PHYSICAL DISABILITY AND SEXUAL HEALTH

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THE AUTHOR HAS NO CONFLICT OF INTEREST TO DISCLOSE

- **Sexual adjustment** for women with disability is associated with environmental and psychosocial difficulties (Tepper 2016), which **reduce** the **access** to proper **care** and to **satisfying pleasurable sex**

- On **top of the pyramid** is the need for **intimate relationships** and **pleasure**

- **How can we help** women with physical disabilities to achieve pleasurable sex ?

- Our **experience** and **studies** with **women** living with spinal cord injury (**SCI**) give us some **guidelines**, which can be **generalized** to women with other disabilities

Courtois, Bonierbale. Médecine Sexuelle, Lavoisier 2016; Courtois, Charvier. Handb Clin Neurol 2015;130:225; Courtois et al. Functional Neurol Rehabil Erg 2013;3(1):59;

- The **guidelines** highlight the need for:
  - **Assessing** perineal **sensations** (genital, perigenital and other sexual sensations) and assessing **knowledge** (professionals and patients) on female **anatomy**
  - **Coaching** women with sexual **stimulation** and observable **responses**
  - **Paying attention** to overall **sensations**, **not only** the end-point of reaching (or not) **orgasm**
  - **Providing help** with concerns on **secondary aspects** of disability, in particular **incontinence**

- The **objectives of this talk** is to:
  - Present **our data** and **approach** on **sexual function** in **women with SCI**. More specifically:
    - What kind of initial **assessment** do we provide
    - How do we **coach** women
    - How do we emphasize overall **sensations** as opposed to mere orgasm
  - See how this can be **generalized** to **clinical practice** with **women** with SCI or other physical disabilities
  - Begin a discussion on the **secondary impacts** of SCI or disability on **sexual function**
    - In particular, the impact of **incontinence** on **sexuality**
    - Providing **tips** and **prevention** strategies

Courtois, Bonierbale. Médecine Sexuelle, Lavoisier 2016; Courtois, Charvier. Handb Clin Neurol 2015;130:225; Courtois et al. Functional Neurol Rehabil Erg 2013;3(1):59; Cramps et al. J Sex Mar Ther 2015;41(3);238; Cramps et al. Sex Disabil 2014;32;397

KNOWLEDGE OF FEMALE ANATOMY:

CURRENT SCIENTIFIC KNOWLEDGE

KNOWLEDGE OF PROFESSIONALS AND PATIENTS

- **Sipski** et al's (1995;1997;2001;2006) extensive **research** on sexuality in **women with SCI** show **remaining** sexual **function** despite even complete lesions to the spinal cord

- In particular, they showed :

- **Vaginal congestion** with
  - **Genital** (reflexogenic) or **psychogenic** stimulation
  - Depending on **lesion level** and **extent** (pinprick sensations)

- **Orgasm** with clitoral stimulation

- Was achieved by 52% women with SCI

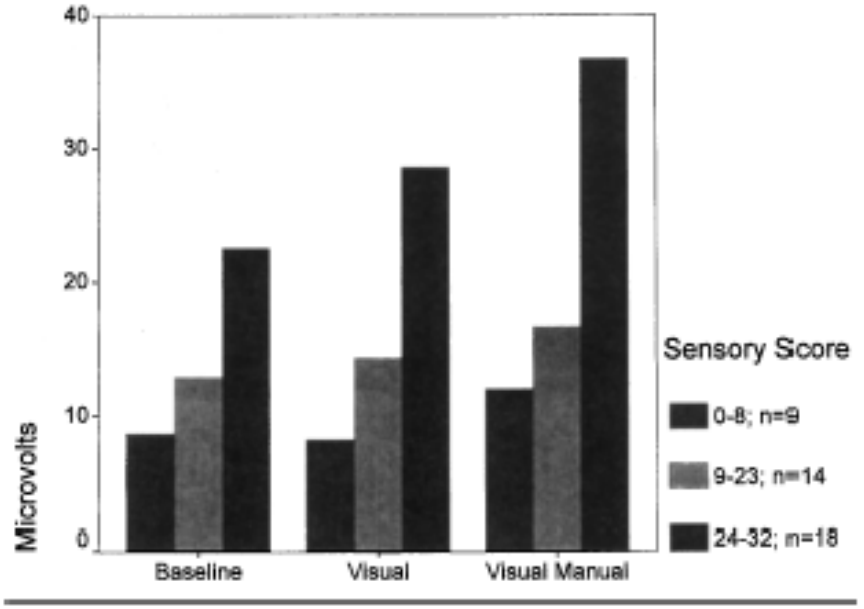
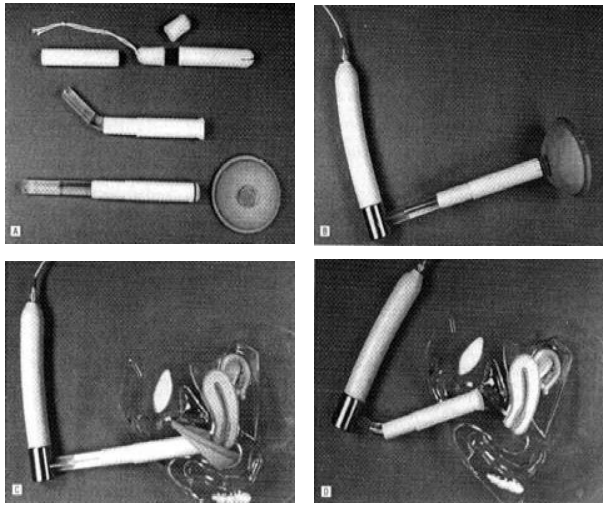
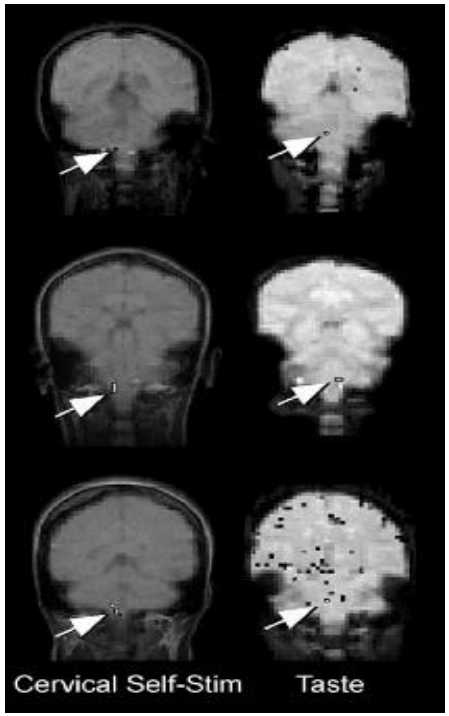


Fig. 2. Vaginal pulse amplitudes during various conditions, incomplete SCI subjects grouped by T11-L2 sensory score. SCI = spinal cord injury.

