Urogynecology Clinical Pearls

"I don't want to wear pads anymore"

Florida Association Enterostomal Therapists
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FEMALE PELVIC MEDICINE AND RECONSTRUCTIVE SURGEON

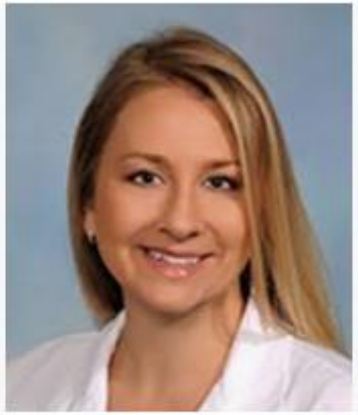
HEALTH FIRST MEDICAL GROUP

Objectives

- Explain Urogynecology Specialty
- Discuss Pelvic Floor Disorders
- Investigate Recurrent UTI and Interventions
- Investigate Pelvic Organ Prolapse
- Discuss Pelvic Organ Prolapse treatments including surgical interventions
- Review types of incontinence and treatment options
- Discuss Fecal Incontinence

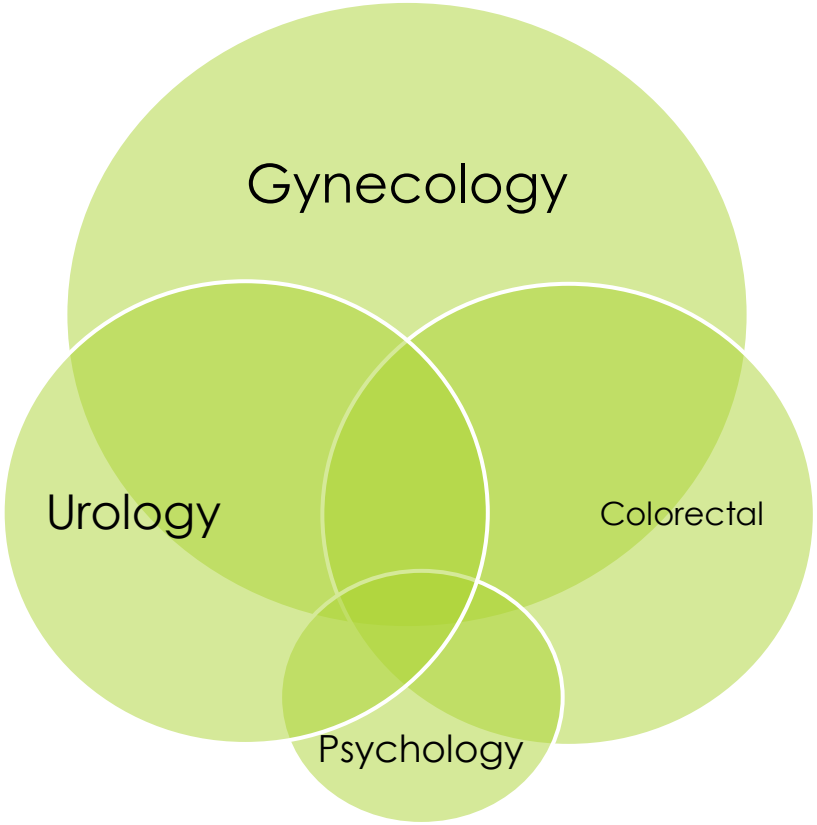
HF Urogynecology

- Viera Medical Plaza
- Gateway Medical Plaza
- Palm Bay



- Aimee Tieu, MD started with HF in 2012
- Suzanne Schoenrock ARNP, joined in July 2014
- Megan McClain ARNP, joined in Dec 2017
- Carey Andreoiu DO, joined in Jan 2019
- Ashleigh Auth PA-C, joined 2021

Urogynecology??



- What is a Urogynecologyst
  - 4 year OB/Gyn residency
  - 3 year Urogyn/FPMRS fellowship
    - Rotations with urologists
    - Rotations with colorectal surgeons
  - Daily interaction with other specialties, physical therapy, GI

Who do we see? "Pelvic Floor Disorders"

- Urinary Incontinence
  - Stress incontinence, Urge incontinence, Mixed incontinence
- Overactive Bladder – excessive urination
- Fistulas
  - Urinary and Rectal
- Pelvic Organ Prolapse
  - "Dropped" bladder, intestines, uterus, vagina
- Fecal Incontinence
- Painful Bladder Syndrome/Interstitial Cystitis
- Recurrent Urinary Tract Infections
- Pelvic pain
- Surgical mesh complications

NP: Ms. Betty Crocker

"I don't want to wear pads anymore!"

- HPI: 65 yo G2P2 NP appt for 6 months of worsening urinary incontinence. Daughter came today because she has also noticed 2 days of fatigue and mild confusion
- PMH: h/o breast Ca age 57, T2DM, h/o diverticulitis & hemorrhoids
- PSH: TLHBSO age 49 (fibroids), but had "bladder sling" at same time for leakage, Mastectomy age 57 – told never to take estrogen
- ROS:
  - + urinary incontinence, constipation, no intercourse due to pain, vaginal burning
  - - fever, chills, nausea, vomiting, dysuria. Overall has been fairly healthy and active

Physical Exam

- Discussion reveals 1-2 year history of "recurrent UTIs" - "always has an infection" when goes for regular checkup but for the last 6 months she has been on abx monthly and even needed IV abx.

- Urine dip: +LE, small blood, +odor, - nitrites
- PE: T 99.2, other VS WNL
  - Gen: AOx3 but doesn't remember what she had for breakfast or if she went out yesterday with her daughter
  - Back: - CVAT; Abd: +suprapubic ttp.
  - Pelvic: + severe atrophy, bulge visible at introitus (stage 2 vault/anterior wall prolapse), no visible vaginal mesh exposure, +hemorrhoids with min old stool visible
  - Cath PVR 220mL

Key points in history

- Key points in H&P
  - Reports over the last year she "always has an infection" – everytime she goes to PCP is told she has a UTI.
  - Only treatment has been abx course every 6-8 weeks for *another* UTI
  - Hasn't had vaginal exam since hysterectomy since was told didn't need a pap
  - Had constipation most of adult life, had diverticulitis and had visible stool around anus
  - Stopped having intercourse due to burning and reports being told "Never to take estrogen"

Develop DDx

- Any further questions you would ask?
  - What symptoms does she get with infections/what triggers her to go to the walk-in to get checked? (symptomatic vs. ASB)
  - What was last HgbA1c? (is diabetes controlled)
  - Does she complain of prolapse symptoms - that she is sitting on a bulge? (is the prolapse symptomatic and how likely is it that it is causing retention)
  - How are her bowel habits? (is she severe constipation and then takes laxatives to have BM and has issues with control or having 7-8 BMs per day)
  - Any vaginal bleeding or pain with intercourse? (does she have significant atrophy or issue with prior mesh sling)
  - Was breast cancer ER/PR + and was she on anti-estrogen? (

Plan:

- Multi-faceted strategy
  - Urine culture and treat current UTI
  - Discuss preventative strategies – start estrogen cream, probiotic; d-mannose; water/cranberry
  - Schedule urodynamics with prolapse reduced
  - Schedule cysto to eval possible erosion and/or fistula
  - Discuss options for prolapse reduction to improve voiding

Recurrent UTIs in elderly

- Definition: 3 positive cultures in 12 months *or* 2 in 6 months
- Symptomatic
  - Aging population do not present with typical symptoms
  - Acute dysuria is a reliable symptom but usually not present. New onset of frequency, urgency, and/or incontinence should prompt the evaluation for UTI.
  - Nontraditional symptoms consist of urinary odor, changes in mentation, fatigue

VS.

- Asymptomatic bacturia:
  - Up to 1/3 women with ASB treated inappropriately with abx
  - Promotes antibiotic resistance, drug reactions, Rx does not change rate of progression to symptomatic UTI
  - Screening for ASB and/or treatment not recommended by AUA, IDSA

- Always check urine culture

UTI Prevention Strategies

- Postmenopausal women
  - Lack of estrogen changes mucosal layer of cells – decline in lactobacilli species
  - Less lactobacilli results in changes in pH – more hospitable environment for pathologic species
- Vaginal estrogen cream and womens/GU probiotics to normalize vaginal flora
- ACOG Committee opinion
  - Vaginal estrogens safe in patients with breast cancer history
  - Oral estrogens prothrombotic due to first pass effect
- D-mannose, Cranberry tablets, Vit C, daily antibiotic x 4-6 mo

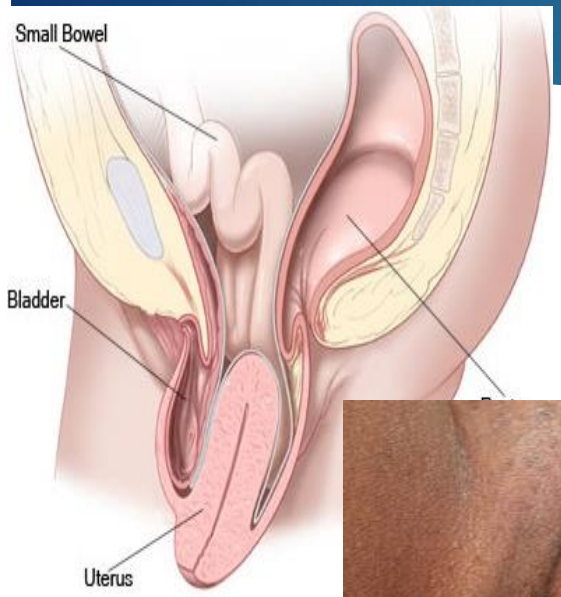
Something in the vagina for UTIs???

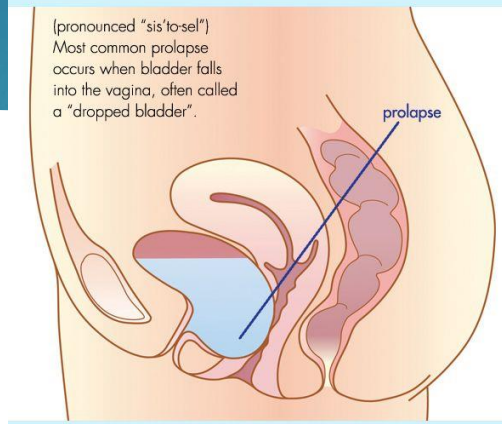
- YES!!
- Decreases recurrent UTIs in postmenopausal from 5.9 to 0.5 episodes/year
- After 1 month of E2 lactobacillus appeared in 60% of those treated vs placebo group
- Cochrane review – Estring effective but vaginal cream more effective
- Oral estrogen not effective and should not be prescribed for UTIs

So what to do with Betty?

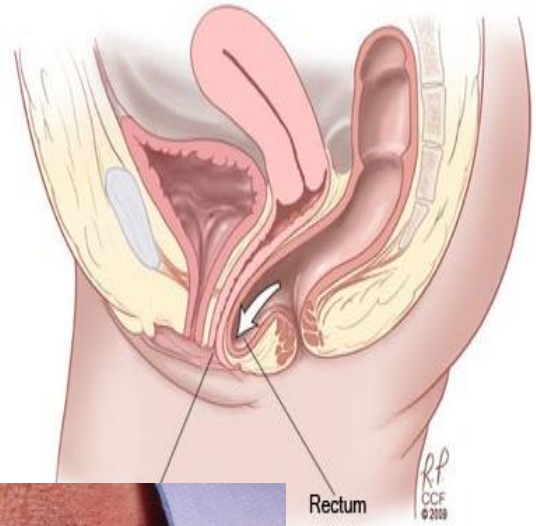
Your uterus is showing….

