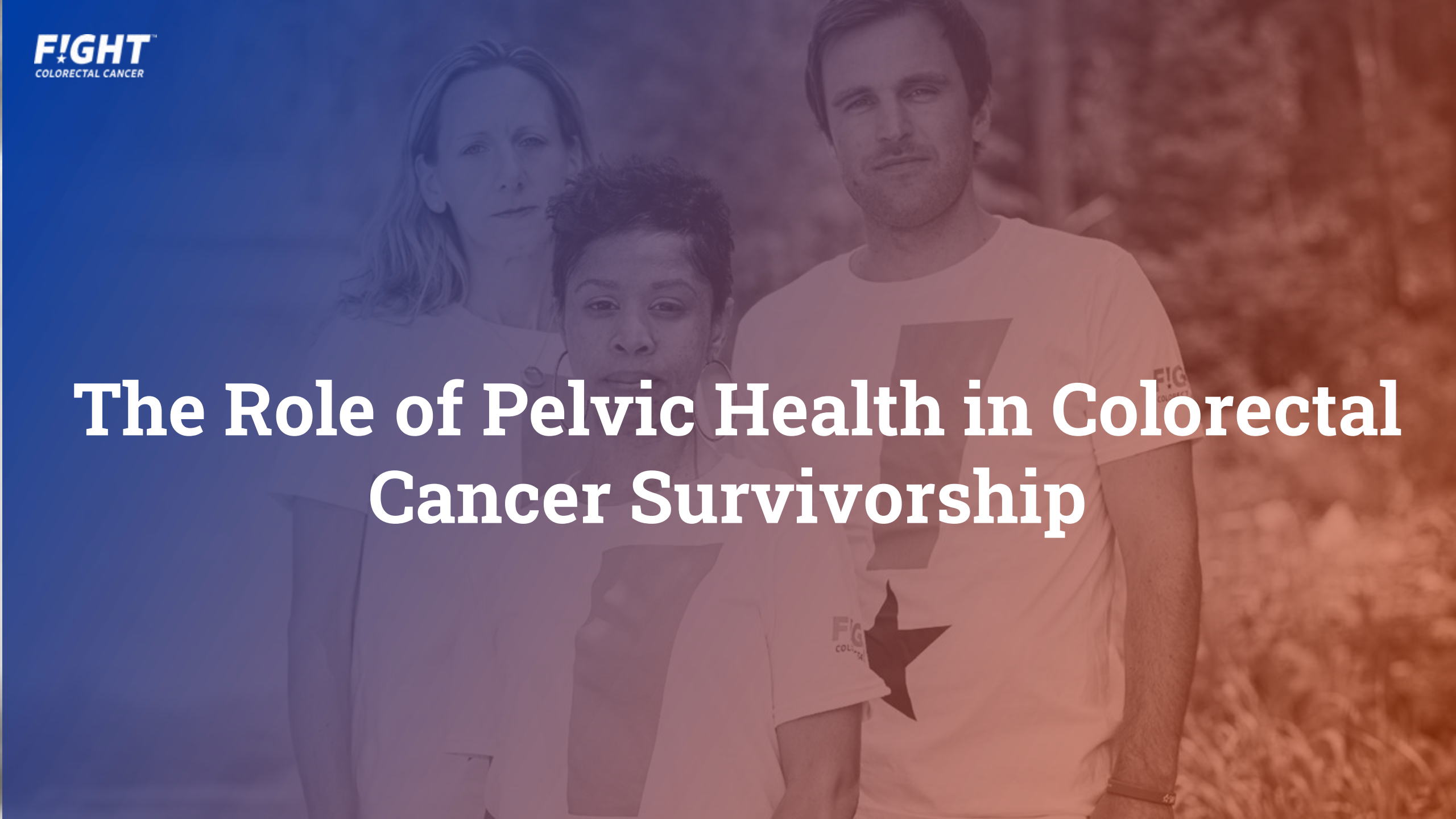
F!GHT™

COLORECTAL CANCER

OUR WEBINAR WILL BEGIN SHORTLY



The Role of Pelvic Health in Colorectal Cancer Survivorship

TODAY'S WEBINAR

01 **QUESTIONS**

Ask a question in the panel on the right side of your screen

02 **WEBINAR ARCHIVE**

Watch a recording of this webinar on the Fight CRC website. Visit FightCRC.org

03 **TWEET ALONG!**

Follow along on Twitter. Use the hashtag #CRCWebinar

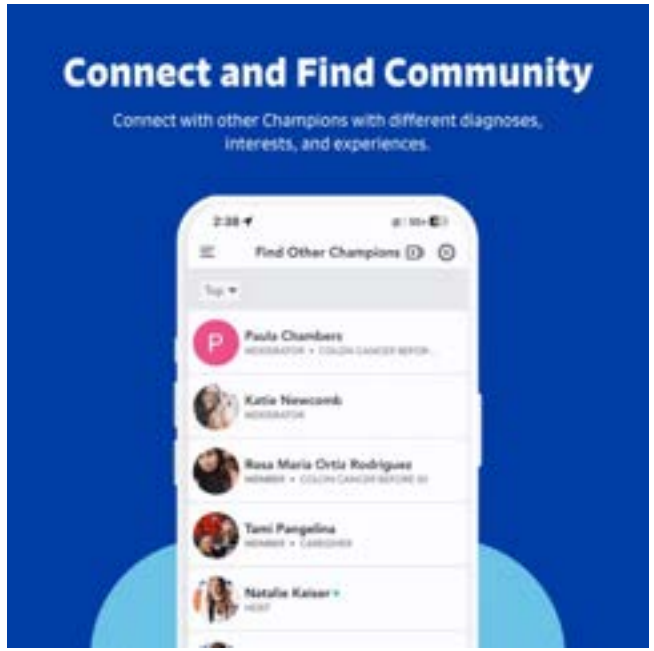
FIGHT COLORECTAL CANCER

Resources

Fight CRC offers a wide variety of resources for those touched by colorectal cancer. Visit FightCRC.org to view, download, and order the latest resources.

Dedicated virtual meetup spaces

Free Resources



Community of Champions App

FIGHT™ COLORECTAL CANCER

The information and services provided by Fight Colorectal Cancer are for general informational purposes only. The information and services are not intended to be substitutes for professional medical advice, diagnoses or treatment.

If you are ill, or suspect that you are ill, see a doctor immediately. In an emergency, call 911 or go to the nearest emergency room.

Fight Colorectal Cancer never recommends or endorses any specific physicians, products or treatments for any condition.

TODAY'S PRESENTERS

Eileen Johnson, DPT

Dr. Johnson is a physical therapist at USC Physical Therapy. She helped develop the Pelvic Floor Pre-Operative Class for patients undergoing prostate and bladder cancer surgeries.

Danielle Ripley-Burgess

Danielle Ripley-Burgess is Fight CRC's Chief Storyteller and a 3x colorectal cancer survivor. She was first diagnosed at age 17.

Role of Pelvic Health in Colorectal Cancer Survivorship

Eileen V. Johnson
Doctor of Physical Therapy
Board Certified Women's Health Specialist

