le disfunzioni ginecologiche

omceobg 14.10.2021

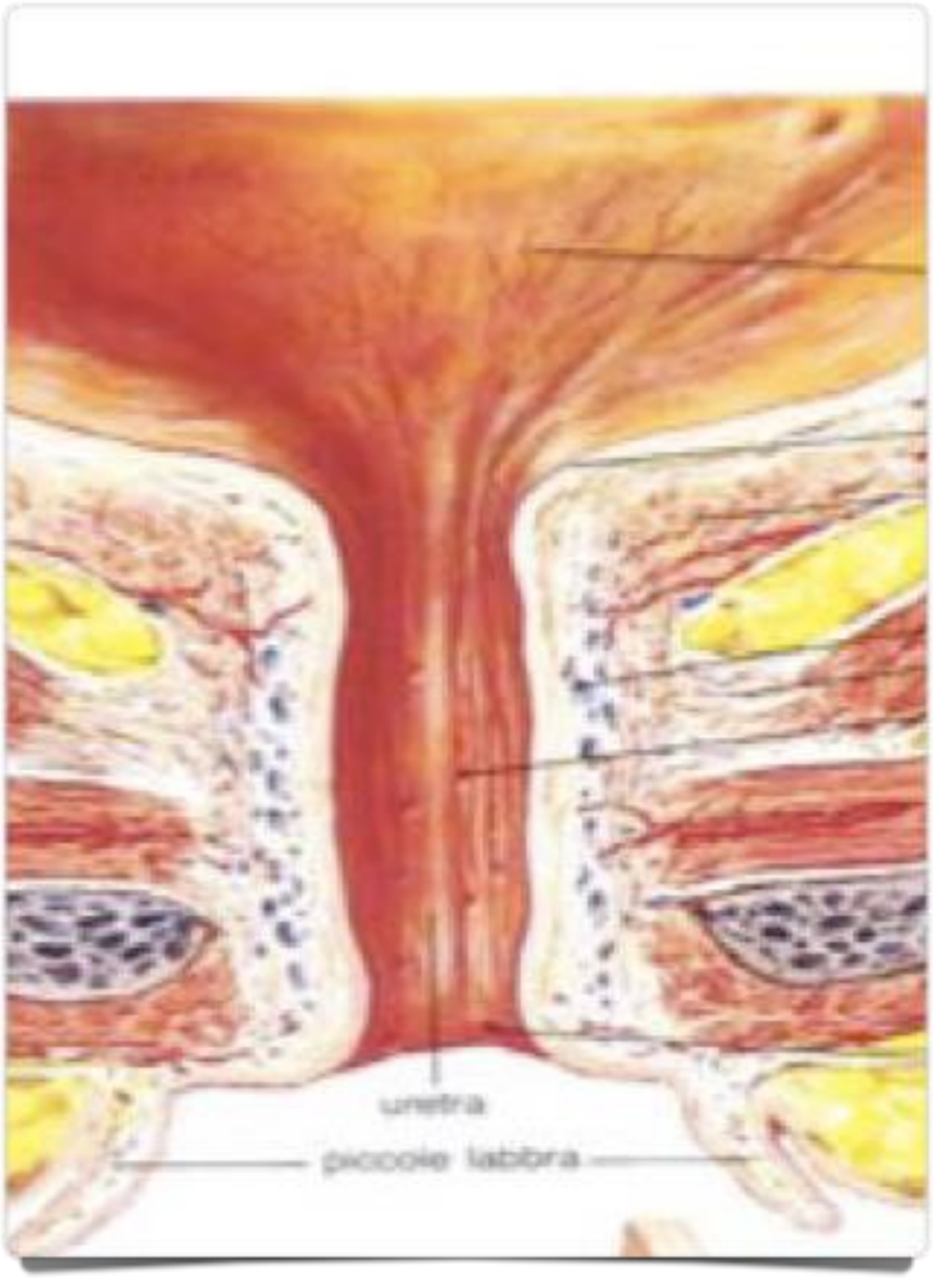
g. baudino

Why are women different?

Anatomy

Menopause

Pregnancy & delivery



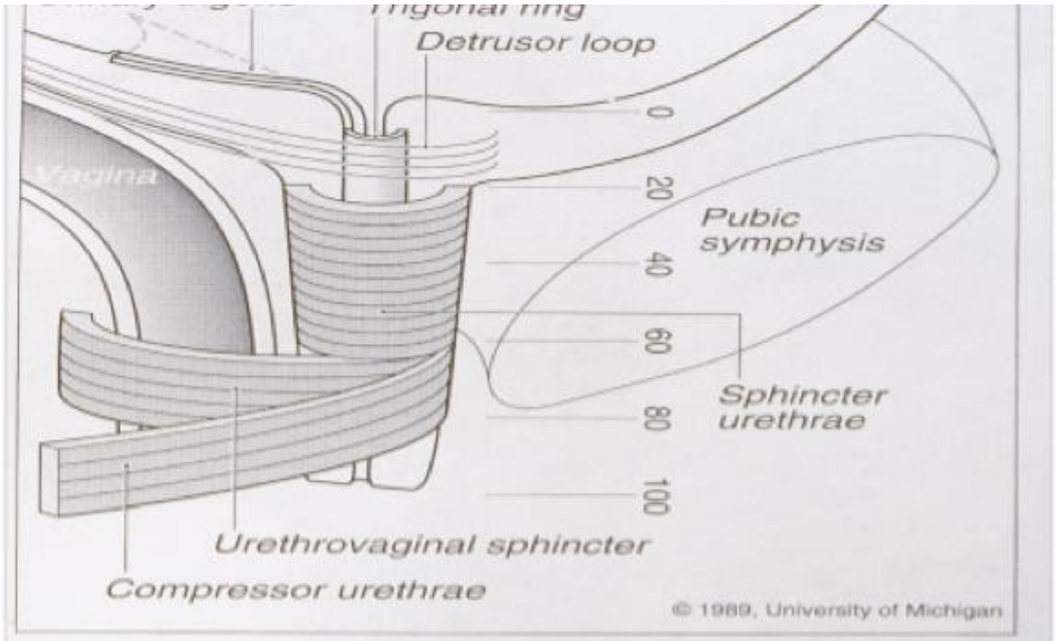
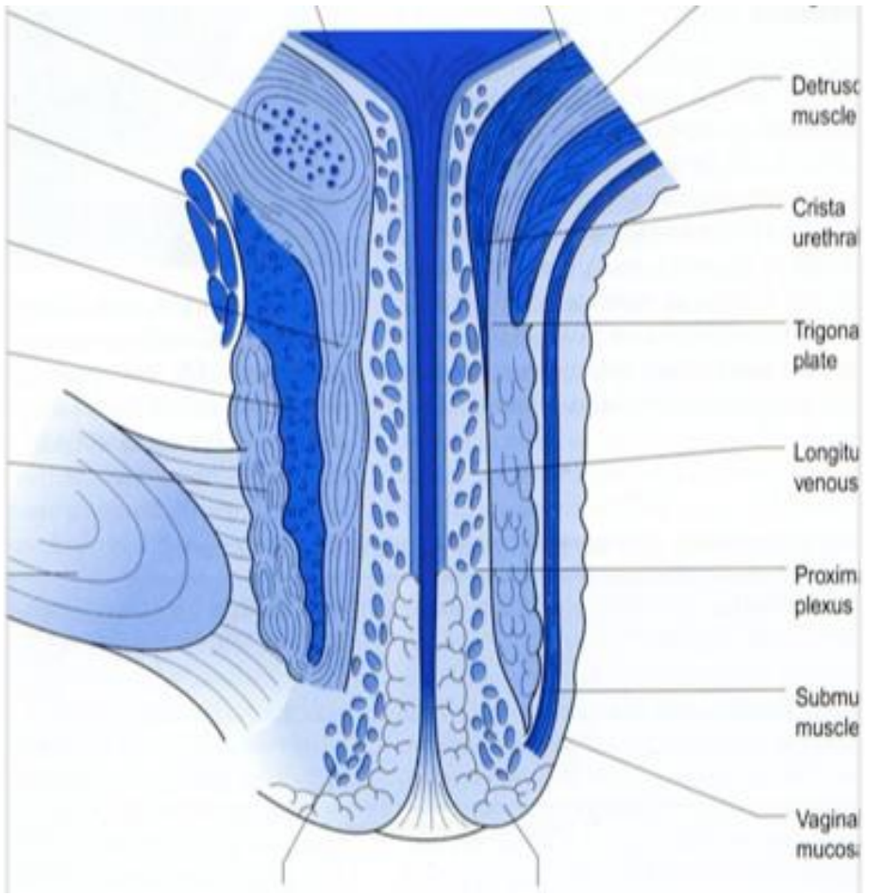


Figure 2.9 Diagrammatic representation showing the component parts of the internal and external sphincteric mechanisms and their locations. The sphincter urethrae, urethrovaginal sphincter and compressor urethrae are all parts of the striated urogenital sphincter muscle.

