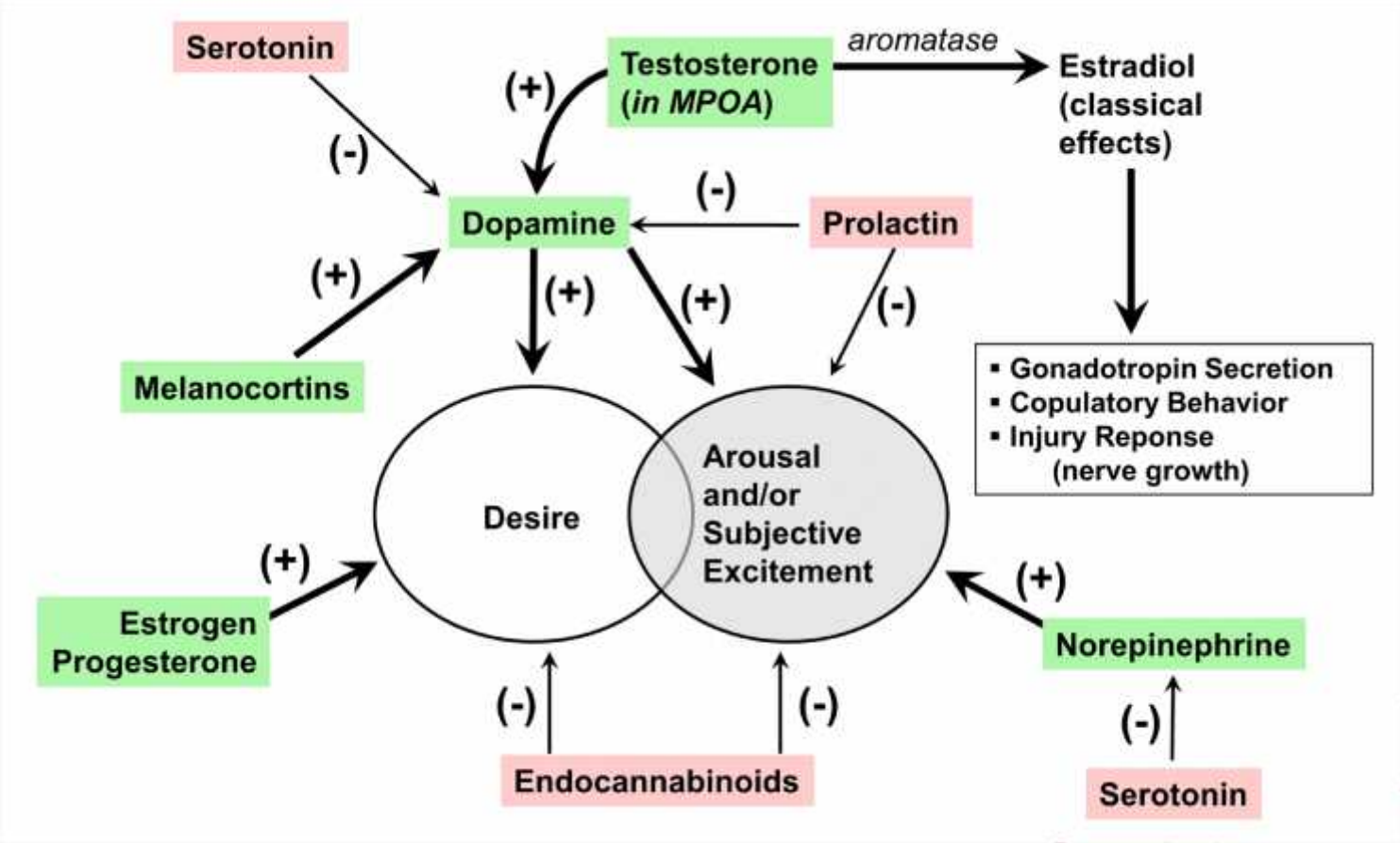


Clitoral phimosis



Genitourinary syndrome of menopause (GSM)

EFFECTS OF TESTOSTERONE IN CNS



Role of ANS in Female Sexual Arousal

Sympathetic	Parasympathetic
Central Effect: + ⇧ Wakefulness, focus + ⇧ HR, RR, BP + Pupil Dilation + ⇧ blood flow to skeletal muscle Peripheral Effects: + Increased vulvovaginal blood flow	Peripheral Effect: Vasodilation of genital blood vessels: + Tumescence: labia minora, vaginal introitus, glans clitoris & corpora cavernosa, periurethral glands, anterior vaginal wall + ⇧Lubrication: plasma transudate through vaginal mucosa, mucin release from Bartholin and Skene glands

Extra-Genital Changes During Sexual Arousal

+Nipple erection

+Increased skin sensitivity:

- +Ear lobes
- +Fingers
- +Wrists
- +Thighs
- +Buttocks

+Flushing of the skin

Central Sexual Arousal

+ Arnow et al., *Neuroscience*, 2009: fMRI study assessing brain activation and sexual arousal
  + significant activation in entorhinal cortex of women without HSDD compared to women with HSDD

+ Komisaruk et al., *JSM*, 2011: fMRI study to map sensory cortical fields of cervix, clitoris, vagina, and nipple
  + Differentiable regions of activation for vaginal, clitoral, and cervical self-stimulation in the genital sensory cortex (medial cortex)
  + Activation of the genital sensory cortex & thoracic region by nipple self-stimulation

Key CNS Mediators of Female Sexual Arousal

ACTIVATION

Dopamine:

+ Promotes craving for continued sexual activity once it's started
+ Inhibits prolactin release / stimulates oxytocin release

Norepinephrine:

+ Stimulating action on sexual behavior

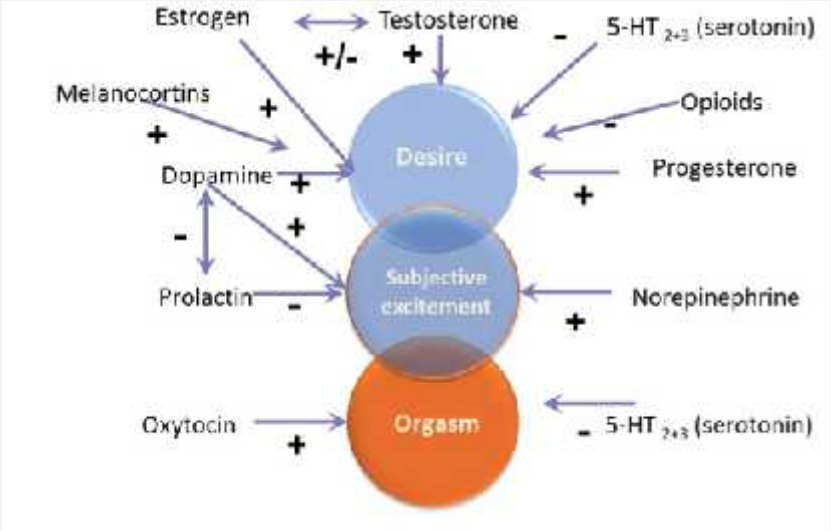
INHIBITION

Serotonin:

+ Inhibits central desire and arousal by decreasing dopamine levels

Prolactin:

+ Levels increase after orgasm
+ Inhibitory effect on desire and arousal



This image was published in the Journal of Sexual Medicine, Vol 4. Clayton AH, Epidemiology and neurobiology of female sexual dysfunction. Copyright Elsevier 2007.

Peripheral Innervation

- Motor innervation*
  - Parasympathetic-sacral cord
    - Early genital arousal-engorgement of clitoris, labia, vagina, lubrication response
  - Sympathetic-lumbar spinal cord
    - Late stages of sexual arousal-increased heart rate and blood pressure, orgasm
- Sensory innervation
  - Pelvic nerve (vaginal and cervix)
  - Pudendal nerve (clitoris, vulva, striated pelvic and perineal muscles)
  - Hypogastric nerve (mostly noxious information from uterus, cervix, ovaries)
  - Vagus (vagina and cervix)

* Recent evidence identifies the neurochemical and transcriptional markers of sympathetic neurons in sacral pre- and post ganglionic neurons in the mouse; pelvic plexus may soon be redefined as purely sympathetic in humans (Espinosa-Medina et al. 2016).

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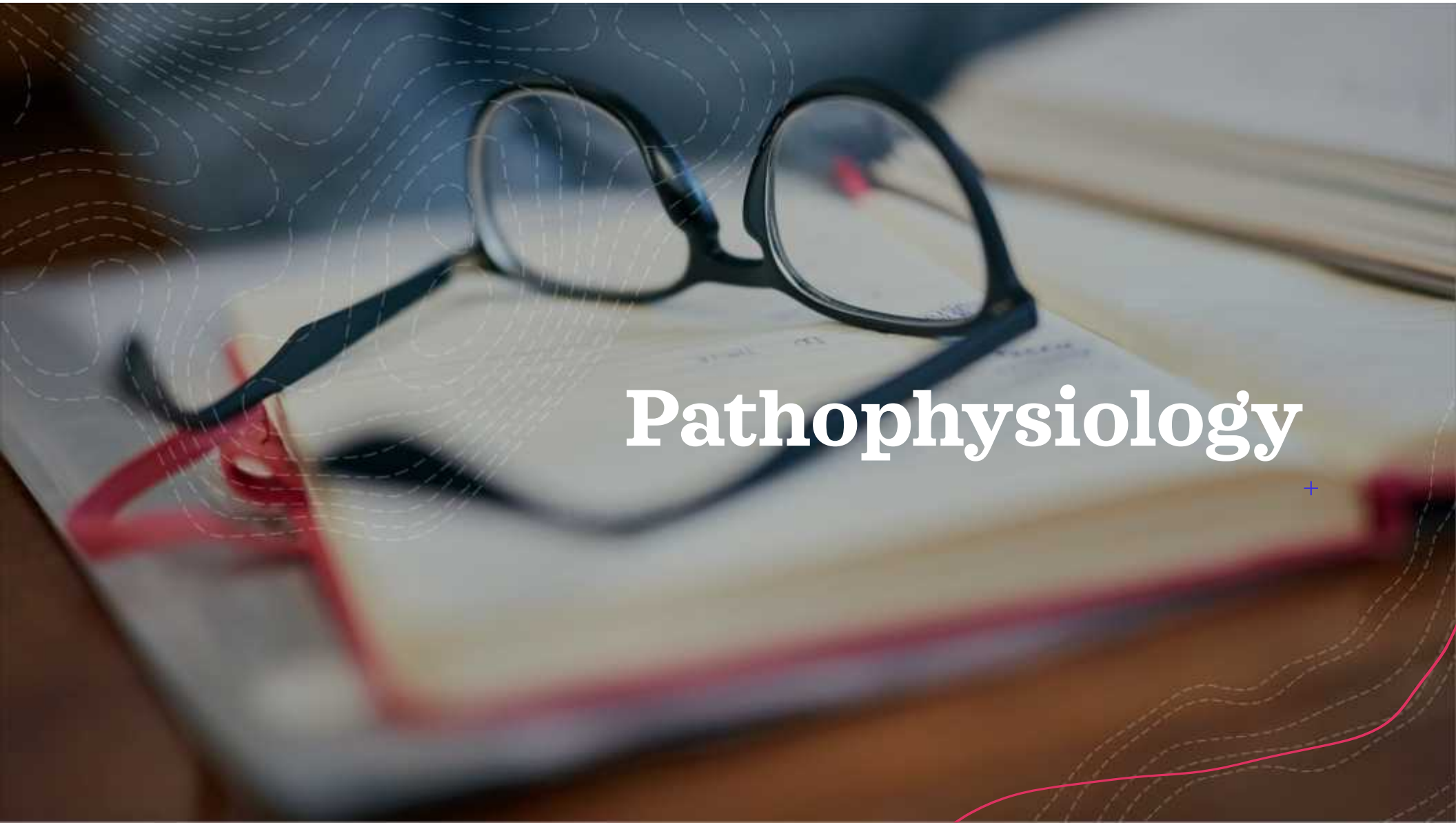
Pathophysiology

