

## Faecal Incontinence in 2016 And Sacral Nerve Stimulation

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## Take Home Messages

- Faecal incontinence is common.
- You need to ask about it – Windows of Opportunity.
- Majority of people can be managed conservatively.
- Excellent surgical options are available.
- Everyone who seeks help is improved.

## Why Bother?

- Faecal Incontinence > **1.3 million**<sup>1</sup>.
- Urinary incontinence ≈ **4.2 Million**.<sup>1</sup>
- **18%** of community dwelling adults<sup>2</sup>
- **47%** of Nursing Home residents<sup>3</sup>
- FI is NOT a part of aging.
- FI is slightly more common among women.

1. Continence foundation of Australia. The economic impact of incontinence in Australia, 2011  
2. MacMillan et al DCR 2004  
3. Nelson et al DCR 1998

## Patients Don't Tell

- Stigmatising condition.
- Occurs at any age.
- Misconception in community that it is part of aging.
- Windows of opportunity to ask:
  - PAP smear
  - Flu vacs
  - Post partum
  - Prostate checks
  - Medication reviews

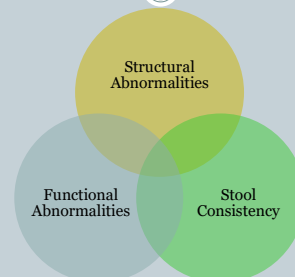


## Multifactorial – Last Straw

- It is a sign or a symptom – NOT a diagnosis.
- Important to dx the cause(s) for each individual.
- Some factors are relatively simple to reverse.
- “**LAST STRAW THEORY**” - Adele Burgess
  - Often addressing and reversing one issue is enough.



## Pathophysiology of Faecal Incontinence



SS Rao. Gastroenterology. 2004 Jan;126(1 Suppl 1):S14-22.

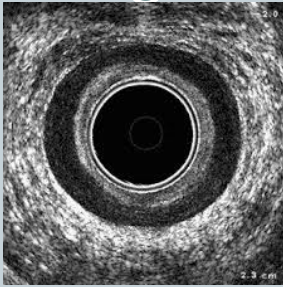
## Evaluation

- History
  - Symptoms
  - Bowel habits
  - Diet
  - Obstetric Hx
  - Medication and
  - Other medical problems.
- Examination
  - Digital Rectal Examination
    - ✦ Rule out cancer
    - ✦ **ASK PATIENT TO BARE DOWN - rectal prolapse or large haemorrhoids**

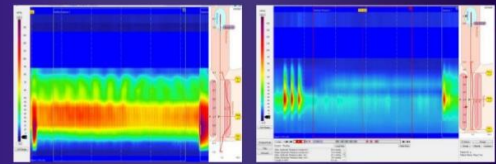
## Diagnostic tests

- Bloods
  - TFT, PTH, Ca+2, HbA1c, U/E/Crt, Fe studies, CRP, B12, Coeliac screen.
- Stool
  - M/C/S and Faecal calprotectin
- Gastroscopy & Colonoscopy
- Manometry/ Ultrasound and Pudendal Nerve testing

## Ultrasound



## Manometry



Normal

Weak

## Pudendal Nerve testing



## Common 'Reversible' Causes

- Faecal loading
- Treatable causes of diarrhea (e.g. infective, inflammatory bowel disease and irritable bowel syndrome, medications i.e.. Metformin, PPI, NSAID)
- Rectal prolapse or third-degree haemorrhoids
- Lower gastrointestinal cancer
- Acute anal sphincter injury including obstetric and other trauma
- Acute disc prolapse/cauda equina syndrome.