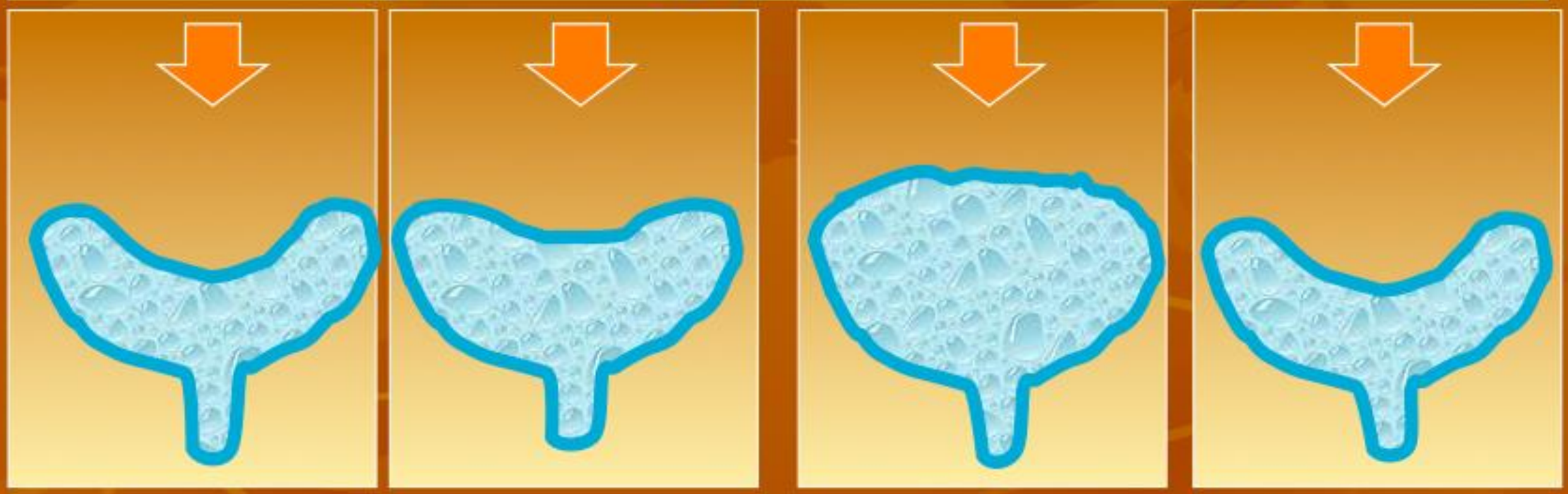


Fase di svuotamento

Pressione vescicale

Fase di riempimento

Fase di riempimento



Riempimento vescicale

Primo stimolo

Normale desiderio minzionale

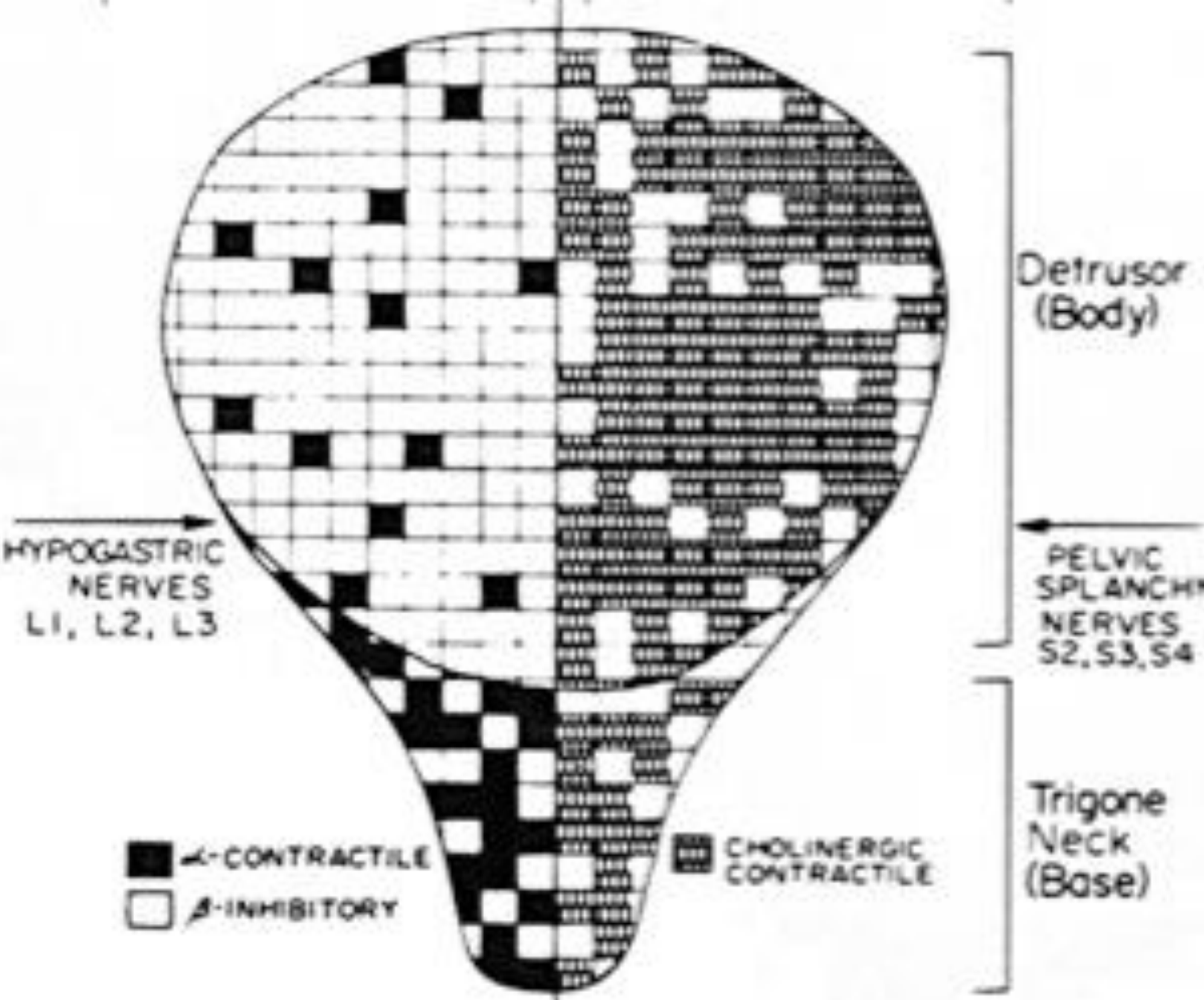
Riempimento vescicale

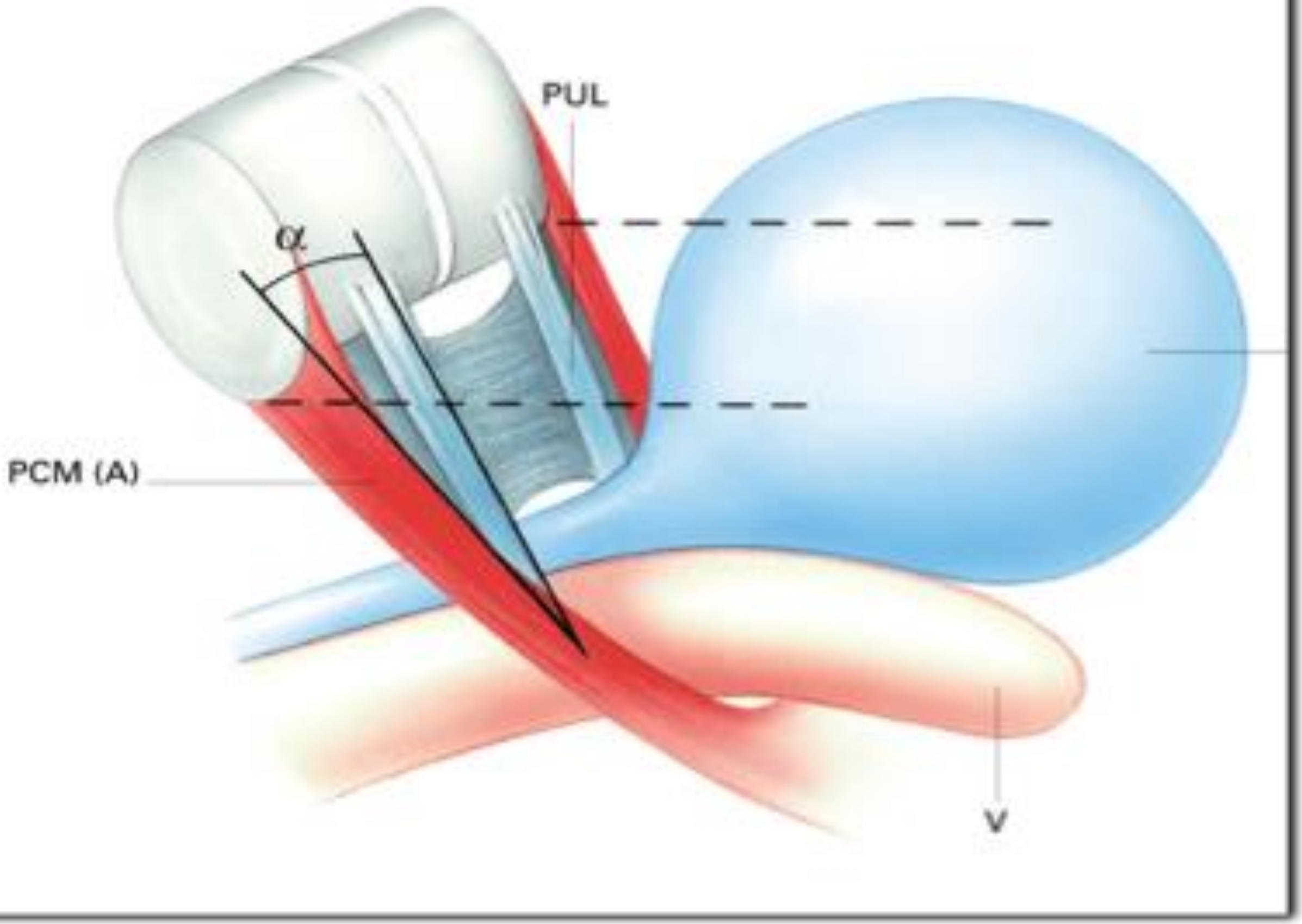
Detrusore si rilassa + Uretra si contrae