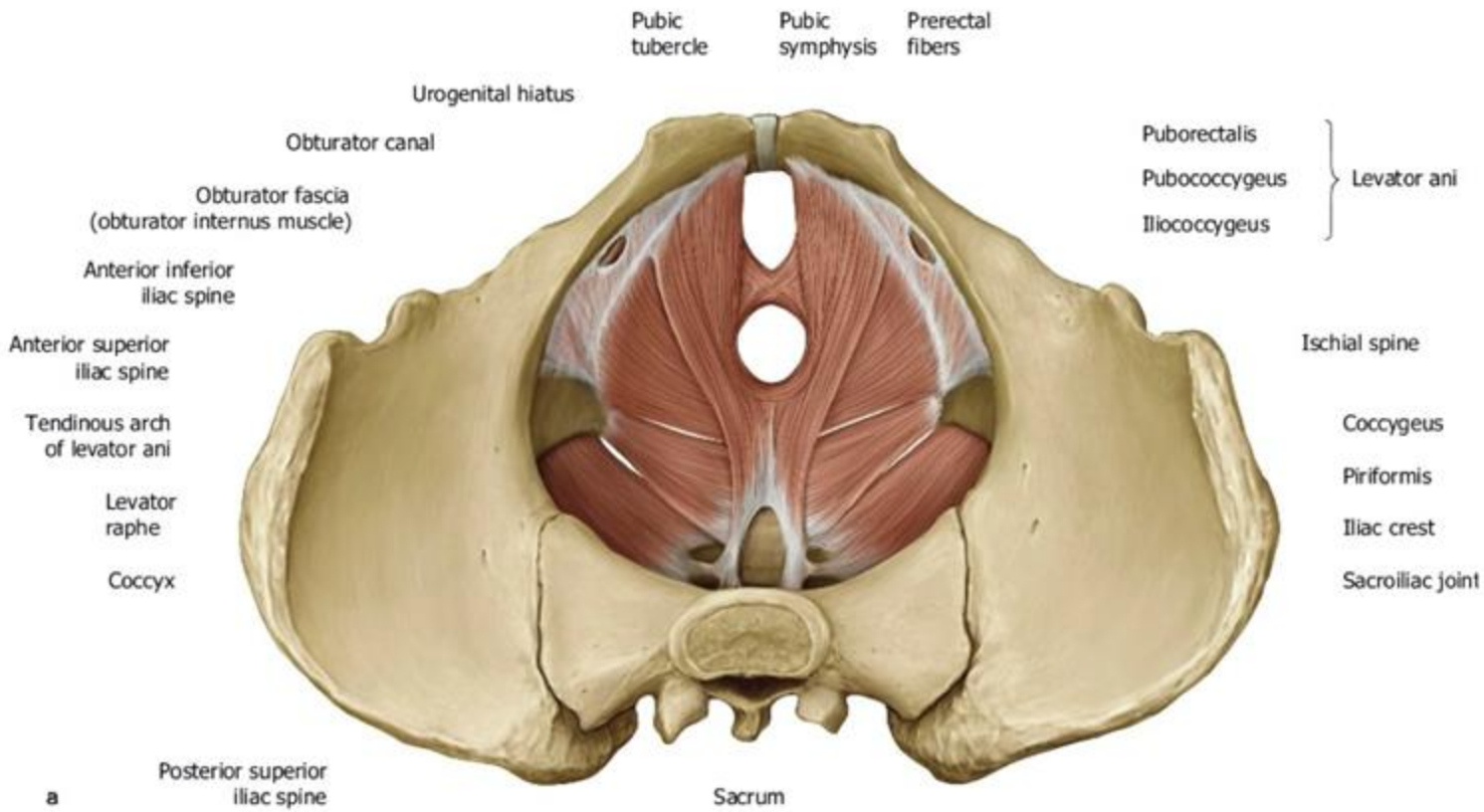
OBJECTIVES

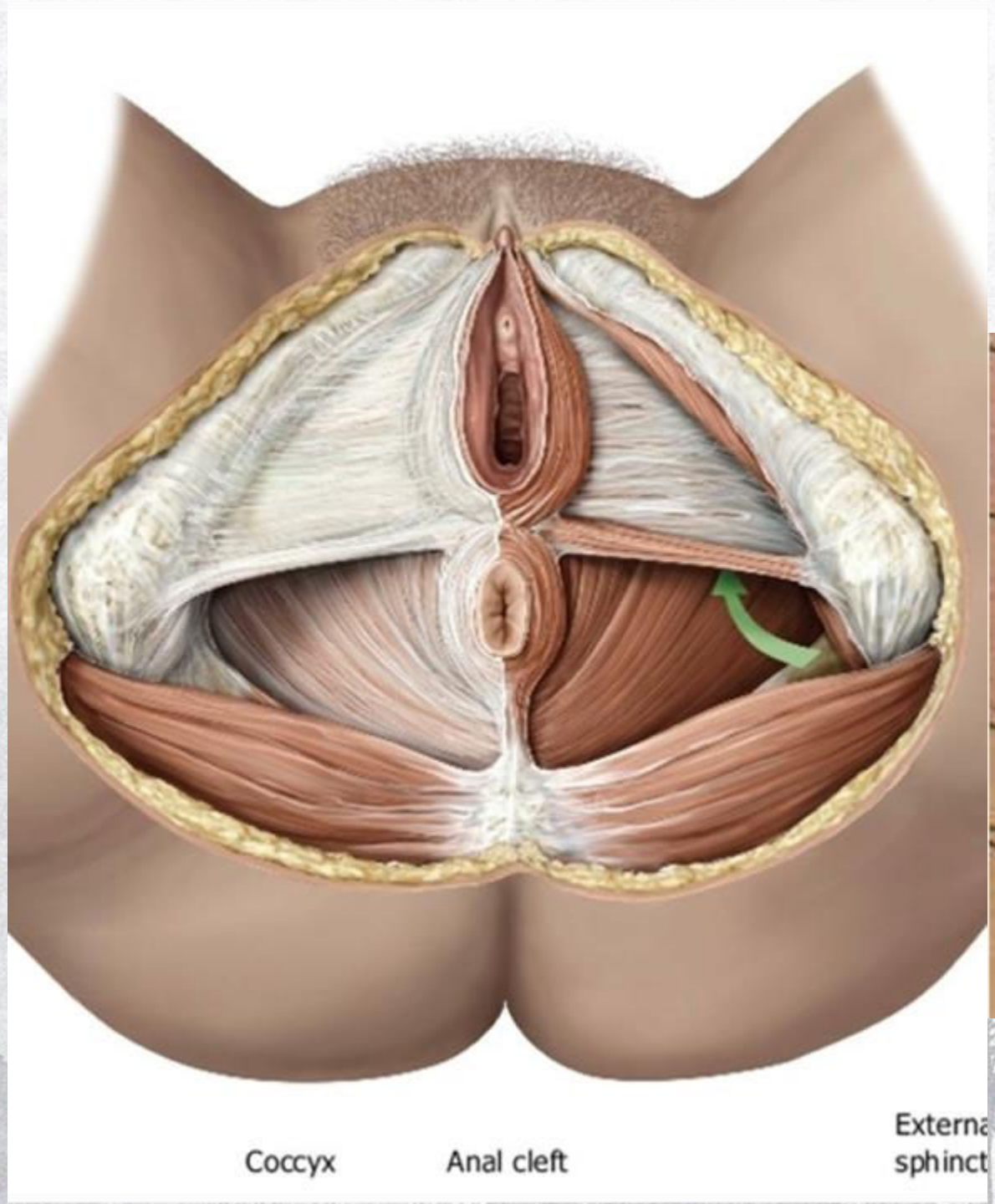
- Understand the role of the pelvic floor muscles
- Understand possible changes after colorectal cancer treatment
- Improve awareness of pelvic floor therapy interventions and ways to regain your pelvic health