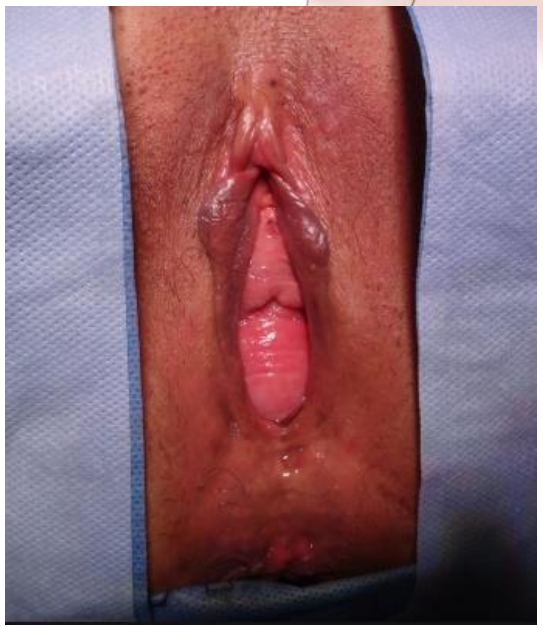
What is Pelvic Organ Prolapse?





CYSTOCELE





The POP Burden

- Affects 50% of parous women with a 10-20% life time risk for surgical repair
- Half of women >50 yrs affected with a lifetime prevalence risk of 30-50%
- A common indication for gynecological surgeries in the western world

- Risk Factors
  - Obstetric
    - Parity
    - Mode of delivery; vaginal vs cesarean
  - Advancing age
  - Overweight and Obesity
  - Chronic elevated intra-abdominal pressure
    - Chronic cough, constipation, heavy lifting
  - Connective tissue disorders
    - eg Ehlers-Danlos

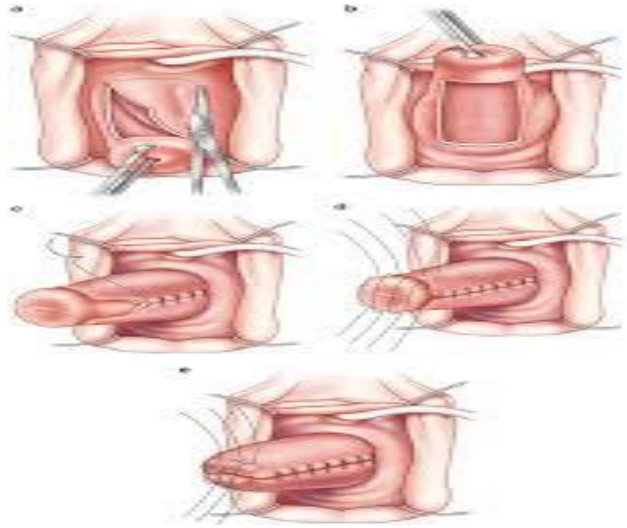
Barber & Maher, (2013); Subak LL, (2001)

POP Myths

- First question to ask - Is prolapse symptomatic and causing decline in quality of life?
- Is patient having urinary retention causing UTIs/symptoms (if due to prolapse, prolapse is usually always exteriorized)
- Prolapse itself not strong cause of UTIs, only if having retention
- Prolapse doesn't cause any PAIN, pain with intercourse, and vagina doesn't get blocked
- Patients aren't "too old for surgery", We don't wan to "treat it now before it gets worse" and peoples bladders "cant fall on the floor" or get "damaged/torn"
- At discovery of prolapse patients don't have to alter their activities, they can do things to their comfort level. In fact we actually WANT the prolapse to get worse if it is going to.
- Decision to have surgery – symptoms present and is it appropriate time to do 6 week period of restrictions

POP Management

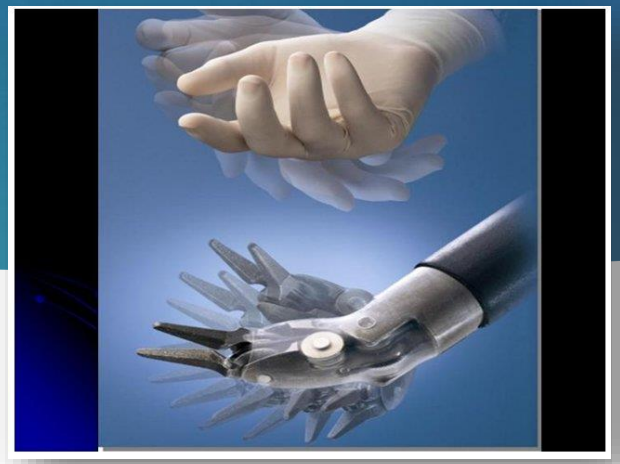
- Conservative
  - Watch and wait for symptoms
    - appt in 6 mo, do all activities
  - Referral to PFPT/biofeedback
- Non-surgical
  - Pessary
- Surgical
  - Reconstructive vs. Obliterative
    - Vaginal vs. Laparoscopic
    - Mesh vs. No Mesh

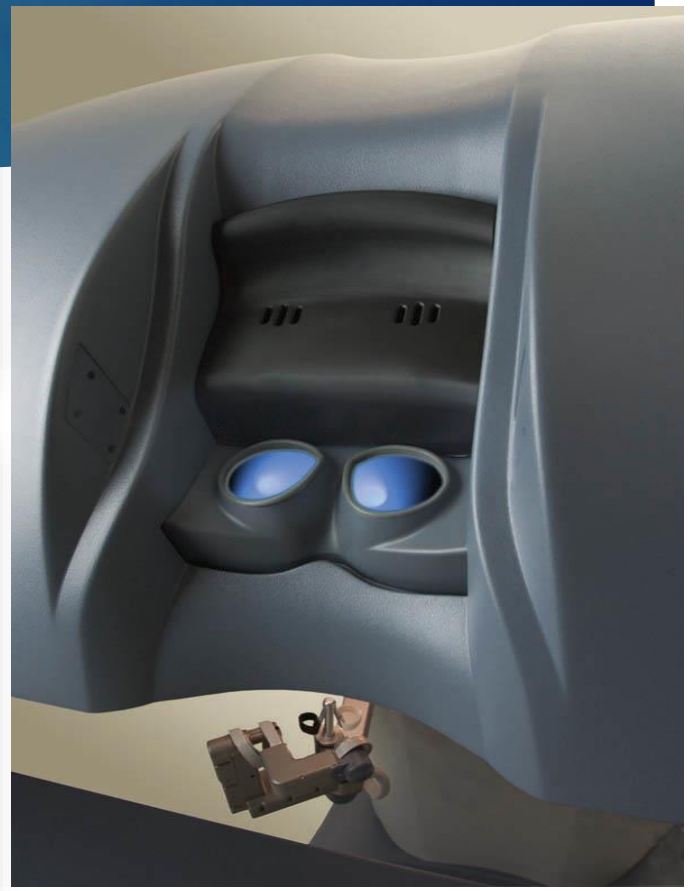


Robotic Surgery in Urogynecology

Robotic Surgery

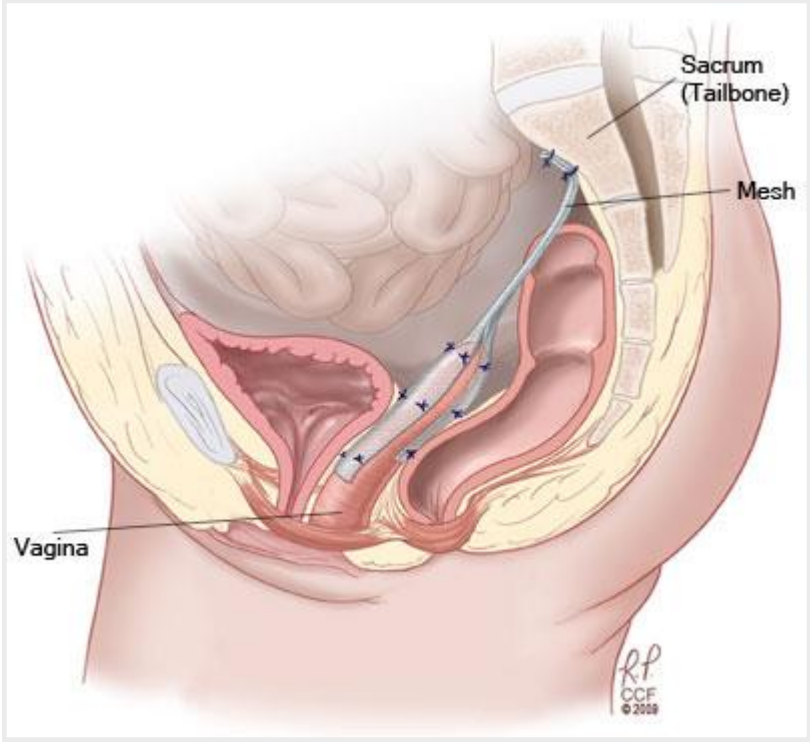
- Benefits
  - More precise/range of motion
  - 3D vision/magnified
  - Less bleeding
  - More comfortable for surgeon
- Disadvantages
  - Lack of haptics
  - Cost?
  - Long set-up/procedure time
  - Higher learning curve





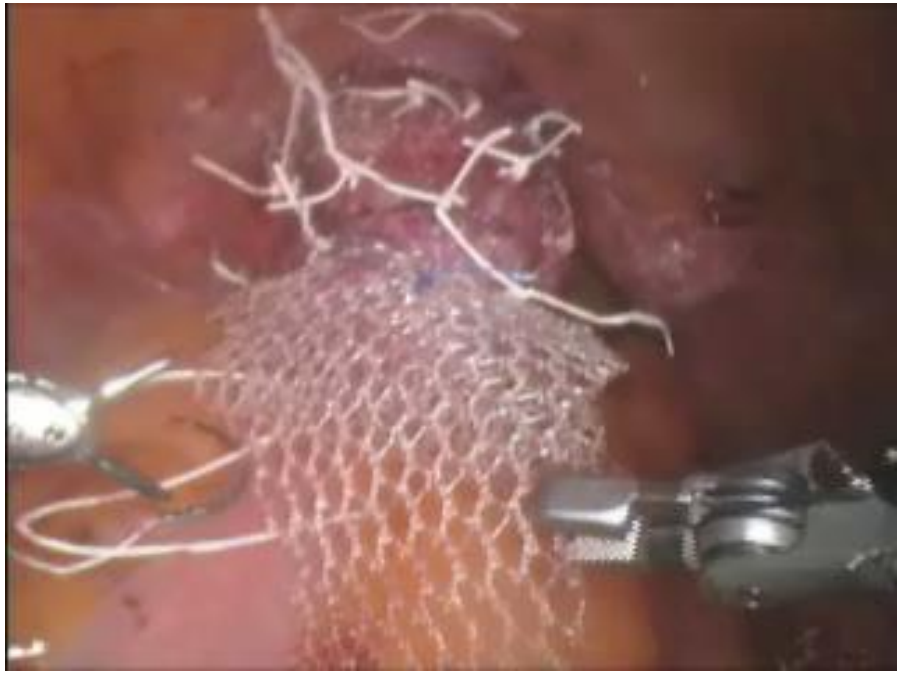
da Vinci Sacrocolpopexy

- **Sacrocolpopexy is considered the gold standard for vaginal vault prolapse**
  - <5% are performed with laparoscopy b/c requires difficult dissections and extensive suturing
- **Da Vinci Advantages**
  - Complete control of the camera and all operative arms
  - Improved access to the pelvis vs. open & lap
  - Facilitates more precise rectovaginal and presacral dissections and ease of suturing
  - Improved handling of suture and mesh for more accurate graft placement and attachment
  - A reproducible approach



da Vinci Sacrocolpopexy

- When compared with open techniques, robotic abdominal sacrocolpopexy is associated with less blood loss, shorter lengths of stay, and longer operative times