Detrusore si rilassa + Uretra si contrae ulteriormente

Detrusore si contrae + Uretra si rilassa

Detrusore si rilassa + Uretra si contrae


HYPOGASTRIC
NERVES
L1, L2, L3
PELVIC
SPLANCHNIC
NERVES
S2, S3, S4
Detrusor
(Body)
Trigone
Neck
(Base)
α-CONTRACTILE
β-INHIBITORY
CHOLINERGIC
CONTRACTILE


PUL
α
PCM (A)
V

Obstetrics Risk Factors and the Pelvic Floor

- Pelvic organ prolapse
- Urinary incontinence
- Fecal Incontinence
- Overactive bladder
- Sexual dysfunction

Obstetrics Risk Factors and the Pelvic Floor

- Bladder Pain Syndrome (interstitial cystitis)
- Myofascial pain
- Voiding Dysfunction
- Pelvic Organ Fistulae
- Recurrent urinary tract infections

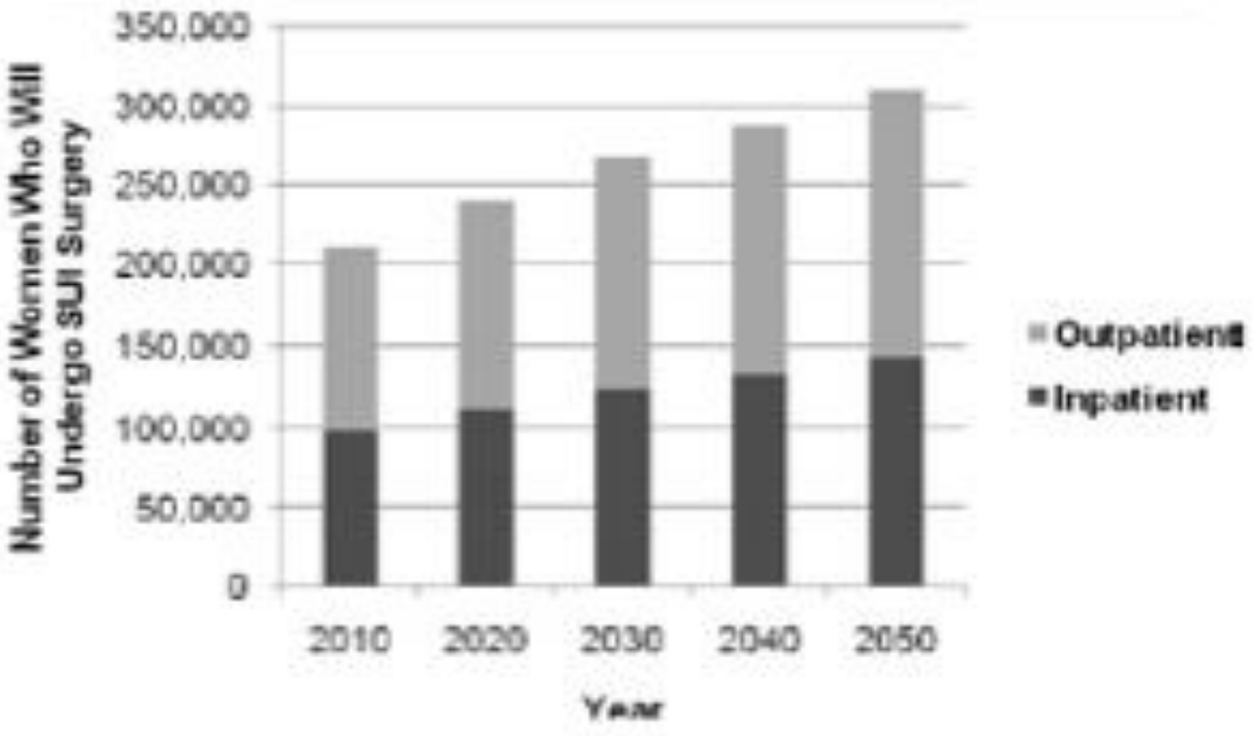
PFD's are common

- Overall prevalence in women of at least one PFD is 23.7%
- Increases with age
- 49.7% in those ≥80 years of age

Nygaard I, et al. Prevalence of symptomatic pelvic floor disorders in US women. Jama 2008.

FIGURE 1

Number of women who will undergo surgery for SUI in the United States from 2010 through 2050

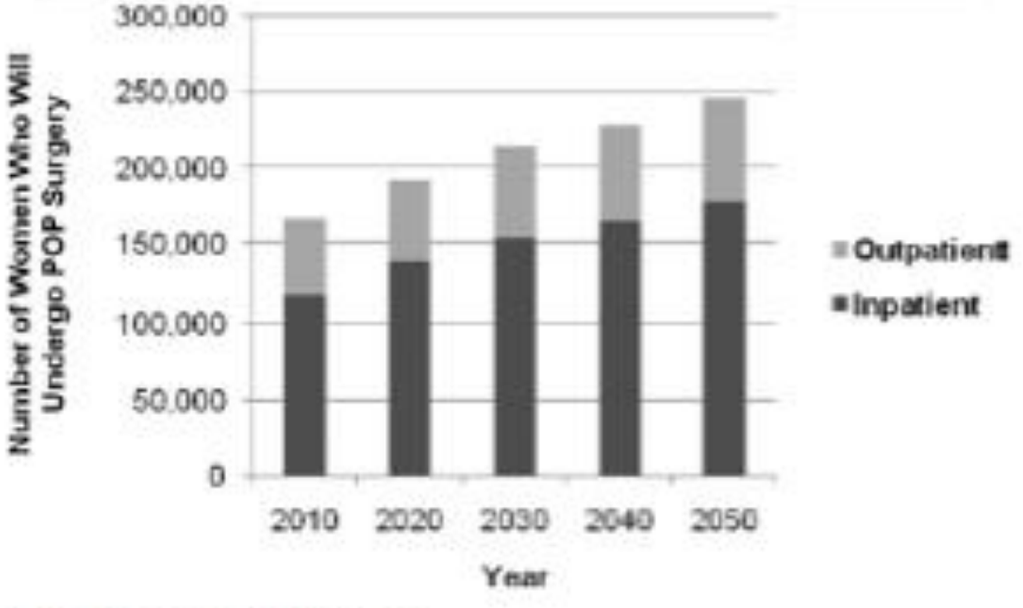


SUI, stress urinary incontinence.

Wu. Incontinence and prolapse surgeries, 2010 to 2050. Am J Obstet Gynecol 2011.