Female Sexual Dysfunction: Female Sexual Arousal Disorder (FSAD)

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FCAD & FGAD

Female Cognitive Arousal Disorder (FCAD)

- Characterized by the distressing difficulty or inability to attain or maintain adequate mental excitement associated with sexual activity as manifested by problems with feeling engaged and/or mentally turned on or sexually aroused, for a minimum of six months

Female Genital Arousal Disorder (FGAD)

- Characterized by the distressing difficulty or inability to attain or maintain adequate genital response including vulvovaginal lubrication, engorgement of the genitalia, and sensitivity of the genitalia associated with sexual activity, for a minimum of six months
- Disorders related to: Vascular and neurological injury or dysfunction

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How to Evaluate Female Arousal Disorders

- History Taking is Everything!
  - Be focused on distinguishing arousal from desire
    - Desire is motivation to engage in and/or be receptive to a sexual event for sexual or non-sexual gratification
    - Arousal is the response to sexual stimuli
- Remember to ask about the subjective vs the genital response

Subjective Arousal

- If this appears to be the main problem, consider the factors that play a role
  - Remember the bio-psycho-social model
  - Make sure to ask about relationship factors (social)
  - Ask about psychological factors (body image, stress)
    - Think about what medications patient is on
      - Common culprits
        - Systemic hormonal contraception
        - SSRIs
    - Think about comorbidities

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Associated Medical Conditions

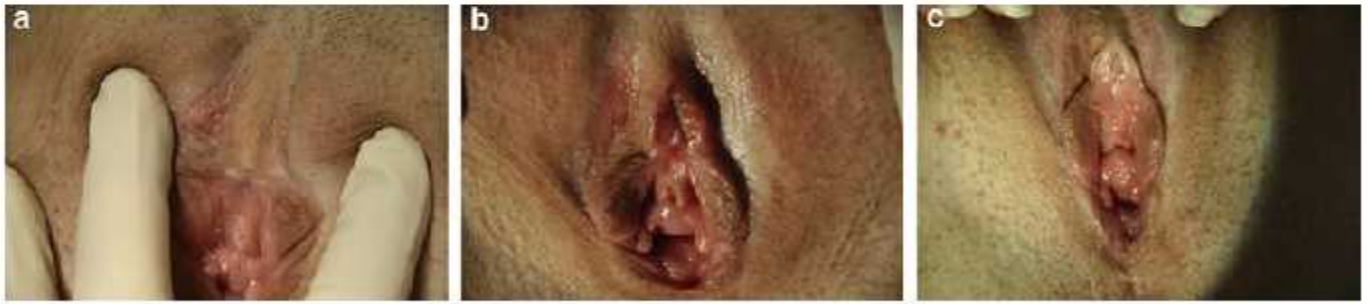
+ CVD/Peripheral Vascular Disease
+ Obesity
+ Diabetes Mellitus
+ Thyroid Disorders
+ Neurologic Disorders (MS, pudendal neuropathy)
+ Lumbar Spinal Pathology (Spinal Stenosis)
+ Sacral Spinal Pathology (Tarlov Cyst)
+ Pelvic Surgeries (TAH, prolapse repair)
+ Pelvic Radiation Therapy
+ Anorexia Nervosa

Medications

- Oral Contraceptives:
  - Increase SHBG 3-10 times results in lower biologically available T
- SSRI/SNRI's
- Anti HTN meds (Beta Blockers, Thiazides)
- Opioids
- Aromatase Inhibitors
- Tamoxifen
- Other hormonal suppression (Lupron)
- Antihistamines

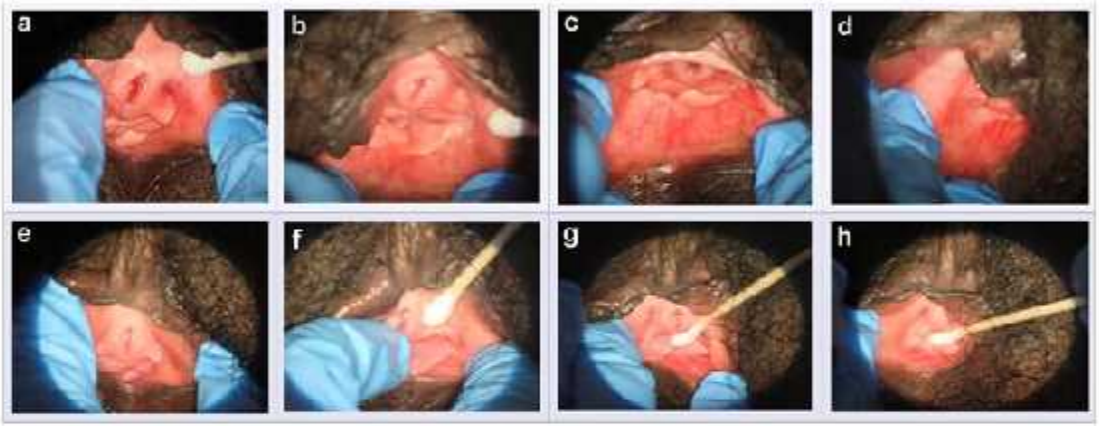
Genital Arousal

- This can be more physiologic
  - Again consider medications
    - Systemic contraceptives
    - Antidepressants
  - Other comorbidities
    - Neurologic disorders
    - Diabetes
    - Trauma
    - Dermatitis



The Journal of Sexual Medicine 2019 16257-266DO : (10.1016/j.jsxm.2018.12.012)

Physical Exam: Vulvar Exam & Q-tip Testing



Goldstein J Sex Med 2018

- You are doing a detailed assessment of sensation, both soft and light touch
- Use the soft and then break the q tip and test pain sensation with the sharp edge
- Assess for differences in sensation on different parts of the entire external genitals
- Can then see if any associated changes in neurologic or strength in pelvic floor and in legs

Technology

- Biothesiometry :objective assessment of peripheral neuropathy
  - Quantitative sensory testing examination using vibratory, and hot and cold thermal sensory thresholds

- Perineometry
  - Record the strength of pelvic motor contraction directly in cm/H20 and the ability to sustain the pelvic floor contraction in seconds

- Doppler ultrasound of the clitoral arteries pre-and post-sexual stimulation
  - Measuring changes in genital blood flow as implied by changes in peak systolic and end-diastolic velocity measurements
  - Can help determine autonomic system integrity

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Female Sexual Dysfunction: Orgasm Disorders

Female Orgasmic Disorder

Diagnostic Criteria

- Presence of either of the following symptoms and experienced on almost all or all (approximately 75%-100%) occasions of sexual activity (in identified situational contexts or, if generalized, in all contexts):
  - Marked delay in, marked infrequency of, or absence of orgasm.
  - Markedly reduced intensity of orgasmic sensations.
- The symptoms have persisted for a minimum duration of approximately 6 months
- The symptoms cause clinically significant distress in the individual.
- The sexual dysfunction is not better explained by a nonsexual mental disorder or as a consequence of severe relationship distress (e.g., partner violence) or other significant stressors and
  is not attributable to the effects of substance/medication or another medical condition.
  - All specifiers apply (lifelong, acquired, generalized, situational, mild, moderate or severe)
  - Specify if:
    - Never experienced an orgasm under any situation

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Orgasm

- Orgasm is closely related to sexual arousal
  - Even more so than desire!
- Physiologically orgasm is tied mostly to the pelvic floor muscles
- Pelvic muscles have both afferent (sensory) and efferent (motor) innervation, which belongs to the pudendal nerve pathway
  - Rhythmic contractions of these muscles which eventually occur in most women at and during orgasm
- Thus the integrity of the pelvic floor muscles is critical in female orgasmic disorder
  - Need to assess for both hypo and hypertonicity of the pelvic floor

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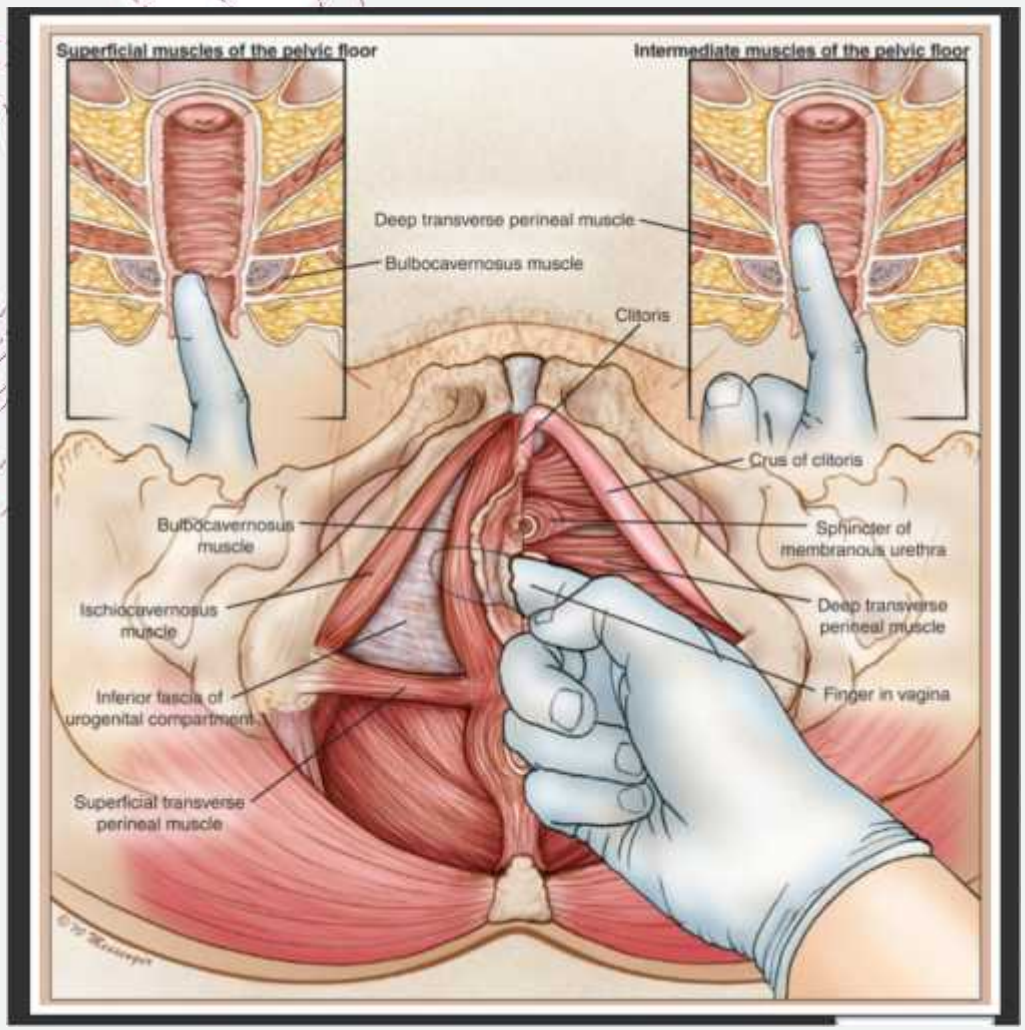