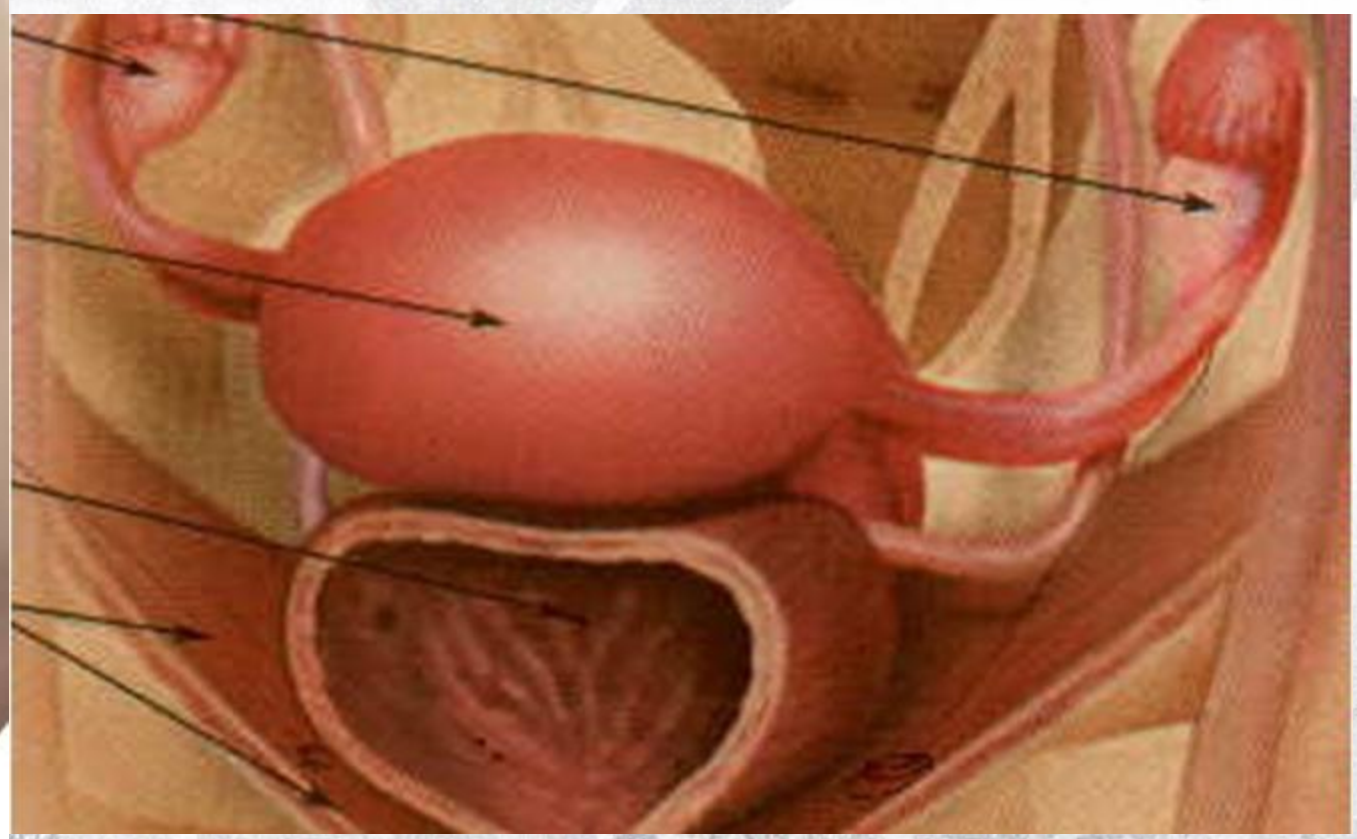
ROLE OF PELVIC FLOOR

1. Sphincteric
2. Support
3. Sexual Function
4. Stabilization

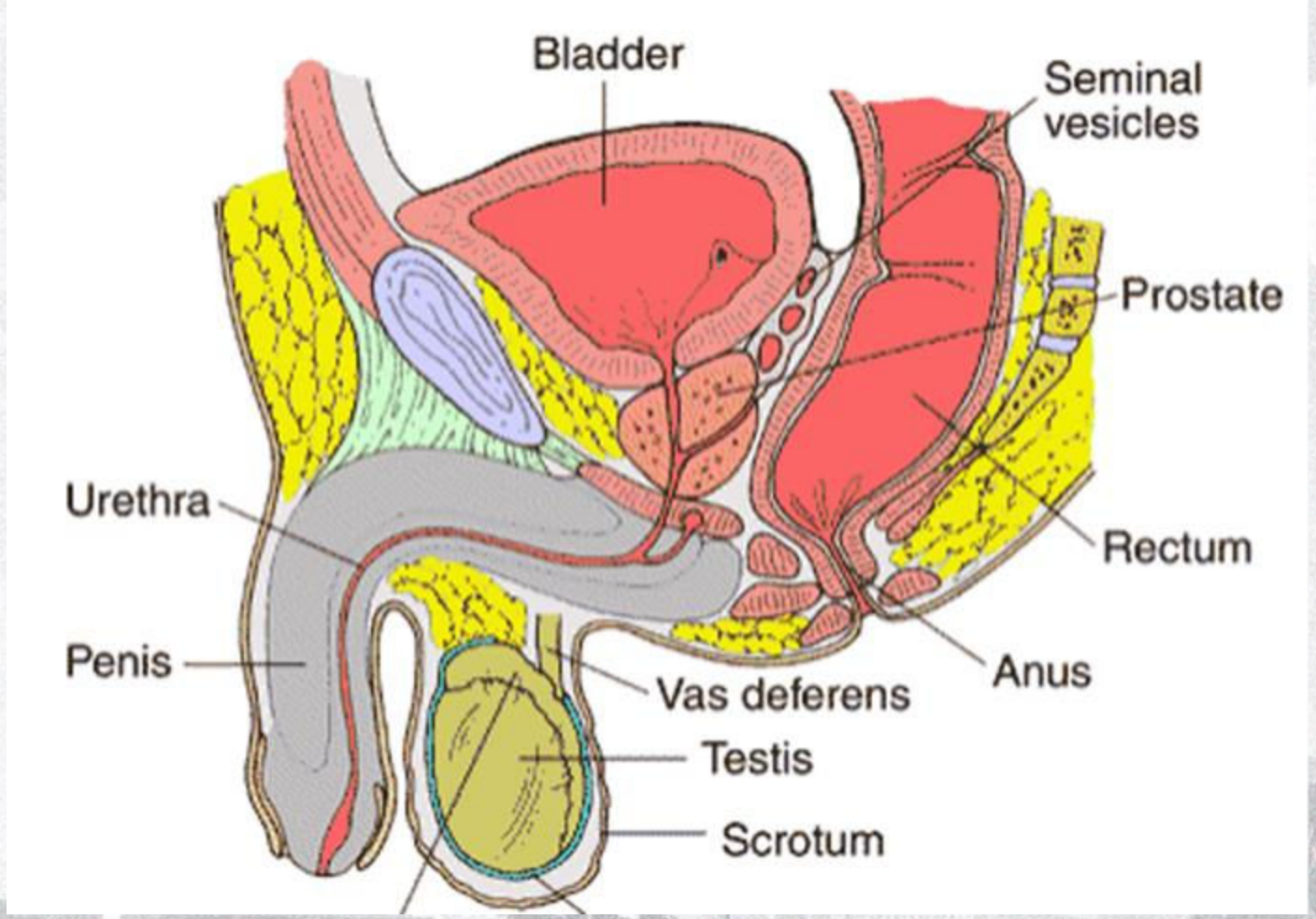
The Levator Ani Muscles

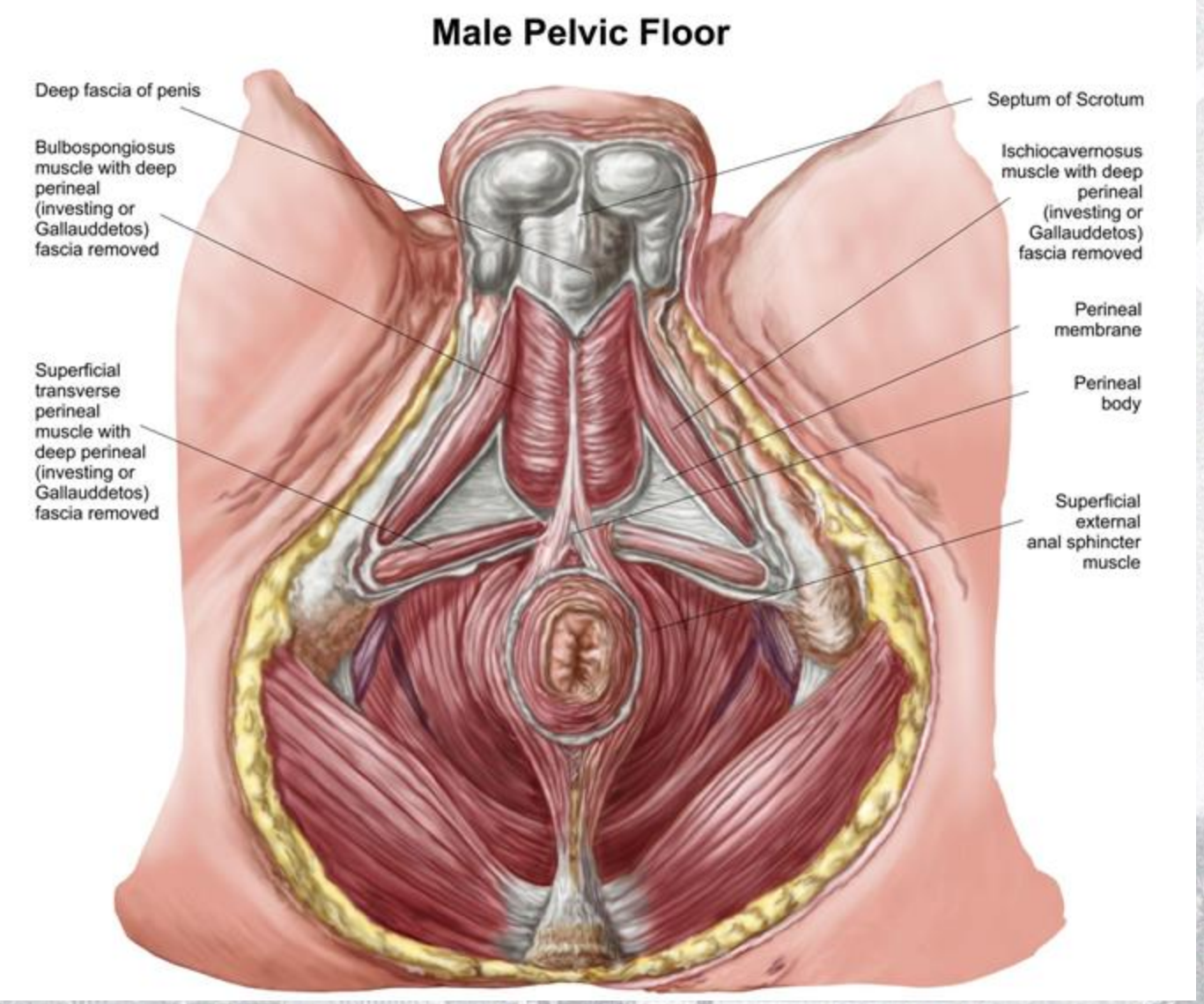



Coccyx
Anal cleft
Externa
sphinct



Male Pelvic Anatomy




Male Pelvic Floor
Deep fascia of penis
Bulbospongiosus muscle with deep perineal (investing or Gallauddetos) fascia removed
Superficial transverse perineal muscle with deep perineal (investing or Gallauddetos) fascia removed
Septum of Scrotum
Ischiocavernosus muscle with deep perineal (investing or Gallauddetos) fascia removed
Perineal membrane
Perineal body
Superficial external anal sphincter muscle

Prevalence of Pelvic Floor Dysfunction

- 1 out of 4 women
- 1 out of 10 men
- 16 million adults affected in USA
- Only 1/3 of those affected seek help
- Over 28 billion dollars spent annually for treatment and products

Prevalence: Oncology Specific

- Prevalence estimates of dyspareunia after treatment for gynecological cancer range from 12% to 58% after cervical cancer and 7% to 39% after endometrial cancer
- Urinary incontinence prevalence after pelvic region cancer treatment range from 4% to 76%