Sipski et al Arch Phys Med Rehabil 1995;76:811; Arch Phys Med Rehabil 1995;76:1097; Arch Phys Med Rehabil 1997;78:305; Ann Neurol 2001;49:35-44;

- **Whipple** et al (2002) and **Komisaruk** et al (2004) also showed that
- **Cervix stimulation** can also lead to **orgasm**
- In women with **complete SCI** >T10
- **Orgasm confirmed with fMRI** activity in the brainstem's solitary nucleus
- Where lies the nucleus of **Vagus N**





Whipple et al J Sex Mar Ther 2002;28:79; Komisaruk et al Brain Research 2004;1024:77.

- **Recent studies** further reveal that the **clitoris** is a **complex** structure composed of :

- A **glans**, involved in **clitoral** stimulation
- **Vestibular bulbs**, **crura**, and erectile tissue surrounding the **urethra**, involved in **vaginal** stimulation (external third described by Masters & Johnson 1962)
- Which surround the **anterolateral** wall of the **vagina**
- Also known as the **G spot** (Grafenberg 1950)
- And renamed the **clitoro-urethro-vaginal** complex

Battaglia et al. J Sex Med 2010;7(8):2755-64; Buisson et al. J Sex Med 2008;5(2):413-7; J Sex Med 2013;10:2734; Buisson, Jannini. J Sex Med 2013;10(11):2734-40; Caruso et al. J Sex Med2011;8(6):1675-85 ; Foldès, Buisson. J Sex Med 2009;6(5):1223-31; Grafenberg Int J Sexol 1950;3:145; Jannini et al J Sex Med 2010;7:25; O'connell et al J Sex Med 2008;5:1883;

- All of which supporting the notion (reports) of "**differential**" **orgasms**

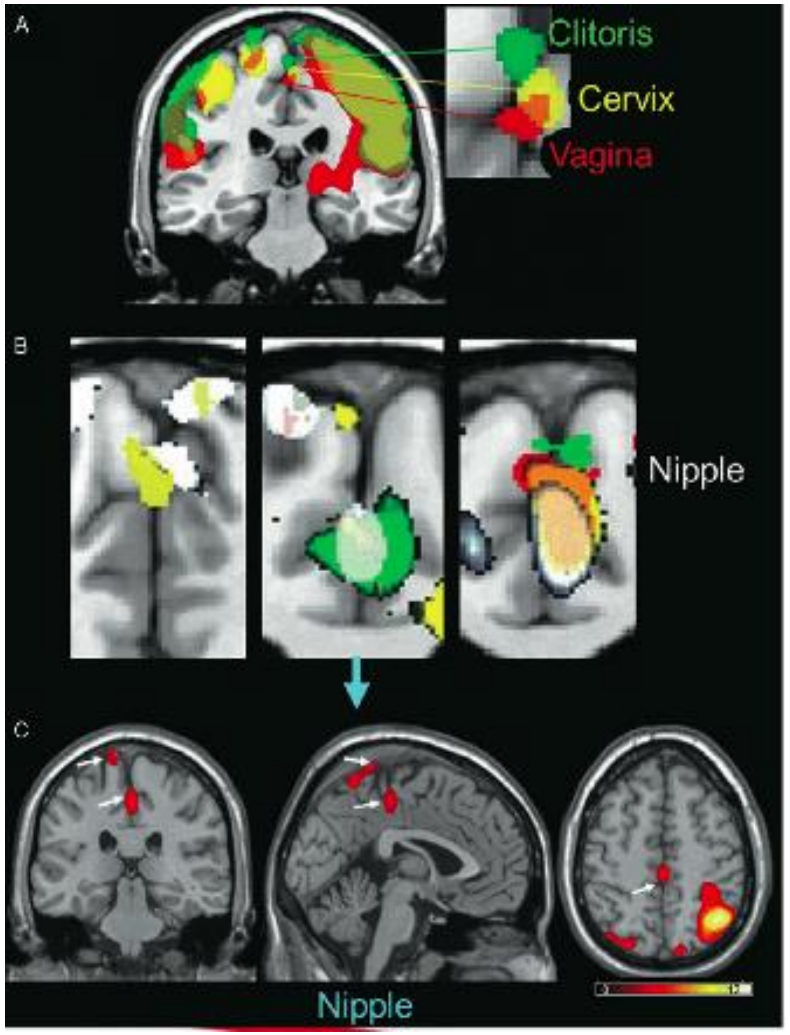
- Further **fMRI findings** on sexual **stimulation** show that

  - Clitoris, vagina & cervix activate **distinct** areas of the sensory **parietal cortex**

  - **Nipple (breast)** activates both

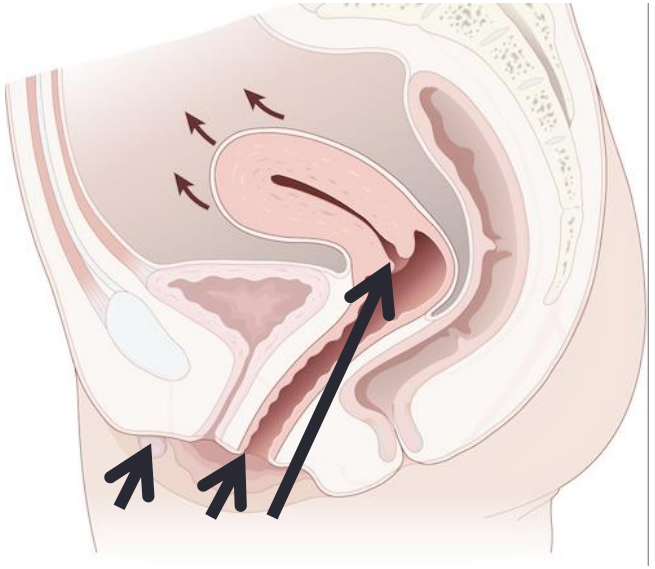
    - **Genital** region of parietal cortex and