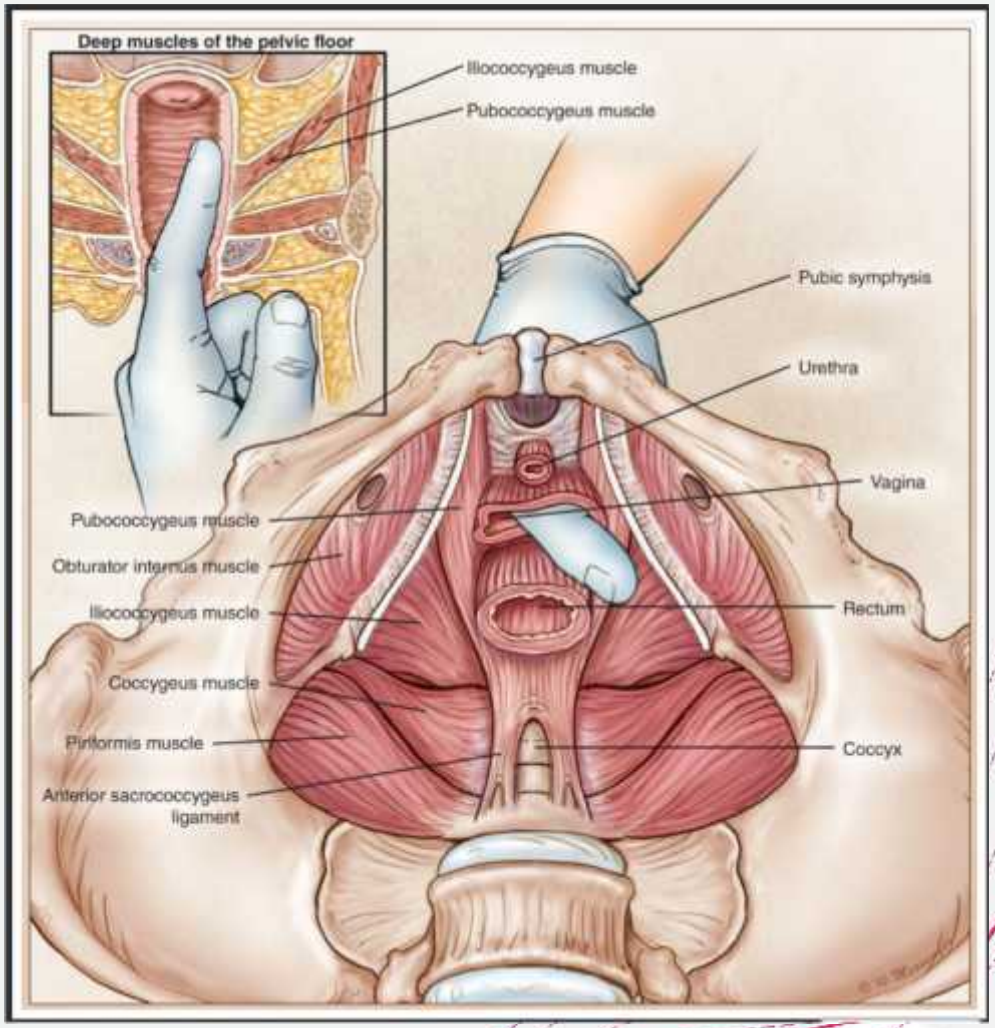

Sarton, Julie. "Assessment of the pelvic floor muscles in women with sexual pain." *The journal of sexual medicine* 7.11 (2010): 3526-3529.

Other critical components of Orgasm

- Vaginal stimulation is NOT required for orgasm
  - However, at orgasm, the contractions of the striated muscles will impinge on the vagina causing passive increases in its intraluminal pressure
    - This likely leads to increased lubrication
    - Electrical activity in the vagina is increased by clitoral stimulation
      - The sensation of pleasure is NOT correlated to the strength of vaginal contraction

- What about the Clitoris?
  - During sexual arousal, central reduction of sympathetic tone and the release of VIP and NO increase blood flow and relaxing the trabecular smooth muscles

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What else plays a role in orgasm?

- The basis of orgasm may be physiologic contractions leading to a peak sensation of pleasure
- Dopamine as the key neurotransmitter involved in stimulating orgasm in humans
- Inhibition of orgasm is mediated by interaction of serotonin with the serotonin-2 receptor subtype
- Orgasm also involves release of oxytocin and prolactin, but oxytocin doesn't lead to orgasm. Prolactin increases can decrease orgasms
- Data on E/T's role in facilitating orgasm is mixed
  - If any role, it's for androgens

Female Orgasmic Disorder (FOD)

- Often diagnosed concurrently with 1 or more other FSDs
- FOD ruled out if symptoms better explained by another FSD, non-sexual psychiatric disorder, severe interpersonal distress, medical treatment (THINK SSRI), or medical condition (e.g. diabetes)
- Clitoral vs Vaginal—both normal variations
  - 1/3-2/3 range in women reporting inability to orgasm with vaginal penetration/intercourse alone
- Majority of women able to orgasm with masturbation but less reliable with partner
  - Partner skill and situational factors
  - Orgasm more reliable reporting from women who have sex with women

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Female Orgasmic Disorder: Lifelong

- Generalized
- Commonly termed "primary anorgasmia"
- Tend to be younger and have less experience with sexual activity including masturbation
- May have had less access to sex education during childhood/adolescence

Female Orgasmic Disorder: Acquired

- Assess health status
- Medications RX and OTC
- Partner/relationship issues
- Anxiety and other psychiatric conditions

How to Evaluate Orgasmic Disorder

- Think bio-psycho-social
- Remember the definition of FOD is absence or reduced orgasm with sufficient stimulation
- Sexual History taking is the most important factor in determining a potential cause
  - Need to assess history of masturbation, partnered sexual activity, psychological comorbidities
    - Need to know what medications she may be on

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What About a Physical Exam?

Controversial Statement

- All women with FOD should have a detailed physical exam
- This must include an examination of the clitoris
  - Look for size, volume, adhesions and sensitivity
- Assess their entire vestibule for sensitivity
- Assess the pelvic floor for hypo or hypertonicity

SSRI-Induced FSD

- Diminished libido
  - Reduced testosterone levels, dopamine transmission
  - Prevalence: up to 50%
- Diminished arousal
  - Negative effects on nitric oxide system and sensation
  - Prevalence: 5%
- Delayed, reduced or absent orgasm
  - 5-HT2 and other receptors
  - Prevalence: up to 66%
- Sexual side effects: noncompliance, discontinuation, decreased recovery
- Actual patient reports are two times greater than what physicians perceive

SSRI Sexual Dysfunction: Management

- Dose reduction or await tolerance: low success
- "Drug holiday": relapse, discontinuation syndrome
- Drug substitution: fear of failure
- Augmentation/antidote: cost, side effects, limited efficacy

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SSRI Sexual Dysfunction: Management

- Augmentation/antidote: cost, side effects, limited efficacy
  - Bupropion: improvements in self-reported feelings of desire and frequency of sexual activity, but no differences in global sexual functioning measured by CSFQ, orgasm, desire/interest measured by sexual thoughts, or self-reported arousal
  - Sildenafil: small, significant improvement in Clinical Global Impression-sexual function scores
  - Testosterone: significant increase in SSEs in women with SSRI/SNRI- emergent loss of libido with 300 mcg TT
  - Exercise: 20 minutes 3x/week improved desire; improved global sexual function in those with sexual dysfunction at baseline.

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Female Orgasmic Disorder: Sex Therapy

- Cognitive Behavior Therapy (CBT) has been empirically shown to be effective
- Aim: Change attitudes and sexually relevant thoughts, decrease anxiety and increase orgasmic ability
- CBT techniques
  - Directed Masturbation
  - Sensate Focus
  - Systematic Desensitization
  - Sex Ed, communication skills training and Kegels too

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Female Sexual Dysfunction: Treatment Platform

- Educate couple on:
  - female and male sexual response and dysfunction, specifically addressing lack of comparison
  - communication skills and identification of sexual expectations
  - how diet, exercise, and stress reduction affect sexual health
  - use of fantasy to prime sexual pump
  - benefits of self stimulation
  - types and techniques for orgasm
  - female anatomy

North American Menopause Society 2014: Sexual Counseling

- Educate couples about normal, age-related sexual response changes in women (e.g., diminished lubrication, increased time for stimulation)
- Educate couples about normal, age-related sexual response changes in men (e.g., decreased rigidity, increased time for stimulation)
- Warm baths before genital activity
- Extended foreplay, lubricants

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North American Menopause Society: Sexual Counseling

- Sexual fantasies, erotica
- Experiment with non-coital activities: massage, oral stimulation
- Use masturbation as alternative to intercourse
- Change routine: location, time of day
- Change positions, other than "missionary"
  - "Coital alignment, women on top"

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Orgasmic Disorder: Treatment Options for Non-Therapists

- Permission by physician to:
  - Practice and explore self-stimulated/masturbation in privacy
  - Assert desired stimulation with partner
- Masturbation education
  - Described as common behavior and medical intervention
  - Describe types of masturbation
  - Distinguish and combine with dilators/incontinence devices
- Educate on vibrator use and types
- No FDA approved medical treatment for FOD
- No research on combined interventions


The erogenous zones
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2
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5
6
7
8
9
10
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9
10


Impotence

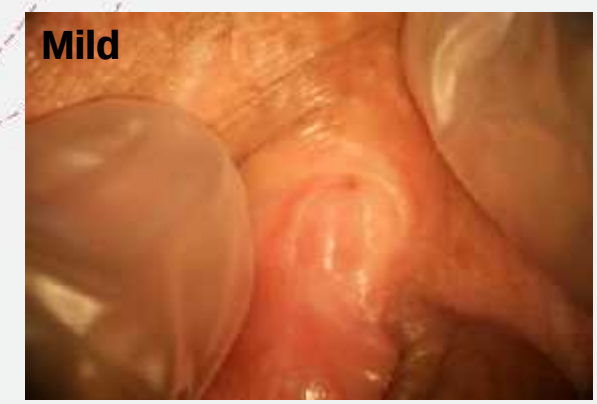
Treatments

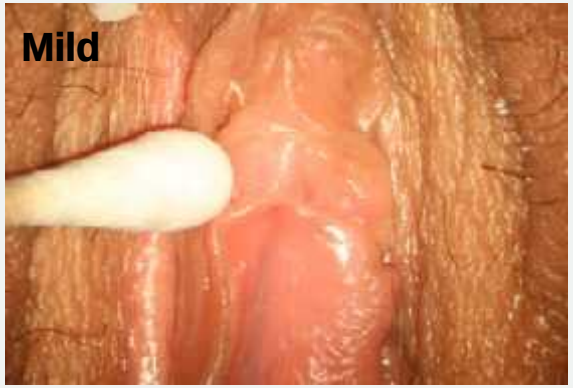
of FDA approved Medicinal Treatments For Female Sexual Arousal and Orgasm Disorders