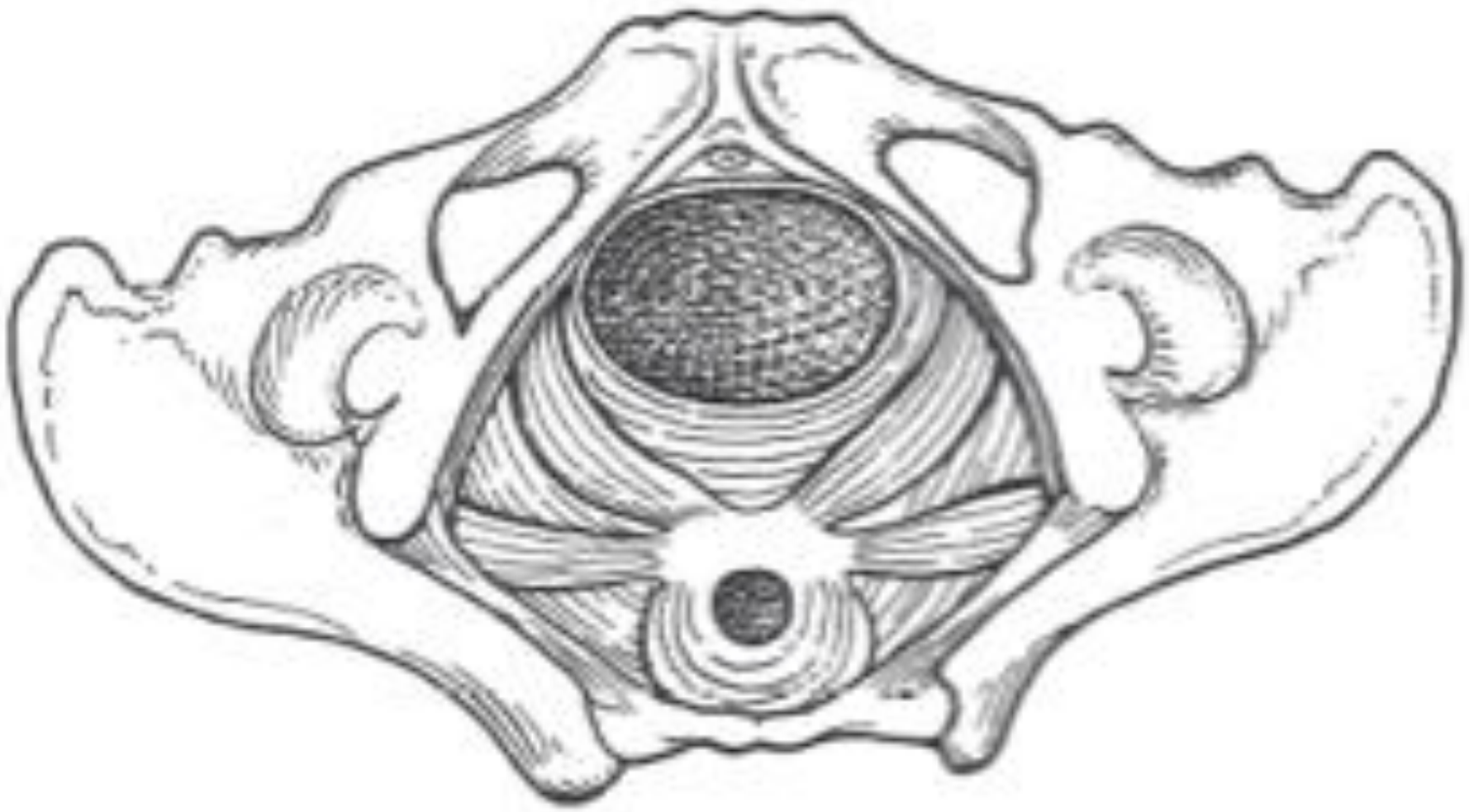
FIGURE 2

Number of women who will undergo surgery for POP in the United States from 2010 through 2050



POP, pelvic organ prolapse.

Wu. Incontinence and prolapse surgeries, 2010 to 2050. Am J Obstet Gynecol 2011.



Effect of Pregnancy on Pelvic Floor Anatomy and Physiology

Pelvic Floor & Delivery

- Pudendal nerve terminal motor latency

  - Normal latency in pregnant non-labored women

  - 43% women with prolonged PNTML after vaginal or operative delivery most normalized by 2 month postpartum

- MRI of pelvic floor muscles

    - No levator ani defects in nulliparous women

    - 20% primiparous women with levator ani defects

Sultan AH, et al. Pudendal nerve damage during labour:prospective study before and after childbirth. BJOG 1994.
2Snooks SJ, et al. Effect of vaginal delivery on the pelvic floor: a 5-year follow-up. British J Surgery 1990.
3Delancey JO, et al. The appearance of levator ani muscle abnormalities in MRIs after vaginal delivery. OG 2003.

Anal Sphincter Injury

- Incidence of anal sphincter injury noted after delivery is approximately 10% (range 1-24%)

- Endoanal ultrasound may show occult sphincter injury in up to 35% primiparous women within a few months postpartum

- Risks

  - Forceps delivery

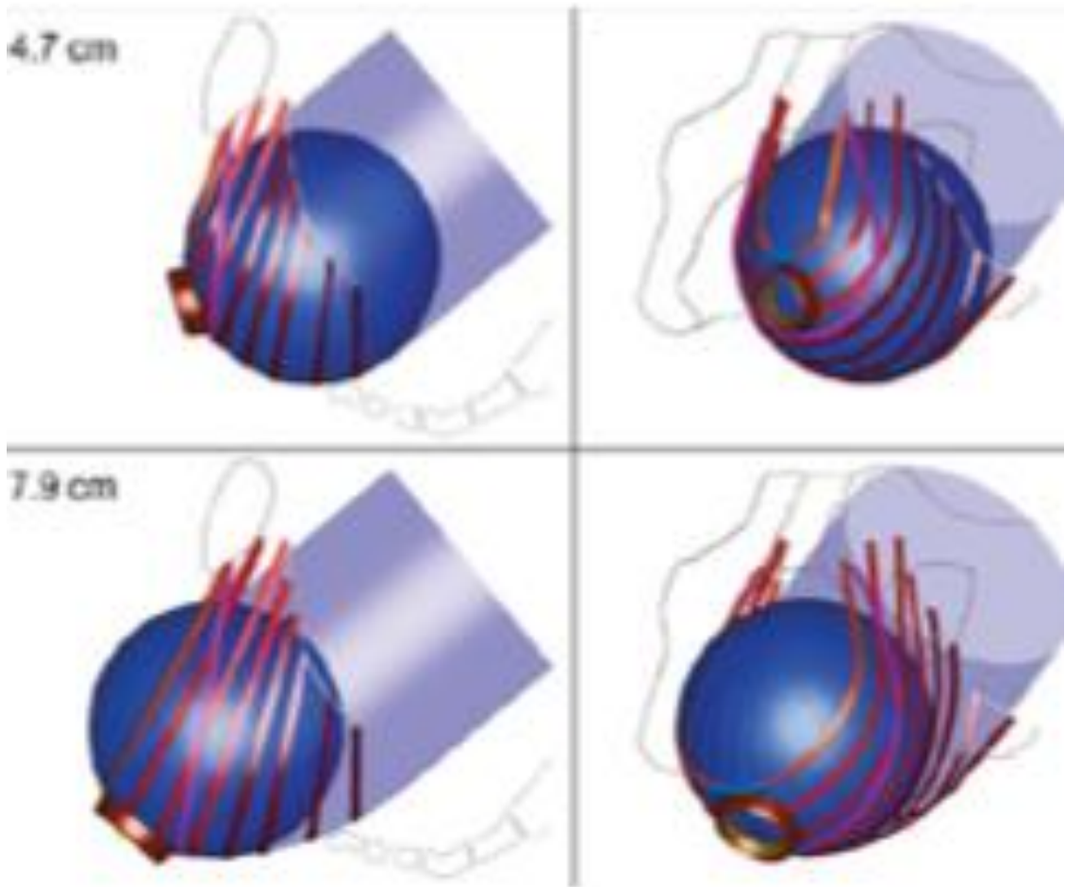
  - Prolonged second stage

  - Large birth weight

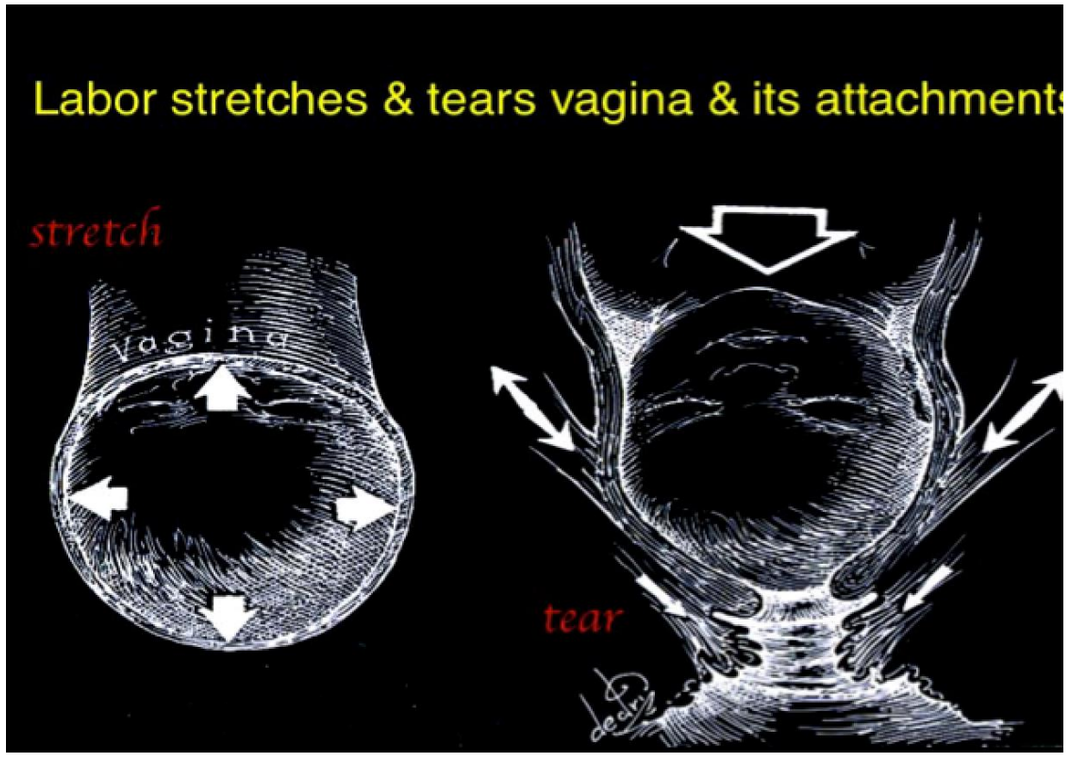
  - Midline episiotomy

  - Occiput posterior position

ge: Gynecologic, Obstetric, and Related Surgery. 2nd Edition. Nichols DH and Clarke-Pearson DL.


