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Melbourne Australia

## MANAGEMENT OF URINARY INCONTINENCE IN WOMEN

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5 March 2016

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### Female Urinary Incontinence: GP resources

[www.thewomens.org.au](http://www.thewomens.org.au)

- Clinical Practice Guidelines
- GP management of female urinary
- Urogynaecology fact sheets

**HealthPathways Melbourne**

CFA: Continence Foundation of Australia  
[www.drmarcuscarey.com](http://www.drmarcuscarey.com)

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### Female Urinary Incontinence

10-16% of women have urinary incontinence (35% after age 65)

Burden of care for incontinence will increase by 110% by 2030

Stress incontinence is the commonest cause of urinary incontinence followed by urge incontinence

Urge Incontinence is a distressing symptom

Accurate clinical assessment

Conservative treatment often very effective

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### OAB: Prevalence (US data)

Approximately 37.4 million adults in the United States have symptoms of OAB<sup>1,2</sup>

Prevalence of OAB vs Other Health Conditions in the United States<sup>1,2</sup>

Condition	Number of Adults (in million)
Obstructive Disorder	37.4
Asthma	31.5
Diabetes	25.8
FI	18
Osteoporosis	10
Alzheimer's	5.4

Epidemiologic surveys suggest that the incidence of OAB rises as the population ages<sup>1</sup>

References: 1. Stewart WF, Van Rooyen JB, Cundiff GW, et al. World J Urol. 2003;20:327-336. 2. United Nations, Department of Economic and Social Affairs, Population Division (2014). World Population Prospects: The 2014 Revision, CD-ROM Edition, 3. Centers for Disease Control and Prevention (CDC), All Prostate and Respiratory Health Branch, National Center for Environmental Health (asthma-prevalence [asthma], Atlanta, Georgia U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. 2010. 4. National Diabetes Information Clearinghouse. National Diabetes Statistics, 2011. Atlanta, GA: U.S. Department of Health and Human Services. 5. Whitehead WE, Bernal L, Goske PS, et al. Gastroenterology. 2009;137:515-517. 6. National Osteoporosis Foundation. What is osteoporosis: www.nof.org/about? Accessed October 25, 2012. 7. Alzheimer's Association. Alzheimer's facts and figures. www.alz.org/alzement\_facts\_and\_figures.asp. Accessed August 23, 2012.

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### Female Urinary Incontinence: Causes

- Urethral sphincter incompetence (stress incontinence)
- Detrusor over-activity (urge incontinence; OAB)
  - idiopathic
  - neurogenic (e.g. MS, spinal trauma)
- Mixed incontinence
- Urethral diverticulum
- Fistula
- Congenital abnormalities (e.g. bladder extrophy, ectopic ureter)

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### Female Urinary Incontinence: Causes

- Transient incontinence
  - UTI, restricted mobility, constipation, excessive urine output (diuretics, CCF, hypercalcaemia, diabetes insipidus), confusion
- Drugs (e.g. prazosin, diuretics)
- Overflow incontinence
- Urethral instability
- Functional

## Urinary Incontinence: Definitions



**OAB** is the presence of **urinary urgency**, usually accompanied by **frequency** and **nocturia**, with or without **urgency incontinence**, in the absence of UTI or other obvious pathology

**Stress Urinary Incontinence** is the complaint of involuntary leakage on effort or exertion, or on sneezing or coughing

## Urinary Incontinence: assessment



### History and examination

- OAB symptoms
  - Urgency=sudden compelling desire to pass urine that is difficult to defer
  - Urge incontinence=involuntary leakage of urine accompanied by urgency
  - Women often describe a sudden desire to void but not making it to the toilet in time; may be triggered by hearing running water, opening the front door etc.
- Stress incontinence

### Severity of symptoms

Lifestyle factors: caffeine, alcohol

## Urinary Incontinence: assessment



### Examination

- Exclude neurological causes
- Vaginal examination: prolapse, stress incontinence, atrophy, diverticulum, vaginosis

### Dipstick and/or MSU

Post-void residual urine volume

### Bladder diary

- urinary frequency and nocturia

## Treatment of Overactive Bladder (OAB)

## OAB treatment guidelines



### 1<sup>st</sup> Line Treatment

Behavioral therapies (bladder retraining, bladder control strategies, PFE, fluid management)