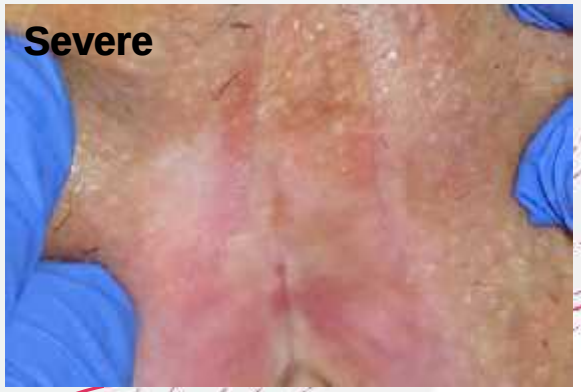
0


OBGYN : Nope.
Urology: Not me!
Primary Care: Don't look here.
WHO OWNS THE CLITORIS???
#whoownstheclitoris?

Mild Glans Adhesions	Moderate Glans Adhesions	Severe Glans Adhesions
> 75% glans visualization no corona visualization	25% - 75% glans visualization no corona visualization	< 25% glans visualization no corona visualization

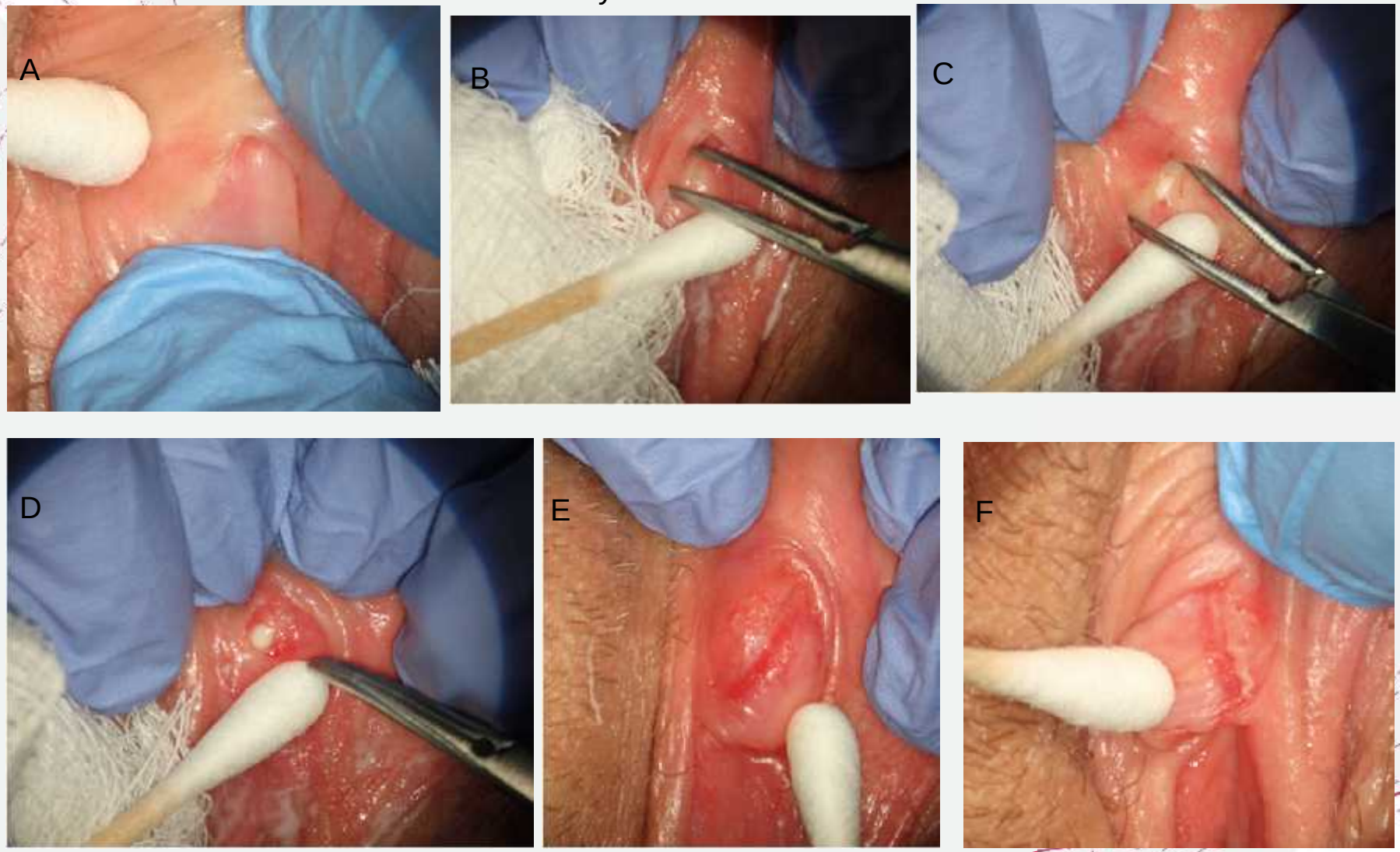




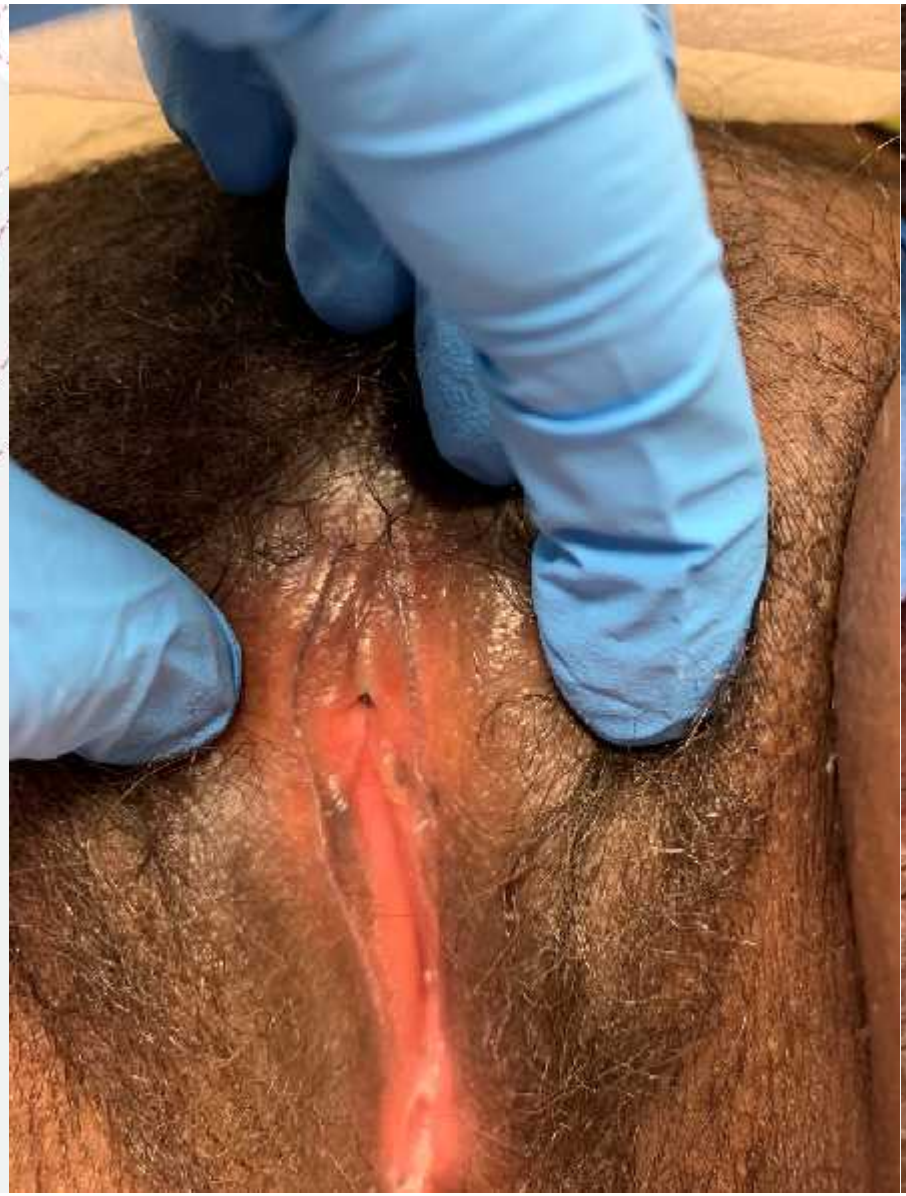


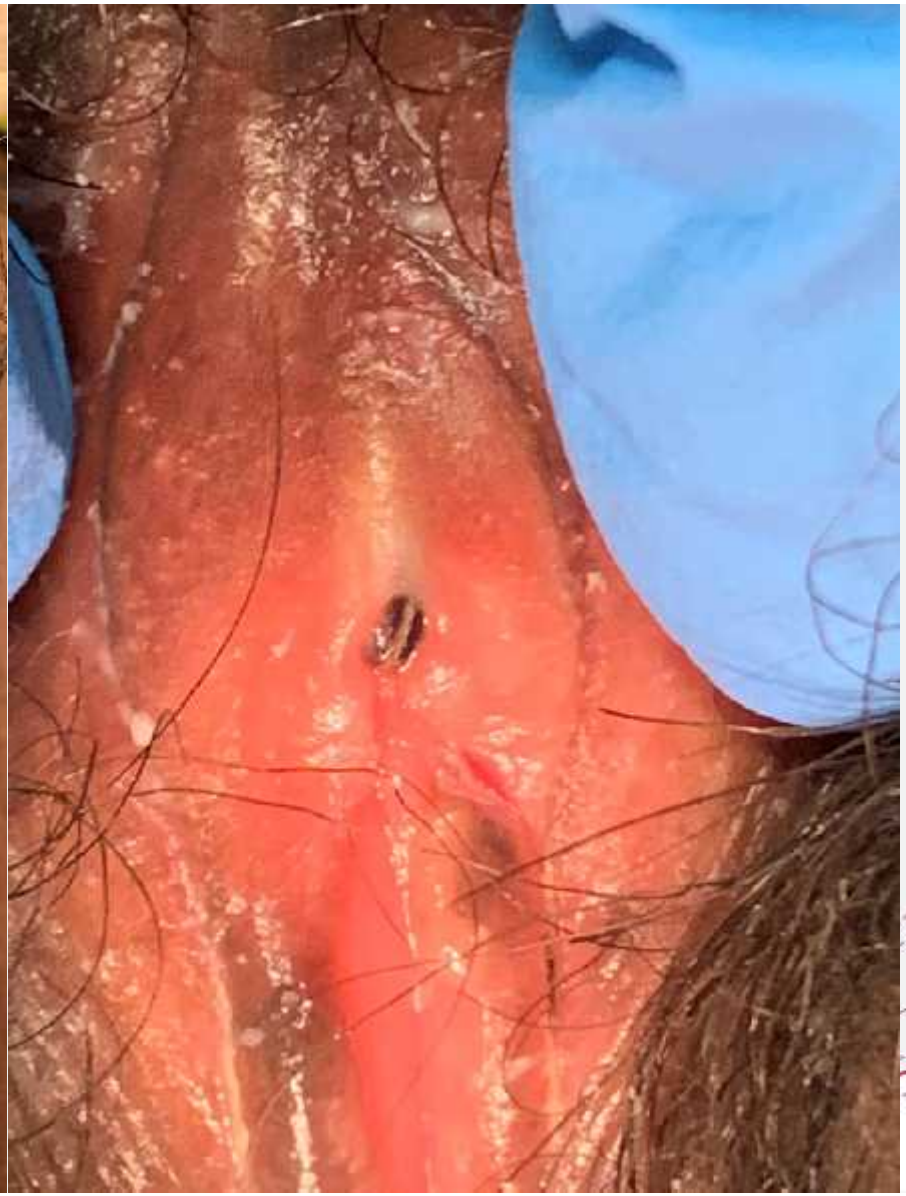
Rubin et al *The Journal of Urology*, *2017*, *197*(4),