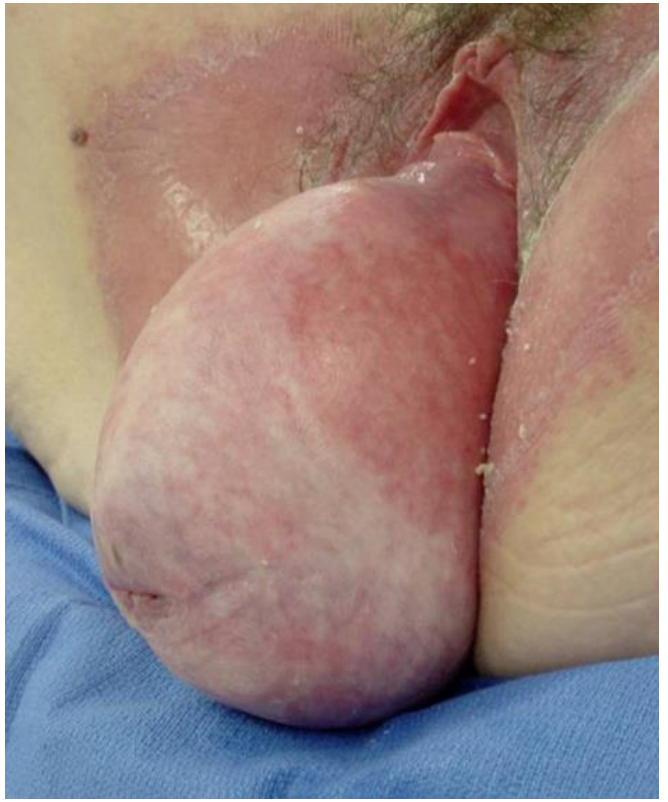


Geller Obstet Gynecol 2008
McDermott Obstet Gynecol Clin North Am 2009

da Vinci Sacrocolpopexy

- **Abdominal sacrocolpopexy vs vaginal colpopexy**
  - Lower rate of apical recurrence (3/84 vs 13/85)
  - Higher success rate (3/52 vs 13/66)

    ("Success" - # failing to improve to Stage 2 or better)
  - Lower postoperative dyspareunia (7/45 vs 22/61)



Maher et al. Neurourology and Urodynamics 2008

da Vinci Sacrocolpopexy

Female Pelvic Med Reconstr Surg. 2014 ; 20(5): 252–260. doi:10.1097/SPV.0000000000000070.

Outcomes of Robotic Sacrocolpopexy: A Systematic Review and Meta-analysis

Catherine O. Hudson, MD[1], Gina M. Northington, MD PHD[1], Robert H. Lyles, PHD[2], and Deborah R. Karp, MD[1]

- 13 studies were selected for the systematic review.
  - Success rate of 98.6%
  - Rate of mesh exposure/erosion was 4.1%
  - Rate of reoperation for mesh revision was 1.7%
  - Rates of reoperation for recurrent apical/non-apical prolapse were 0.8%/2.5%
  - The most common surgical complication (excluding mesh exposure)
    - cystotomy 2.8%
    - wound infection 2.4%

Ms. Betty Crocker – 6 mo postop visit

- HPI: 70 yo G2P2 6 mo s/p Robotic ASC, PR, cysto
  - No UTIs
  - Prolapse cured
  - Using estrogen cream 2x/week
  - Bladder scan – PVR 80mL
  - Still bothered by frequency and incontinence
- Incontinence improved since not having UTIs and retention resolved but cant go without a pad because if she has the urge she cant always make it
- Review preop urodynamics:
  - Retention with PVR 230mL, + detrusor overactivity. No SUI. Normal capacity of 420mL. Normal void and PVR < 100 mL on uroflow with prolapse reduced

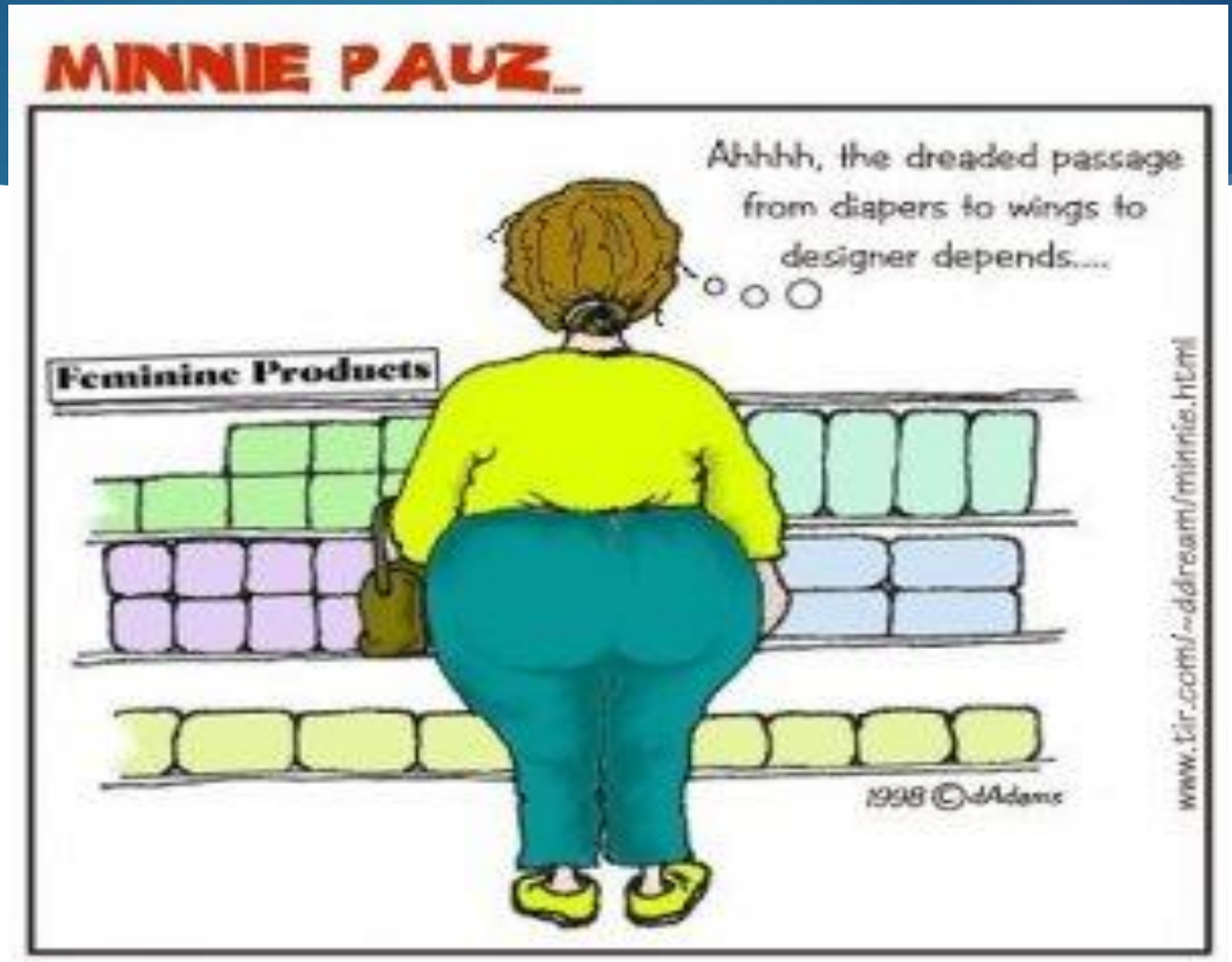
CC: I still don't want to be wearing pads!

- What further questions would you ask?
  - What is the #1 thing that bothers you?
  - What provokes the incontinence? Cough, sneeze, urge?
  - Do you feel that your brain and you bladder are still talking to each other?
  - How many pads do you use a day?
  - How much time or how many hours pass between going to the bathroom?
  - How many times do you wake up at night?
  - Take me through what you drink during the day? Diuretic?

Voiding Diary

	Time	Void oz	Drink	Leak
alarm	8a	8		yes
sleep	11:30	4		
	1a	6		
	3a	8		
	6a	10		

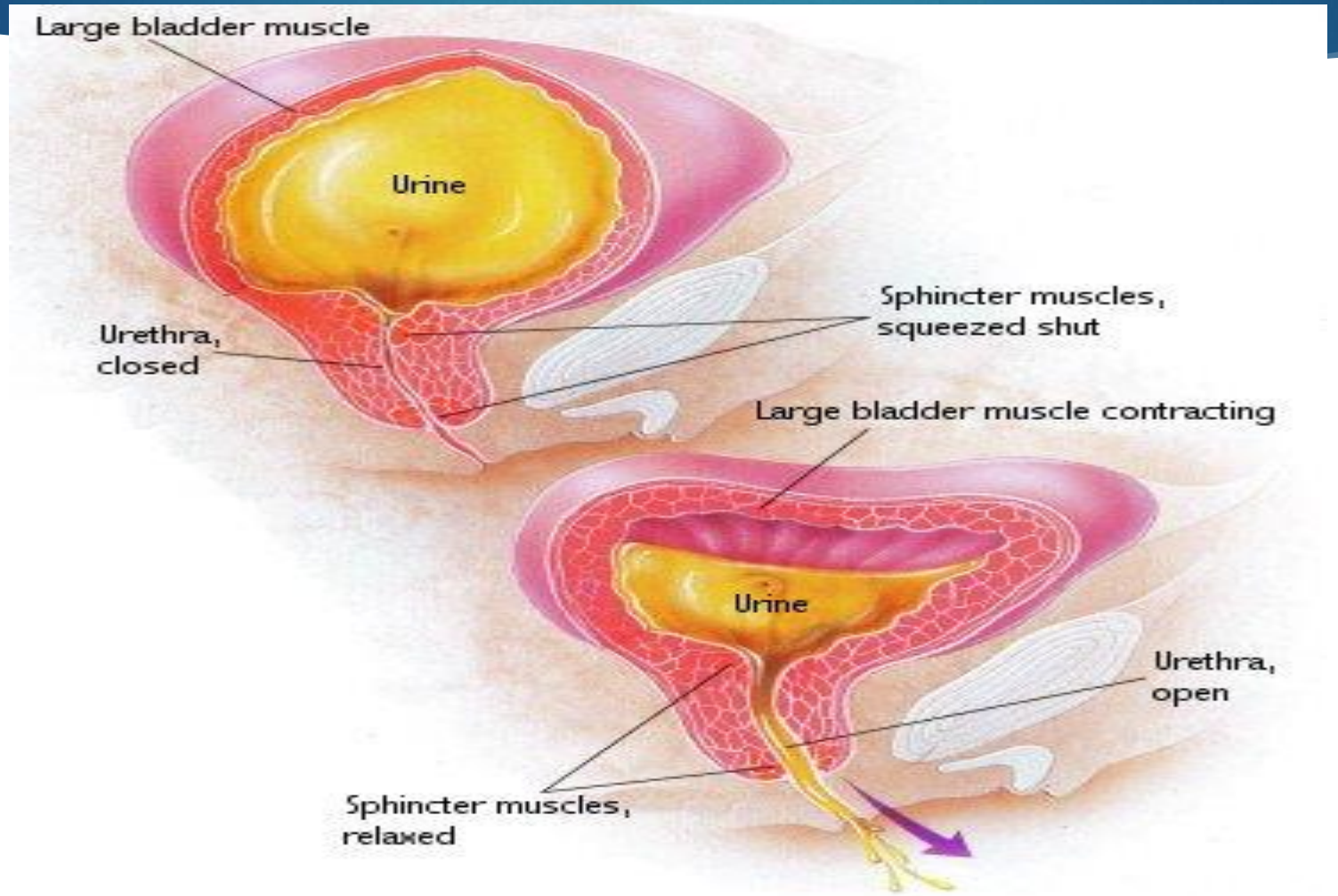
Dx:OAB


MINNIE PAUZ_
Ahhhh, the dreaded passage from diapers to wings to designer depends....
Feminine Products
1998 ©dAdams
www.tir.com/~ddream/minnie.html

