

**ATLANTIC PAIN CONFERENCE**  
**WORKSHOP – GENITAL PAIN**  
**OCTOBER 2010**

**Stella Roy BSc. PT**  
Bedford Health Center  
(902) 835-1932

# CONFLICTS

- I have no conflict of interest however I did ask for samples from
- Vaginismus.com – dilator set
- LAurel prescriptions - dilator set
- Wallace Farrell - samples of slippery stuff



# EDUCATIONAL OBJECTIVES

- To describe Dyspareunia, and in particular Provoked Vestibulodynia (PVD), and the evidence based approach to treatment
- To discuss other types of genital pain – pudendal neuralgia, coccydynia
- To be aware of the multidisciplinary approach – Physician, Psychologist, Physiotherapist
- To learn the detailed physiotherapy assessment of the pelvic floor musculature and related structures
- To learn the evidence based physiotherapy interventions



# ISSVD TERMINOLOGY AND CLASSIFICATION OF VULVAR PAIN (2003)

Vulvar pain related to a specific disorder

1. **Infectious** (eg candidiasis, herpes etc)
2. **Inflammatory** (eg lichens planus, immunobullous disorders)
3. **Neoplastic** (eg Paget disease, squamous cell ca)
4. **Neurologic** (eg herpes neuralgia, spinal nerve compression)



# ISSVD TERMINOLOGY AND CLASSIFICATION OF VULVAR PAIN (2003)

## ○ Vulvodynia

### Generalised

- Provoked
- Unprovoked
- Mixed (provoked, unprovoked)

### Localised (**vestibulodynia**, clitorodynia, hemivulvodynia)

- **Provoked** (sexual, nonsexual, both)
- Unprovoked
- Mixed (provoked and unprovoked)



# VAGINISMUS

- Persistent or recurrent difficulties for women to allow vaginal entry of a penis, a finger and or object, despite the women's expressed wish to do so.
- There is often phobic avoidance and involuntary pelvic muscle contraction and anticipation / fear/ experience of pain.
- Structural or other physical abnormalities must be ruled out / addressed.
- The diagnosis vaginismus often overlaps, co-exists with vulvodynia
- 2003 ISSVD



# VULVODYNIA – GENERALISED OR LOCALISED

- Generilized vulvodynia refers to the whole vulva  
—  
(GVD) discomfort occurring spontaneously without a physical trigger
- Localised Vulvodynia refers to a portion of the vulva eg vestibulodynia, clitorodynia
- When the discomfort is triggered by physical contact it is called Provoked Vestibulodynia
- Vulvar Vestibulitis (VVS) has been eliminated from terminology as the presence of inflammation as implied by the “itis” has not so far been documented



# PROVOKED VESTIBULODYNIA

(HEAFNER

2005)

- Primary

- Lifelong pain on vestibular touch
- No successful intercourse
- May have a mother or sibling with same problem

- Secondary

- Previous pain-free sexual function
- Presentation typically after childbirth, vaginal infection, trauma

AS with other chronic pain conditions after 6 months



# CLASSIFICATION OF PVD

- Level 1 – discomfort but does not prevent sexual intercourse
- Level 2 – frequently prevents intercourse
- Level 3 – Completely prevents intercourse



# PREVALENCE

- 12% of pre-menopausal women
- 16% of general female population
- 80% more likely in Hispanic women

(Harlow & Stewart, 2003)

- 21% of women under 30

(Bergeron 2002)

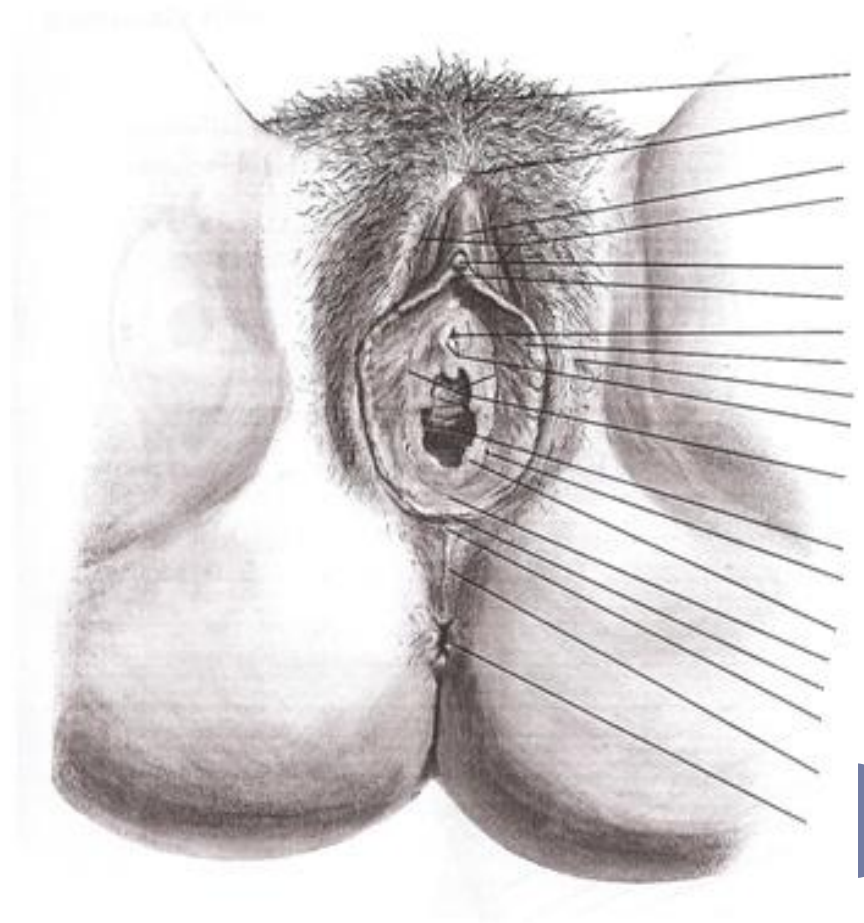


# ANATOMY AND EMBRYOLOGY

Vaginal Epithelium is from  
Mesoderm

Vestibule is from Endoderm

Vulvar outside of Harts Line  
is from Ectoderm



# PVD – ALLODYNIA TEST

- Q-tip Test over Bartholin's Glands

- Gentle pressure to 12, 2, 4, 6, 8, 10 o'clock positions
  - (National Vulvodynia Association, 2006)
- 5-7 o'clock areas being most sensitive

- Rate Pain

- 0 = No pain
- 1 = Mild pain
- 2 = Moderate pain
- 3 = Extreme pain

- Sometimes use of vinegar to visibly whiten lesions and sample (Stone-Godena, 2006)

## Cotton-Swab Test for Allodynia

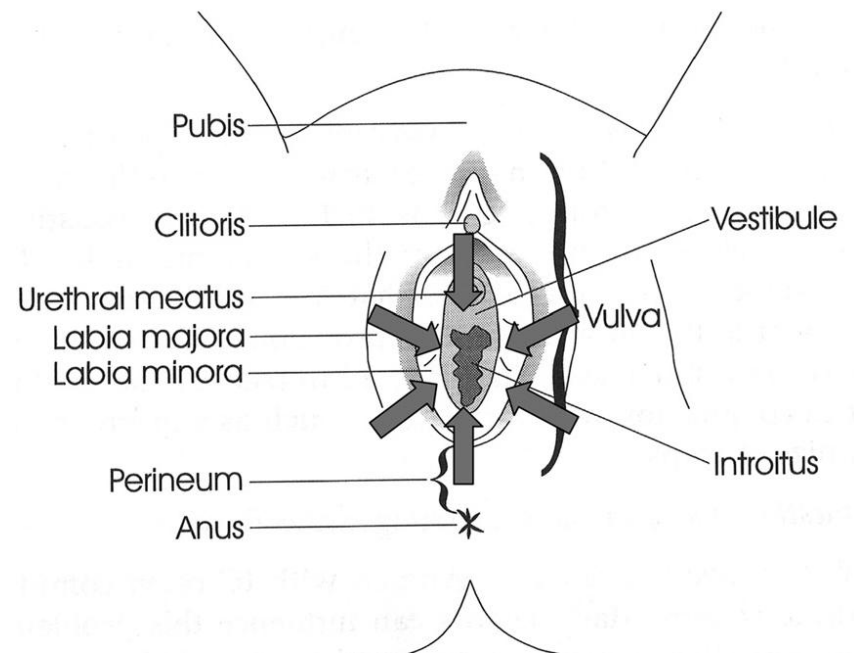


Fig. (National Vulvodynia Association, 2006)