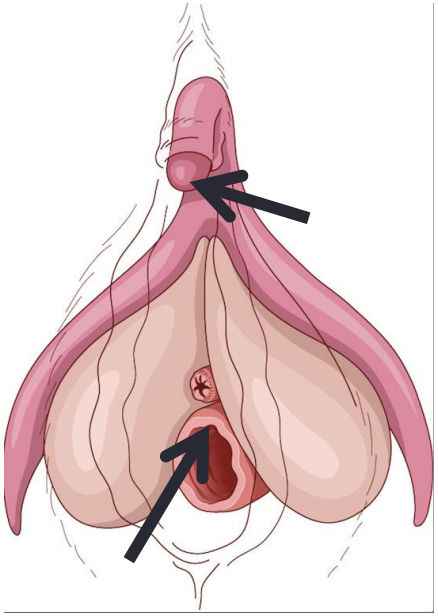
    - **Torso** region of the homunculus

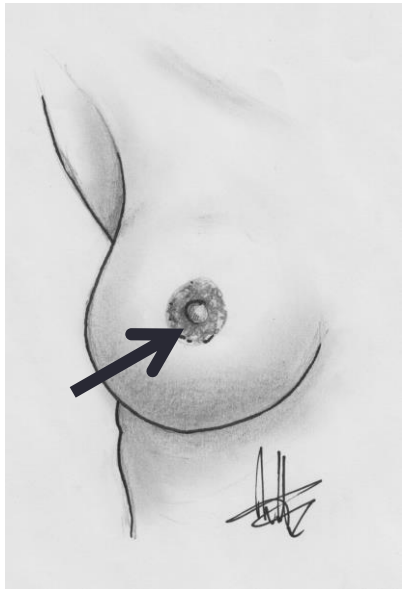


Komisaruk et al J Sex Med 2011;8:2822

- **Women with SCI** should therefore be **encouraged** to explore **various stimuli**
- As they are **mediated by different** nerves fibres and **pathways**
  - **Clitoral** stimulation
  - **Vaginal** stimulation (G spot)
  - **Cervix** stimulation and
  - **Nipple (breast)** stimulation







- **Despite these** possible sources of **stimulation**
  - Data on **women with SCI** reveal that
    - Only **52% orgasm** (without clinical coaching)
    - Against **more than 80%** ejaculation in **men with SCL**
- **Why such a disparity ?**
  - **Ejaculation** is **not necessarily orgasm**
  - **Men better coached** than women in rehab
  - **Women do not see or feel their genitals** (less feedback)

[2]Brackett et al J Urol 1998;159:1931; [3]Courtois et al Paraplegia 1995;33:628 ; [4]Sonksen et al Paraplegia 1994;32:651 [5]Courtois et al BJU 2008;101:331; [6]Courtois et al JSM, 2008, 5(10); 2419; [7]Soler et al J Urol, 2007;178:2082; [8]Soler et al J Urol, 2007;178:2082 ; [9]Giuliano et al Neurology 2006;66:210 ; [10]Giuliano et al Arch Neur 2007;64:1584

PROPOSING A SYSTEMATIC APPROACH FOR CLINICAL COUNSELLING OF WOMEN WITH SCI

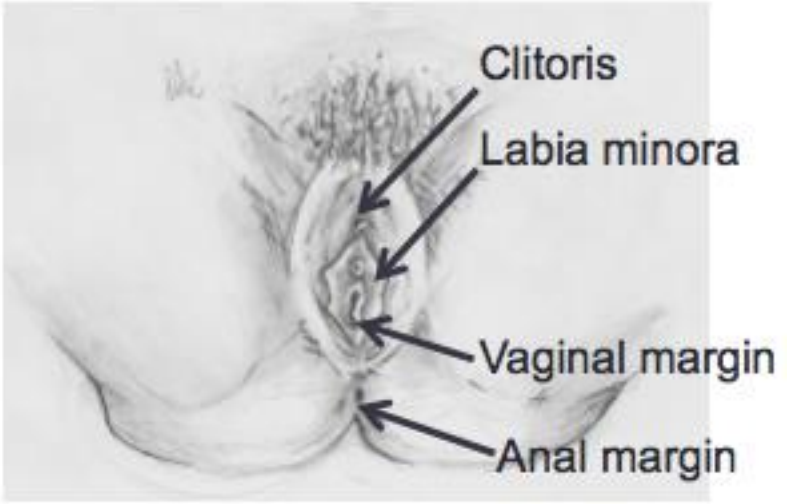
- We designed a systematic approach to allow a better **“mental image”** of the **vulva** and to maximize sexual adjustment
  - It starts with **perineal sensory assessment**
  - It **coaches** women with SCI **in the rehab center** with **vibrostimulation** (as we do for men)
  - It offers tests with **midodrine** (a drug used for men)
  - It **assesses** a variety of **sensations** (**not only** “yes/no” orgasm)

- Clinically, we designed an **easier assessment procedure**
- And added **other options** including :
  - **PDE5 inhibitors**
  - **Lelo** vibrator
  - **Eros** Ctd

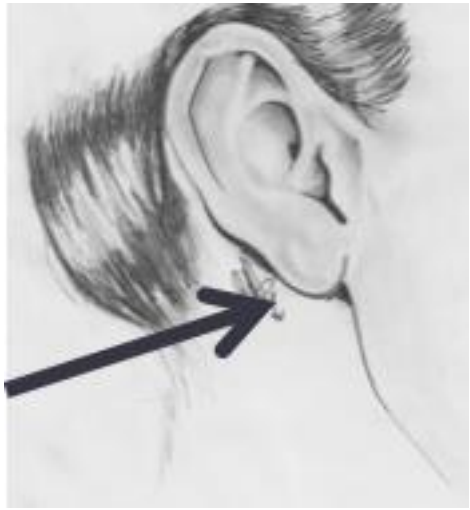
Courtois et al. J Sex Med 2011;8(suppl5):380 ; Courtois, Charvier K. Handb Clin Neurol 2015;130:225-45 ; Courtois et al. Functional Neurol Rehabil Erg 2013;3(1):59-84 ;

- **Perineal assessment** is used to **help** women **identifying** their remaining **vulvar sensations** and to provide **basic education** on female genital **anatomy**

- It assesses :
  - Clitoris
  - Labia minora (L/R)
  - Vaginal opening (L/R)
  - Anal sphincter (L/R)
  - Compared to neck (above lesion)