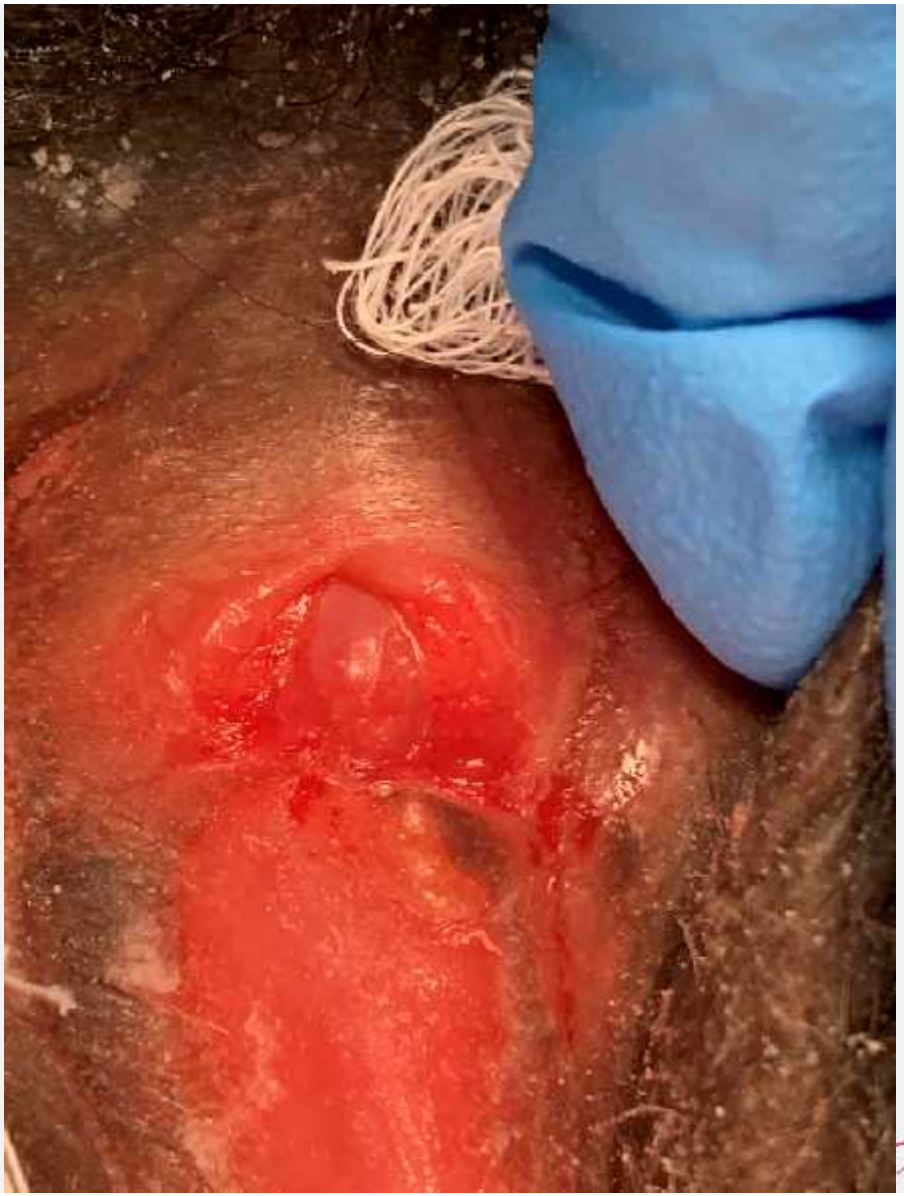
In Office Lysis of Clitoral Adhesions

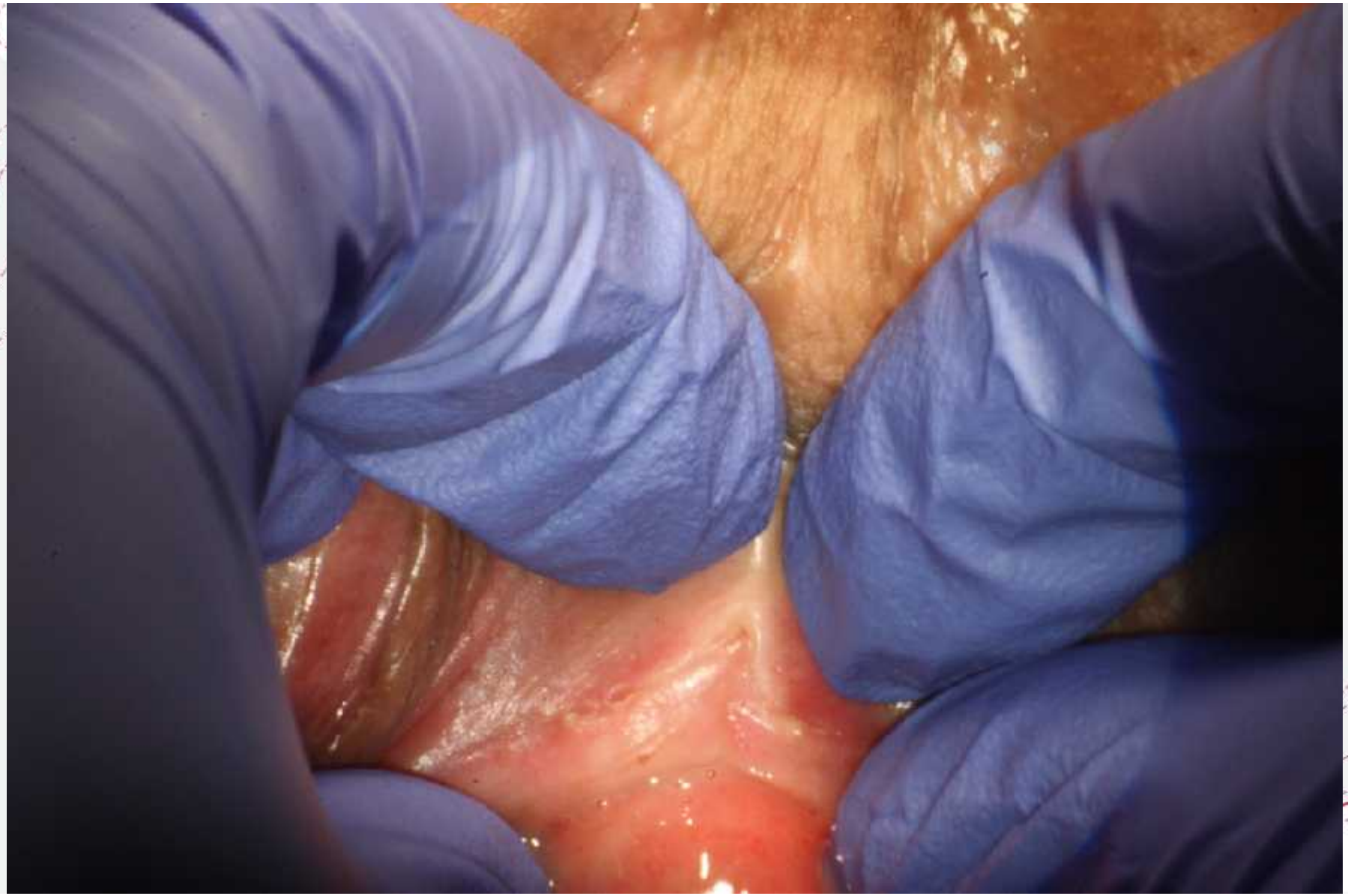


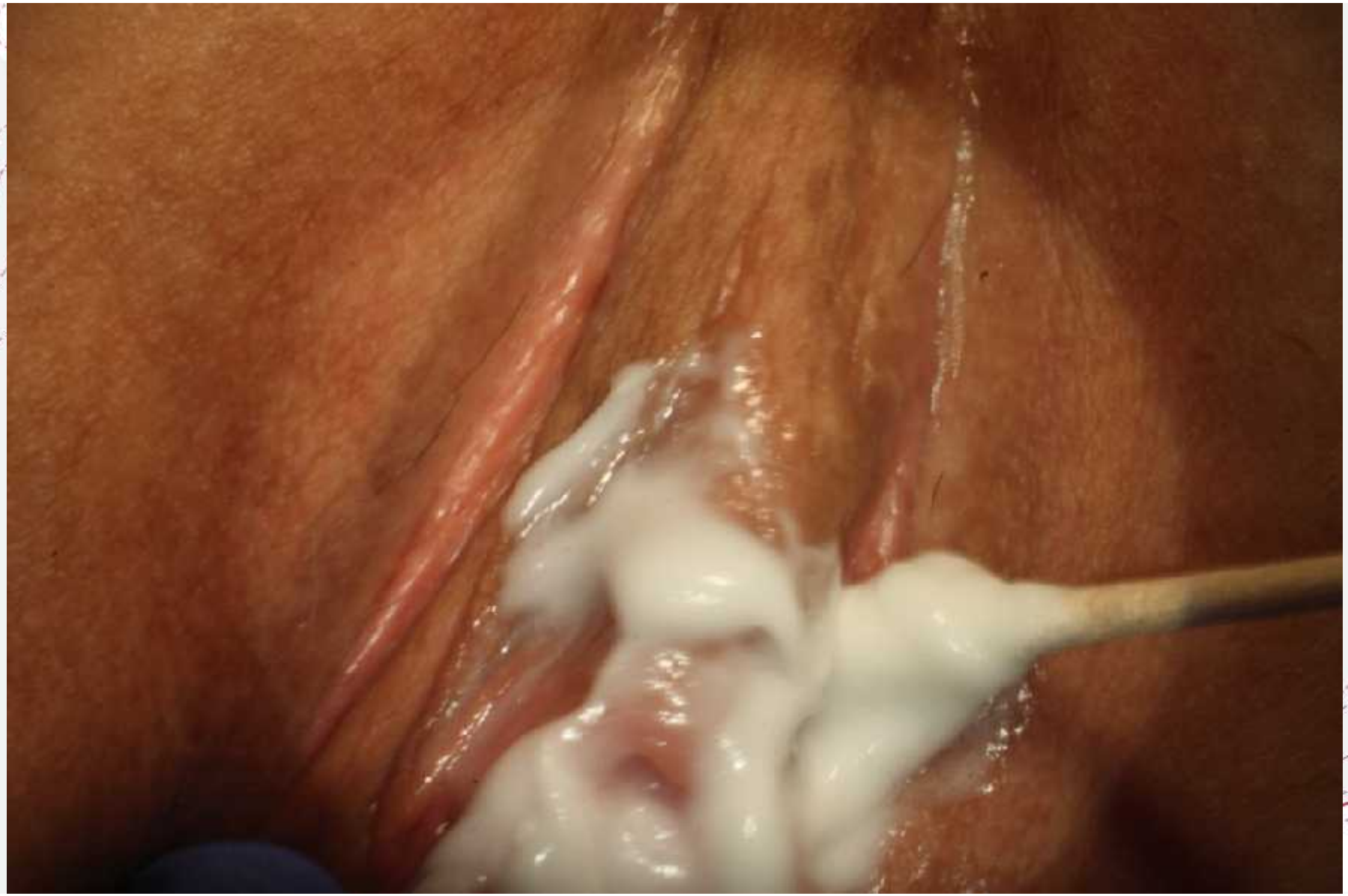
Rubin et al *The Journal of Urology, 2017, 197*(4),