**PHYSICIAN - DR S. KHALIFE**

DR S. KHALIFE

(ICS 2010)

## Traditional Approach

- Medicine

Physical pathology – Treat

“is it in the head” – Refer to Psychology

- Psychology

- Conflict or sexual abuse – Treat

- Physical Pathology – Refer to gynecology



# DR. S KHALIFE

Now Biopsychosocial Approach

Non Simplistic

- Simultaneous psychological therapy and physiotherapy
- Inspired by Melzac's contemporary research on pain and the gate theory



# DR S. KHALIFE – GYNECOLOGICAL ASSESSMENT

- If patient hints they may have pain change assessment
- Please use the small speculum
  - Do not hurt
  - Try not to touch the vestibule
  - Insert lubricated Q tip first
  - Do not insert speculum first (lubricate)
  - Insert one finger at a time



# DR. S. KHALIFE – TREATMENT APPROACH

- First step
  - Psychotherapy
  - Physiotherapy
- Second Step
  - 5% Xylocaine cream
  - elavil medication
- Last resort
  - Vestibulectomy (not done for 7 years)



A decorative graphic on the left side of the slide. It features a series of vertical stripes in various shades of blue and grey. Overlaid on these stripes are several blue circles of different sizes, some of which are partially cut off by the left edge of the frame.

# ETIOLOGY

# CHRONIC PAIN

- Maladaptive Muscular strategies are known to develop in response to acute pain, and if persistent to more pain.
- PFM are involved in the pathophysiology of PVD by way of a persistent protective response to vulvar pain
- Work by Travell & Simon's supports this which suggests that mm affected by myofascial pain are highly excitable at rest
- Treatments aimed at relaxing and retraining the PFM have been shown to decrease pain and improve sexual function



# ETIOLOGY - POORLY DEFINED BUT MAYBE TRIGGERED BY:

- Trauma
  - Obstetrical, tearing
- Hormonal Imbalances
- Chemical Therapeutic Agents
  - Antiseptic agents, suppositories, creams, 5-flurouracil therapy (HPV)
- Destructive Agents
  - Cryosurgery, laser

# ETIOLOGY - CONTD

- Infection
  - Candidiasis
  - Human Papillomavirus
- Vaginal pH changes
  - Chronic alkalinity
- Epidermal Irritants
  - Soaps, douches, vaginal deodorant sprays, detergents

# TYPICAL PATIENT

- Primary PVD
  - Nulliparous women in 20's
- Secondary PVD
  - 30-40 years
  - Following childbirth - Cesarean or vaginal
    - (Goetsch, 1991)
  - topical treatment of yeast infections
    - (Friedrich, 1987; Hansen, et al., 2002; Smith, et al., 2002)



# SIGNS & SYMPTOMS

- Positive Q tip Test
- Pain upon entrance to vestibule
  - Difficulty with intercourse, PAP exam
- Pain with contact of vaginal entrance
  - Riding bike, tight pants
- Erythema unreliable criterion of diagnosis

(Bergeron et al., 2001)



# DESCRIPTION OF PAIN

- Entrance to vagina
- Present during initial penetration
- Sharp , burning, tearing
- Post coital burning up to 24 hours
- Little or no discomfort during Activities of Daily Living
- May have pain with bicycle riding, tampon insertion, tight pant seams



A decorative graphic on the left side of the slide consists of several vertical stripes of varying shades of light blue and grey. Overlaid on these stripes are five solid blue circles of different sizes, arranged in a cluster that tapers towards the bottom.

# PSYCHOLOGY - DR. S. BERGERON

# PSYCHOSOCIAL FUNCTIONING IN WOMEN WITH PVD

- Lower intercourse frequency, lower levels of desire, more avoidance of sexual activities and less orgasmic success (Meana 1997, van Lankveld 1996)
- More anxiety and negative feelings toward sexuality (Meana 1997, Granot et al 2002)
- Less childhood family support, more physical and sexual abuse as a child (Harlow and Stewart 2005)
- More erotophobic (Meana 1997)
- More negative sexual self schema (Gates and Galask 2003)



# WHY COGNITIVE BEHAVIOURAL THERAPY ?

- Only treatment that targets negative sexual and relationship sequelae directly
- Important source of psychological support
- CBT strategies are effective in reducing pain intensity in other pain conditions (Bradley 1996)
- CBT shown to be efficacious in relieving vulvodynia and associated sexual difficulties (Masheb 2009)
- Long term follow up CBT = vestibulectomy



# COGNITIVE TREATMENT STRATEGIES

- Education concerning a multidimensional view of pain
- Education concerning their type of vulvo-vaginal pain
- Cognitive restructuring focusing on pain catastrophizing, attributions, etc
- Coping self –statements
- Sexual fantasies
- Focusing on pleasurable sensations



# MULTI MODAL APPROACH

Therapist needs to show patient

- You know the pain is real
- You know something about it
- You are competent to relieve it
- There is hope for improvement



## CONCLUSIONS - BERGERON

- Difficult to improve sexual functioning without reducing pain.
- Difficult to reduce pain without improving sexual function
- A concurrent multimodal treatment paradigm may prove more beneficial to patients than the more common sequential approach
- The alliance between health professionals and patient is the key in the treatment of PVD: work as multidisciplinary collaborative team



## EFFECTIVENESS OF PFM EX ON RX OF PAIN ON PAP, SEXUAL FUNC, SEXUAL ESTEEM, INTERCOURSE FREQUENCY, PAIN CATASTROPHIZING, PAIN RELATED ANXIETY IN PVD (GOLDFINGER 2009)

- 13 women completed 8 sessions of PFMT
- Pain and Intensity decreased from pre treatment to post treatment in a SIG linear change
- 77% improved
- Greater body awareness
- Improved self esteem
- Improved sexual confidence
- Improved relationship quality
- Reduced sense of hopelessness
- Reduced feeling of shame



The left side of the slide features a series of vertical stripes in various shades of blue and grey. Overlaid on these stripes are several circles of different sizes, also in shades of blue, arranged in a cluster.