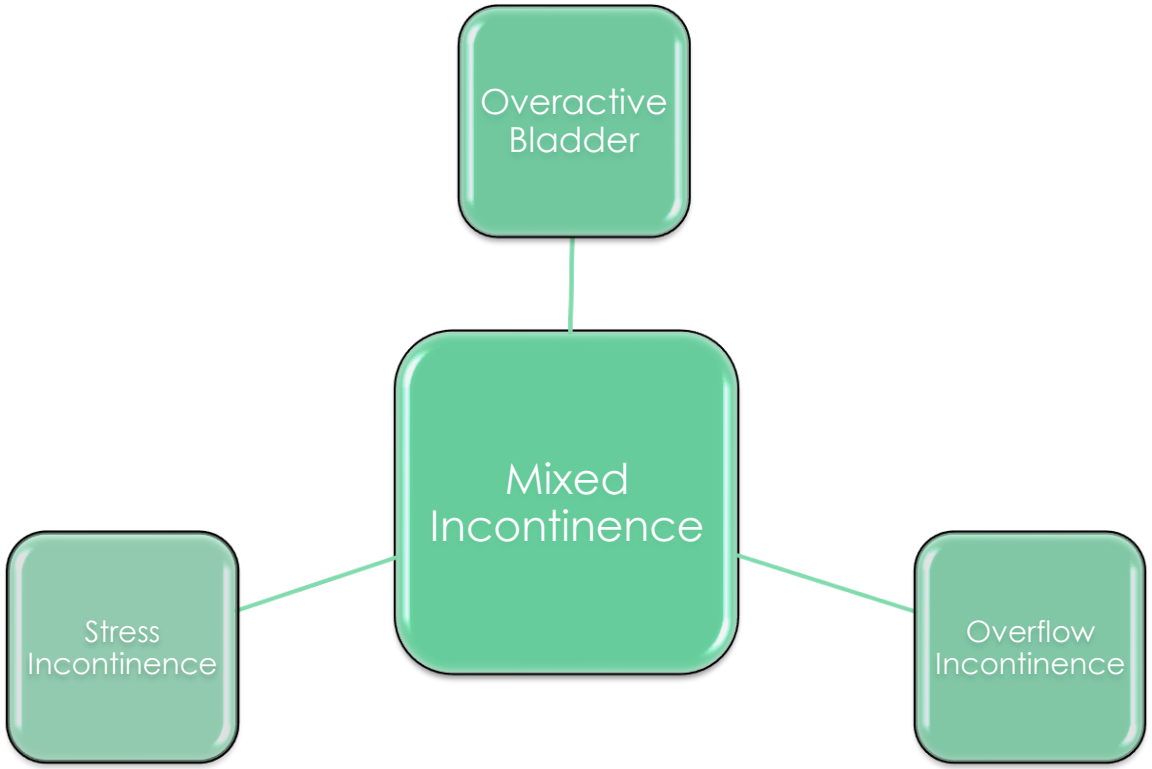
What causes incontinence?

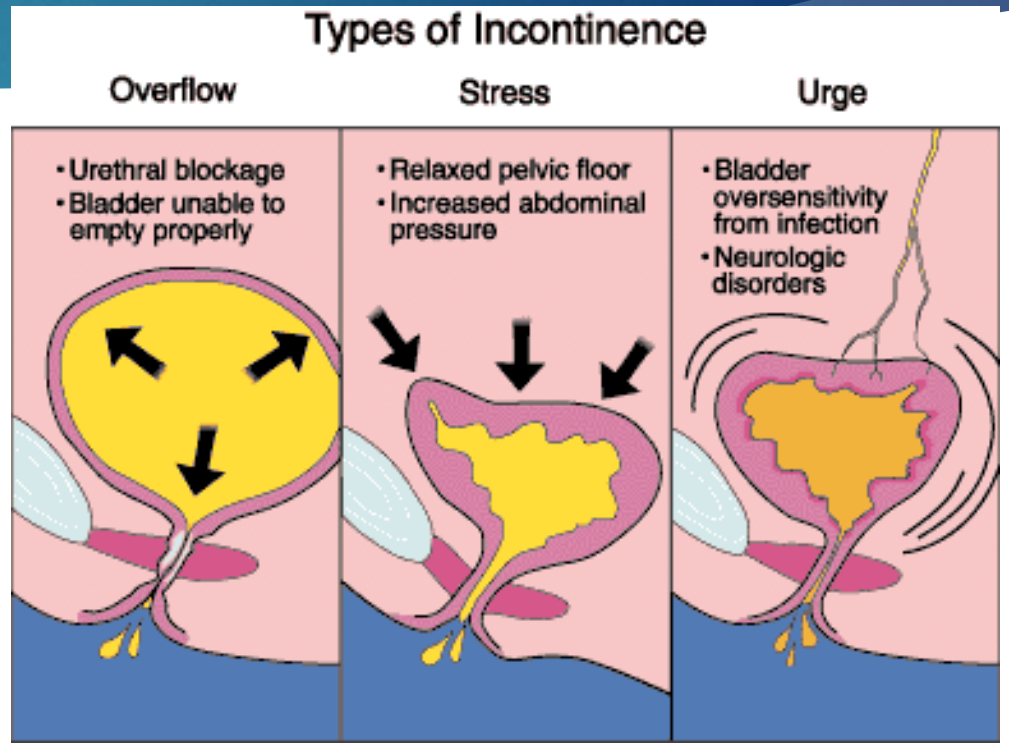
- Pregnancy and childbirth
- Decreased levels of estrogen after menopause
- Damage to pelvic floor muscles from coughing, chronic lifting of heavy objects
- Certain medications
- Back and pelvic injuries
- Neurological diseases
- Diabetes
- Smoking
- Obesity

Physiology of bladder



Basic types of incontinence

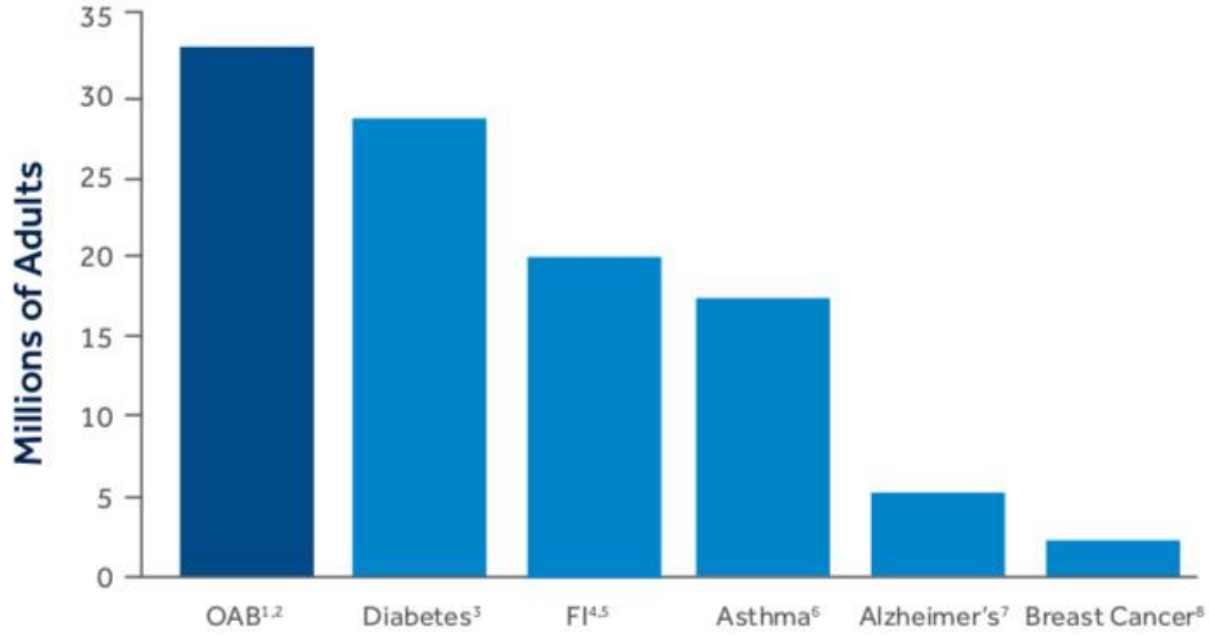




What is OAB/urge incontinence?

- Leakage if one does not reach a bathroom promptly
- No warning time
- Urinary frequency
- Waking up to urinate frequently
- Wetting the bed

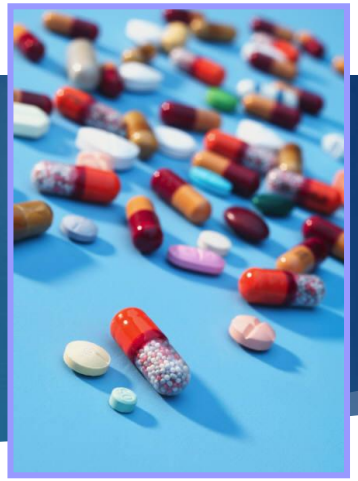
Prevalence of OAB vs other health conditions



1. Stewart WF, et al. Prevalence and burden of overactive bladder in the United States. *World Jrnl of Urol.* 2003;20:327-336.
2. Serels S. The wet patient: understanding patients with overactive bladder and incontinence. *Curr Med Res Opin.* 2004;20(6):791-801.
3. National Institute of Diabetes and Digestive and Kidney Diseases. National Diabetes Statistics Report, 2014. http://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-web.pdf. Accessed April 21, 2016.
4. Whitehead WE, Borrud L, Goode PS, et al. Fecal Incontinence in US adults: epidemiology and risk factors. *Gastroenterology.* 2009;137(2):512-517.
5. United States Quick Facts. United States Census Bureau Web site. Available at: https://www.census.gov/quickfacts/table/PST045215/00. Accessed July 19, 2016.
6. Centers for Disease Control and Prevention. 2014 NHIS Data. http://www.cdc.gov/asthma/nhis/2014/table3-1.htm. Accessed April 21, 2016.
7. Alzheimer's Association. 2016 Alzheimer's Disease Facts and Figures. http://www.alz.org/facts/overview.asp. Accessed April 21, 2016.
8. Breastcancer.org. U.S. Breast Cancer Statistics. http://www.breastcancer.org/symptoms/understand_bc/statistics. Accessed April 21, 2016.