- Daily urinary incontinence of 24% and 29% and moderate to severe urinary incontinence of 47% after endometrial cancer
- Fecal incontinence prevalence estimated between 2% and 37%
- Rates of monthly or more frequent fecal incontinence of 26% after radiotherapy. (Brennan et. Al, 2020)

Colorectal Cancer: Bowel Dysfunction

- Lower anterior resection syndrome **(LARS)**: Collection of symptoms to those who have undergone surgical treatment for rectosigmoid or rectal cancers (partial or full resection).
- 19-90% prevalence, with up to 47.4% experiencing symptoms at 6 month follow-up visits
- Other considerations: Partial ostomy post-surgery and PT implications.

LARS Risk Factors

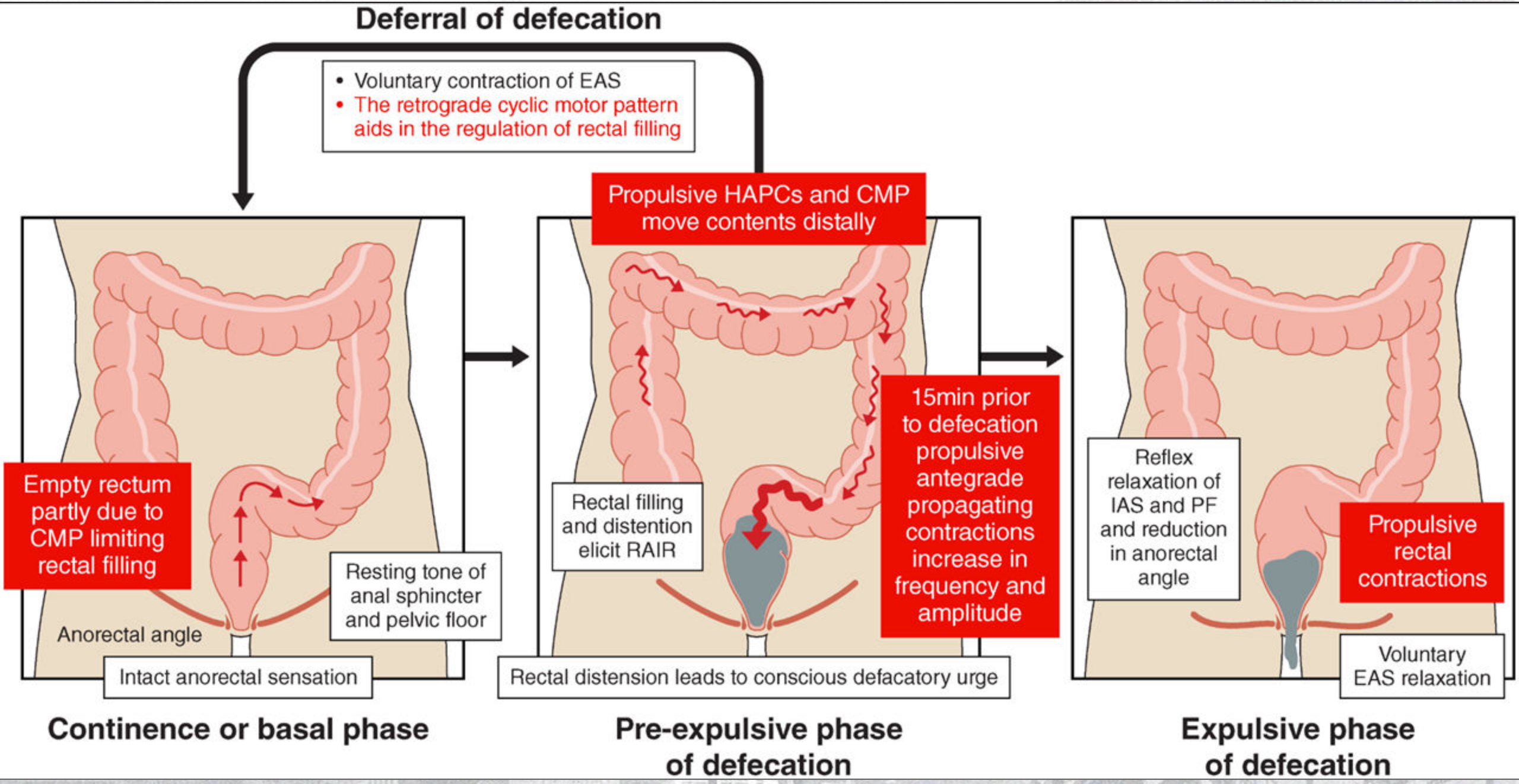
- Low anastomotic height
- Adjuvant radiation therapy
- Tumor height
- Mesorectal excision
- Female gender
- Duration of defunctioning stoma prior to reversal are associated with major LARS

LARS Symptoms

- Fecal urgency
- Bowel frequency/incomplete emptying
- Fecal incontinence
- Stool fragmentation (sensation/urge to have a BM every 1-2 hrs, persistent pressure in the rectum simulating urge to have BM)

80% of patients with LARS feel the condition negatively impacts their QOL

HUGE impact on one's quality of life and psychosocial well being.