# PHYSIOTHERAPY

# EVIDENCE BASED STUDIES

- Gentilcore-Saulnier E, Mclean L, Goldfinger C, Pukall C, Chamberlain S: *Pelvic floor Muscle assessment outcomes in women with and without provoked vestibulodynia and the impact of a physical therapy program. 2010 J Sex Med;7:1003-1022*
- Bergeron S, Brown C, Lord M-J, Oala M, Binik YM, Khalife S: *Physical Therapy for Vulvar Vestibulitis Syndrome: A Retrospective Study*, 2002 Journal of Sex & Marital Therapy, 28:183–192, 2002
- Rosenbaum TY, *Physiotherapy treatment of sexual pain disorders* 2005 journal of sex and marital therapy 31(4) 329-340
- Murina F, Bianco V, Radici G, Martino Di, Nicolini U: *Transcutaneous Electrical Nerve Stimulation to treat vestibulodynia: a randomised controlled trial. 2008 BJOG Int journal of Obst and Gyn :115;1165-1170*



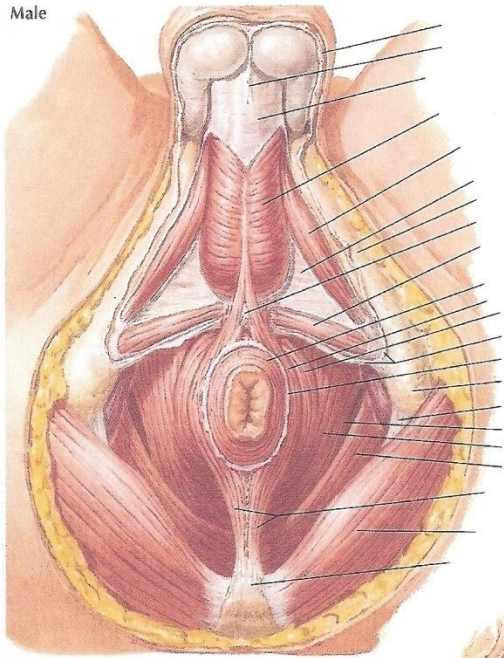
# GENTICORE-SAULNIER (2010)

- 11 women RX-11 women in control (8 sessions PFME) (handout)
- Showed improvement in the RX group for
  - pain threshold,
  - Gynae exam,
  - intercourse pain,
  - sexual frequency
  - sexual function
- Showed pre RX PVD had higher tonic activity SEMG in superficial mm not deep mm
- Superficial mm in RX also showed higher contractile response to pain

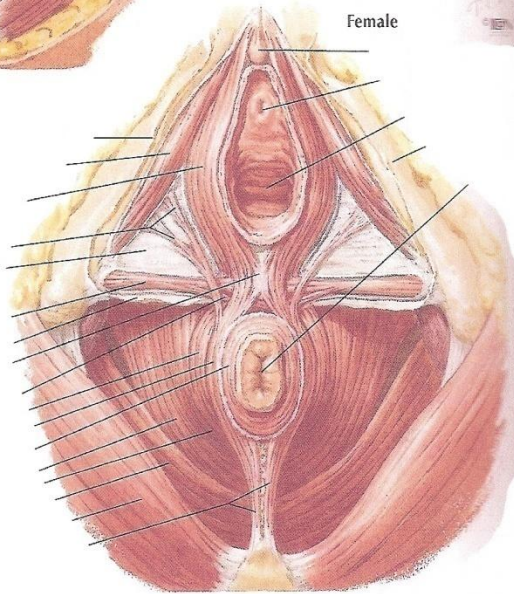


## External Anal Sphincter Muscle: Perineal Views

Male



Female



## GENTICORE-SAULNIER (2010)

Following Treatment there was no longer a difference in the control group or the PVD group to

- PFM tone
- PFM flexibility
- PFM relaxation capacity
- Less PFM response to pain pressure



## BERGERON, LORD, BROWN ET AL (2002)

- Retrospective study
- 35 women average of 7 Rx PFM Physiotherapy
- Telephone call
- Rx education, manual, biofeedback, Estim, dilators, exercise,
- Complete improvement 51%, moderate 20%, no help 28% in
  - Sexual frequency
  - Sexual function
  - Decrease in pain
  - Less pain for PAP test



## MYRINA ET AL (2009)

- 30 women Tens , 26 Placebo
- RX stim through vaginal probe at 10 Hz x 15 mns  
50 Hz x 15 mins (known to be effective in chronic pain) (control 2hz not known to be effective for pn)

Tens Group showed sig dif post Rx and 3/12 FU

- Questionnaires
- VAS score



# PHYSIOTHERAPY EVALUATION AND TREATMENT

- Evaluation
  - History
  - Physical
- Problem list
- Goals of treatment
- Treatment Plan



# TYPICAL PT PVD

- Young girl in late twenties with steady partner, married and wanting to begin a family
- Has had comfortable penetration in the past but has a history of treated for yeast and bladder infections and for last 5 years has had pain. Now has very little penetration, has managed other ways for intimacy but now wishes to start a family and needs penetration.
- Otherwise healthy, fit , with no low back or hip pain. If never has penetration never has pain. Does not wear tampons or ride bicycles. May have frequency of bladder if stressed.
- Describes pain as burning on initial penetration and now feels a block that prevents the penis from entering. If it does get in may get easier but if it comes out same pain or blocked going in again. No pain on orgasm from clitoris.



# EVALUATION - DRAPING

- Reduce anxiety, relax pt and muscles
- Pad under & Towel over pelvis
- Moist Heat
- Sheet/blanket



# PHYSIOTHERAPY PHYSICAL EVALUATION

- **Look**

  - Skin,

  - Muscle contraction

- **Palpate**

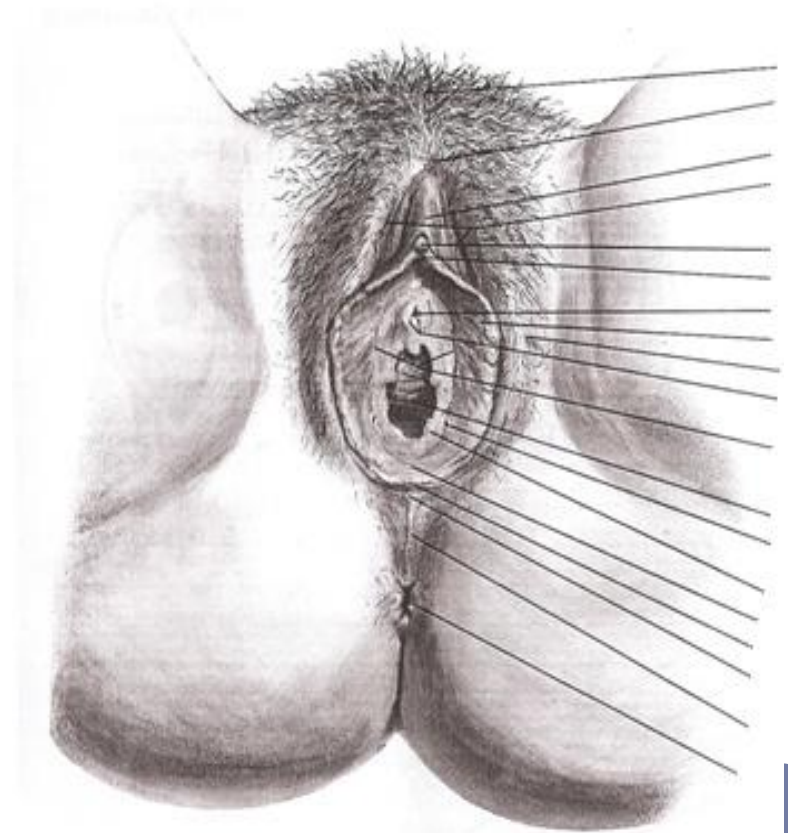
  - trigger points,

  - Skin sensitivity,

  - Tissue compliance,

  - Protective reactions

  - Texture



# PHYSIOTHERAPY MUSCLE EVALUATION

Vaginal evaluation single digit- (lube, non latex glove)

- Can I get in ?- How easy, direction of tissue
  - Ask muscle Contraction
  - Stretch inferior
- Repeat at 4 and 7 o'clock
- Release trigger points ,
- Distract,
- Massage