### 2<sup>nd</sup> Line Treatment

Oral anti-muscarinics (Darifenacin, Solifenacin) or oral  $\beta^3$ -adrenoreceptor agonist (Mirabegron)  
 Transdermal anti-muscarinics (Oxybutynin)  
 Combination therapy (e.g. Mirabegron/Solifenacin)

## OAB treatment guidelines



### 3<sup>rd</sup> Line Treatment (Advanced Therapies)

Intra-detrusor botulinum toxin (Botox)  
 Peripheral Tibial Nerve Stimulation (PTNS)  
 Sacral Neuromodulation (SNM)

### Additional Treatments

Indwelling catheter, augmentation cystoplasty and urinary diversion

## Treatment Algorithm for OAB

**EVALUATION**  
Incontinence,  
Urgency, Frequency

**CONSERVATIVE TREATMENTS**  
PFE, fluid/diet changes,  
Biofeedback, Physical Therapy  
(8-12 WEEKS)

**MEDICATIONS**  
(4-8 WEEKS)

**REFER FOR ADVANCED THERAPIES**



## OAB Combination Therapy

Oral  $\beta^3$ -adrenoreceptor agonist  
Mirabegron 25mg daily

.....with.....

Oral anti-muscarinic  
Solifenacin 5mg daily..or..Darifenacin 7.5mg daily



## Urinary incontinence: when to refer

### Failed conservative treatment

- PFMT and BR little help
- Poor response to medication

### Associated problems:

- pain, haematuria, recurrent UTI's
- voiding difficulty
- suspected neuropathic bladder
- symptomatic prolapse
- suspected fistula



## Advanced Treatments for Overactive Bladder (OAB)



## Sacral Neuromodulation (SNM)

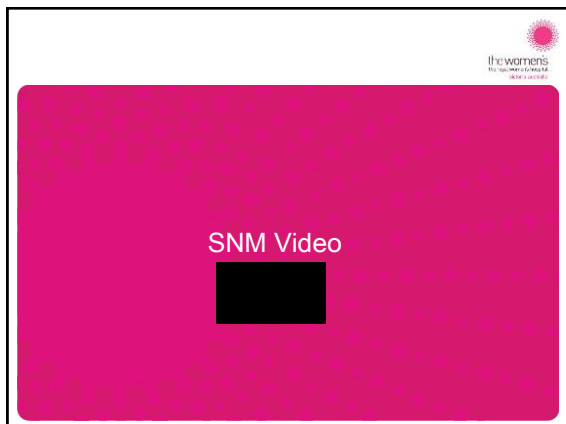


## SNM: current indications (urinary)

- Refractory Urgency Incontinence (*approved*)
- Non-obstructive urinary retention (*approved*)
- Painful bladder syndrome (*not approved*)

MSAC 1115, 2008  
SNM for urinary indications



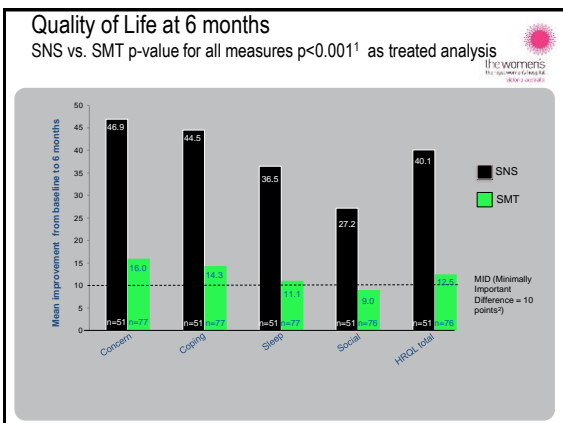
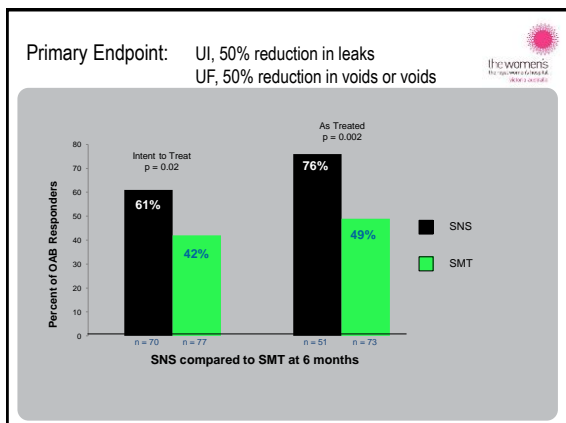


### Efficacy of SNM: InSite Study (2014)\*

5-year prospective multi-center study at 38 centers

- Patients randomized to SNM or SMT in 1:1 ratio
- Enrollment from 2007 – 2010
- N=147 (SNM=70; SMT=77)
- Primary outcome: 50% reduction in leaks and frequency
- Quality of Life, complications.