Deferral of defecation
• Voluntary contraction of EAS
• The retrograde cyclic motor pattern aids in the regulation of rectal filling
Propulsive HAPCs and CMP move contents distally
Empty rectum partly due to CMP limiting rectal filling
Resting tone of anal sphincter and pelvic floor
Anorectal angle
Intact anorectal sensation
Rectal filling and distention elicit RAIR
15min prior to defecation propulsive antegrade propagating contractions increase in frequency and amplitude
Rectal distension leads to conscious defacatory urge
Reflex relaxation of IAS and PF and reduction in anorectal angle
Propulsive rectal contractions
Voluntary EAS relaxation
Continence or basal phase
Pre-expulsive phase of defecation
Expulsive phase of defecation

LARS Medical Treatment

- Medical management: Antidiarrheal meds, bulking agents, sacral neuromodulation
- PFMT for bowel symptoms after Total Mesorectal excision (TME) resulted in lower proportions and faster recovery of bowel symptoms up to 6 months after surgery/stoma closure
- At 4 months, the total LARS and COREFO scores were significantly decreased in the intervention group, and PFMT had a beneficial effect on stool frequency, incontinence, and clustering

Twice as many patients vs. control reached acceptable function at 4 months:

  - Ave # BM, fecal incontinence, ave # cluters/day
- PFPT should be first line treatment for bowel dysfunction post-CRC

What to expect on your PT Evaluation

- Bowel health-related questions
  - How many times per day do you have a bowel movement (BM)?
  - DO you experience diarrhea? Constipation? Combo?
    - If so, what has or has not helped these issues?
  - Do you feel like you need to use excessive toilet paper after a BM?
  - Do you have a history of fissures or hemorrhoids?
    Do you experience sensations of rectal pressure of fullness even when you don't have to go?
  - Do you have to strain to have a BM?
    - If so, how long have you been doing this?
  - Do you experience burning before, during, or after a BM?
    Do you experience skin irritation before, during, or after a BM?
  - How long do your symptoms surrounding your BMs last?
  - Do you ever lose/leak fecal matter when you do not want to?

Nesin, J., Nesin, M., & Sarton, J. (2019) *Pelvic floor and more- pelvic pain: Assessment & treatment strategies for pelvic pain*. Pelvic Education Alliance. Pg 49-52.

Pelvic Floor Awareness Training

Isolating the Pelvic Floor Muscles

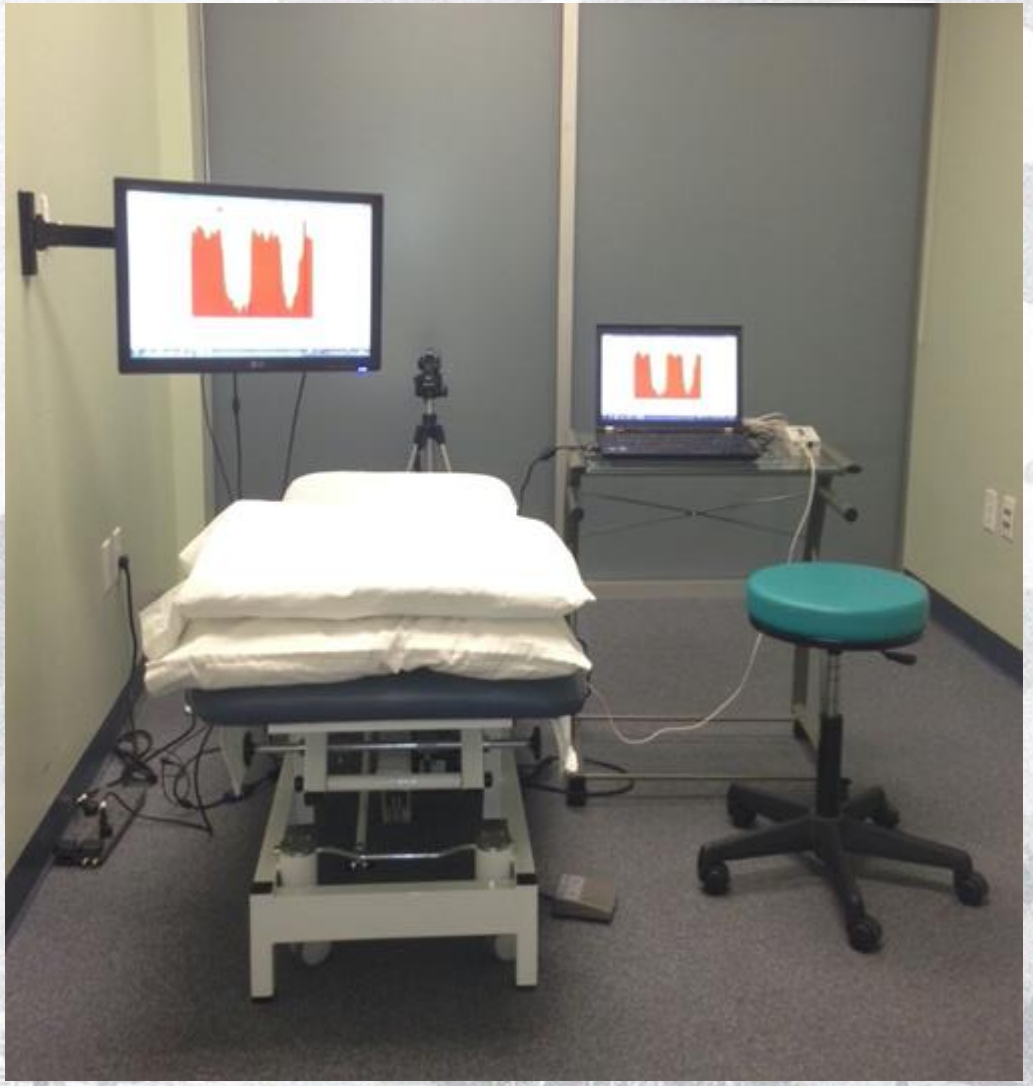
Verbal cues / responses

- holding back gas expulsion
- holding urine in during urge
- stopping urine stream
- “clearing the line”
- penis wiggle
- contraction during ejaculation

Common Errors

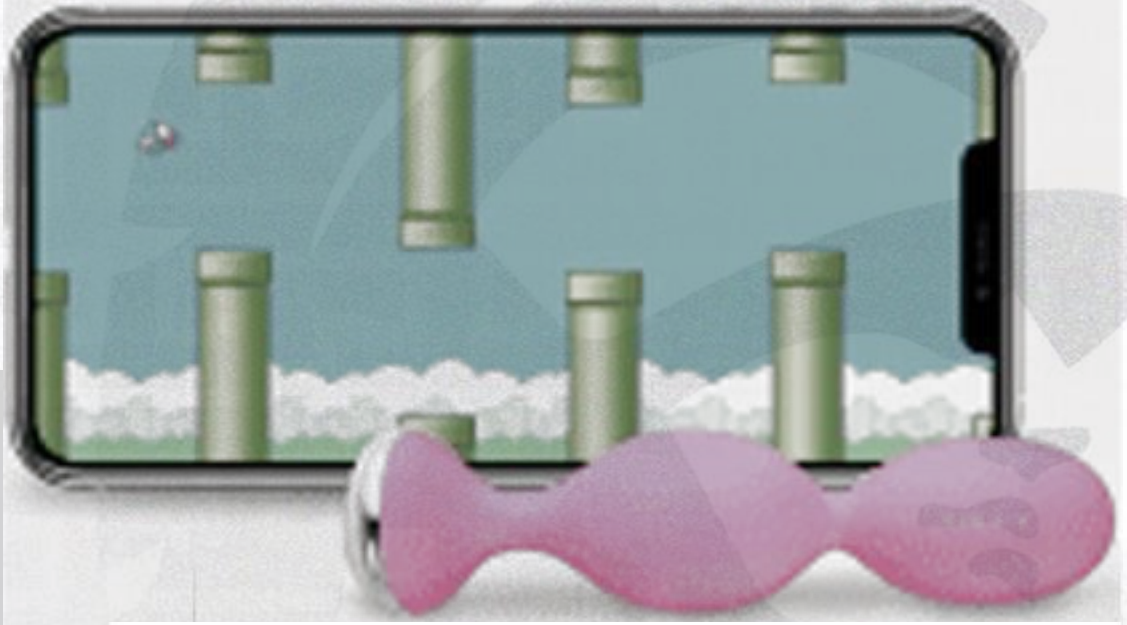
- holding the breath
- bearing down (Valsalva Maneuvor)
- tightening abdominals
- tightening buttocks