# ANATOMY

## Urinary Bladder: Female and Male

SEE ALSO PLATES 325, 341, 342, 346, 375, 377, 378, 392

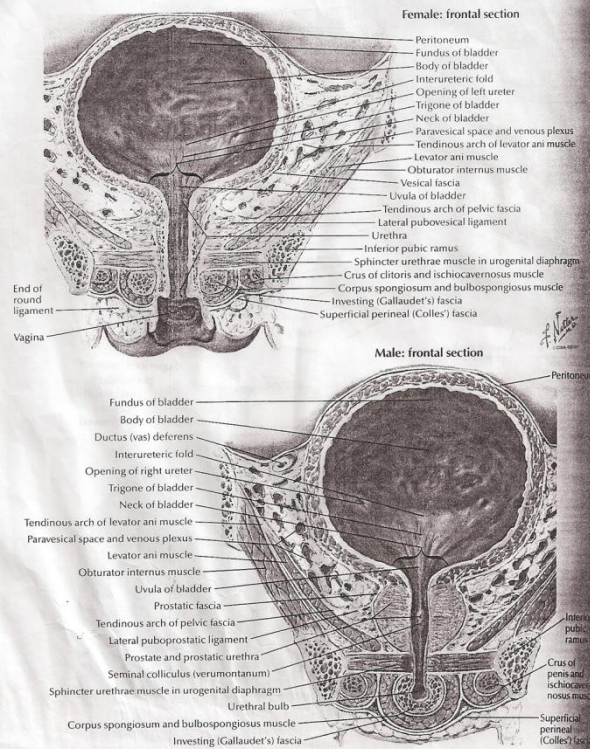


PLATE 347

PELVIS AND PERINEUM

# ANATOMY



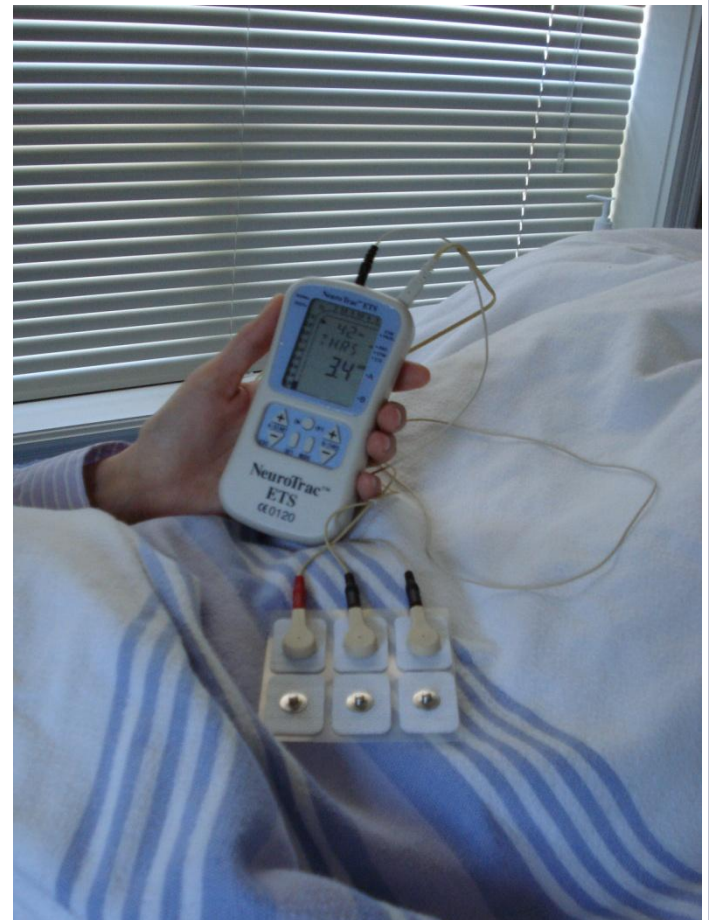
# MUSCLE TONE

- Natural resting tension within the muscle
  - Compliance on palpatory compression
  - Resistance to passive stretch or distension
  - State of readiness for physical activity
  - Related to the static role of the pelvic floor
  - Influenced by the state of activation
- 
- Tone Scale – resistance to passive stretch or distension
  - $-3$  \_\_\_\_\_  $0$  \_\_\_\_\_  $+3$  (brown, lord 2001)



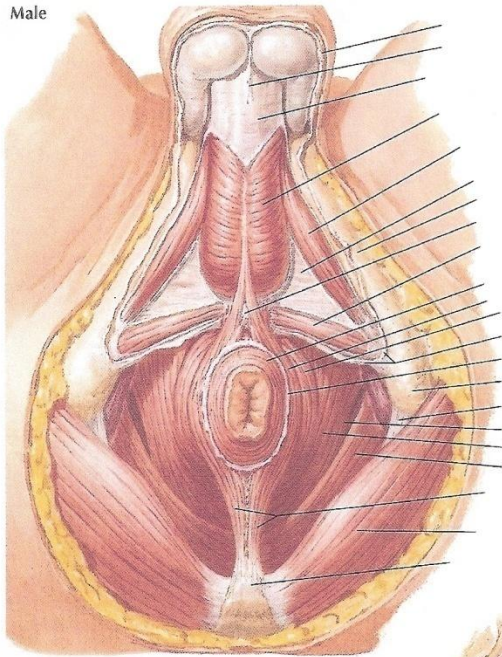
# SURFACE BIOFEEDBACK

- Purpose: To assess muscle control
- Pediatric electrodes
- Levator ani muscles
- Look at:
  - Resting tone
  - Long hold
    - endurance, speed of release
  - Quick flicks