- More than 37 million adults in US, 1/6 suffer from OAB
- OAB and FI rank high among many other chronic diseases in prevalence

Overactive Bladder Treatment



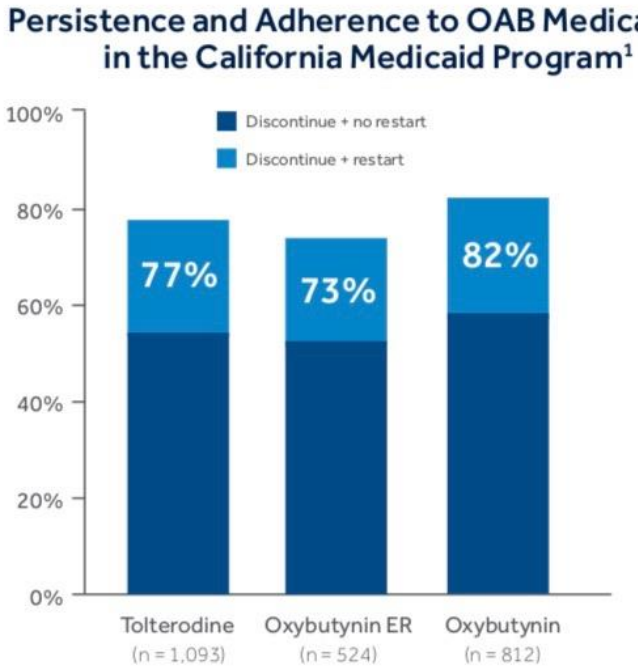
- Modify behavior – bladder irritants, timed voiding
- Pelvic floor muscle exercises
- Estrogen cream
- "Gotta go, gotta go" Medications
- Neuromodulation
- Bladder Botox

Common bladder irritants

- Acidic foods:
  - Tomato based, vinegar, spicy foods, citrus, curry
  - Coffee!! (regular and decaf)
  - Tea!! (regular and decaf)
  - Sodas
  - Artificial sweeteners
  - Milk, chocolate
  - Caffeine

OAB Meds

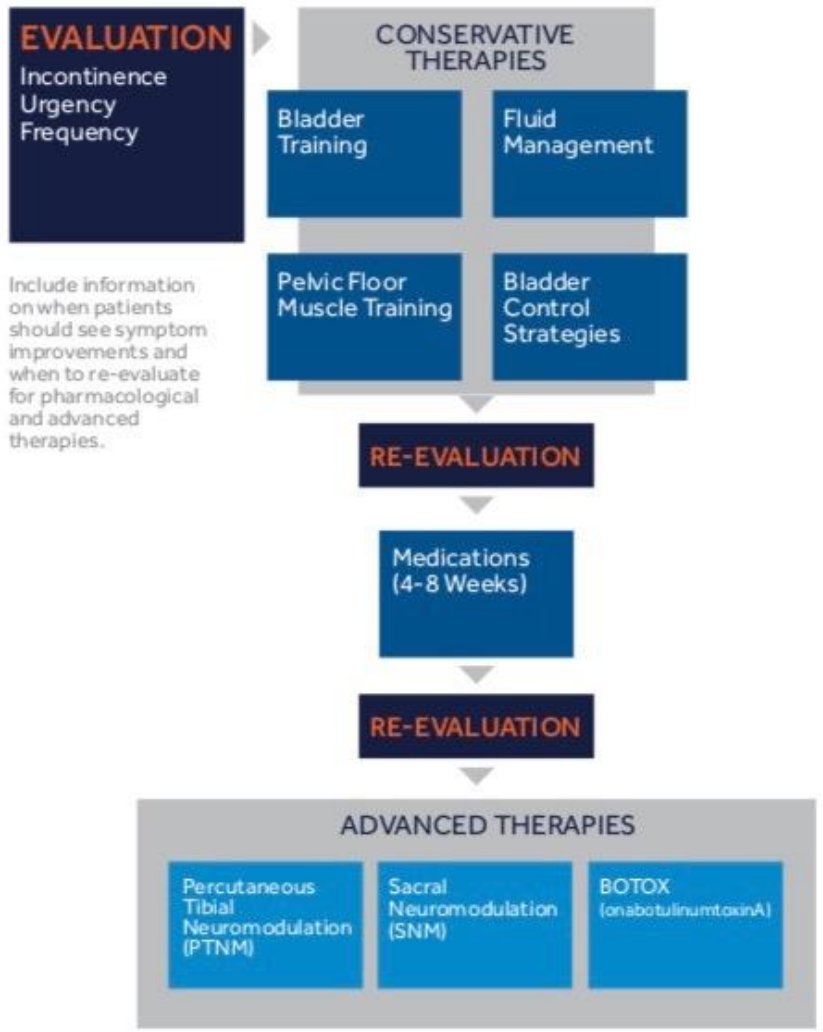
Chemical	Trade name	Highlights
Mirabegron	Myrbetriq	B-agonist, no drying side effects, dementia
Solifenacin	Vesicare	Receptor specific Dose response
Trospium	Sanctura	Large MW BBB blocked
Fesoterodine	Toviaz	Dose response
Darifenacin	Enablex	Long half life Receptor specific
Oxybutynin	Ditropan	Track record
Tolterodine	Detrol	Track record



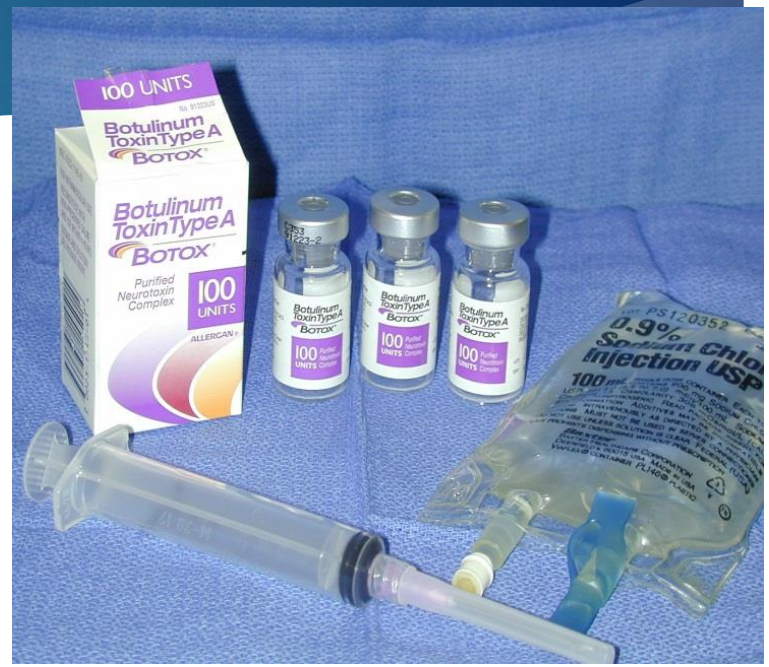
- > 70% discontinuation of prescribed therapy within 6 months.
- > 80% discontinuation of prescribed therapy within 1 year.
- > 50% chose not to restart their therapy after discontinuation.

- Poor Compliance
- High Discontinuation

OAB Care Pathway

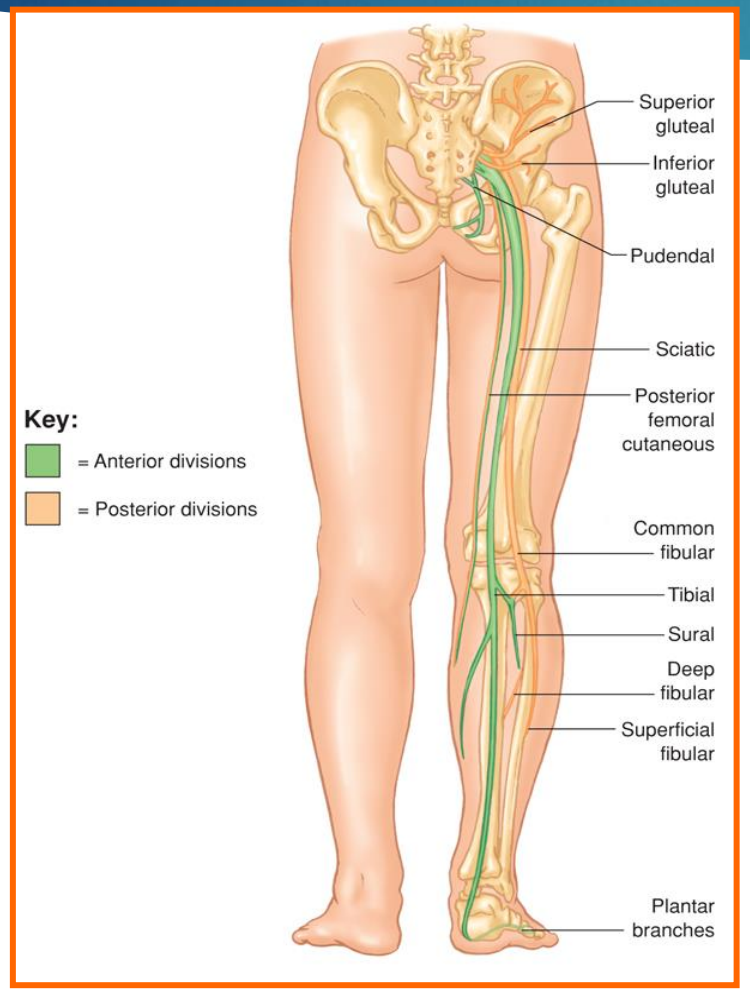


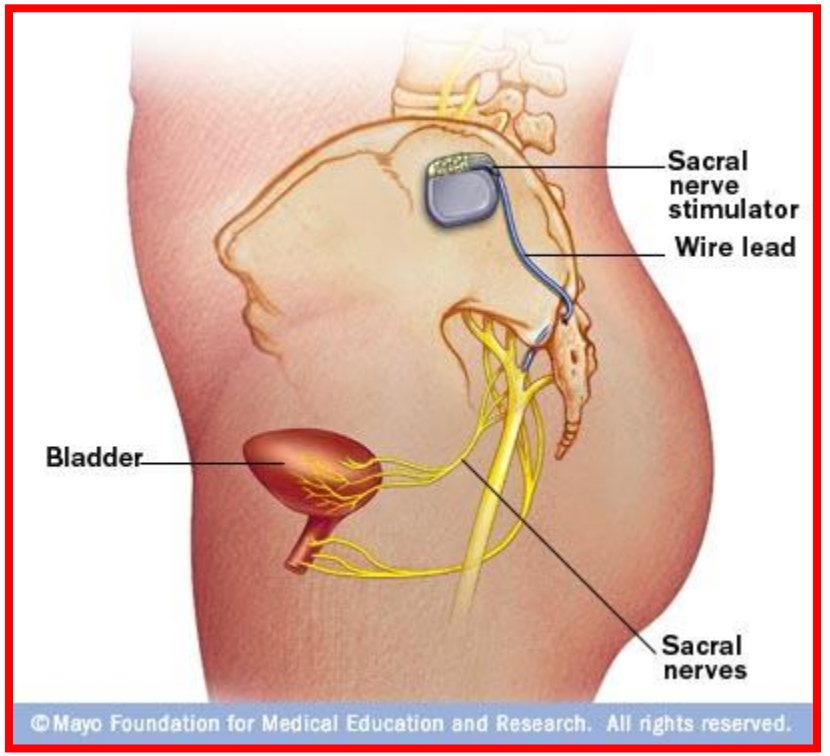
Bladder Botox



- FDA approved for bladder 2013
- Neurotoxin produced by C. *botulinum*
- Botox injected into bladder muscle in office procedure
- Blocks the release of neurotransmitter (acetylcholine) into the pre-synaptic neuromuscular junction
- 5% rate cannot contract muscle to void - CISC
- FDA approved for bladder 2013