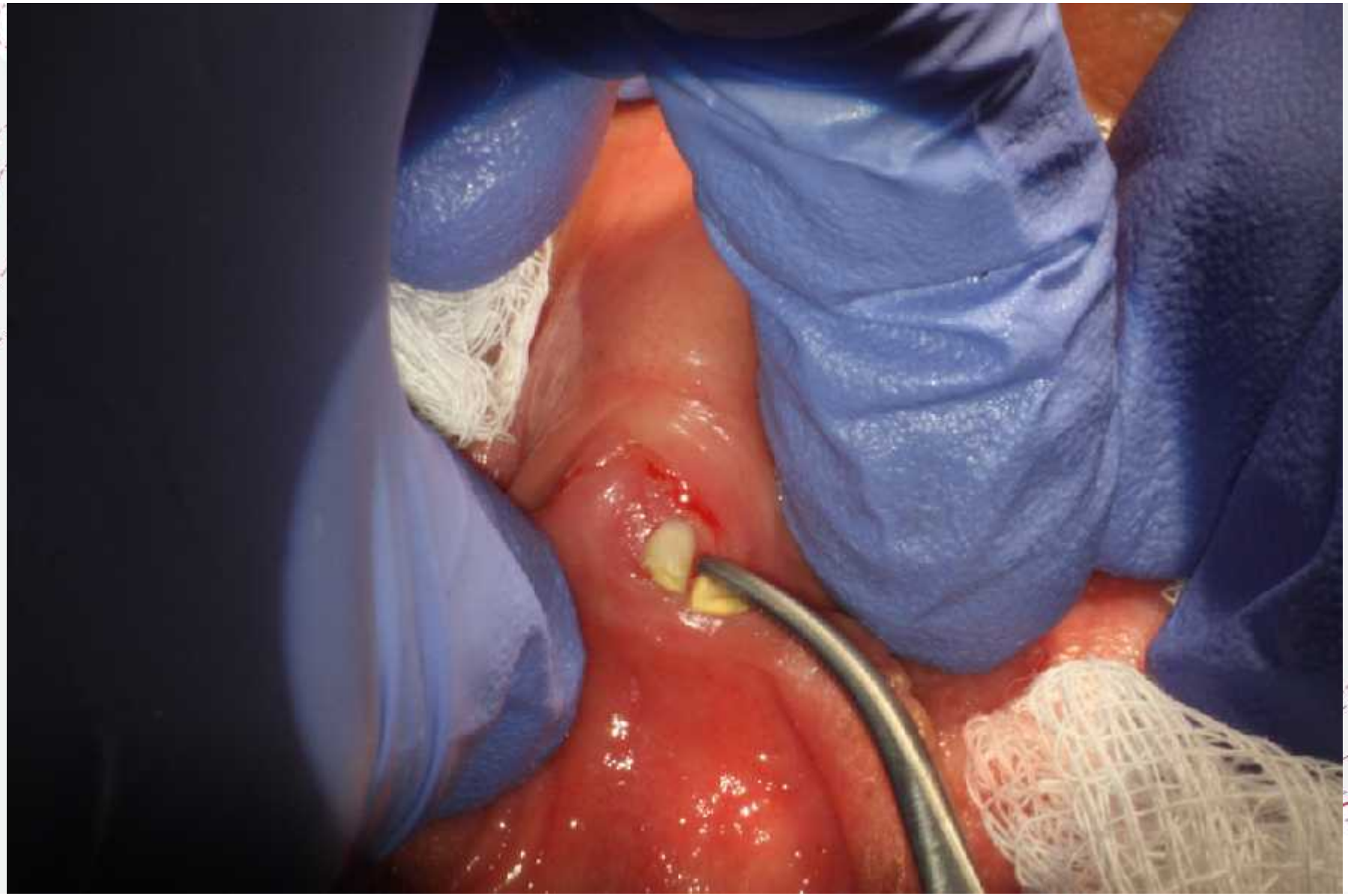


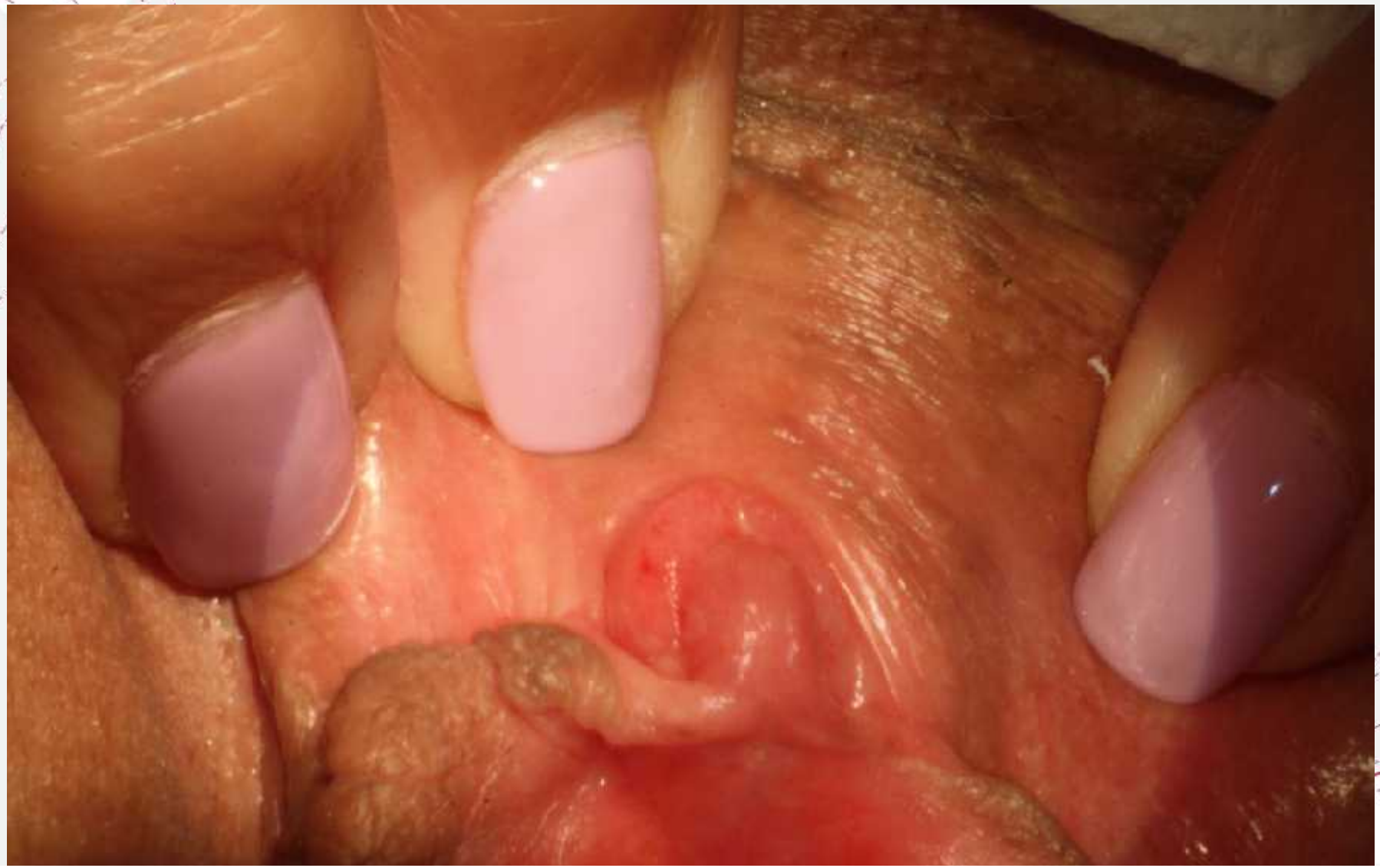


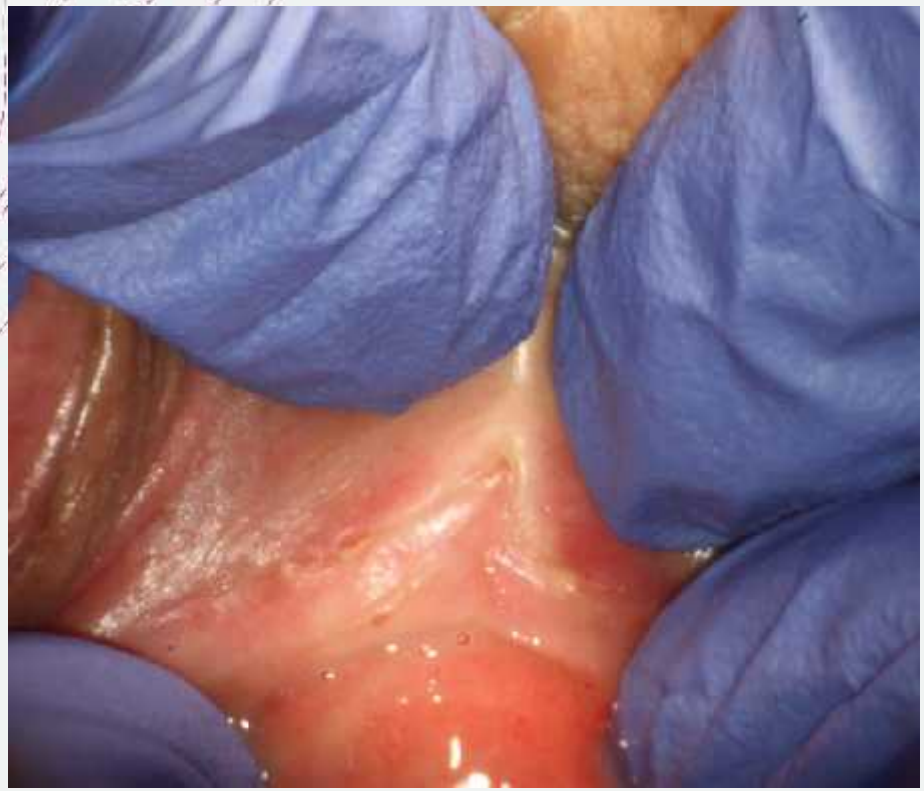


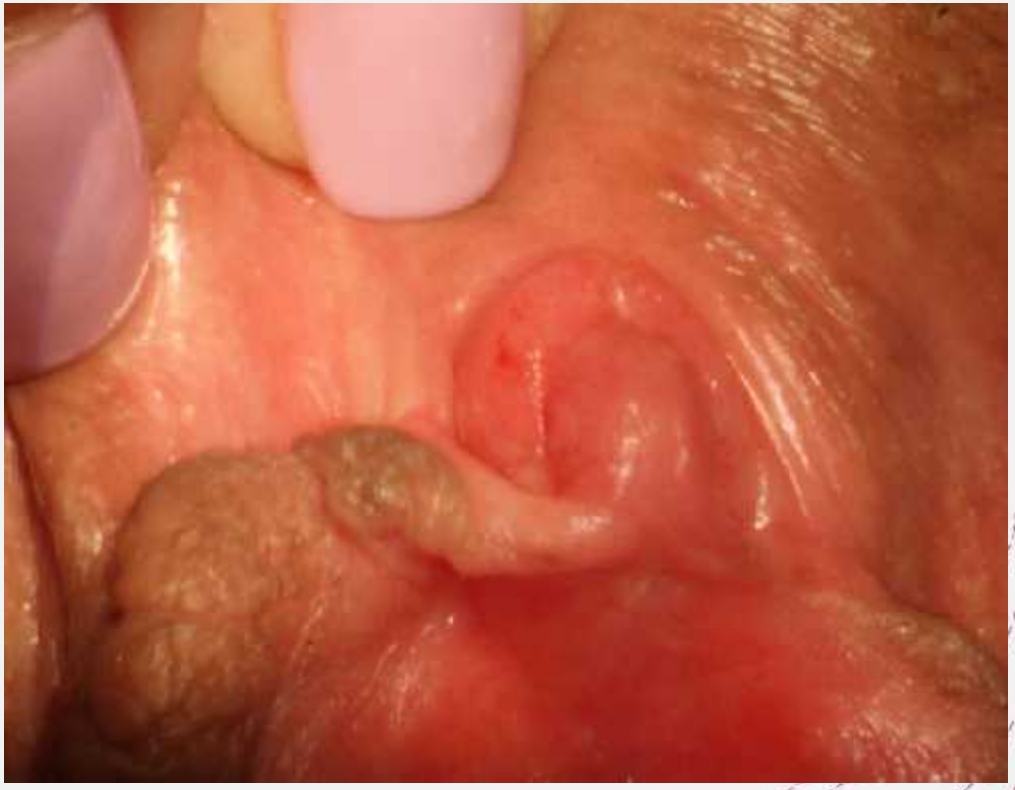


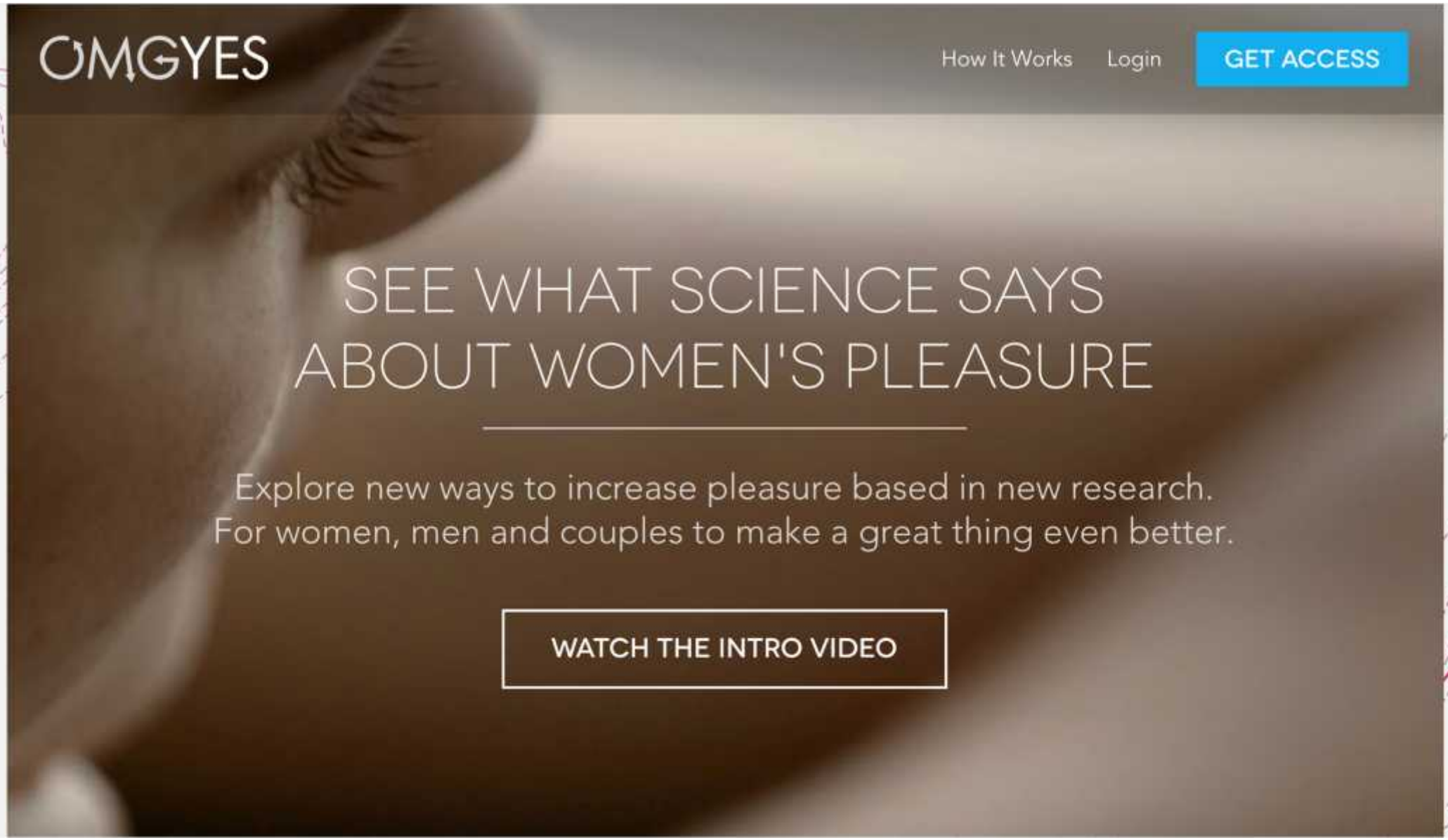


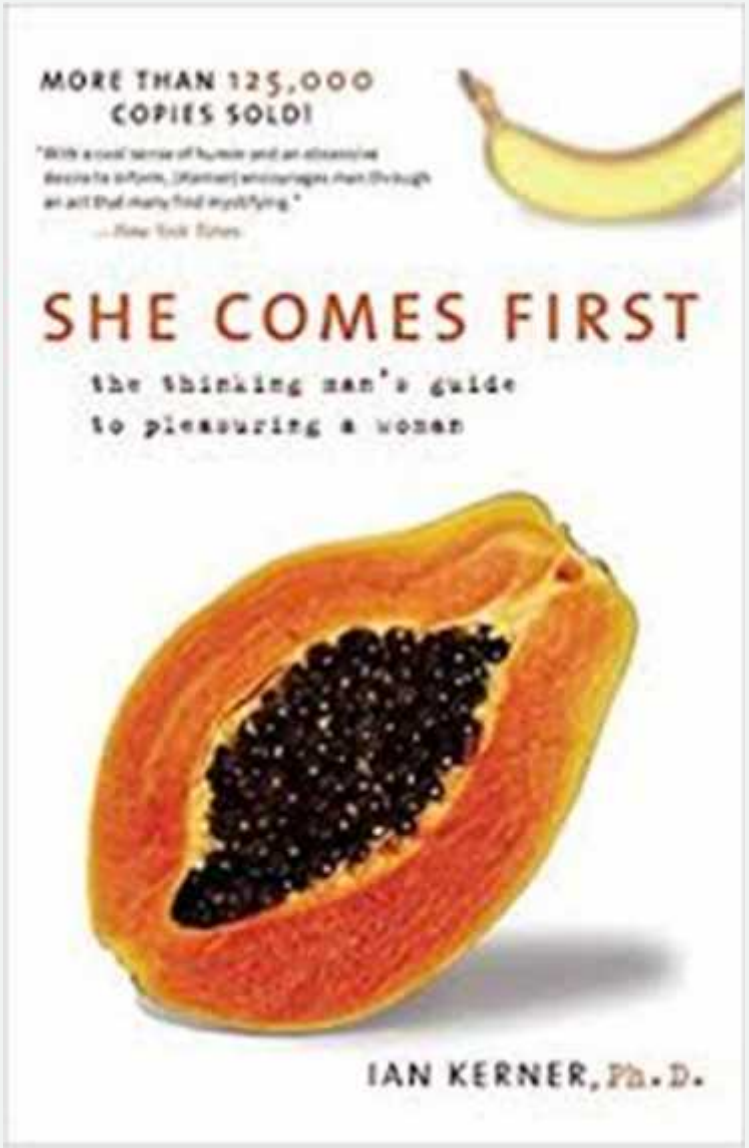









OMGYES
How It Works
Login
GET ACCESS
SEE WHAT SCIENCE SAYS
ABOUT WOMEN'S PLEASURE
Explore new ways to increase pleasure based in new research.
For women, men and couples to make a great thing even better.
WATCH THE INTRO VIDEO


MORE THAN 125,000
COPIES SOLD!
SHE COMES FIRST
the thinking man's guide
to pleasuring a woman
IAN KERNER, Ph.D.