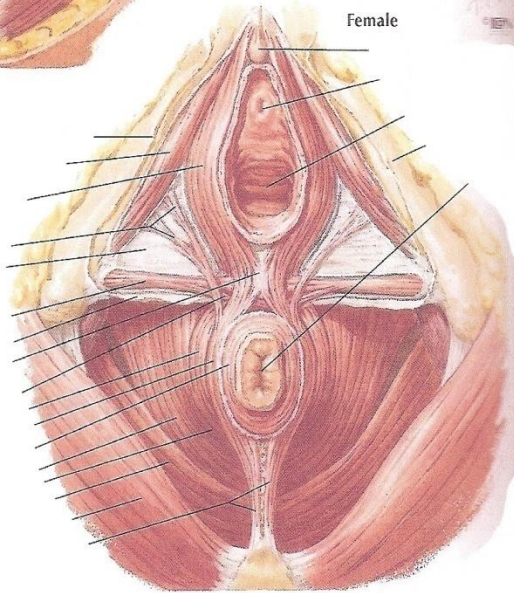


## External Anal Sphincter Muscle: Perineal Views

Male

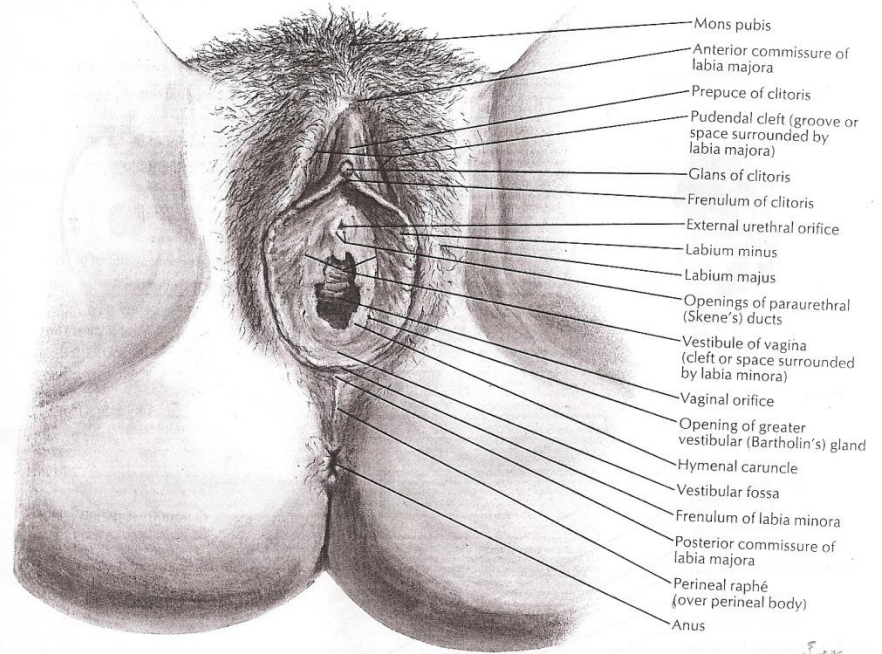


Female



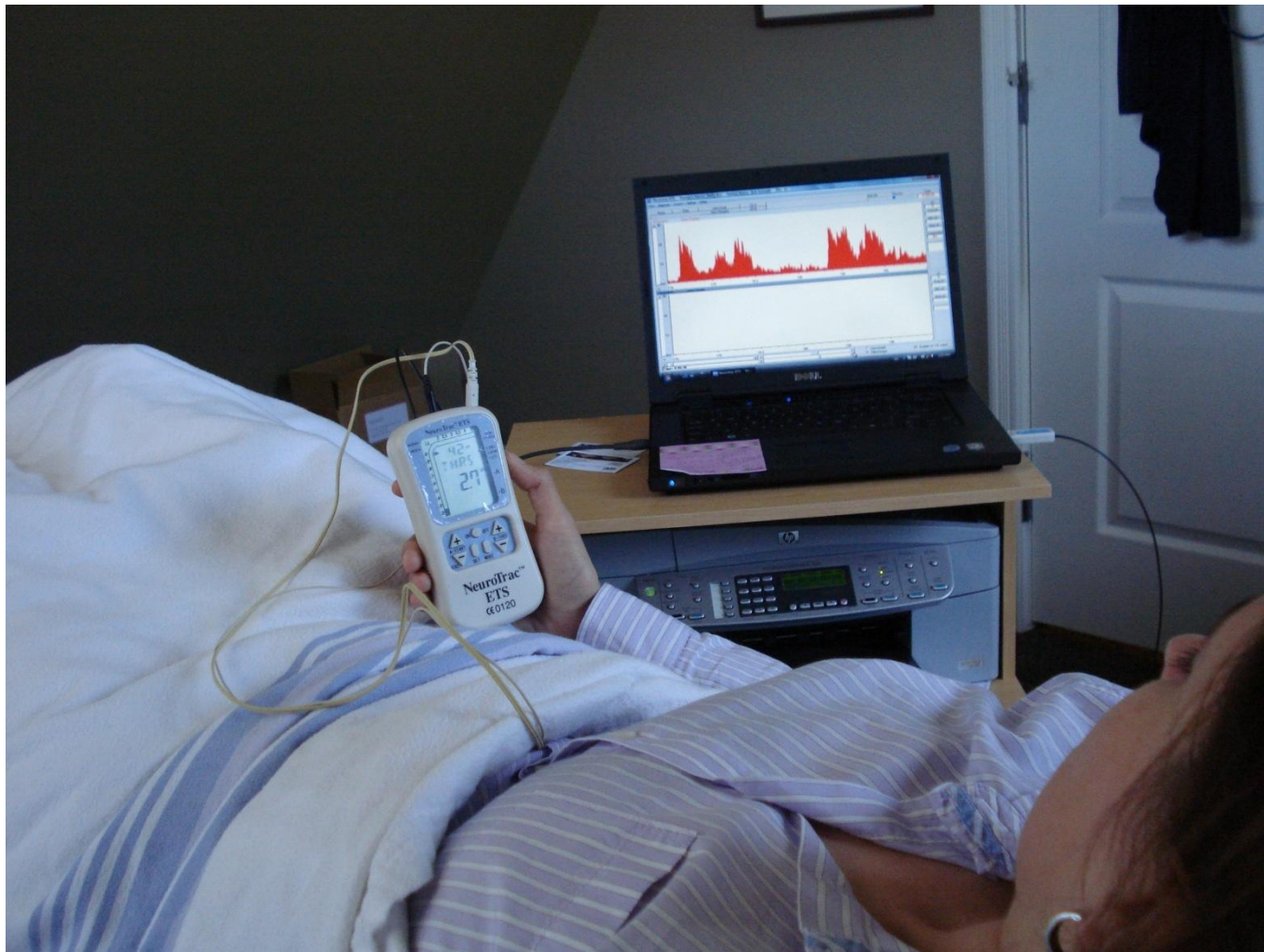
## Perineum and External Genitalia (Pudendum or Vulva)