4.7 cm
7.9 cm

Lorita Cito


Labor stretches & tears vagina & its attachments
stretch
vagina
tear

Quantity and distribution of levator ani stretch during simulated vaginal childbirth

Lennox Hoyte, MD; Margot S. Damaser, PhD; Simon K. Warfield, PhD; Giridhar Chukkapalli, PhD; Amitava Majumdar, PhD; Dong Ju Choi, PhD; Abhishek Trivedi, PhD; Petr Kryal, PhD

AJOG American Journal of Obstetrics & Gynecology

2008

FIGURE 3
Axial view showing areas of stretch

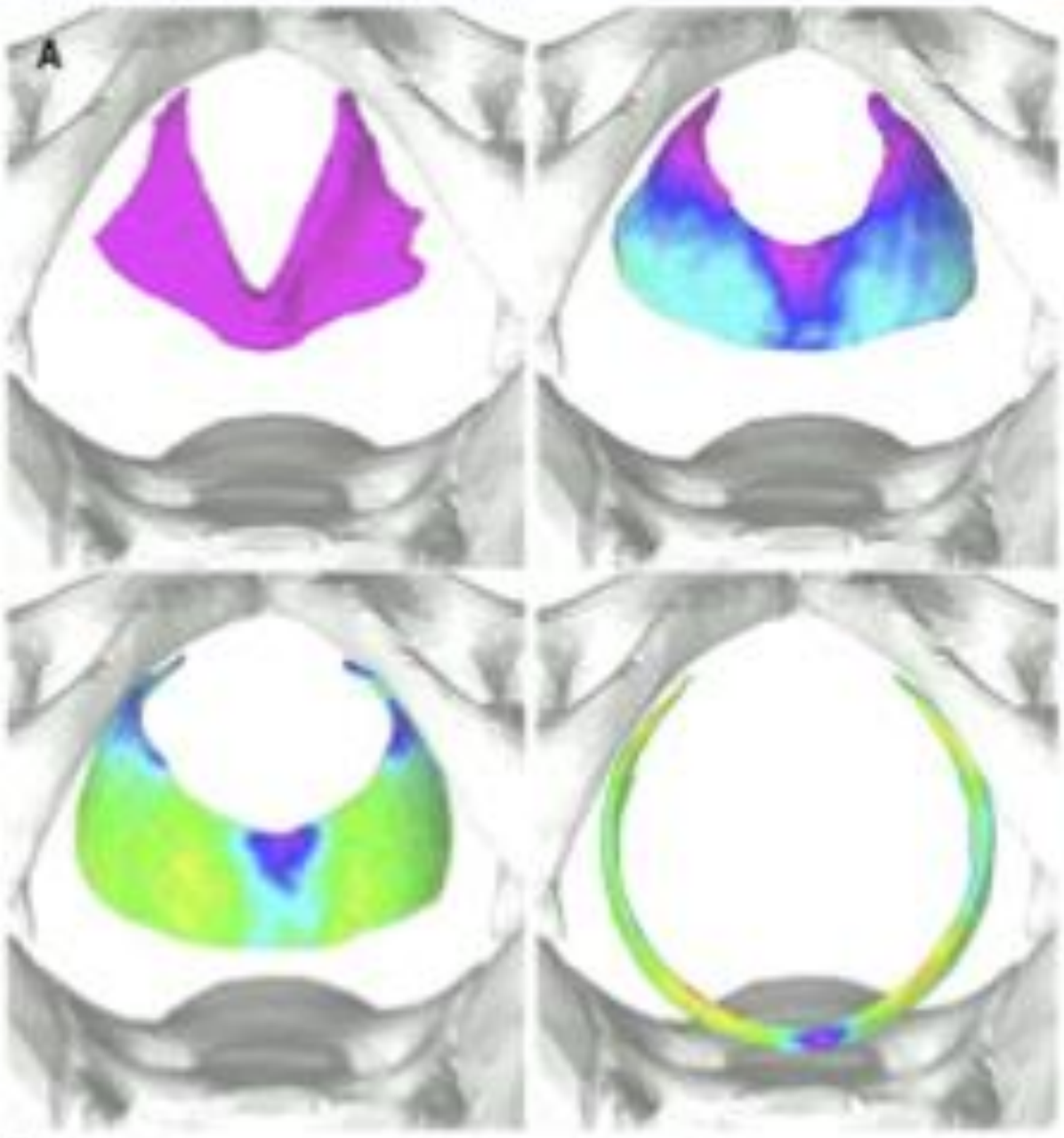
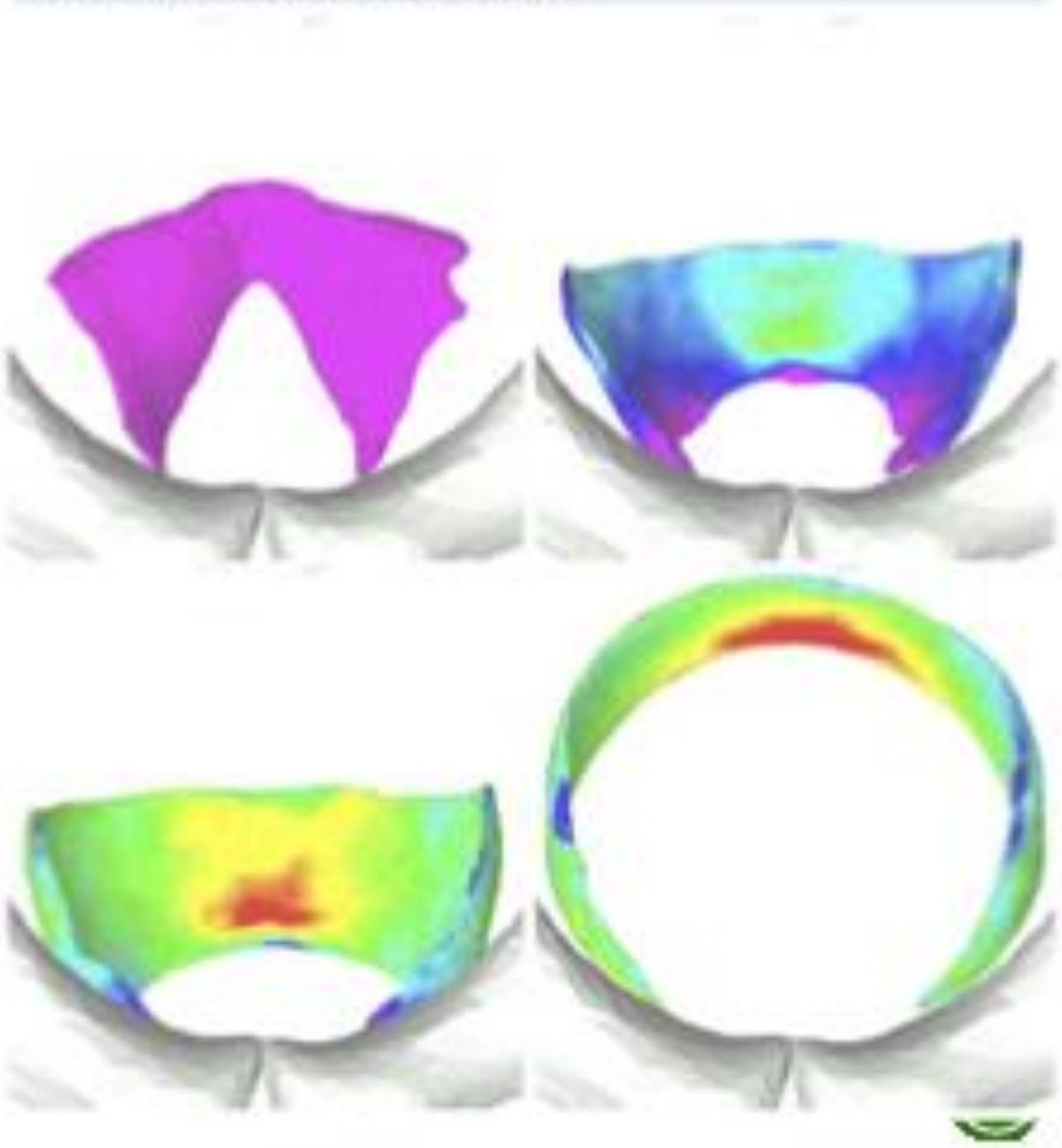