\*Siegel S, Noblett K, Mangel J, et al. [published on line ahead of print Jan 10 2014]. *NeuroUrol Urodyn* 2014. [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1520-6777/issues](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1520-6777/issues). Accessed January 29, 2014



### Intra-detrusor Botulinum toxin

The diagram shows the bladder with labels for the sphincter of urethra, urethra, bladder, and ureter. An inset shows a close-up of the needle tip injecting into the bladder wall.

### Intra-detrusor Botox: Mechanisms of Action

Motor: Decreases detrusor muscular contractions

Sensory: Reduces urgency, frequency and nocturia

Risk of urinary retention/voiding difficulty: 6%

## Intra-detrusor Botox: Indications

Refractory Urgency Incontinence ( $\geq 14$  leaks per week)

100 IU diluted in 20 ml Saline and injected between urothelial and detrusor muscle layer at 20 sites by an approved provider

Generally 'top-up' treatments each 9 to 12 months

6% will develop post-operative voiding difficulty



## GENITOURINARY SYNDROME OF MENOPAUSE



## Genitourinary Syndrome of Menopause (GSM)

*Menopause, Vol. 21, No. 10, 2014*



### Symptoms

Genital dryness  
Decreased lubrication with sexual activity  
Discomfort or pain with sexual activity  
Post-coital bleeding  
Decreased arousal, orgasm, desire  
Irritation/Burning/Itching of vulva or vagina  
Dysuria  
Urinary frequency/urgency

### Signs

Decreased moisture  
Decreased elasticity  
Labia minora resorption  
Pallor/Erythema  
Loss of vaginal rugae  
Tissue fragility/fissures/petechiae  
Urethral eversion or prolapse  
Loss of hymenal remnants  
Prominence of urethral meatus  
Introital retraction  
Recurrent urinary tract infections

## Genitourinary Syndrome of Menopause (GSM)



## Genitourinary Syndrome of Menopause (GSM)



### Management:

Topical vaginal oestrogen (Vagifem, Ovestin)