SEE ALSO PLATES 375, 377, 378, 384



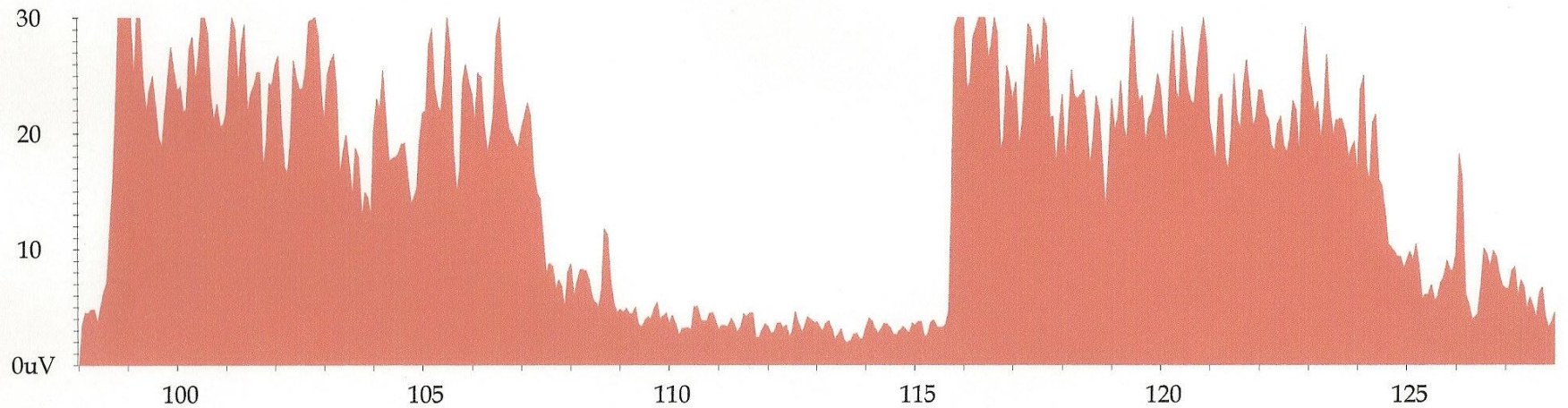
© Novartis

# SURFACE BIOFEEDBACK



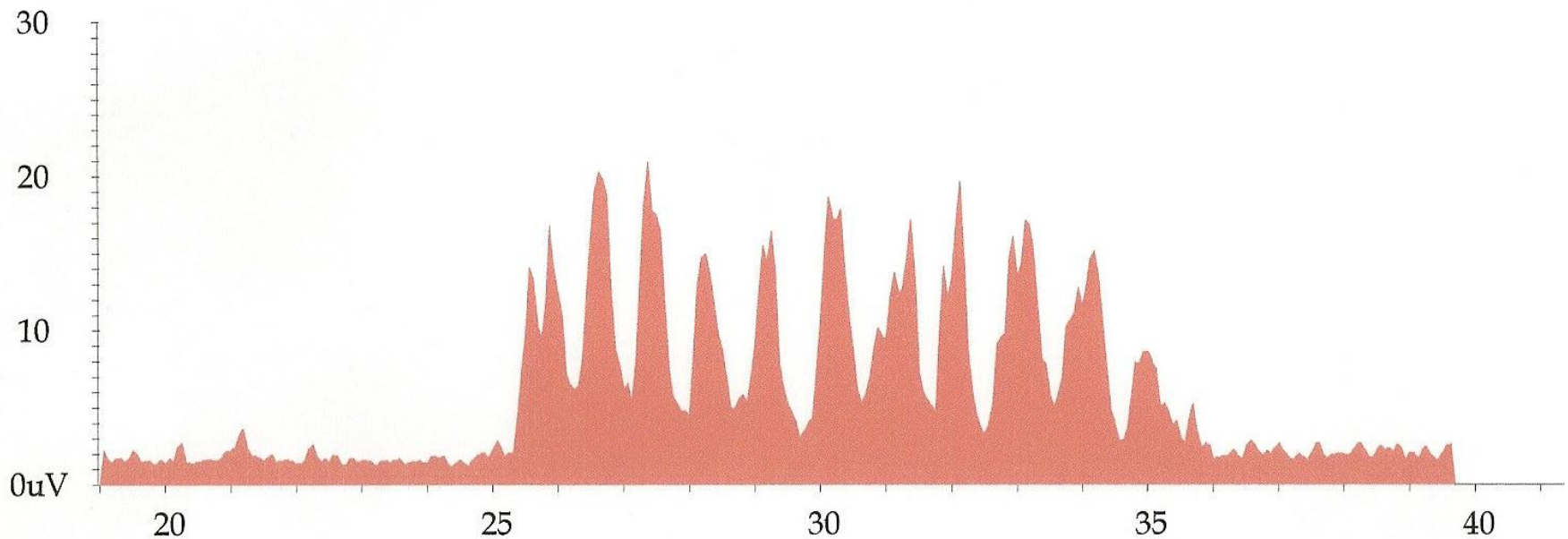
# EXTENDED CONTRACTION

PatID	Surname	First name	Date	Session Number
01	Example	Bob	19/03/2010	148



# QUICK FLICKS

PatID	Surname	First name	Date	Session Number
01	Example	Bob	04/05/2010	178



A decorative graphic on the left side of the slide. It consists of several vertical lines of varying shades of blue and grey. Overlaid on these lines are several circles of different sizes, also in shades of blue and grey, arranged in a cluster.

# PHYSIOTHERAPY TREATMENT

# GOALS OF TREATMENT

Patient goal usually:

- Improve sexual function

Therapist goals:

- Decrease pain
- Decrease muscle tension
- Improve active relaxation and proprioception
- Increase diameter of comfortable vaginal opening
- Decrease fear and anxiety
- Desensitize vaginal vestibule

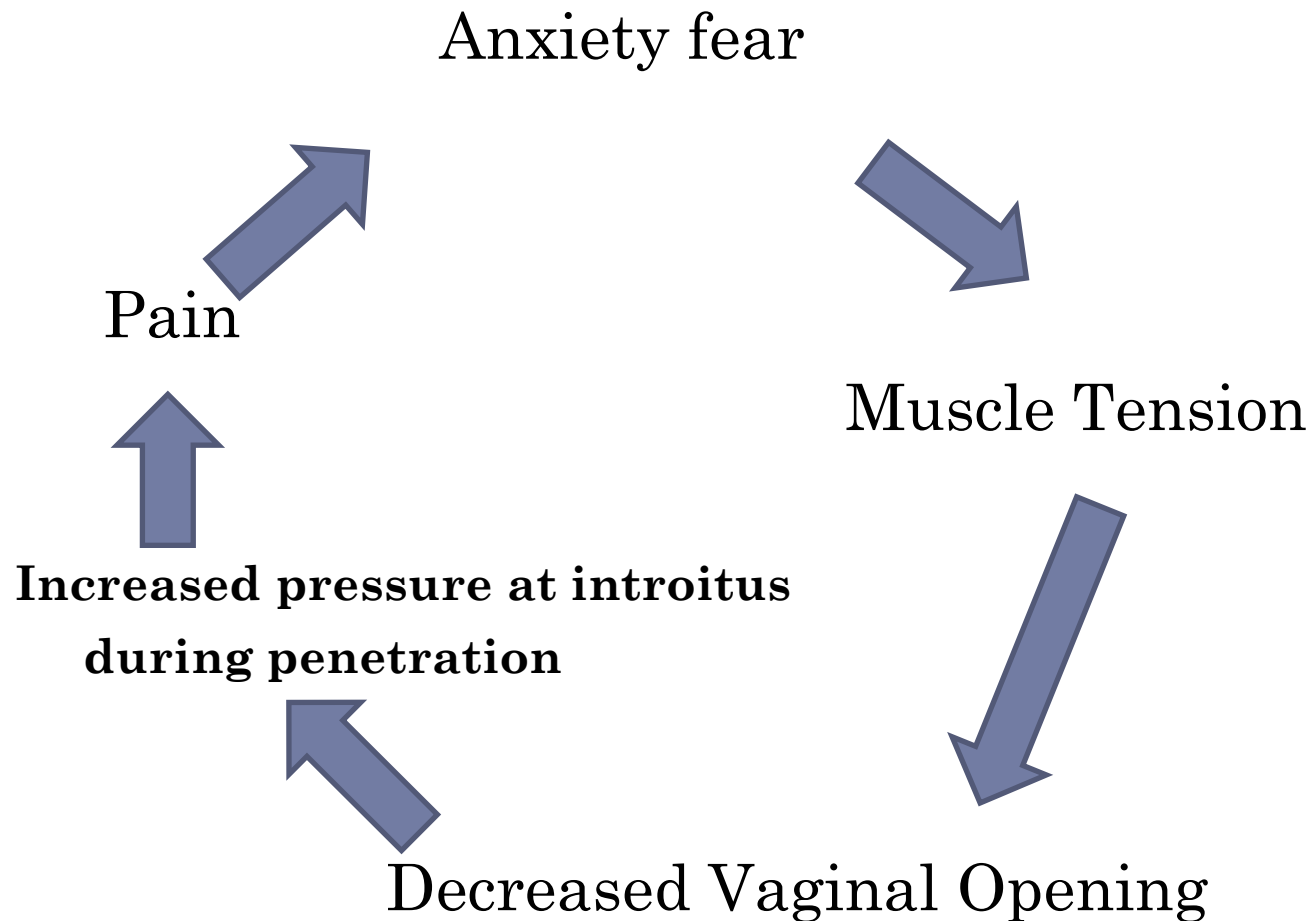


# TREATMENT

- Education
- Topical Treatments
- Exercises
- Manual Techniques
- Biofeedback
- Electrical Stimulation
- Insertion Techniques/Exercises



# EDUCATION - BREAK THE PAIN CYCLE (LORD 2010)



# LOTIONS & POTIONS

## ○ Lubrication

- Muco
- Slippery Stuff
- No GLY (glycerine, glycol, glycogen)
- Water based

## ○ Moisturize

- Esterase or Glaxal-based cream, Wellskin
  - Morning & Night
  - Apply between 3-9 o'clock
  - PVD rub/massage area, desensitization



# LOTIONS & POTIONS

## ○ Pain Relief

- Xylocaine Jelly 2% or 5% cream
  - Anesthetic & Anti-inflammatory
  - Takes edge off/ Decreases sharpness during intercourse or after

## ○ Amitryptiline (Elavil)

- Antidepressant / Neurogenic Pain Management
- 5-10mg dose
- Helpful to initiate physiotherapy treatment