Biofeedback Training




EMG A Channel
MicroVolts (µV)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0
5
10
15
20
25
30

Biofeedback Tools



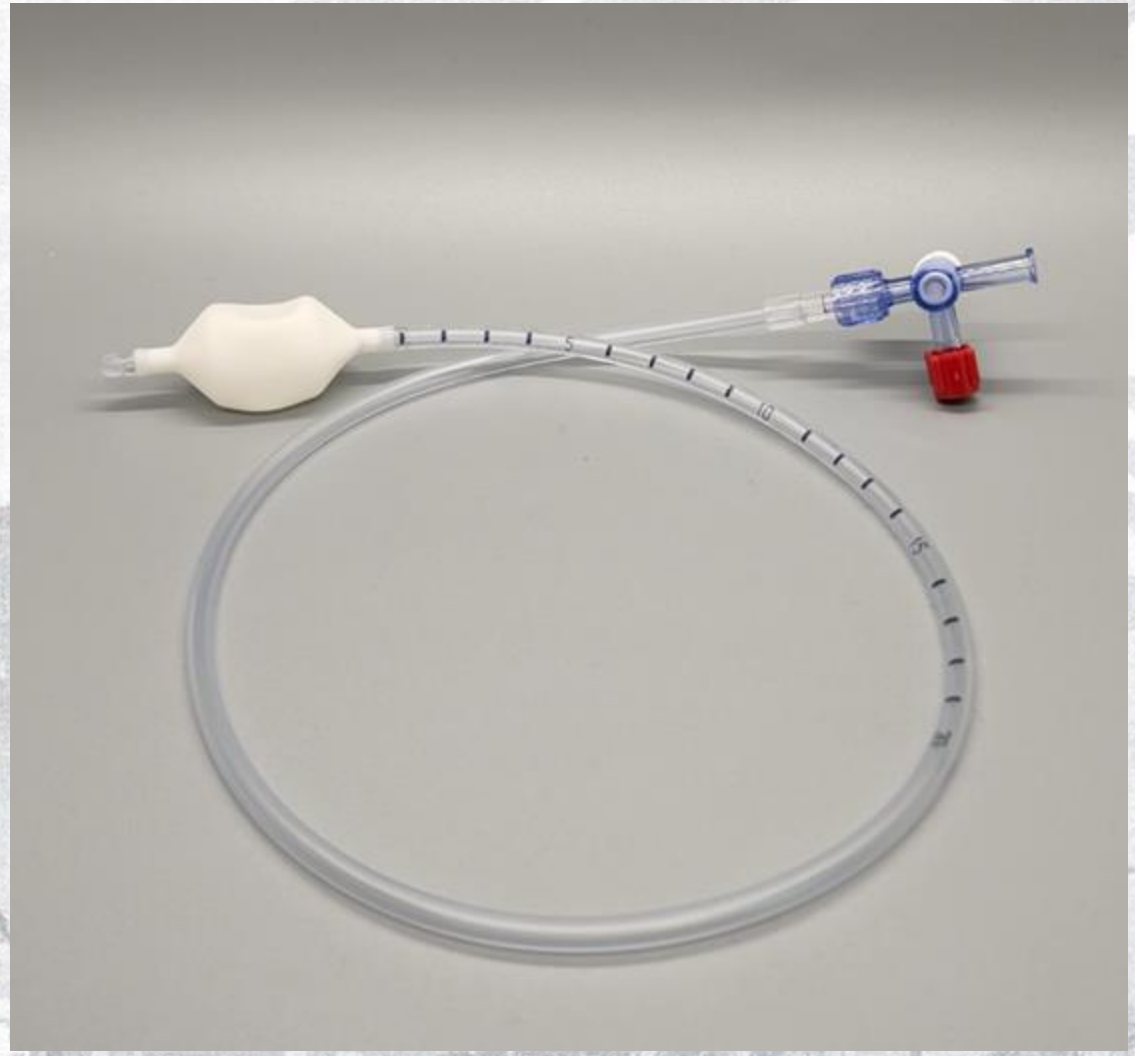
Dyssynergic Defecation

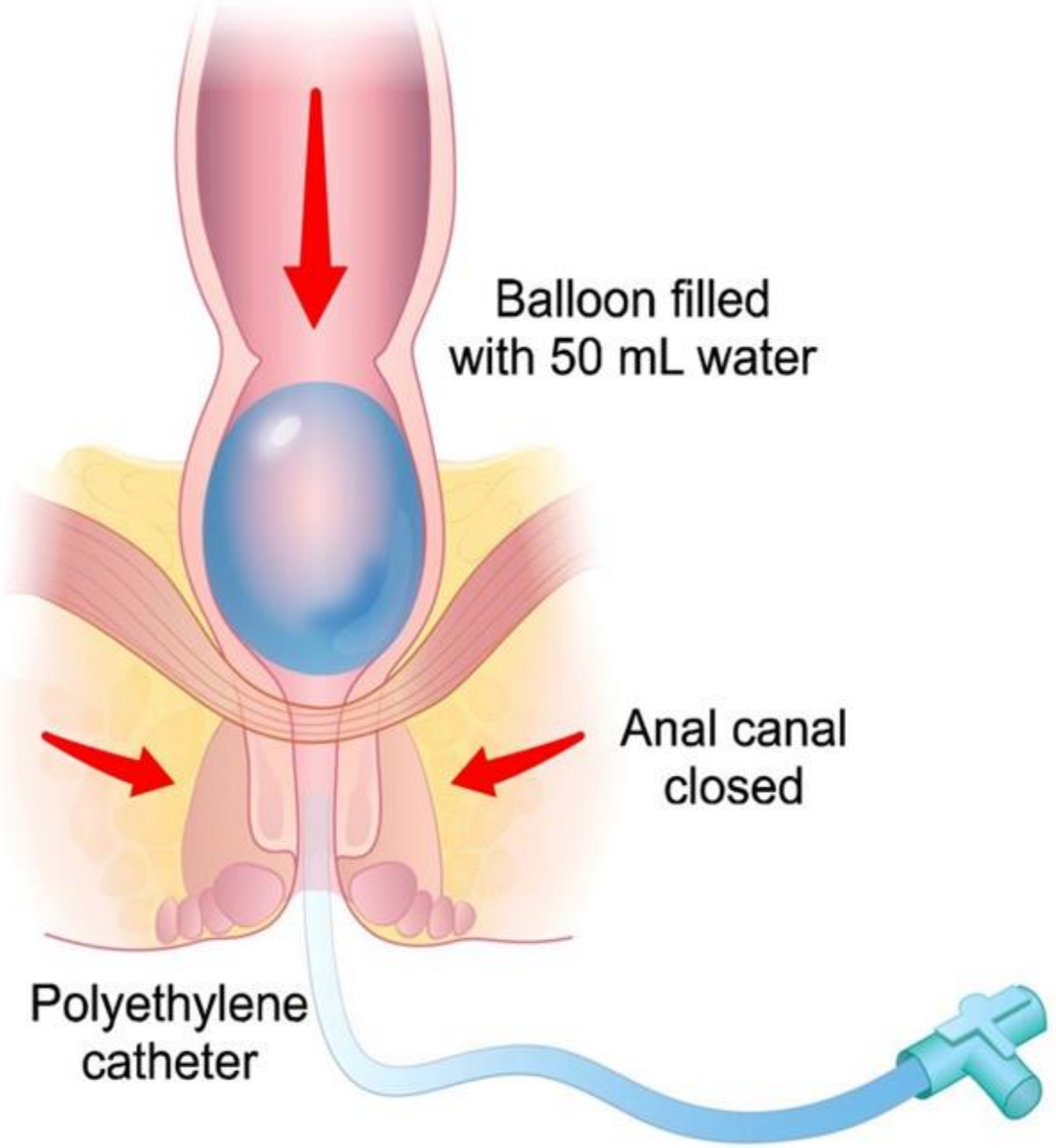
- Prevalence of dyssynergic defecation in patients investigated for chronic constipation is as many as 40%.
- Randomized controlled trials have demonstrated major symptom improvement in 70–80% of patients undergoing biofeedback therapy for chronic constipation resistant to standard medical therapy and have determined it to be superior to polyethylene glycol laxatives, diazepam, or sham therapy.
- Long-term studies have shown 55–82% of patients maintain symptom improvement.