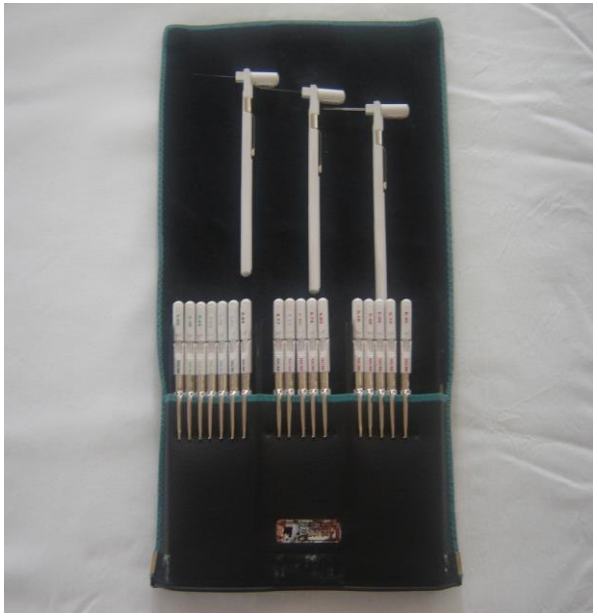


- It assesses **light touch**
  - Involved in sexual caresses
- But also **pressure** sensation
  - Involved in vaginal penetration
- And **vibration** sensation
  - Involved with sex toys



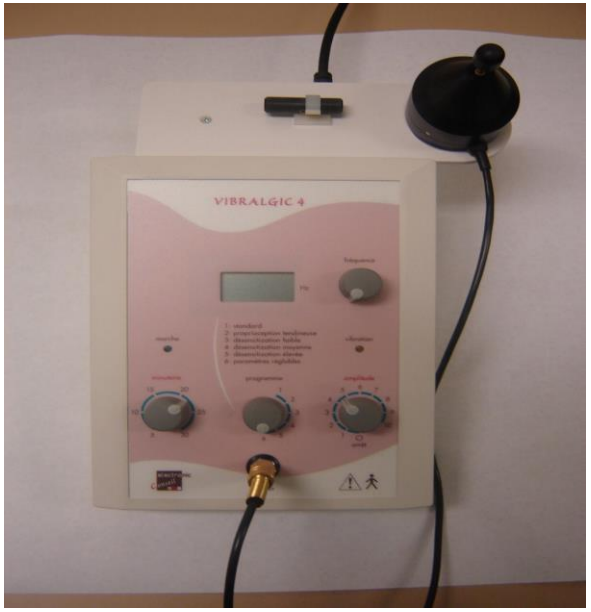
Courtois et al J Sex Med 2011;8:380; Cordeau et al J Sex Med 2014; Pukall et al Physiol Measures 2007;28:1543

Scientific assessment uses :



Light touch
Semmes-Weinstein monofilaments

Vibration
Vibralgic 4



Pressure
Vulvogesiometer

Courtois et al J Sex Med 2011;8:380; Cordeau et al J Sex Med 2014; Pukall et al Physiol Meas 2007;28: 1543

- **Coaching** trial with **vibrostimulation**
  - Same as men with SCI (ejac test)
- A week later **self-stimulation** with Ferticare
  - **In rehab setting** as for men

- Tests with **midodrine** if vibrostimulation alone fails
  - **5 mg**, increased 5 mg **up to 20 mg** (separate sessions)
- Each **test** is **accompanied** with
  - **BP/HR** recordings to confirm physiological arousal/climax and to provide feedback
  - Completion of a **questionnaire** on sexual **sensations**
    - To identify perceived **sensations** during stimulation

Sonksen et al. Paraplegia 1994;32:651-60; Courtois et al. BJU Int 2011;108(10):1624.

REPERTOIRE OF SEXUAL SENSATIONS

To what extent have you experienced the following sensations ?

Not at all Slightly (Somewhat) Moderately A lot Tremendously

Cardiovascular Responses

1. I felt my blood pressure rising (hypertension)
2. I felt my heart beating faster (tachycardia)
3. I felt my respiration accelerating (hyperventilation)
7. I felt a shortness of breath (apnea)

Muscular resposnes

9. I felt contractions in my abdomen
10. I felt pulsations in my clitoris
11. I felt pulsations in my vulva
15. I felt spasms in my legs
18. I felt spasms in my lower back

Signs of autonomic arousal

19. I felt my clitoris hypersensitive
22. I was shivering, I had goose bumps (hair standing)
23. I had hot flashes
30. I felt tingling, prickling sensations on my face (forehead, cheeks)

Signs of autonomic dysreflexia (AD)

42. I felt tightness of chest
42. I had a headache

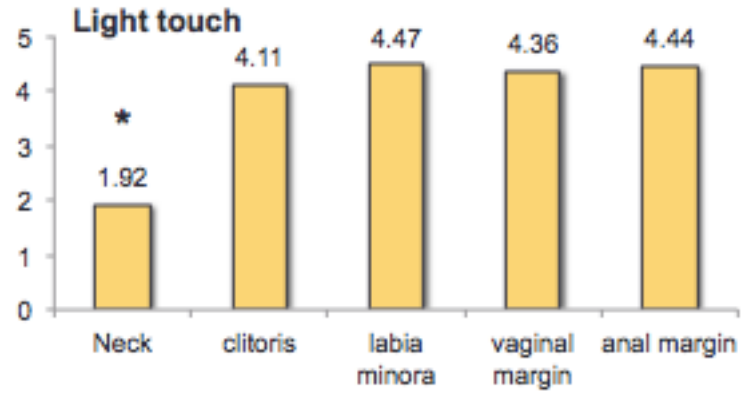
Climax report

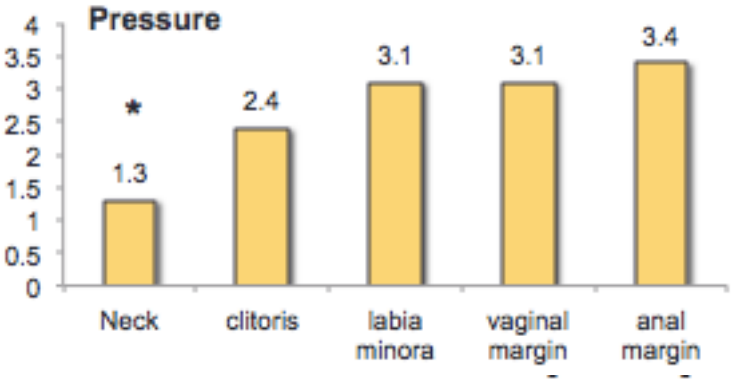
48. Would you say that what you felt resembles orgasm (climax)? (Yes/No)
49. Have you experienced orgasm (climax) since your lesion? (Yes/No)