Management of Arousal Disorders

+Lifestyle changes

+Behavioral health interventions

+Pelvic floor physical therapy

+Medications

+Devices

Types of Interventions

- Psychotherapy: Individual or Couples
- Physical therapy
- Pharmacologic therapies
- Adjunctive and alternative therapies

FSAD Treatment: Addressing Psychosocial Factors

- Negative cultural/religious beliefs/Guilt
  - Online role-playing games to reduce shame?
  - Permission giving by clergy/local community leaders, peer counseling
- Attentional factors
  - Mindfulness techniques
  - Stress management
- Attachment and mood disorders: Standard Recommendations
- Quality of Relationship: Standard Recommendations

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FSAD: Non-Pharmacologic Genital Arousal Treatments

- Increasing stimulation
  - Vibrators, Pelvic Floor PT
- Eros Clitoral Therapy Device

Customize Treatment

Use a Biopsychosocial Approach

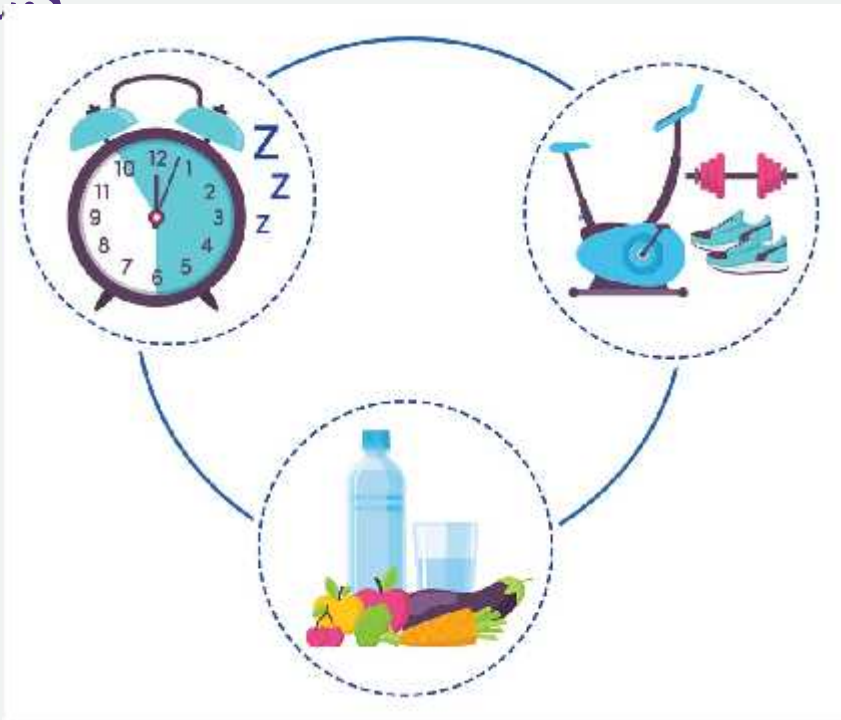
Lifestyle Changes

+Get enough sleep

+Healthy diet

+Routine exercise

+Smoking cessation



Miner M. J Sex Med. 2012;9(3):641-51.

Behavioral Interventions

+Medication adjustments

+Sex therapy

+Cognitive behavioral therapy

+Mindfulness

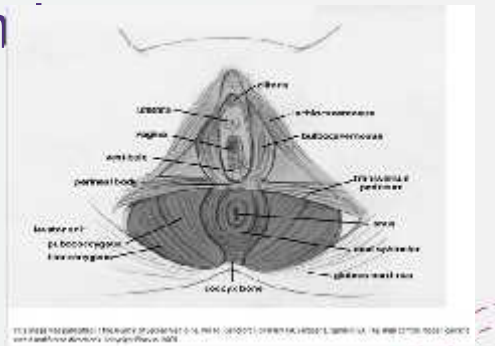
+Sensate focus therapy

+Yoga, massage therapy, and acupuncture

Higgins, A. Drug, healthcare and patient safety 2 (2010): 141.
Stephenson K, J Sex Res. 2017;15:1-18.
Brotto L, J Sex Med. 2008;5(12):2741-8.
Brotto L,. J Sex Med. 2008;5(7):1646-59.

Pelvic Floor Physical Therapy

- Manual pelvic floor physical therapy has been shown to improve all domains of the female sexual function index including pain, orgasm and arousal.
- Consider referral to specialized pelvic floor physical therapist in patients who have arousal disorder an
  - pelvic pain
  - incontinence
  - high tone pelvic floor muscles



Wurn, L. *Medscape General Medicine* 6.4 (2004).

Vaginal moisturizers and lubricants

+ Moisturizers: applied directly to the vaginal epithelium multiple times per week independent of sexual activity.

+ Lubricants: applied as needed to reduce friction and relieve symptoms of dryness and irritation during sexual activity.

Stabile C, Breast Cancer Res Treat. 2017;165(1):77-84.
Edwards D, Climacteric. 2016;19(2):151-61.
Carter J. J Sex Med. 2011;8(2):549-59.
Hickey M. Breast Cancer Res Treat. 2016;158(1):79-90.

Moisturizers

Product	Ingredients	Use	Studies
Replens	Polycarbophil Gly + in, mineral oil	Every 3 days	Yes
Me again	Hyaluronic acid Propylene glycol, benzoate	7 days > 2/wk	HA-yes
KY Liquibeads (ovules)	Dimethicone, Gelat n, G lycerin, Dimeth i- and	?	No
KY long lasting	Various polymers Glycerin, mineral oil	?	No
Emerita personal moisturizer	Aloe Vera Gel, Calendula, Vitamin E, Ginseng, Chamomile, Allantoin	As needed	No
Moist Again	Carbomer, aloe vera glycerin, chlorhexidine	As needed	No
Hyalofemme	Hyaluronic acid	7 days > 2/wk	HA-yes
Pre-seed	Hydroxyethylcellulose, Pluronic, Arabinogalactan	As needed	Yes

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Lubricants

Base	Ingredients	Safe with latex?	Staining	Comments
Water	Deionized water, glycerin, propylene glycol	Yes	No	Rarely causes irritation but dries out with extended activity
Petroleum	Mineral oil, petroleum jelly, baby oil	No; do not use with condoms, diaphragms, or cervical caps	Yes	Irritating to vagina
Natural oil	Avocado, olive, peanut, corn	Unclear (not recommended)	Yes	Safe (unless peanut allergy); non irritating to vagina
Silicone	Silicone polymers	Yes	No	Non irritating to vagina, long-lasting and waterproof

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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 crea		daily for 2 weeks then -3x per week
Conjugated estroge cream		ily for 2 weeks then r week
Vaginal Inserts		
Estradiol		aily for 2 weeks r week
17-beta-estradio caps		serts daily for 2 2x per week
DHEA (prasterone)		s daily
Vaginal Ring		
17-beta-estradiol ring		erted every 3 months
SERM		
Ospemifene	Osphena	60mg oral tablet daily

A DAB OF ESTROGEN CREAM IS NOT ENOUGH!

Hormone Replacement Therapy (HRT)

+ Can be considered in peri- or early menopausal women with vasomotor symptoms in addition to arousal problems after a careful discussion and patient risk stratification

+ Systemic estrogen + progesterone in women who have a uterus, may be considered as a possible treatment.

Simon J. J Women's Health. 2011;20(10):1453-65.

Summary of Testosterone for Women

- Transdermal testosterone treatment has been shown to improve sexual function in postmenopausal women
- May be a role for testosterone in select patients
- Long term safety and efficacy RCT data are lacking
- Not FDA-approved for women
  - Intrinsa Patch- Never received FDA approval, approved in Europe, taken off the market
  - Libigel- Never received FDA approval
- Aim for normal physiologic range in premenopausal women

Achilli C, Fertil Steril. 2017;107(2):475-82.

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

Other Medications

+ Flibanserin 100mg qhs
+ Bremalanotide
+ Phosphodiesterase type 5 inhibitors (PDE5i)
  + Sildenafil
  + Vardenafil
  + Tadalafil
  + Avanafil

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Gao L. Int J Gynaecol Obstet. 2016;133(2):139-45.
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Sexuality: *Current Commentary*

A Clinical Reference Guide on Sexual Devices for Obstetrician–Gynecologists

Elizabeth S. Rubin, MD, Neha A. Deshpande, MD, Peter J. Vasquez, MD, and Susan Kellogg Spadt, PhD, CRNP

Box 2. Examples of Sexual Device Screening Questions

1. Have you ever or do you currently use a sexual device, such as a vibrator or dildo, alone or with a partner?
2. Would you consider using a sexual device if it would improve your sexual health and wellness?

If "yes" to 1, consider the following questions:

3. Do you use your device externally (around the vulva or clitoris) or internally (in the vagina)?
4. Do you use your device inside or near the rectum or anus?
5. Do you ever share devices with others?
6. What material is your device made from?
7. How often do you clean your device and by what method, if at all?

Box 3. Examples of Vibrators

- Wand: vibrators with a soft, tennis-ball-sized head that vibrates and contains a large plastic handle for the motor.
- Bullet: thumb-sized, battery-powered vibrators intended for external use.
- Dual-stimulation: vibrators meant to simultaneously stimulate the internal and external genitalia.
- Wearable: vibrators designed to maintain external placement and stimulation during sexual activity, including vaginal penetration, either using leg straps or internal portion using pelvic floor muscles.

Rubin, Elizabeth S., et al. "A Clinical Reference Guide on Sexual Devices for Obstetrician–Gynecologists." *Obstetrics & Gynecology* 133.6 (2019): 1259-1268.

Devices

+Vibrators

+EROS Clitoral Therapy Device

+Fiera Personal Care Device

+Energy based devices

  +Lasers

  +Radiofrequency

Herbenick, D. J Sex Med, 6, 1857–1866
Leiblum S. Med J Aust. 2003;178(12):638-40.
Herbenick D. J Sex Med. 2015;12(3):641-5.
Billups, K. *Journal of Sex &Marital Therapy* 27.5 (2001): 435-441.
Goldstein I, Climacteric, 18 (2) (2015), pp. 219-225

Pumps/Vacuum devices

EROS, NuGyn $395
* No longer available

Womanizer rechargeable, Lelo sona cruise, Orlena clitoral stimulator, $159 - $299

Vibrating clit pump, $32
Goodvibes.com

Fiera®
AROUSER FOR HER™

Company Website, fiera.com:
"Fiera was specifically created for "Before-Play," in comparison to vibrators, which are designed for orgasm."

- N – 12
- 15 minutes of Fiera use
  - 8/12 completed Fiera session
  - 4/12 ended <15 min due to experiencing orgasm
  - Mean 4.5 min to experience "sexual arousal"
- Endorsement of feeling "in the mood"
  - All participants agreed with statement
- Statistically significant differences in scores across FSFI domains
  - Sexual satisfaction, orgasm and arousal scored highest
- Statistically significant temperature increases from baseline
  - Clitoris – 0, 2, 4, 6, 8, 10 min
  - Vestibule – 0, 2, 4, 6, 8, 10 min
  - Labia - 0, 2 min only

(Goldstein, I., Goldstein, S. & Millheiser, L., 2015)

Final Words

Summary

- No FDA approved medications with indications for arousal or orgasm disorders
- Numerous lifestyle, behavioral and multidisciplinary interventions, off label medications, and devices which may aid in treatment of arousal disorders.
- A thorough history and physical exam will help evaluate the underlying etiology of the arousal disorder which can then help customize treatment for your patient.