- Skardoon et al.

Balloon Expulsion Test

- The balloon expulsion test (BET) is a simple and inexpensive bedside procedure that can identify patients with pelvic floor dyssynergia.
- No standardization in the methodology such as the filling volume of the balloon or the position of the patient for BET.
- Normal range of balloon expulsion time has differed in various studies and laboratories
- Normally performed in conjunction with other tests to rule in/out functional defecatory disorders (defecography, anorectal manometry, motility studies, etc.).





Normal < 60 seconds

Patient sits on toilet

Patient tries to expel balloon

3-way stopcock → to pressure transducers

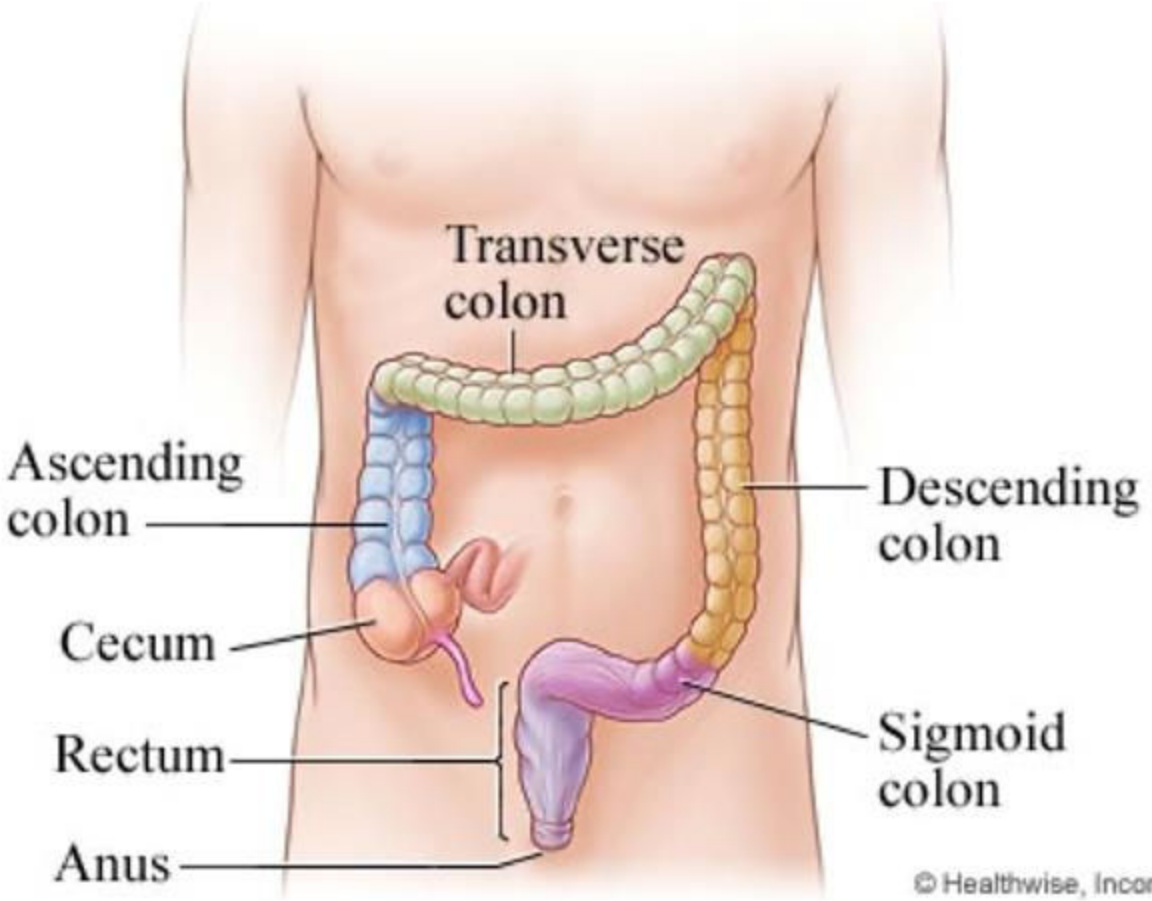
- Insertion of balloon catheter: patient L side lying with hips and knees flexed for comfort
- Lubricated balloon inserted and filled with 50-60 cc’s of water (to patient’s tolerance, will have sense of urge to defecate/defecation reflex stimulated
- Patient seated in desired toileting posture to promote PFM relaxation and left alone to expel balloon
    - Set timer

Toileting Techniques

Bristol Stool Chart

Type 1		Separate hard lumps, like nuts (hard to pass)
Type 2		Sausage-shaped but lumpy
Type 3		Like a sausage but with cracks on its surface
Type 4		Like a sausage or snake, smooth and soft
Type 5		Soft blobs with clear-cut edges (passed easily)
Type 6		Fluffy pieces with ragged edges, a mushy stool
Type 7		Watery, no solid pieces. **Entirely Liquid**

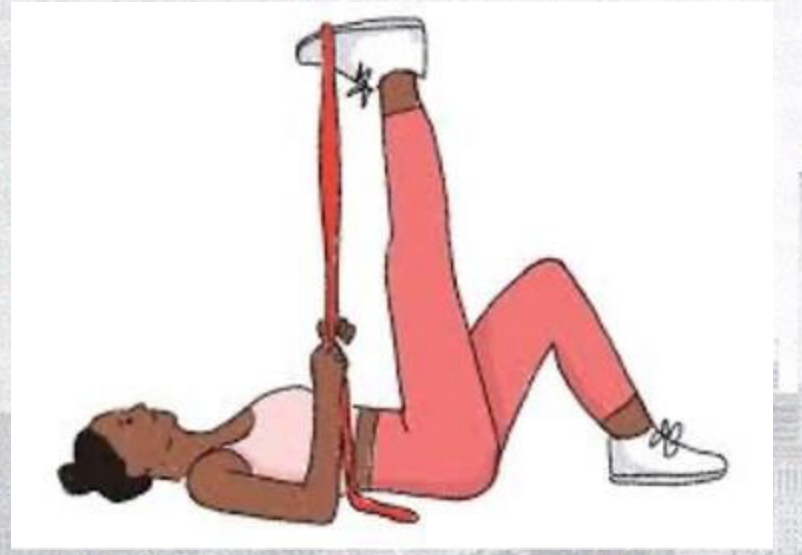
Manual Techniques: Abdominal Massage



- Gentle downward strokes or small circles along each segment of the colon.
- Begin at the descending colon ("I")
- "L"ove: travel from R UQ to sigmoid
- "U" travel from RLQ to sigmoid
- Start with 10 strokes along each segment
- *Avoid performing deep abdominal massage with pregnancy

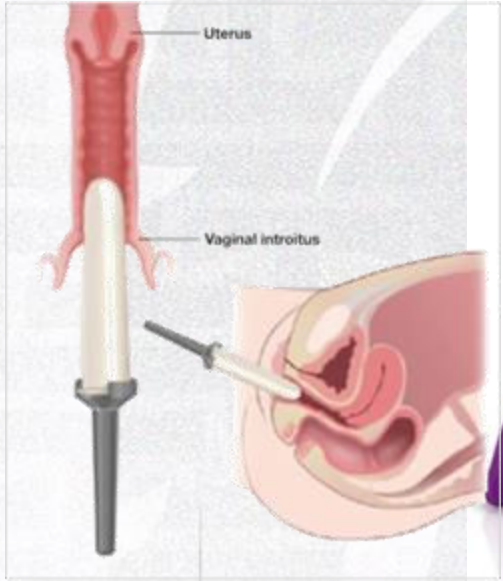
Home Program: Hip flexibility


1
2
3



Home program: Manual therapy tools

- Myofascial release
- Soft tissue mobilization
- Vaginal dilators/ desensitization program
- Pelvic floor muscle down training
- Improving posture and restoring muscle balance
- Pain management techniques



Using Vaginal Dilators Post Radiation

- Begin after tissues heal: 2-4 weeks after last radiation
- First month of dilator use: 5 days a week, 15-30 minutes
- Months 2-6: 3 days per week
- After 6 months: 2-3 times per week FOR LIFE
- Consider options for managing depth of penetration

Rectal Dilators

Find a local pelvic health specialist

- https://aptapelvichealth.org/ptlocator/
- https://pelvicrehab.com/

Questions?