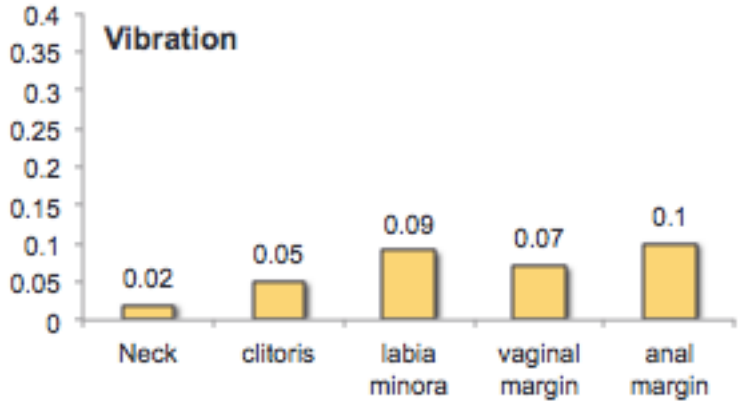
Results on perineal assessment

58 women SCI, 44 tested, 35 completed; M=37yo from 21yo to 68yo; 25% complete lesions, 75% incomplete lesions

- Despite **poor** sensations from
  - **Light touch** and
  - **Pressure** that were
  - Sign^{ly} different from **neck**
- **Vibration sensations** were perceived by most women
  - And **not** sign^{ly} **different** from **neck**
- Overall, **85%** women declared perceiving **more sensations** than they originally thought

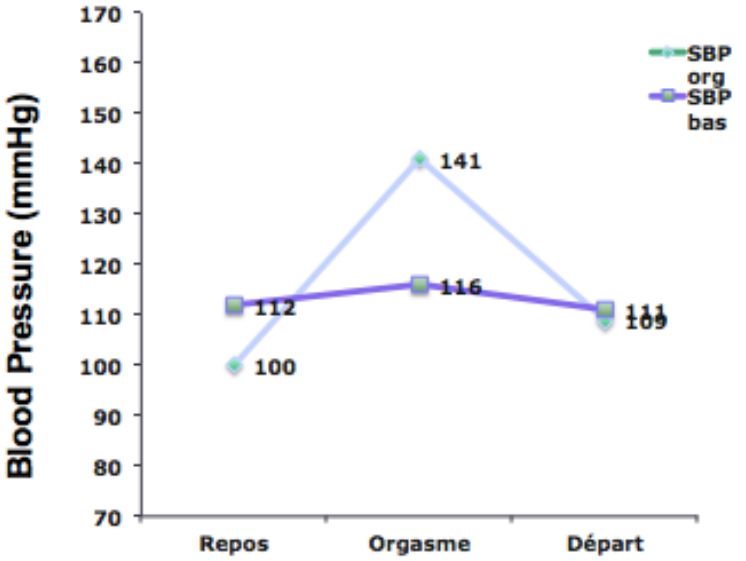


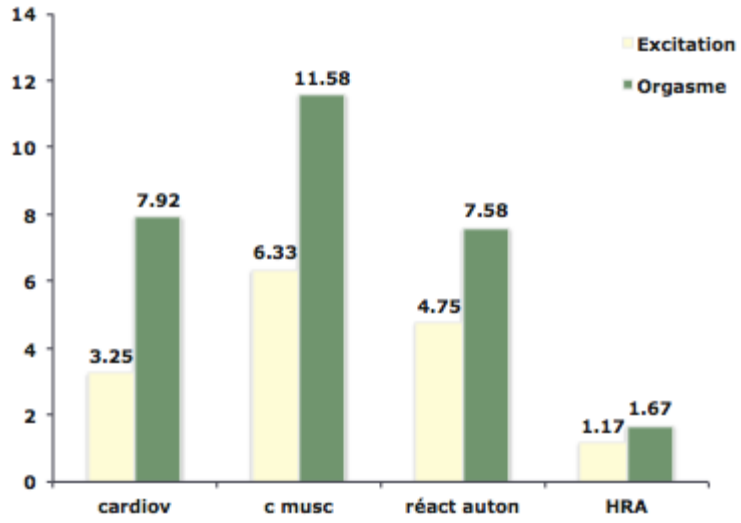




Results on sexual function

- Overall **70%** (intention to treat) women with SCI achieved **orgasm**
- Among **those who completed** the protocol
  - **81%** achieved **orgasm**
    - **55%** with **vibrostim**
    - **27%** vibrostim+**midodrine**
- Orgasm was supported by **significant** increases in **SBP** and by
- **Sign[ly] more sensations** compared to **vibrostimulation** alone





Courtois et al J Sex Med 2011;8:380.

CLINICAL APPLICATIONS

- **Perineal sensitivity** can be assessed **in rehab**
  - **Touch** can be assessed with **cotton balls** (or gauzes)
  - Pressure with a **cotton swab**
  - Vibration with a **U fork**
  - In addition to **pinprick**
- All of which, **including trials** in **rehab**, can be generalized to **women** presenting **any sensory loss** or physical **disability**

Easy access clinical tools

Light touch

Pressure

Vibration

Other **clinical options**

- In addition to manual or vibrostimulation (Ferticare)
- For **clitoral** stimulation

Ferticare clitoral stimulation

- Lelo vibrator
  - 7 vibration-pulsatile options
- For **vaginal** stimulation
- And **cervix** perception

Lelo vaginal, cervix stimulation

- Manual or Eros Ctd
- For **nipple (breast)** exploration

Eros Ctd Nipple-breast stimulation

Billups et al. J Sex Marital Ther 2001;27(5):435-41; Golstein, Berman. Int J Impotence 1998;10(suppl 2):S84-S90; Munarriz et al. J Sex Marital Ther 2003;29 Suppl 1:85-94 ; Wilson et al. J Gend Specif Med 2001;4(2):54-8.