FIGURE 4
Coronal view showing areas of stretch

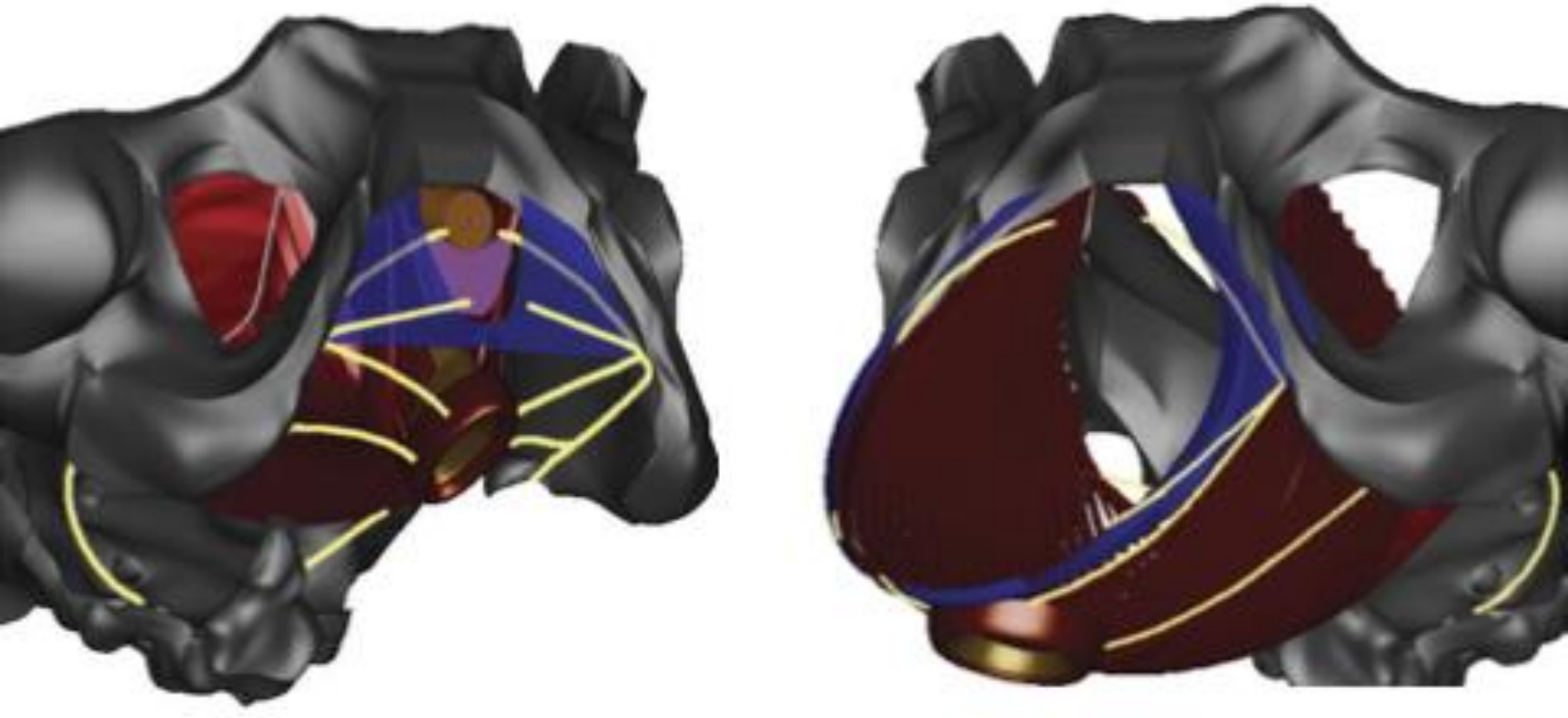


Pudendal nerve stretch during vaginal birth: A 3D computer simulation

AJOG American Journal of Obstetrics & Gynecology

2004

Kuo-Cheng Lien, MS,[a,*] Daniel M. Morgan, MD,[c] John O. L. Delancey, MD,[c]
James A. Ashton-Miller, PhD[a,b]



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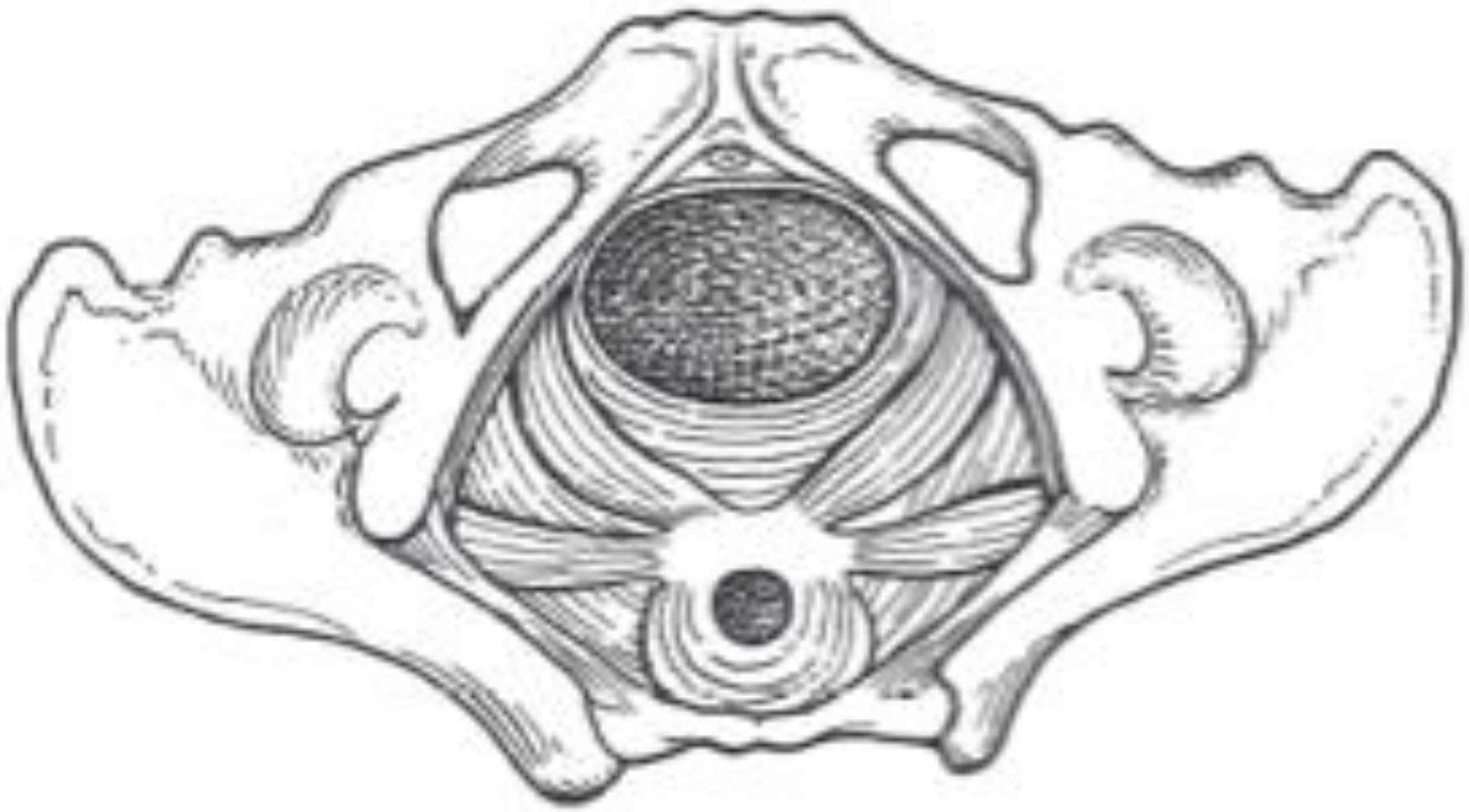
Kuo-Cheng Lien, MS,[a,*] Daniel M. Morgan, MD,[c] John O. L. Delancey, MD,[c] James A. Ashton-Miller, PhD[a,b]

25% in nerves' strain is the known threshold to cause permanent damages in peripheral nerves

Brown R, et al. Effects of acute graded strain on efferent conduction properties in the rabbit tibial nerve. Clin Orthop 1993:288-94.

Jou IM, et al. Changes in conduction, blood flow, histology, and neurological status following acute nerve-stretch injury induced by femoral lengthening. J Orthop Res 2000;18:149-55.

Huan SC, Chang CW. Electrophysiological evaluation of neuromuscular functions during limb lengthening by callus distraction. J Formos Med Assoc 1997;18:172-8.