## Management

- Dietary
- Bowel Regime
- Lifestyle
- Mobility Aids
- Medical Therapy
- Physiotherapy
- Surgery

## Stool Modification and Management

- Fiber as a bowel normalizer
  - Metamucil – psyllium husks
- Enemas

Dear Dr Burgess,  
I came to see you on  
3.9.2013 with a small problem. On  
taking Metamucil, as you suggested,  
the problem has not occur since  
two months. Thank you, It has made  
life much happier.  
With many thanks

## Pharmacological management

- Anti - diarrheal medications.
  - Loperamide (Imodium) – decrease stool frequency and increase sphincter tone
- Low dose tricyclic antidepressants
  - Amitriptyline (1)(2)

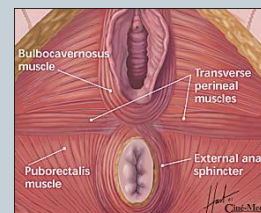
(1) Santoro GA. Open study of low-dose amitriptyline in the treatment of patients with idiopathic fecal incontinence. *Dis Colon Rectum*. 2000 Dec;43(12):1676-81.  
(2) Scarlett Y. Medical Management of faecal incontinence. *Gastroenterology*. 2004;126:S55-S63.

## Surgery

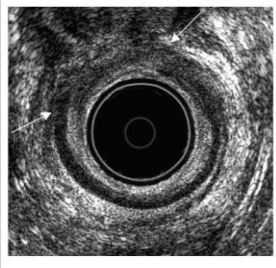
- Correcting haemorrhoids or prolapse
- Injectable bulking agents – i.e.. Solesta injected directly into the anal canal
- Sphincter repair – if there is a defect
- Artificial sphincter
- Stoma
- Sacral Nerve Stimulation



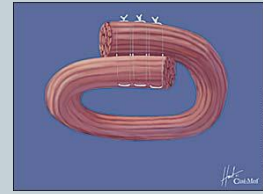
## Sphincter repair



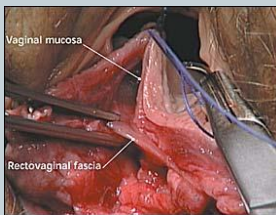
### Ultrasound sphincter defect



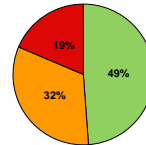
### Sphincter repair



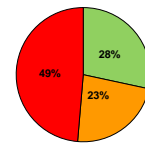
### Sphincter repair



### Long-Term Results Of Overlapping Sphincter Repair



3 months n=86

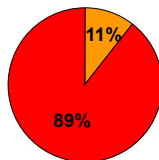


40 months n=74

- Incontinent
- Incontinent to gas
- Continent

Karoui et al. DCR June 2000

### Long-Term Results Of Overlapping Sphincter Repair

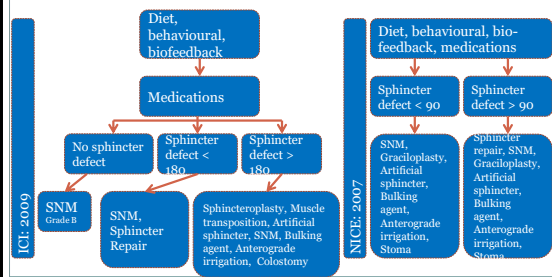


77 months n=38

- Incontinent
- Incontinent to gas
- Continent

Malouf, Lancet Jan 2000

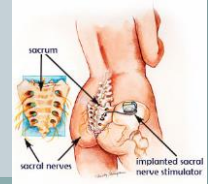
### Published international guidelines: Bowel



# Sacral Nerve Stimulation

## What is it?

- Programmable stimulator
- Delivers low amplitude electrical stimulation via a lead to the sacral nerve.
- Usually accessed via the S3 foramen.
- Minimally invasive procedure
  - can be done under sedation.
- Two steps –
  - Stage 1 - trial
  - Stage 2 - permanent implant



## What Is It For?

- **Faecal Incontinence**
- **Urinary Urge Incontinence, Urinary Frequency, and Urinary Retention**
- **Pain**
  - Idiopathic constipation
  - Chronic anal fissure
  - Reduction in pressure ulcers
  - ? Sexual function