OTHER ASPECTS OF DISABILITY

CONCERNING WOMEN :

SEXUALITY AND INCONTINENCE

- Studies by Anderson et al (2004; 2007) on individuals with SCI show that
  - **Bladder** and **bowel** function are a **another top priority** for quality of life

- We performed a **qualitative study** on **women with SCI** to explore the extent of concern of these women with incontinence and sexuality
  - The results revealed a number of emerging themes regarding **contributing factors** and **types of concerns**

- To which we added themes from our **clinical experience** with women with SCI

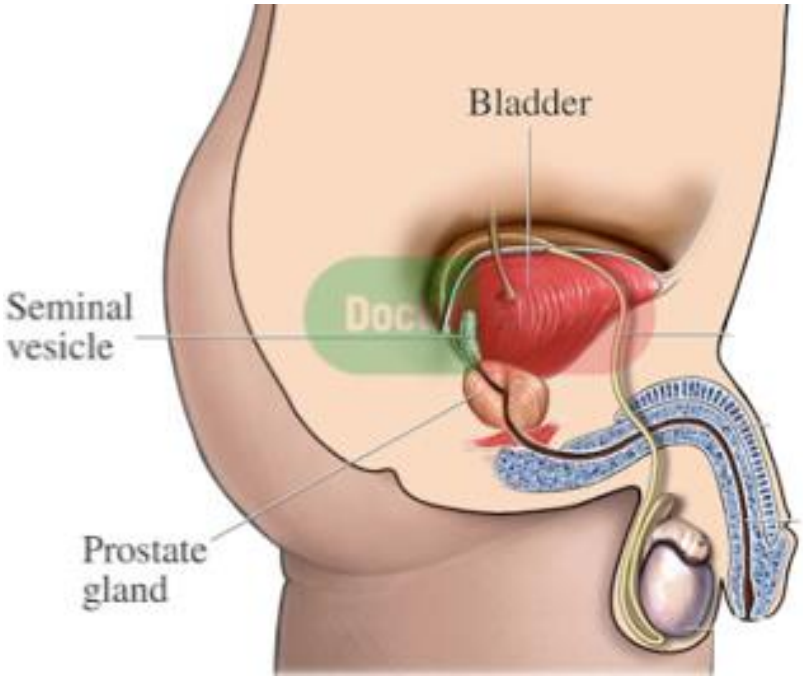
- And adding **clinical tips** to overcome or prevent these concerns

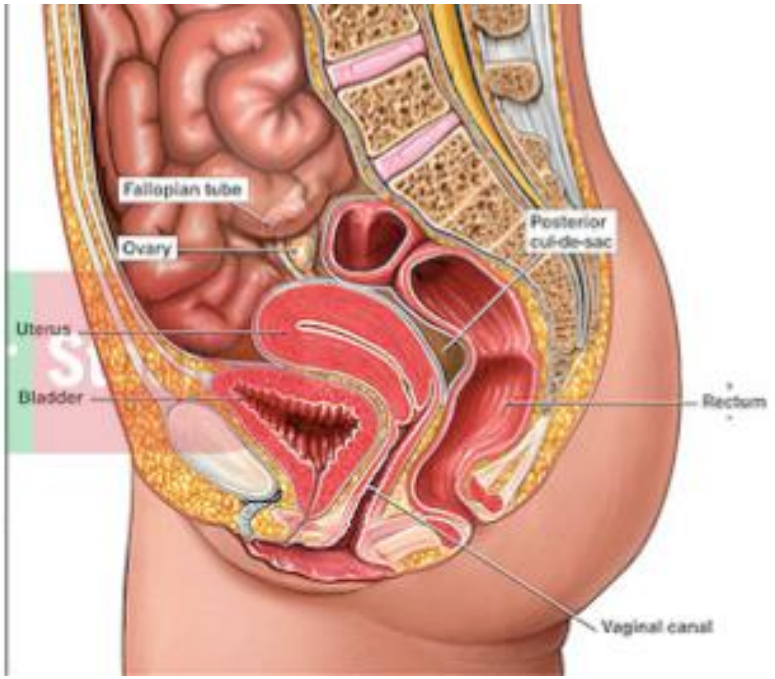
Cramp et al J Sex Marital Ther. 2015;41(3):238-253; Cramp et al Sex Disabil 2014;32:397-412;

INCONTINENCE AND SEXUALITY:

Contributing factors
Types of concerns

CONTRIBUTING FACTORS - ANATOMICAL DIFFERENCES



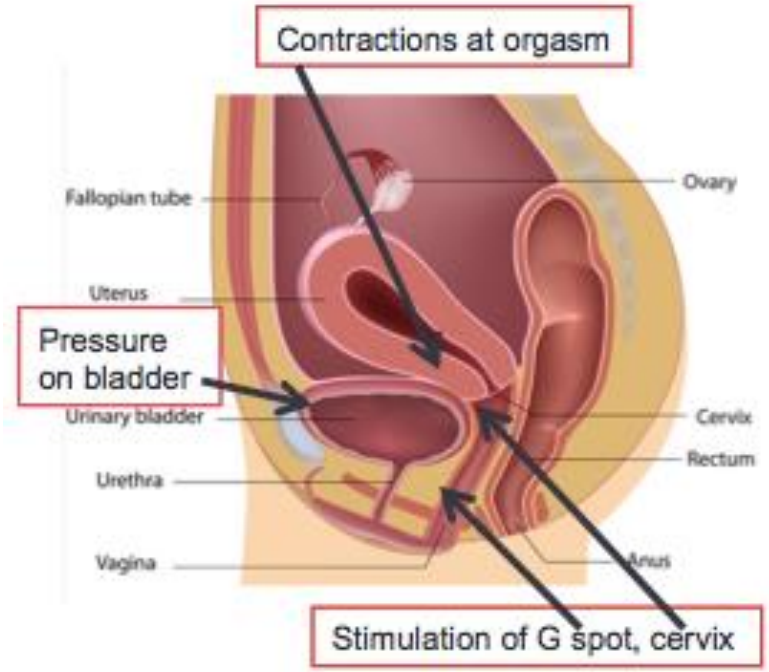


- Men have a **longer urethra**
- A **curved** urethra
- **Prostate** surrounding the urethra
- Hence **much** more **resistance**

- Women **shorter straight** urethra
- **Uterus** lying over the bladder
- Factors such as menstrual cycle, childbirth prolapse contribute
- Hence **poorer** urethral **resistance**

TYPES OF BLADDER

- **Overactive bladder** with reflex contractions of detrusor muscle
  - Possibly **more vulnerable** to incontinence during **orgasm**
- **Hypotonic (peripheral) bladder** with overflow, poor urethral sphincter &/or stress incontinence
- Possibly **more vulnerable** to **positions** involving
  - Movements or effort
  - Pressure on the bladder
  - Stimulation of the G spot ?