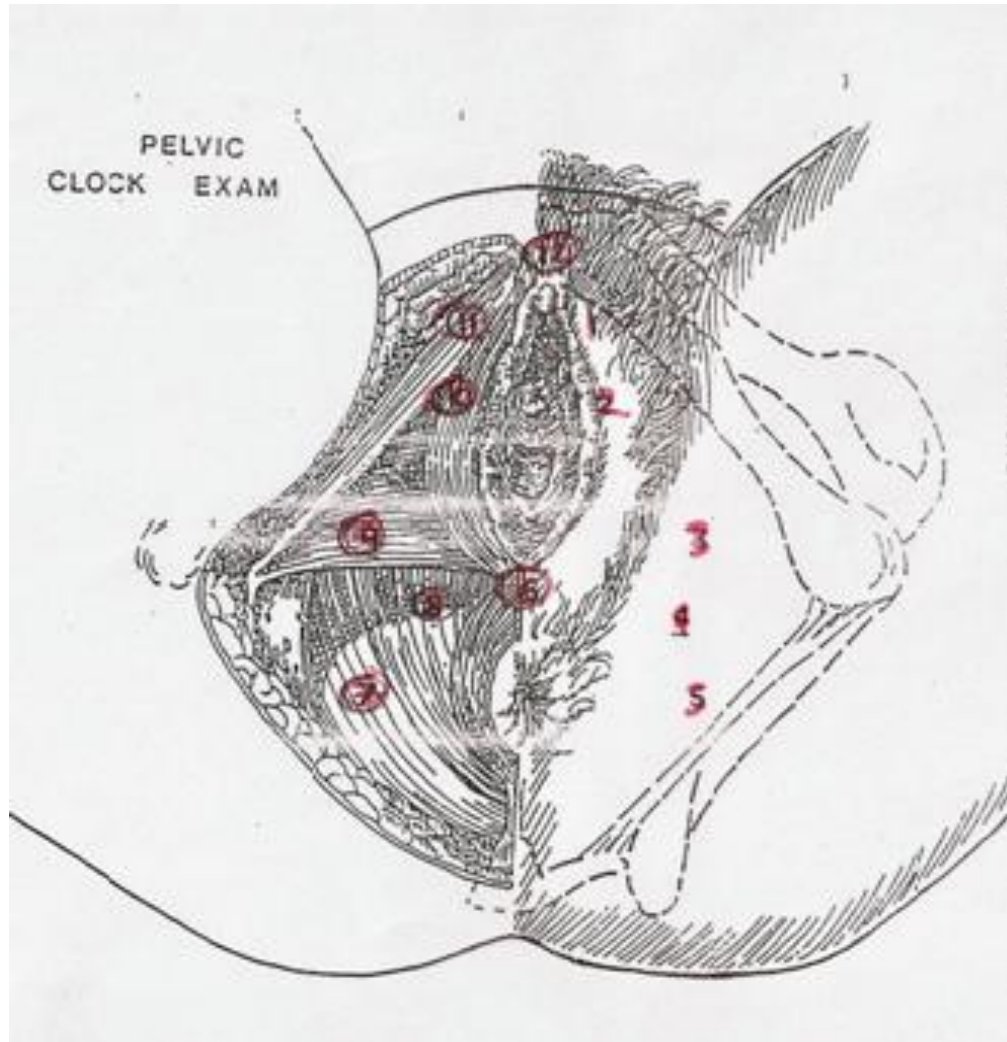


# MANUAL TECHNIQUES

- Desensitization,
- Stretch,
- Myofascial Release
  - Increase fascia mobility
- Trigger Point Release
  - Continuous pressure over point of tension
- Perineal Massage
  - Internal & external
- Transverse Friction Massage
  - Friction perpendicular to muscle fibers to soften adhesions



# PELVIC CLOCK – TRIGGER POINTS – (TRAVEL)



# PELVIC FLOOR MUSCLE EXERCISES

- Addressing with biofeedback:
  - Resting tone
    - Down-training
    - Relaxation – breathing
  - Endurance – slow twitch fibres
    - Long hold
  - Let Go – fast twitch fibres
    - Quick flicks

Muscles can be long and short, or weak and strong



# BIOFEEDBACK

- Identification, control and relaxation of muscles,
- Purpose: Downtrain
- Relaxation training of muscles
- Fast twitch fibers to let go
- Lengthen muscle

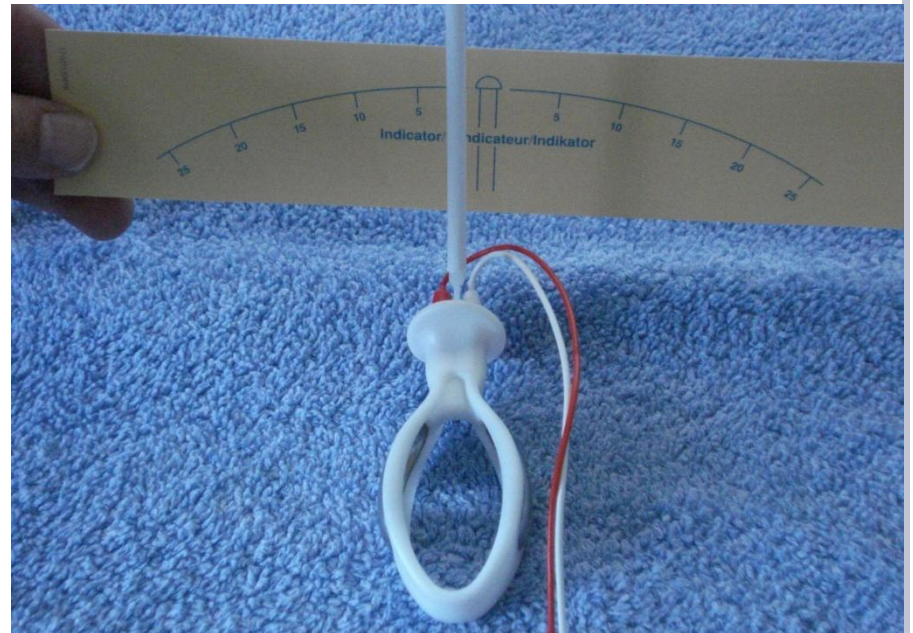
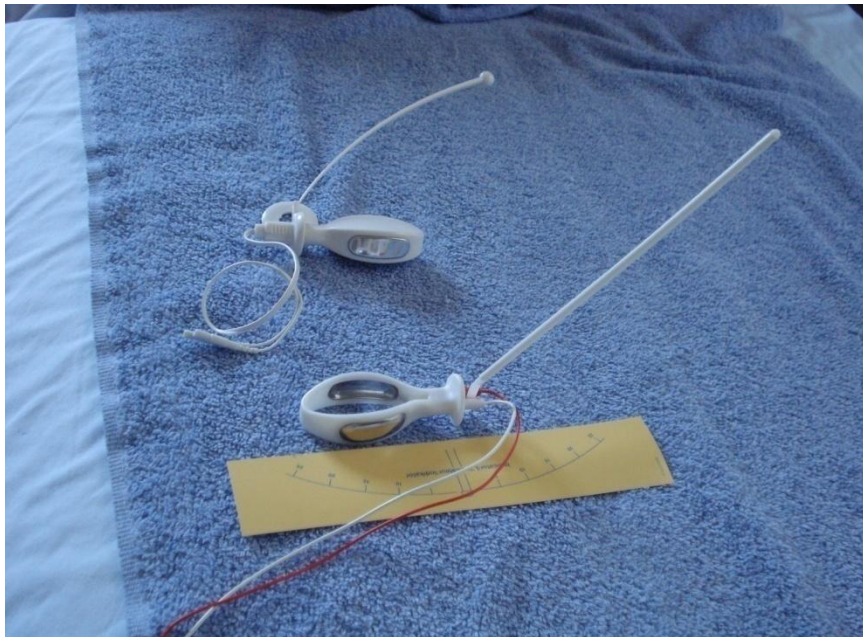