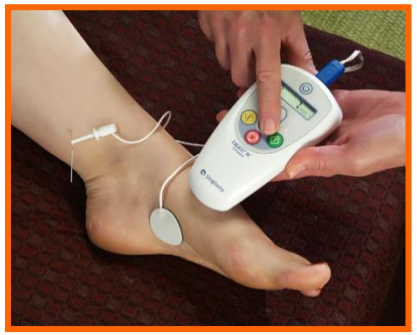
Neuromodulation

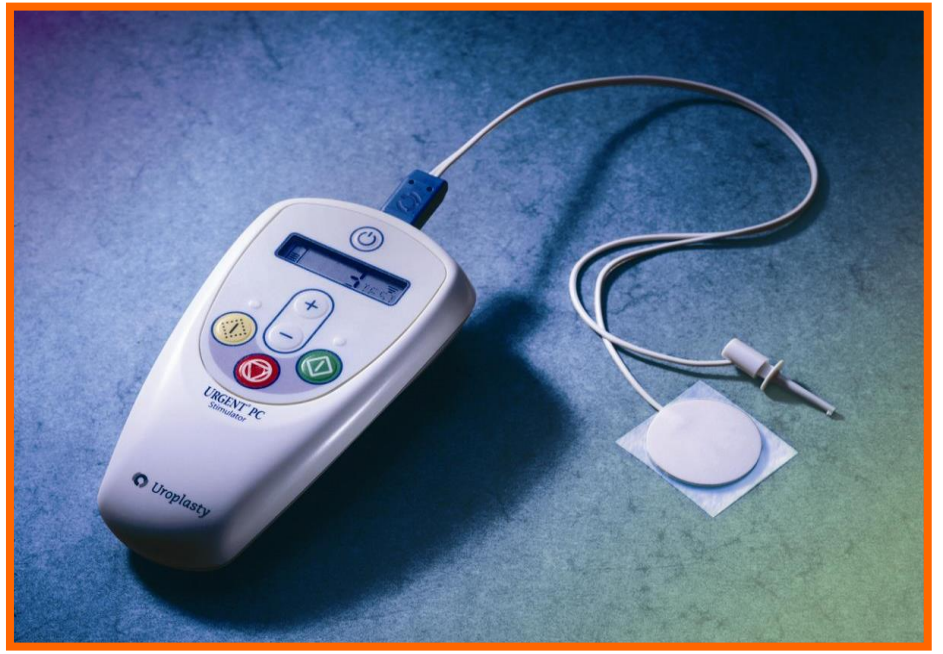




"PTNS" Tibial nerve: Office-based Neuromodulation

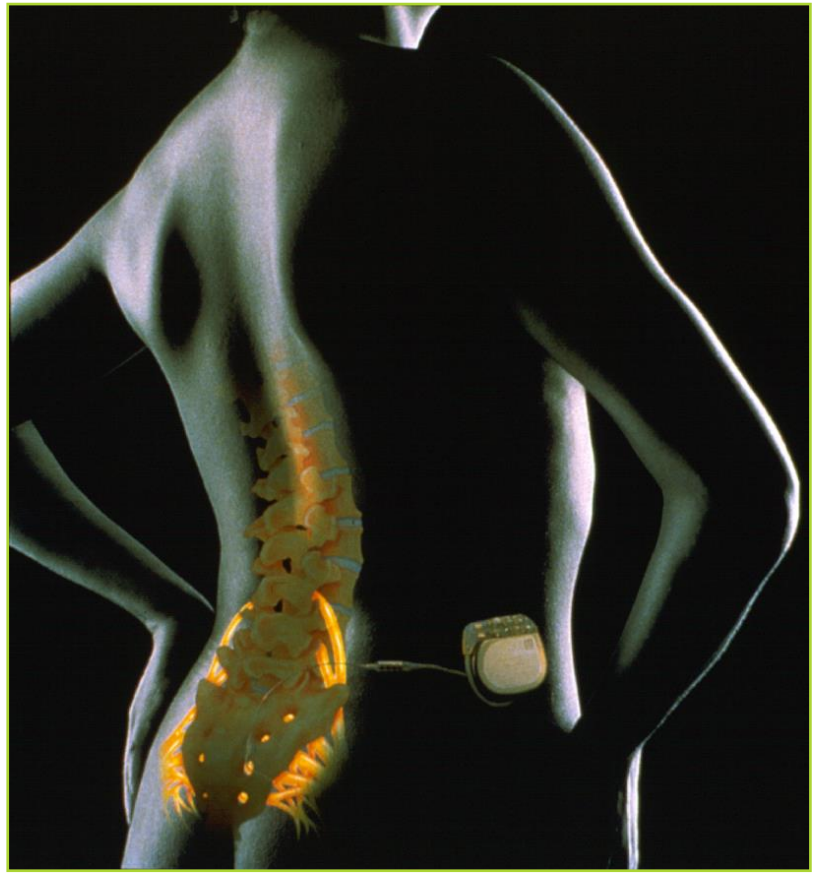
- Approved by FDA in 2000
- 30 minute sessions
- Once a week
- Series of 12
- Monthly
- 75% improvement rate





InterStim Therapy:
Implantable programmable neurostimulator

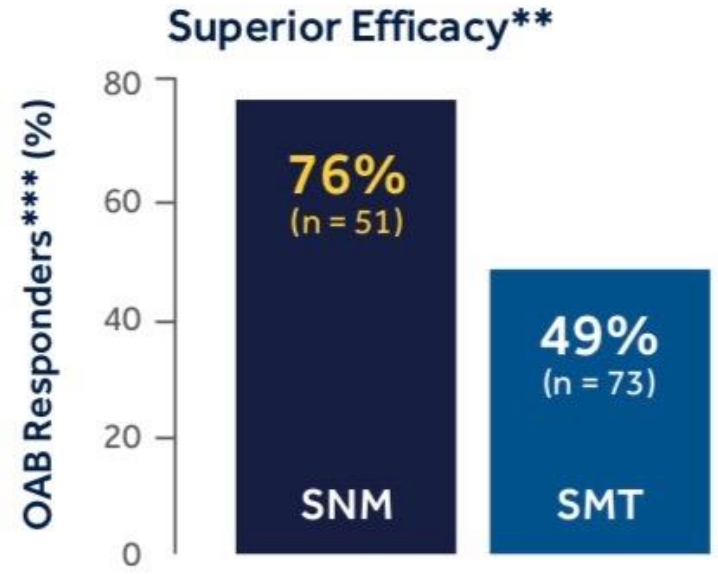
- Outpatient/day surgery procedure
- 2 Stages – first evaluate if works
- FDA approved test stimulation procedure using the percutaneous test stimulation lead (3-7 days)
- Stage 1: FDA approved following an inconclusive percutaneous test stimulation (up to 7 - 21 days)
- Stage 2: Implant placed
- 60-70% have at least 50% decrease in urge symptoms



Results: Clinically Effective

SNM Outperforms Medications* at 6 Months[1]

InSite study results compare SNM delivered by the InterStim™ system to standard medical therapy (SMT) in patients with mild symptoms of OAB:



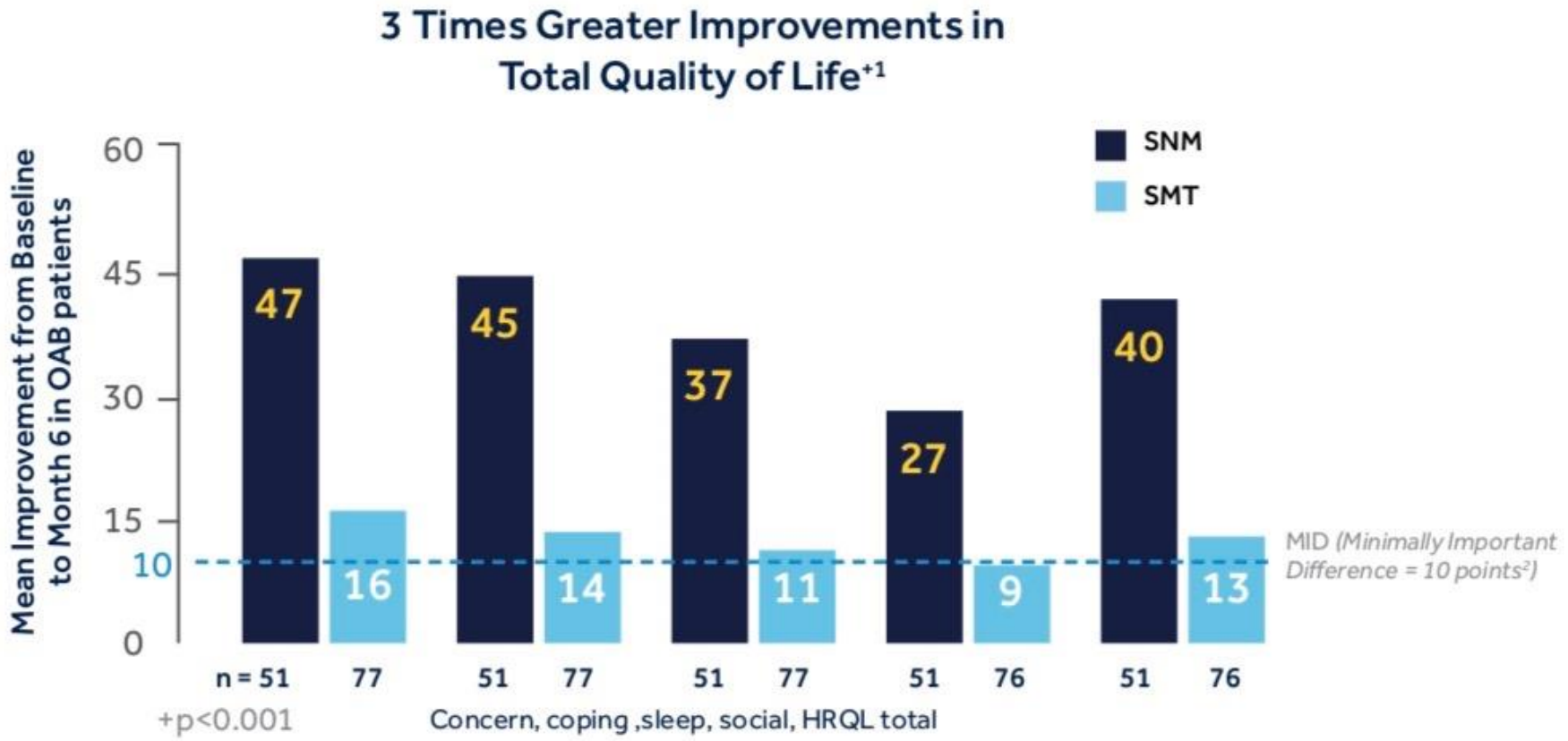
Device-related adverse events occurred in 31% of SNM patients, and medication-related adverse events occurred in 27% of SMT patients.