SPECIFIC CONCERNS

- Urine **colour, volume, smell**
  - **Darker** urine more shameful
  - Larger stains on the sheets
- Clinical tips:
  - **Reduce** intake 3-4 hrs before sex
  - **Voiding** before sex
  - Clean **more often** moist/wet wipes
  - Change **protections**
  - **Infection** to treat ?
  - **Oxybutynin** (Ditropan) **45 min before sex** to reduce contractions

CONCERNS WITH BODY IMAGE

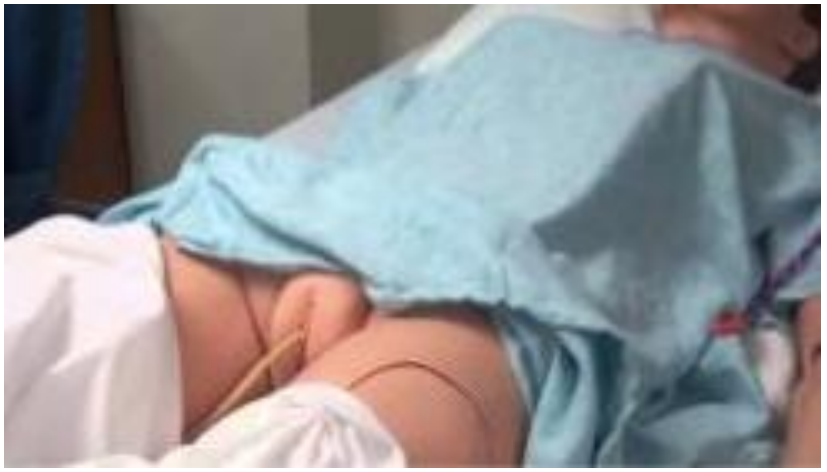
- Having to **wear protections** (diapers)
  - Not very sexy !
  - Feeling old (elderly)
  - Or immature (baby)

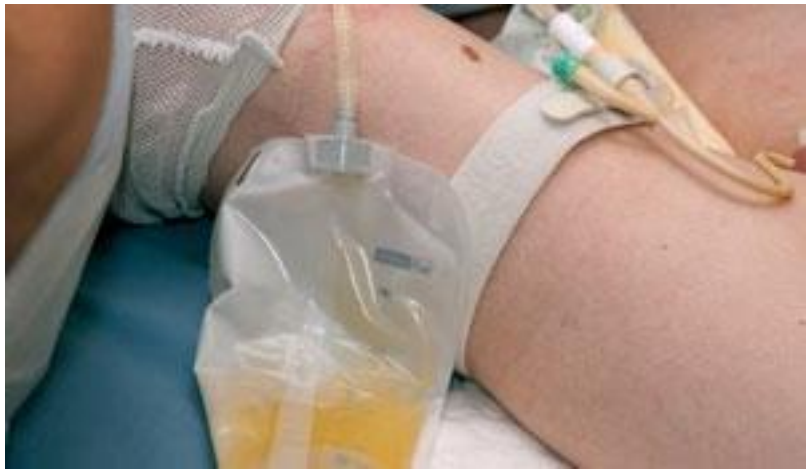
- Tips: **New briefs** available

CONCERNS WITH BODY IMAGE AND VOIDING

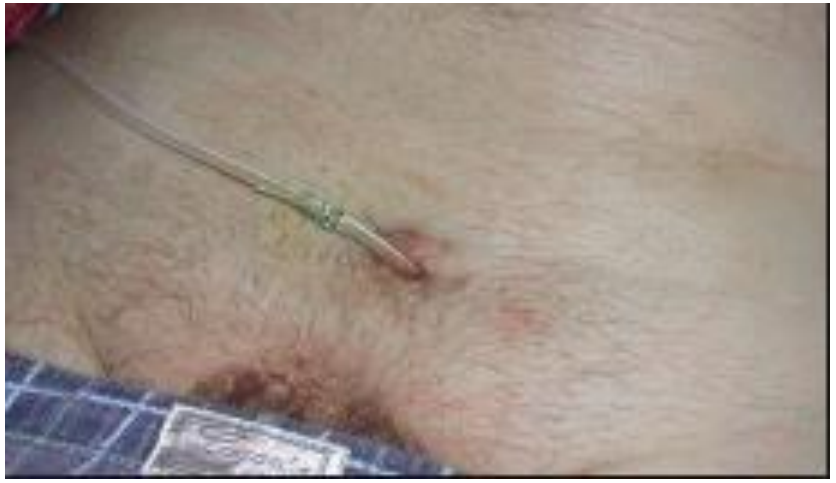
Concerns about:

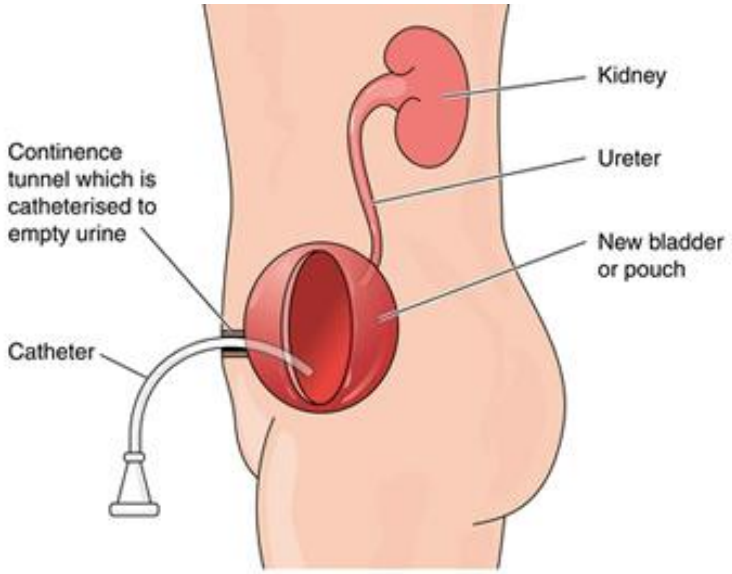
- **Medical appearance** of the **genitalia**
  - Not very sexy
  - Appears medical/technical





- **Clinical tips:**
  - **Permanent** catheter can be **removed** during sex
  - Catheter can be **taped** sideways
  - **Supra-pubic** catheter or **urinary derivation** (Mitrofanoff)
    - Less in the way
    - Facilitates voiding in privacy





CONCERNS DURING A DATE

- Fear of **incontinence** in a **public place**
  - In a restaurant on a date
  - At the movie
- Concerns with
  - **Access** to washrooms
  - **Clean washrooms**