# ELECTRICAL STIMULATION

- External
  - Pediatric electrodes
- Internal
  - Vaginal probe
- Pudendal Nerve
- Parameters:
  - 5-10 Hz, >250 pulse width, ramp on 1-2 s
  - 5-10 mins, 10 sec on, 10 sec off



# Internal Probes

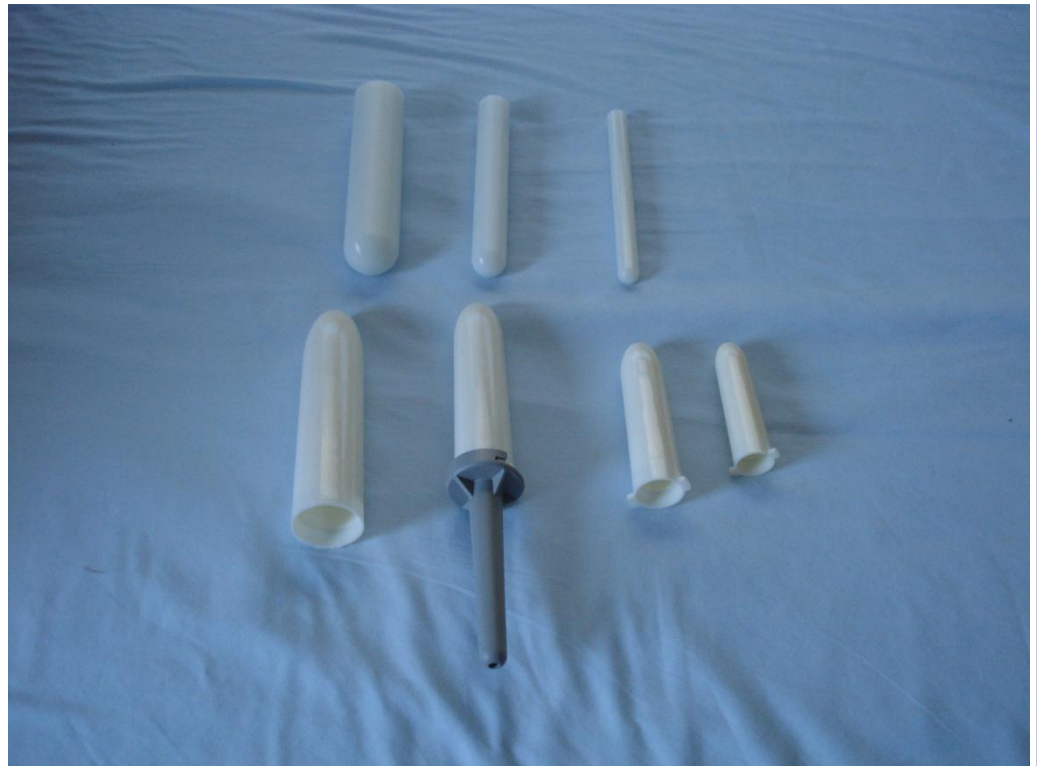


# INSERTION TECHNIQUES/EXERCISES

## ○ Dilators/Vaginal Probe

- Start small work bigger
- Measured by circumference
- Every 3<sup>rd</sup> day

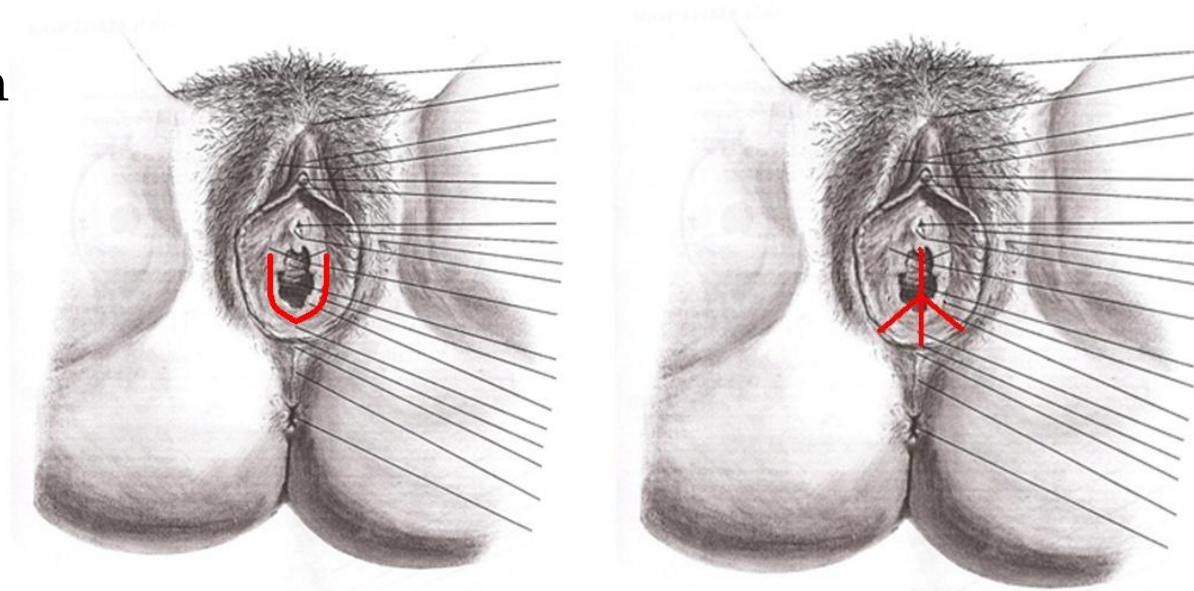
## ○ Pediatric speculum



# MANUAL TECHNIQUES

## ○ Passive Stretch

- Contract-Relax –stretch on relaxation
- Peace Sign
- U-stretch



# HOME PROGRAM

- Twice daily regime with cream
  - desensitize,
  - massage)
- Practice with dilator every third day
  - (see handout for protocol)
  - Use quick flicks to prevent pain
  - If have a good session note Cycle, Time of day, food, Stress level
- Quick flick PFM ex three times daily
- Myofascial release of active trigger points
- Daily Stretching



A decorative graphic on the left side of the slide. It features a series of vertical lines in various shades of blue and grey. Overlaid on these lines are several circles of different sizes, also in shades of blue and grey, arranged in a cluster.

# OTHER PAIN ISSUES

# PELVIC PAIN SYNDROMES:

- Vaginal atrophy
- Pain from menopause,
- Lichens ,
- Vaginal fissures,
- Pudendal Neuralgia ,
- Post birth scars,
- Radiation trauma and cancer
- Pelvic/Sacro-Iliac joint instability
- Interstitial Cystitis



# TYPICAL PATIENT WITH PUDENDAL NEURALGIA

- 45 yr old female working out in the gym to train for an overseas hiking in scotland.
- Used fitness machines for leg presses and did kick boxing. Sudden pain one night that worsened over several days. Feeling of golf ball in the rectum.
- Worse when bowel full, sitting.
- Better after sitting on toilet and evacuating and lying down. Today unable to sit.
- Has seen several dr's and now



# DIFFERENCE IN TREATMENT

- Spend more time assessing pelvic alignment,
- More global muscle assessment – adductors.  
Obturator
- May need anal assessment to feel deeper tissues
- Can usually do double digit vaginal assessment
  
- Osteopathy
- Home trigger point releases
- More manual treatments “inside and out”