Effect of Pregnancy on Pelvic Floor Function

Stress Urinary Incontinence

- Prevalence SUI increases during pregnancy
- Up to 1/3 of women will report SUI postpartum
- SVD with 3 times increased likelihood of SUI compared to CD without labor
- No difference in rates of stress urinary incontinence based upon mode of delivery

  - 2 years and 5 years after delivery

11.
Hannah ME, et al. Term Breech Trial Collaborative Group. AJOG 2004;191:917-27.
Rortveit G, et al. Norwegian EPICONT Study. NEJM 2003.

Swedish Registry Data

- >100,000 women, Mean follow-up >25 years

- Women who had only vaginal deliveries have a **3-fold increased likelihood of UI and a 9-fold increased likelihood of POP**, compared to women who only had cesarean deliveries

- Risks increased with number of vaginal deliveries

NNT to prevent surgery for SUI = 357

NNT to prevent surgery for POP = 135

Leijonhufvud A, et al. Risks of stress urinary incontinence and pelvic organ prolapse in relation to m

Anal Incontinence

- Anal sphincter laceration doubles risk of anal incontinence 6 months after delivery (26%), compared to vaginal delivery without anal sphincter laceration (11%)

  - Cesarean not entirely protective (7.6% with AI)

- Impact of delivery type declines with age

Borell-France D, et al. Fecal and urinary incontinence in primiparous women. OG 2006. Nygaard

Systematic Review on Delivery and Anal Incontinence

- 21 Studies comparing postpartum anal incontinence in women who had cesarean Vs. vaginal delivery

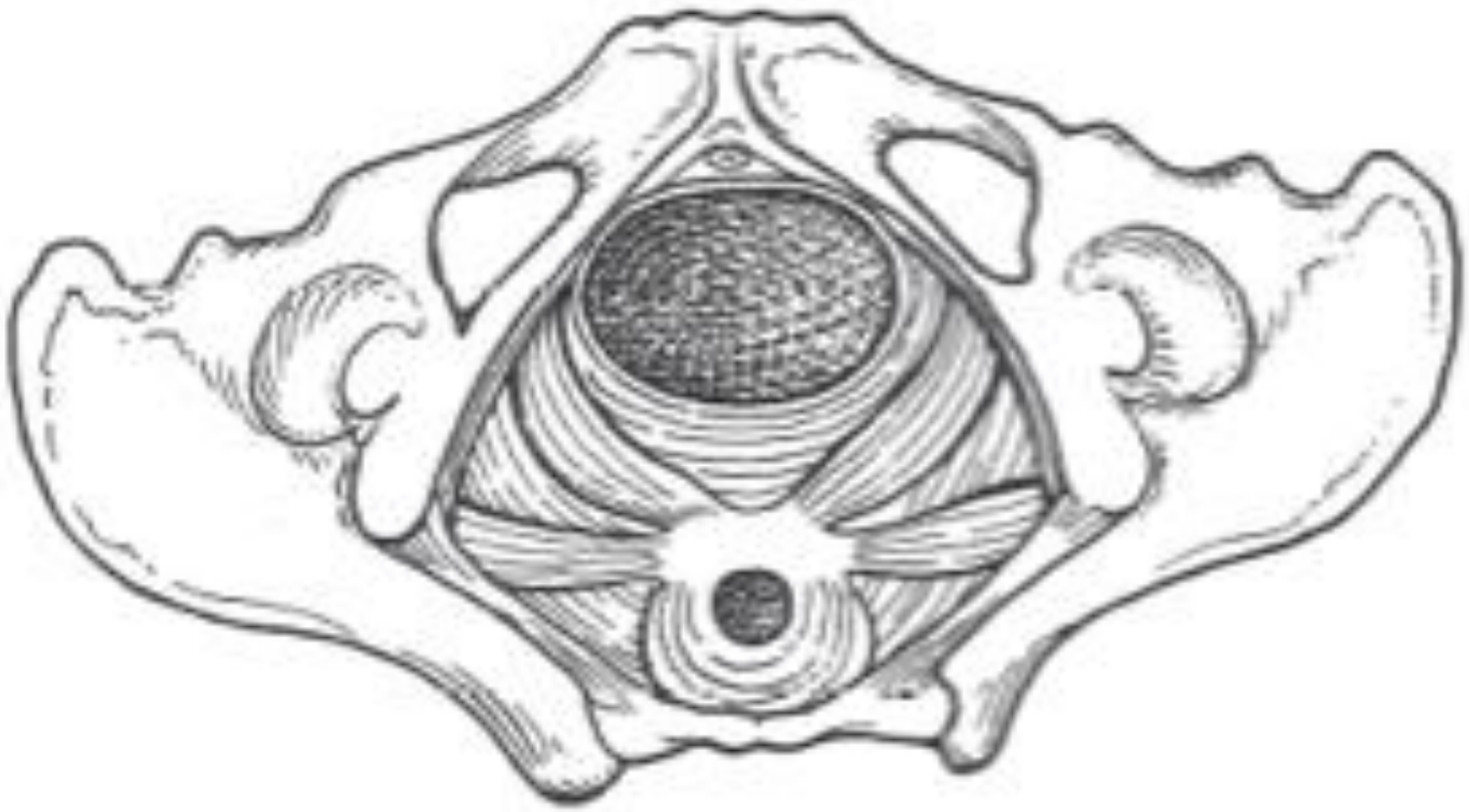
  - 31,698 women (6,028 CD and 25,170 VD)

- Only 1 RCT (breech presentation)

- Only one study showed CD with decreased risk AI

- Conclusion → CD not recommended for AI prevention in average risk women

Nelson RL, et al. Cesarean delivery for the prevention of anal incontinence. Cochrane Review 201



Pelvic Floor Muscle Training for Prevention of Pelvic Floor Disorders Following Pregnancy

Systematic Review: PFMT for UI and FI

- 22 RCT's of PFMT versus usual antenatal or postnatal care

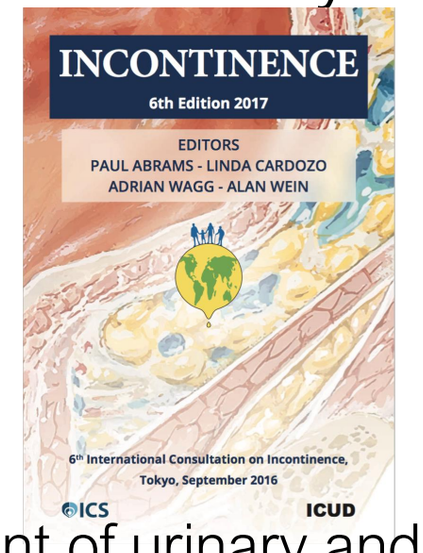
  - 8485 women (4231 PFMT and 4254 controls)

- Antenatal PFMT: with 30% less likelihood of UI symptoms 6 months postpartum

- Postnatal PFMT: if SUI symptoms at 3 months, 40% less likely to report UI at 12 months

- Insufficient evidence for FI

- Little evidence regarding long-term effects



Hay-Smith BR, et al. Pelvic floor muscle training for prevention and treatment of urinary and faec

"In the absence of maternal or fetal indications for cesarean delivery, a plan for vaginal delivery is safe and appropriate and should be recommended to patients."

ACOG Committee Opinion: Cesarean Delivery on Maternal Request. April 2013.