Inaccessible washroom in public places

Dirty washroom

CONCERNS DURING SEXUAL ACTIVITIES

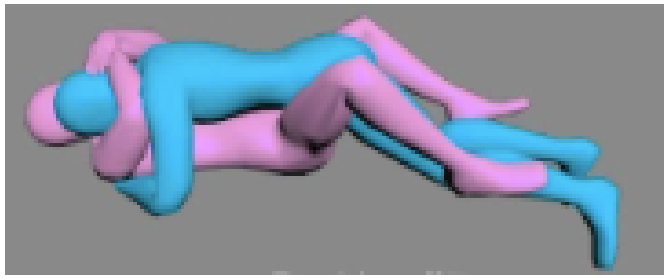
- Fear of incontinence during **oral sex**

- Fear of incontinence during intercourse
  - Fear of having incontinence **ON the partner**
  - Fear of **infecting the partner**
  - Fear of incontinence while **being unaware of it**

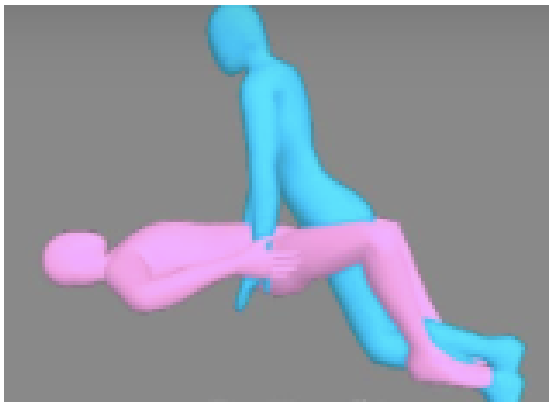
SEXUAL POSITIONS

Sexual positions may increase the risks of incontinence

- **Positions involving pressure** on the bladder
- **Sexual stimulation**
  - Finger, sex toys stimulation on **anterior wall** of **vagina** (G spot)
  - **Male** position, motion, **anatomy**

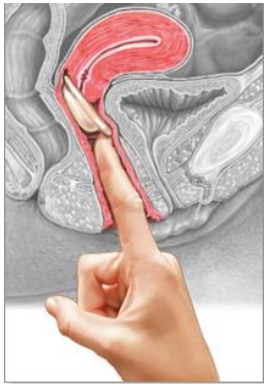


Pressure on female bladder



Better position to relieve Pressure on female bladder

Pressure on female **bladder**



Stimulation of **G spot**

BETTER POSITIONS TO RELIEVE PRESSURE ON BLADDER

PREVENTION STRATEGIES

- **Incontinence is NOT always random**
- To what **extent** is the women **aware** of:
- Reducing **liquid intake** 3 to 4hours before sex
- **Particular effects** of:
  - Beer, white wine
  - Caffeinated drinks:
    - Coca cola, Redbull
- **Catheterizing before** sexual activity

FECAL INCONTINENCE AND GAS

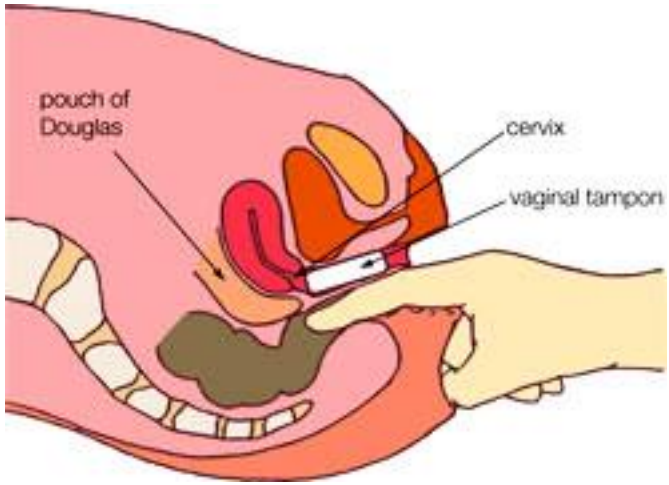
- Very few **if any** studies on **faecal incontinence** and **sexuality**
- **Clinical concerns** with
  - **Incontinence, stains**, **leakage**, and/or **gas**
- Which may become a **devastating experience**
  - While **dating**
  - During **sexual activities**

ANAL SEX – ANAL STIMULATION

- **Anal stimulation** and **anal sex**
  - **More common** sexual activities **today**

- **Women** may have used **anal stimulation** (with or without anal penetration) **prior to SCI** as part of their **regular sexual activities**

- **Women with SCI** (or other disability) may discover **sensations** with **anal** stimulation that are **otherwise lost** with the lesion



CONTRIBUTING FACTORS - MEDICATIONS

- **Suppositories**
  - **Bisacodyl** (Dulcolax) tends to have **mucus** secretion several hours after voiding
    - Hence **need wearing protection** (not sexy !)
    - **Leakage** during sex
  - **Glycerine** suppository **better** in this context

- **Medications**
  - Sennosides + docusate sodium (**Senokot**) tends to **increase** abdominal **discomfort** and **gas**
    - Polyethylene glycol (Lax-a-Day) or docusate sodium (Colace) **better in this context**

MEDICATIONS

- **Transanal irrigation** (Peristeen)
  - If not contraindicated and available/affordable, empties rectum and descending colon
  - Reduces the risk of daytime incontinence
  - Allows **anal stimulation**/anal sex with **less risk**

NEUROGENIC BOWEL

- **Lower motor neuron** lesions
  - More problematic, less control

- **Push** rather than **contract** the sphincter **when trying to prevent** a **gas** or fecal **incontinence**

- **Pelvic floor training** (physiotherapy) with **incomplete lesions** or other disability may be considered

- **Anal plug**
  - May be **most helpful** to reduce anxiety
    - During **sex**
    - On a **date**

CONCLUSION

- **More options** are now available for **women with SCI**, which can be generalized to **women with other disabilities**
  - Encourage a variety of sexual stimulations
    - **Psychogenic** stimulation: fantasies, memories
    - Genital stimulation: **clitoris**, **vagina** (G spot), **cervix**
    - **Nipple** (breast) stimulation
- Best to provide **assessment** and tests with **coaching in rehab**
- **More sexual practices** lead to **more questions** on the risks of incontinence during sexuality
- Complaints that **non-rehab physicians** are **poorly informed**
  - **Emphasizes the need to provide information**
    - **To professionals**
    - **To patients during rehab**

Thank you

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