* Anticholinergic/antimuscarinic

** Numbers reflect as treated results, defined as subjects with diary data at baseline and 6 months (p=0.002). Intent to treat results, which include all randomized subjects, are 61% for SNM and 42% for SMT (p=0.02).

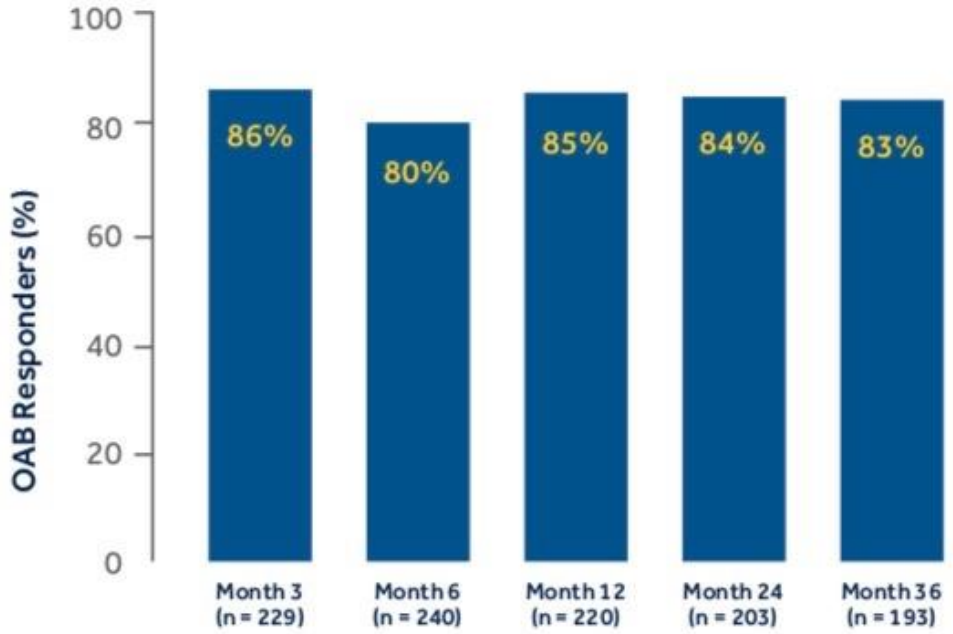
*** OAB response was defined as either ≥50% improvement in leaks/day for UI subjects or ≥50% improvement in voids/day or a return to normal voiding frequency (<8 voids/day) for UF subjects.

Results: Improves Quality of Life



Results sustained and long term

SNM results sustained at 36 Months[1]



- OAB subjects who receive SNM delivered by the InterStim™ system have sustained improvements in therapeutic success.
- OAB subjects who receive SNM with the InterStim™ system have significant and sustained improvements in QOL.
- The most common device-related adverse events were: undesirable change in stimulation (18%), implant site pain (13%), and therapeutic product ineffective (6%).

OAB therapeutic success rate over time. Analyses included subjects with diary data at baseline and follow-up visits (3, 6, 12, 24, and 36 months). OAB response was defined as either ≥50% improvement in leaks/day for UI subjects or ≥50% improvement in voids/day or a return to normal voiding frequency (<8 voids/day) for UF subjects.

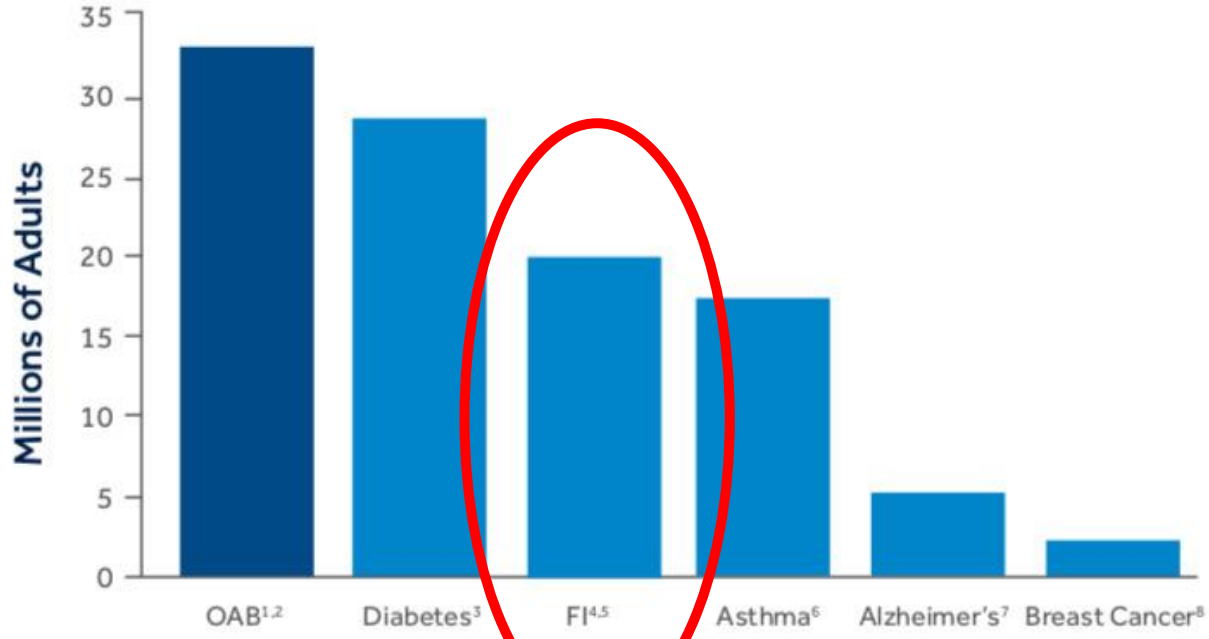
6 mo repeat Botox

- Returns 6 mo
  - Doing well, no symptoms of bulge. No UTIs. Using estrogen cream.
  - Botox working well, can make it to the bathroom without any leakage.
  - Provider: you must be so happy to not be wearing a pad anymore
  - Patient: I still wear a pad for the backside

Fecal Incontinence: Always Ask!

- Hidden Condition
  - For 85%, the physician was unaware of the disorder
  - 54% had never discussed with a professional
  - 65% with FI want help for their symptoms

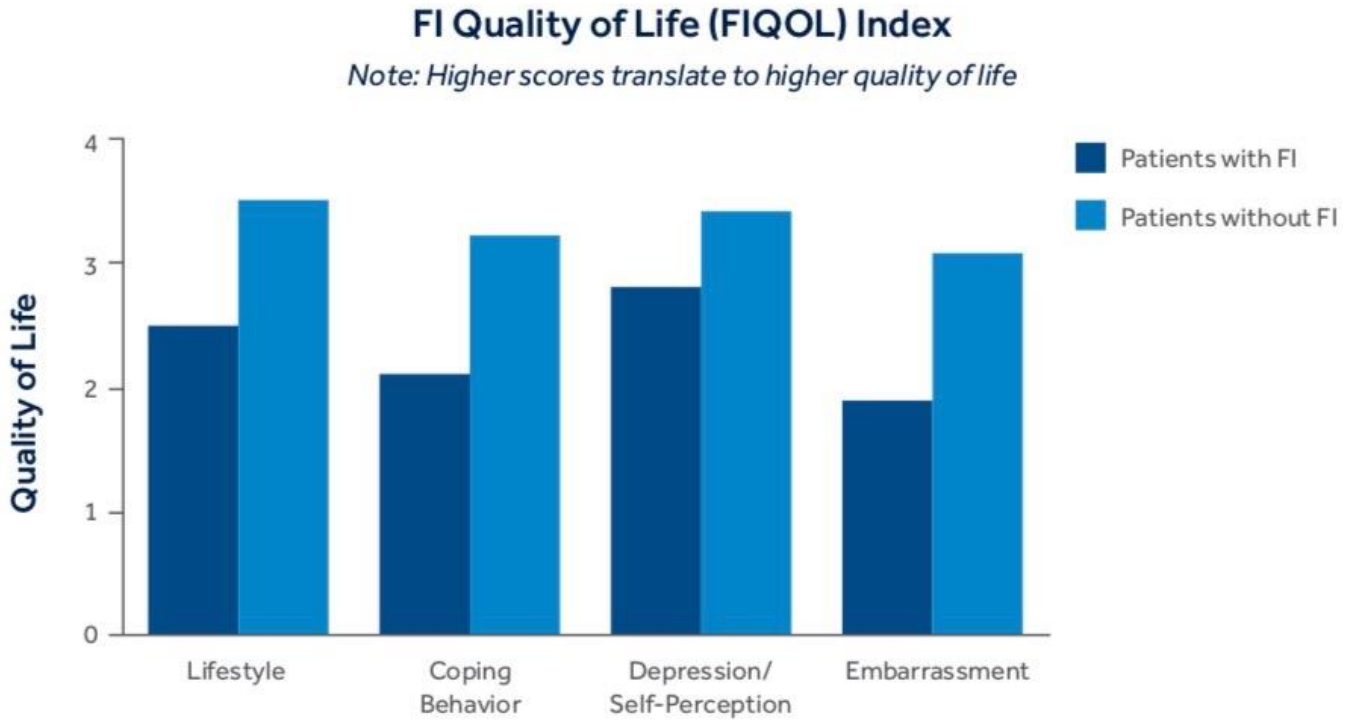
Prevalence of FI vs other health conditions