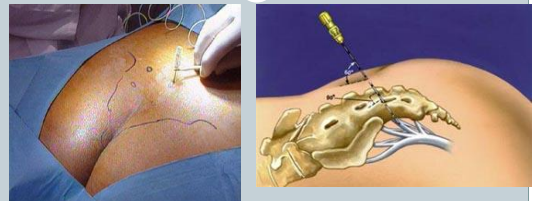
## How Does It Work ? Bottom/Gut/Head

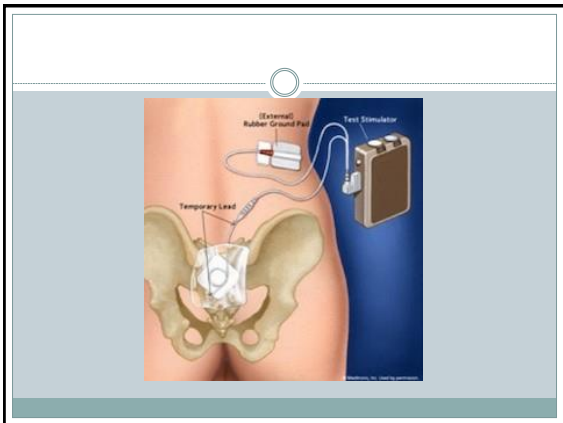
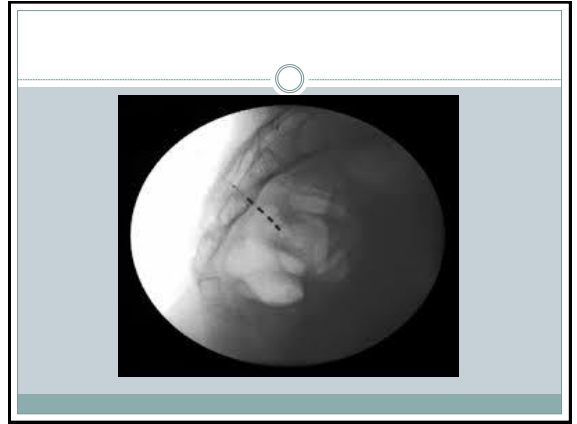
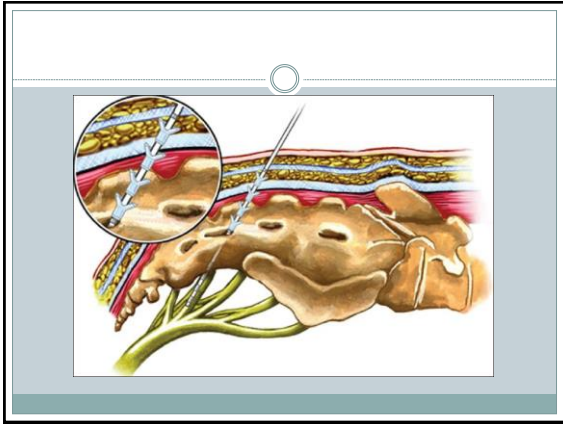
- Increased awareness of pelvic floor
  - Sensory homunculus representation (Elabbady, 1994)
- Recruit residual sphincter function
  - Striated and smooth muscle (Tjandra, 2004)
- Decreased rectal contractility
- Changes in colonic motility
  - Bi-directional peristaltic activity (Dinning, 2012)
- Modulation of anorectal reflexes
  - Spinal and central (Kenefick, 2004)
- Affect on brain function
  - Sheldon, 2005

## What Does It Involve?

### Stage 1: 'Try Before You Buy'



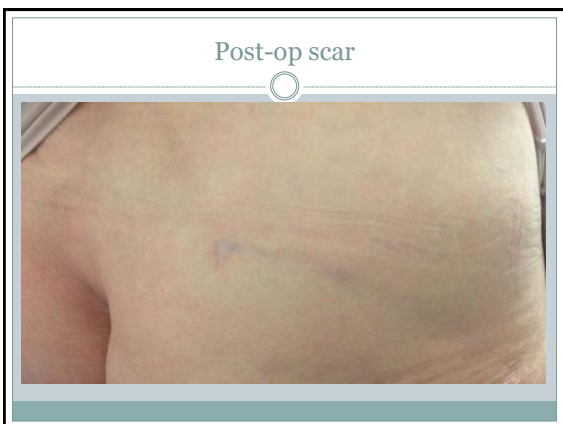
- 10 – 14 day trial
- Insert electrode to S3/S4 foramen
- Connect to external pulse generator.
- Minimally invasive.
- Can be done under sedation alone.
- If positive response then can go on to have a permanent stimulator implant.