prevention & treatment

Urinary Incontinence

Prevention

Lifestyle modifications

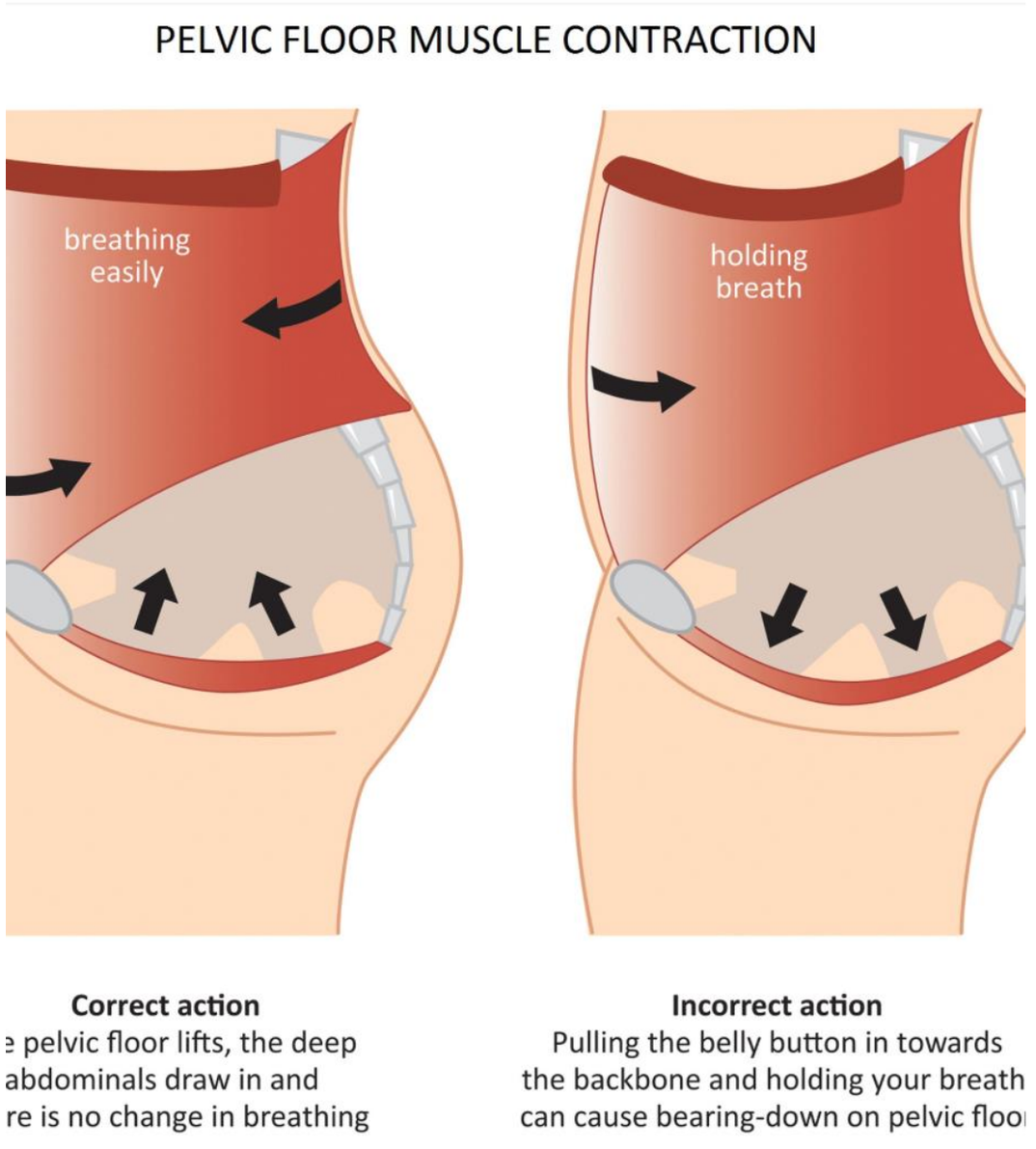
- Weight loss (Gr. Racc. A)
- PFMT in pregnancy (Gr. Racc. A)
- Caffeine intake red. (Gr. Racc. B)
- Phys. activity (Gr. Racc. C)
- Stop smoking (Gr. Racc. C)

treatments
SUI (or MUI)

- PFMT (Gr. Racc. A)
- VC (Gr. Racc. B)
- Continence Pessaries (Gr. Racc. B)
- Drug therapy (Gr. Racc. B)
- Surgery (Gr. Racc. B)
- EStim no adv. (Gr. Racc. B)

treatments
UUI (or MUI)

- PFMT=BT (Gr. Racc. B)
- PFMT>Oxybutinine (Gr. Racc. B)
- PTNS>Tolterodine, also in assoc. (Gr. Racc. B)
- SNS (Gr. Racc. B)
- EStim no adv. (Gr. Racc. B)



TREATMENTS
LUTS/OAB/DO

BLADDER SYMPTOMS/DETRUSOR OVERACTIVITY

It has been estimated that more than 50 million people in the developed world are affected by urinary incontinence, and an abundance of drugs has been

went untreated. Only 25.6% of those treated were men. (Helfand et al., 2010). As underlined by several other subcommittees, drugs may be efficacious in some patients, but they do have side effects, and frequently are not continued indefinitely. Hence it would be worth considering them as an adjunct to conservative therapy.

Table 2: Drugs used in the treatment of LUTS/OAB/ DO. Assessments according to the Oxford system (modified)

	Level of Evidence	Grade of Recommendation
Antimuscarinic drugs		
Atropine, hyoscyamine	3	C
Darifenacin	1	A
Fesoterodine	1	A
Imidafenacin	1	A
Propantheline	2	B
Solifenacin	1	A
Tolterodine	1	A
Trospium	1	A
Drugs with mixed actions		
Oxybutynin	1	A
Propiverine	1	A
Flavoxate	2	D
Drugs acting on membrane channels		
Calcium antagonists	2	D
K-Channel openers	2	D
Antidepressants		
Imipramine	3	C
Duloxetine	2	C
Alpha-AR antagonists		
Alfuzosin	3	C
Doxazosin	3	C
Prazosin	3	C
Terazosin	3	C
Tamsulosin	3	C
Silodosin	3	C
Naftopidil	3	C

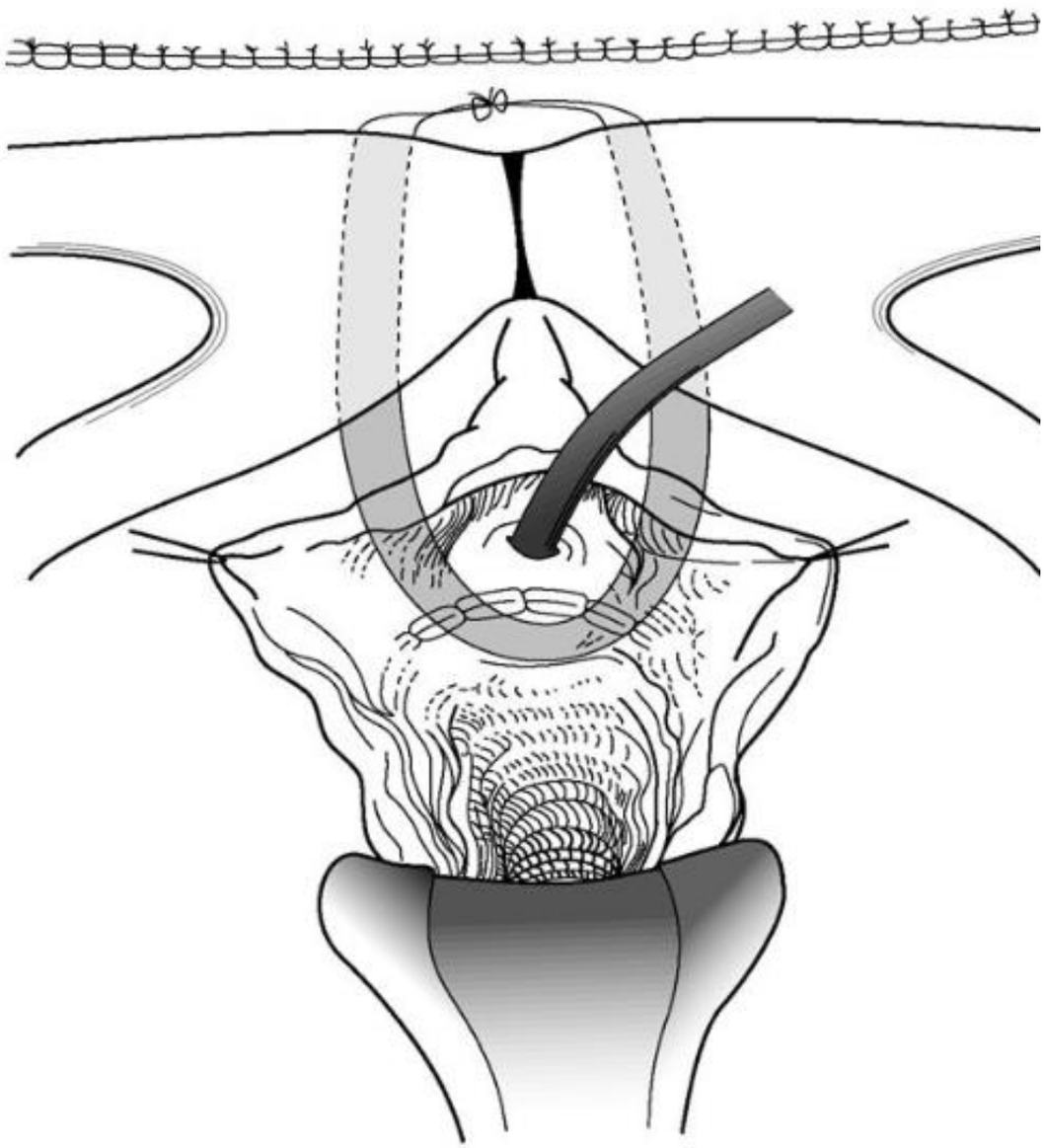
treatments
any type of UI

- Bladder training 1st (Gr. Racc. A)
- Bladder training for freq./nocturia (Gr. Racc. B)
- Bladder training=Drug Ther. (Gr. Racc. B) in UUI
- MStim (Gr. Racc. D)

treatments
surgery for SUI

Type Evidence level

- Autologous fascial slings (1)
- MUS (1)
- MSIS (2)
- Colposuspensions LPT (2)
- Colposuspensions LPS (3)
- Bulking agents (3-4)



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