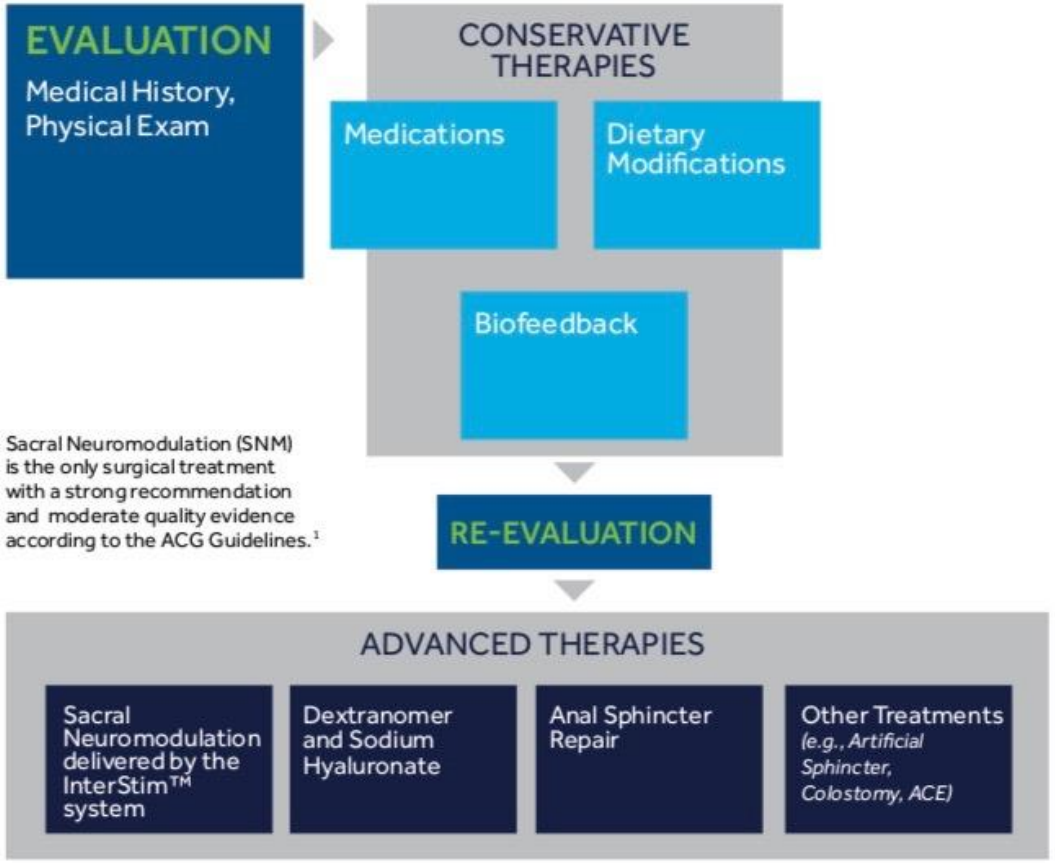
1. Stewart WF, et al. Prevalence and burden of overactive bladder in the United States. *World Jrnl of Urol.* 2003;20:327-336.
2. Serels S. The wet patient: understanding patients with overactive bladder and incontinence. *Curr Med Res Opin.* 2004;20(6):791-801.
3. National Institute of Diabetes and Digestive and Kidney Diseases. National Diabetes Statistics Report, 2014. http://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-web.pdf. Accessed April 21, 2016.
4. Whitehead WE, Borrud L, Goode PS, et al. Fecal Incontinence in US adults: epidemiology and risk factors. *Gastroenterology.* 2009;137(2):512-517.
5. United States Quick Facts. United States Census Bureau Web site. Available at: https://www.census.gov/quickfacts/table/PST045215/00. Accessed July 19, 2016.
6. Centers for Disease Control and Prevention. 2014 NHIS Data. http://www.cdc.gov/asthma/nhis/2014/table3-1.htm. Accessed April 21, 2016.
7. Alzheimer's Association. 2016 Alzheimer's Disease Facts and Figures. http://www.alz.org/facts/overview.asp. Accessed April 21, 2016.
8. Breastcancer.org. U.S. Breast Cancer Statistics. http://www.breastcancer.org/symptoms/understand_bc/statistics. Accessed April 21, 2016.

- >20 million adults in US – 1 in 12- suffer from fecal incontinence

Compromises quality of life!



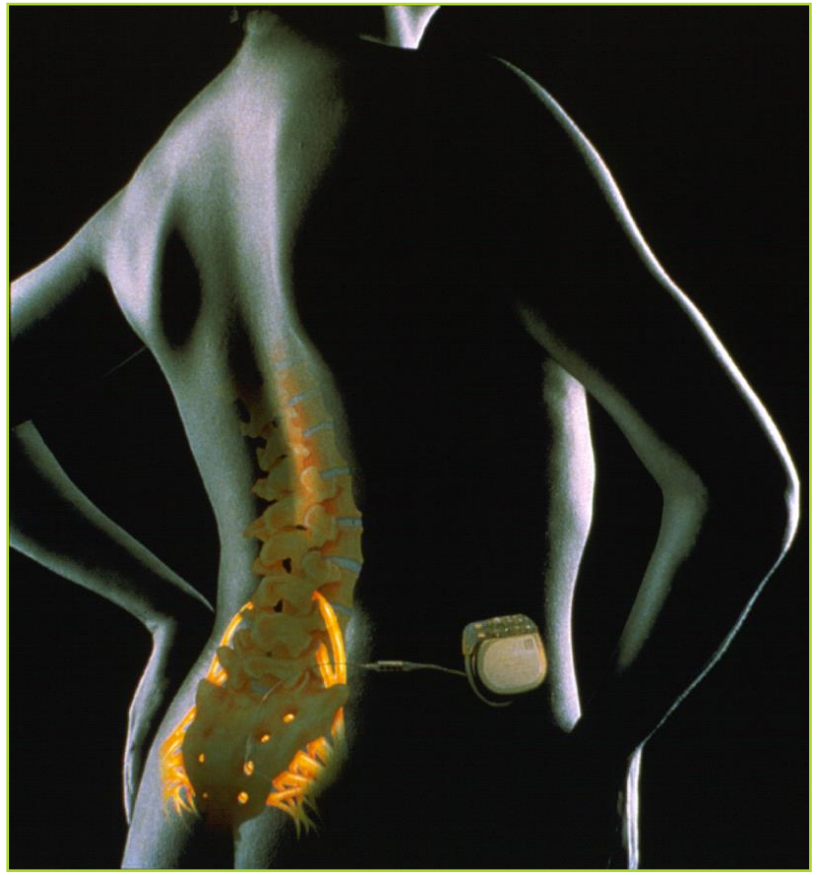
But what can we do?



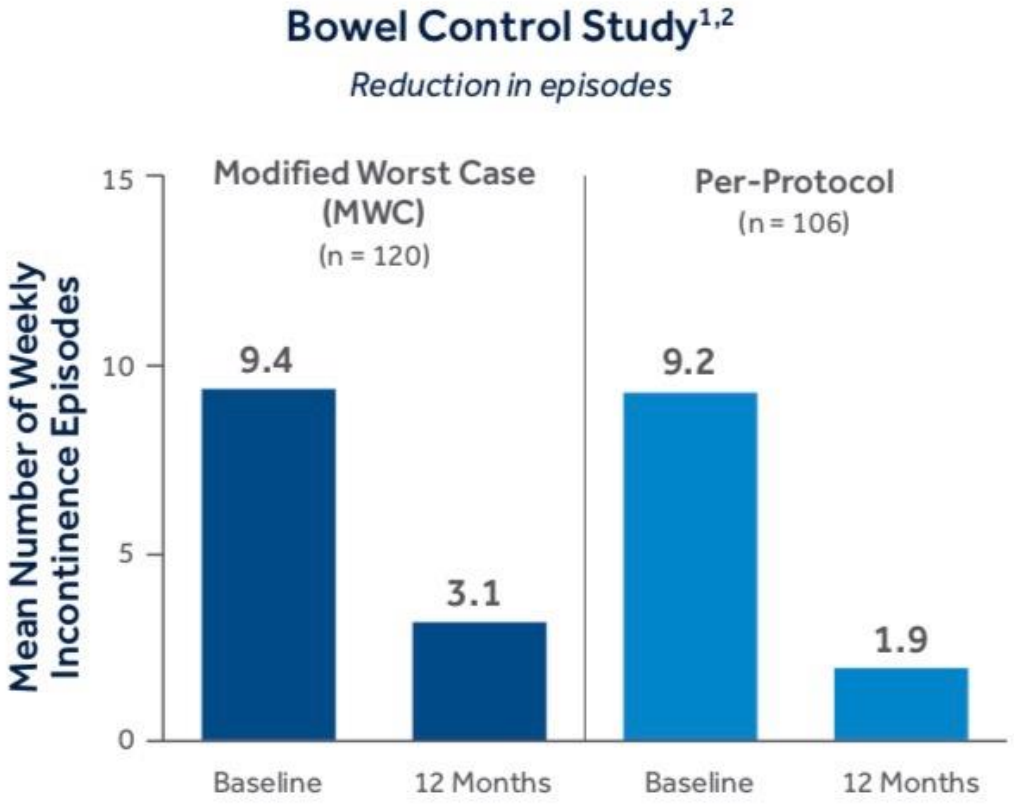
- Conservative treatments
  - MANAGE CONSTIPATION!
  - Dietary changes – Food Journal
  - Physical Therapy
  - Anti-diarrheal/stool bulking meds
  - GI collaboration

InterStim Therapy:
Implantable programmable neurostimulator

- Outpatient/day surgery procedure
- Stage 1: FDA approved following an inconclusive percutaneous test stimulation (up to 7 - 21 days)
- Stage 2: Implant placed
- 85% have at least 50% decrease in urge symptoms



Clinically effective: Reduces Inc episodes

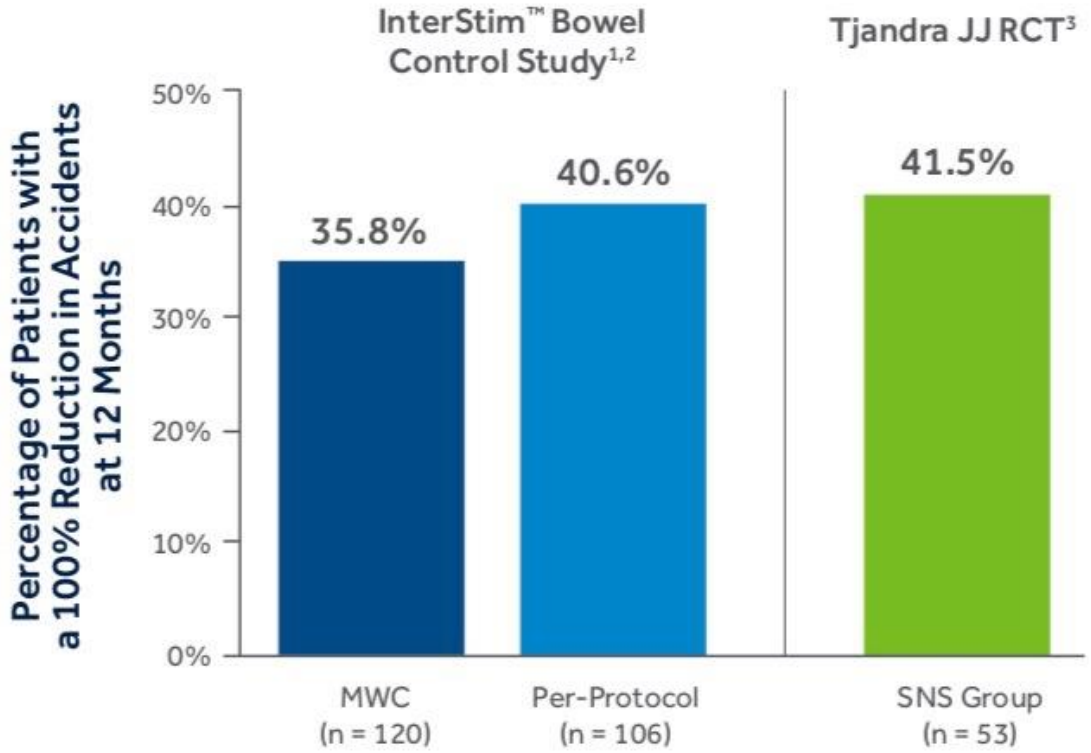


Modified Worst Case (MWC) — If a subject's 12-month data were missing but subsequent data were available, those subsequent data were used for the 12-month end point; if 12-month data were missing and no subsequent data were available, the therapy was considered a failure with zero improvement.

Per-Protocol — Using only the subset of patients with complete data.

Can achieve complete bowel continence

Complete Resolution of FI with Sacral Neuromodulation[1-3]



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Per-Protocol — Using only the subset of patients with complete data.

Betty Crocker

- Finally elected to undergo interstim placement and is now…..

Betty Crocker

- Finally elected to undergo interstim placement and is now…..

PAD FREE!!

Thank You for letting us take care of your patients!!