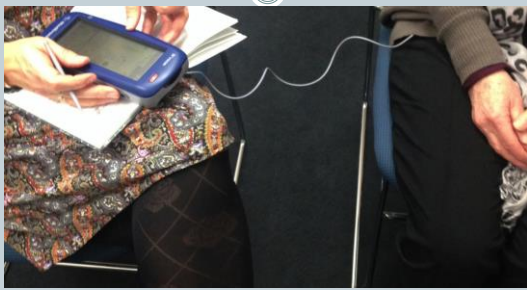


### What Does It Involve?

- Permanent implant if good response to stage 1.
- Minimally invasive
- Under sedation

### Tune Up



### Outcomes?

### Sacral Nerve Stimulation

- Overall success rate is reported to be between 70 and 80%. (3,4)
- Long-term efficacy in patients treated with SNS, and the beneficial results remain for as long as 13 years after implantation.

3. Jarrett ME, Mowatt G, Glazener CM, et al. Systematic review of sacral nerve stimulation for faecal incontinence and constipation. Br J Surg. 2004;91:1559.  
 4. Melenhorst J, Koch SM, Uhdag O, van Gemert WG, Baeten CG. Sacral neuromodulation in patients with faecal incontinence: results of the first 100 permanent implantations. Colorectal Dis. 2007;9:72-730.

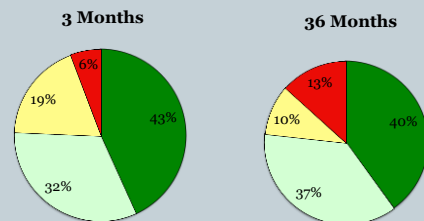
### Common Complications

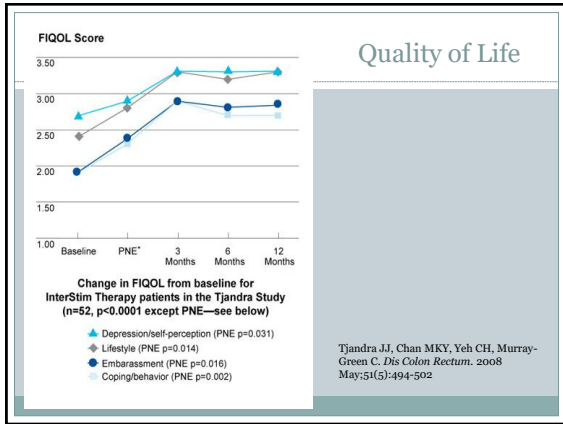
- implant site pain (25.8 %),
- a sensation of tingling, pricking, or numbness of the skin (12.5 %)
- implant site infection (10.8 %).

Improvement in Weekly Incontinent Episodes



### SNS Outcomes





### New Indications

- 70% - 80% improvement in idiopathic faecal incontinence,
- 76% improvement after sphincter rupture/episiotomy,
- 78% improvement after anal repair, and
- 73% improvement in neurological injury (4)

7. Melenhorst J, Koch SM, Uhdag O, van Gemert WG, Baeten CG. Sacral neuromodulation in patients with faecal incontinence: results of the first 100 permanent implantations. *Colorectal Dis* 2007; 9: 725-30.

### Summary

- Don't accept incontinence – we can improve symptoms
- You need to ask about symptoms
- Majority of patients can be managed conservatively.
- Good surgical options are available.
- Sacral Nerve Stimulation
  - Minimally invasive
  - simple procedure
  - 'try before you buy'
  - Life changing.

### Faecal Incontinence in 2016

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