Thank you!!!!

Eileen Johnson PT, DPT, WCS

Eileen.johnson@med.usc.edu

References

Stubblefield, M. D. (Ed.). (2018). Cancer Rehabilitation 2E: Principles and Practice. Springer Publishing Company.

Using Vaginal Dilators Post Radiation: Katz, A. (2009). Interventions for sexuality after pelvic radiation therapy and gynecological cancer. The Cancer Journal, 15 (1), 45-47.

Exercise Recommendations for Cancer Survivors from ACSM (Schmitz, K. H., Courneya, K. S., Matthews, C., Demark-Wahnefried, W., Galvão, D. A., Pinto, B. M., ... & Schneider, C. M. (2010). American College of Sports Medicine roundtable on exercise guidelines for cancer survivors. Medicine & Science in Sports & Exercise, 42 (7), 1409-1426.

Huffman LB, Hartenbach EM, Carter J, Rash JK, Kushner DM. Maintaining sexual health throughout gynecologic cancer survivorship: A comprehensive review and clinical guide. Gynecol Oncol. 2016;140(2):359-368. doi:10.1016/j.ygyno.2015.11.010

Hazewinkel MH, Sprangers MAG, van der Velden J, et al. Long-term cervical cancer survivors suffer from pelvic floor symptoms: A cross-sectional matched cohort study. Gynecol Oncol. 2010;117(2):281-286. doi:10.1016/j.ygyno.2010.01.034

Bergmark K, Åvall-Lundqvist E, Dickman PW, Henningsohn L, Steineck G. Vaginal Changes and Sexuality in Women with a History of Cervical Cancer. N Engl J Med. 1999;340(18):1383-1389. doi:10.1056/NEJM199905063401802

Bernard S, Ouellet M-P, Moffet H, Roy J-S, Dumoulin C. Effects of radiation therapy on the structure and function of the pelvic floor muscles of patients with cancer in the pelvic area: a systematic review. J Cancer Surviv 2016;10(2):351-362. doi:10.1007/s11764-015-0481-8

Rutledge TL, Heckman SR, Qualls C, Muller CY, Rogers RG. Pelvic floor disorders and sexual function in gynecologic cancer survivors: a cohort study. Am J Obstet Gynecol. 2010;203(5):514.e1-e514.e7. doi:10.1016/j.ajog.2010.08.004

Hazewinkel M, Sprangers M, Taminiau-Bloem E, van der Velden J Burger M, Roovers J-P. Reasons for not seeking medical help for severe pelvic floor symptoms: a qualitative study in survivors of gynaecological cancer: Pelvic floor symptoms in survivors of gynaecological cancer. BJOG Int J Obstet Gynaecol. 2010;117(1):39-46. doi:10.1111/j.1471-0528.2009.02411.x

Bergmark K, Avall-lundqvist E, Dickman PW, Henningsohn L, Steineck G. Lymphedema and bladder-emptying difficulties after radical hysterectomy for early cervical cancer and among population controls. Int J Gynecol Cancer. 2006;16(3):1130-9.

References

Gane, E. M., Steele, M. L.,Janda, M., Ward, L. C., Reul-Hirche, H., Carter,]., ... Hayes, S. C. (2018). The Prevalence, Incidence, and Quality-of-Life Impact of Lymphedema After Treatment for Vulvar or Vaginal Cancer. Rehabilitation Oncology, 36(1), 48-55. doi: 10.1097 /01.reo.0000000000000102

Hayes, S. C., Janda, M., Ward, L. C., Reul-Hirche, H., Steele, M. L., Carter, J., ... Obermair, A. (2017). Lymphedema following gynecological cancer: Results from a prospective, longitudinal cohort study on prevalence, incidence and risk factors. Gynecologic Oncology, 146(3), 623-629. doi:10.1016/j.ygyno.2017.06.004

Hazewinkel MH, Sprangers MAG, van der Velden J, et al. Long-term cervical cancer survivors suffer from pelvic floor symptoms: A cross-sectional matched cohort study. Gynecol Oncol. 2010;117(2):281-286. doi:10.1016/j.ygyno.2010.01.034

Li, C. C., Rew, L., & Chen, L. (2015). Factors affecting sexual function: A comparison between women with gynecological or re ctal cancer and healthy controls. Nursing & health sciences, 17 (1), 105-111.

Tidhar, D., Armer, J. M., & Stewart, B. R. (2018). What is Clinically Important in Lymphedema Management? A Systematic Review. Rehabilitation Oncology, 36(1), 13-27. doi:10.1097 / 01.reo.0000000000000093

Zuther, J. Norton, S. (2013). Lymphedema Management: The Comprehensive Guide for Practitioners (3rd ed.) New York: Thieme Medical Publishers

Linea Alba Mobilization: PORi (Physiological Oncology Rehabilitation Institute) Breast Cancer Rehabilitation, 2019.

David, J. Magee; Orthopaedic Physical Assessment; Chapter 9- Lumbar Spine; Fifth Edition: Pg 558-564. Butler DA: Mobilisation of the nervous system, Melbourne, 1991, Churchill Livingstone.

Travel, J., Siimons, D., Simons, L. (1999). Myofascial Pain and Dysfunction: The Trigger Point Manual (2nd ed. Vol.2). USA: Lippincott Williams & Williams

Evans, C. H., Kraus, V. B., & Setton, L. A. (2014). Progress in intra-articular therapy. Nature reviews. Rheumatology, 10 (1), 11-22.;

References

Bartlett L, Sloots K, Nowak M, Ho YH. Biofeedback for fecal incontinence: a randomized study comparing exercise regimens. *Dis Colon Rectum* 2011;54(7):846-56.

Bartlett L, Sloots K, Nowak M, Ho YH. Biofeedback therapy for symptoms of bowel dysfunction following surgery for colorectal cancer. *Tech Coloproctol* 2011;15(3):319-26.

Cornel EB, de Wit R, Witjes JA. Evaluation of early pelvic floor physiotherapy on the duration and degree of urinary incontinence after radical retropubic prostatectomy in a non-teaching hospital. World J Urol 2005; 23(5):353-355.

Filocamo MT, Li M, V, Del Popolo G, Cecconi F, Marzocco M, Tosto A et al. Effectiveness of early pelvic floor rehabilitation treatment for post-prostatectomy incontinence. Eur Urol 2005; 48(5):734-738.

Jackson KS, Naik R. Pelvic floor dysfunction and radical hysterectomy. Int J Gynecol Cancer 2006; 16(1):354-363.

Liu CH, Chen CH, Lee JC. Rehabilitation exercise on the quality of life in anal sphincter- preserving surgery. *Hepatogastroenterology* 2011;58(110-111):1461-5.

Shamliyan TA, Wyman JF, Ping R, Wilt TJ, Kane RL. Male urinary incontinence: prevalence, risk factors, and preventive interventions. *Rev Urol.* Summer 2009;11(3):145-165.

Stewart CM, Wheeler TL, 2nd, Markland AD, Straughn JM, Jr., Richter HE. Life- space assessment in urogynecology and gynecological oncology surgery patients: a measure of perioperative mobility and function. *J Am Geriatr Soc.* Dec 2009;57(12):2263-2268.

FIGHT COLORECTAL CANCER

QUESTION AND ANSWER

Type in your questions on the panel on the right side of your screen

Fight Colorectal Cancer Mission

We FIGHT to cure colorectal cancer and serve as relentless champions of hope for all affected by this disease through informed patient support, impactful policy change, and breakthrough research endeavors.

FIGHT COLORECTAL CANCER

THANK YOU