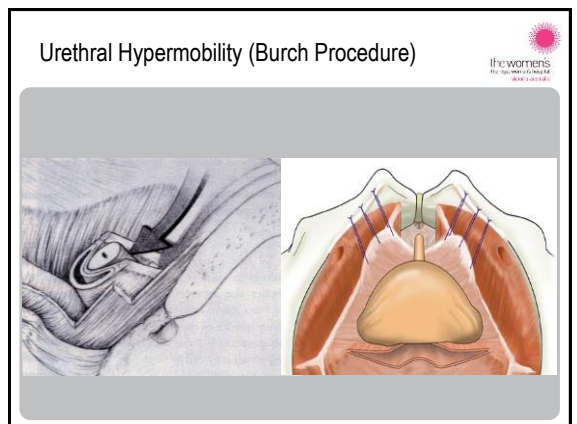
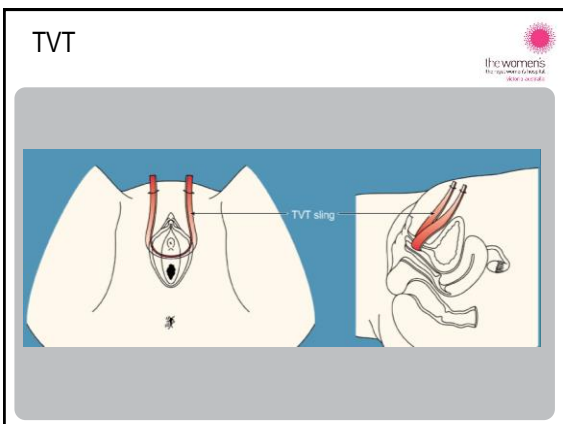
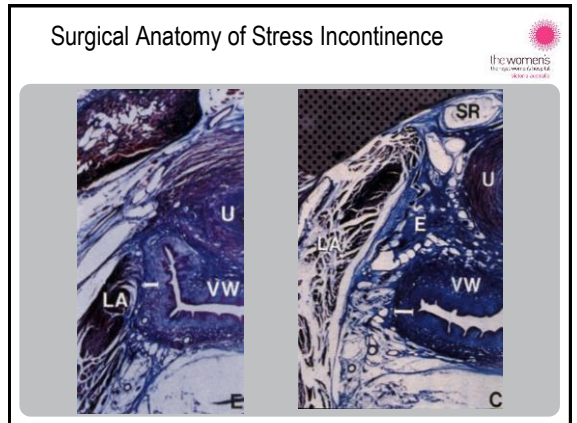
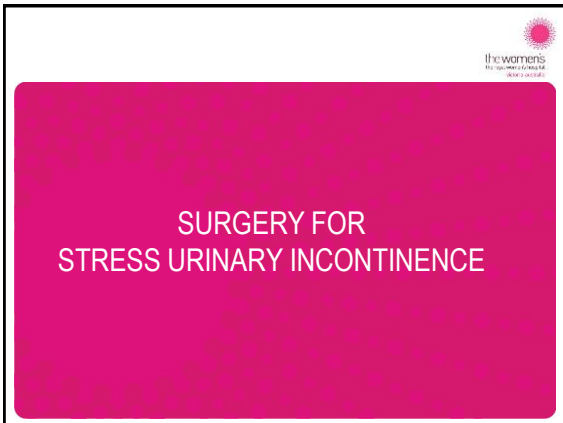
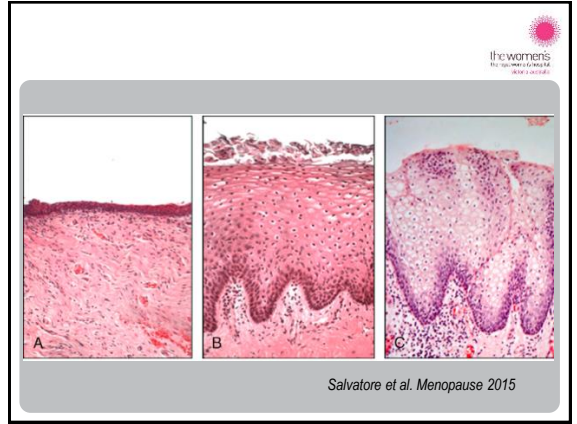
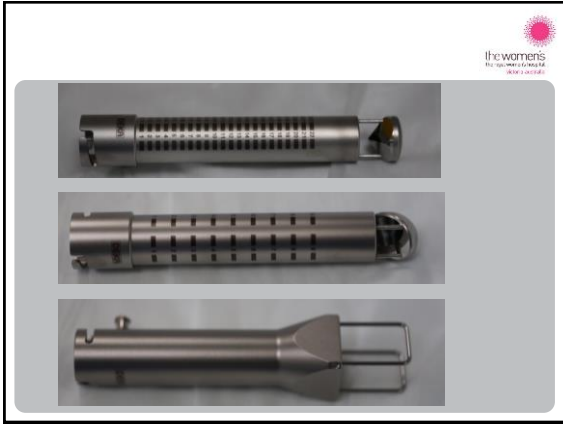
Lubricants and moisturizers

**Ospemifene (SERM)**

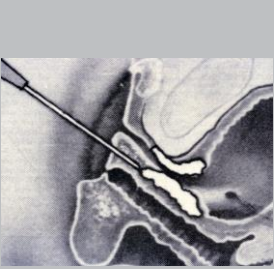
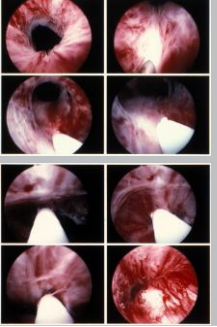
**Pulsed CO<sub>2</sub> Laser (DEKA *MonaLisa Touch*)**

Surgery





## Urethral Bulking Agent


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## Female Urinary Incontinence


Very common  
 SUI and OAB commonest conditions  
 Conservative treatment initially  
 For OAB trial of medication for 6 weeks  
     better compliance with Solifenacin and Darifenacin  
     rarely need surgery for OAB  
 Surgery for SUI usually very effective

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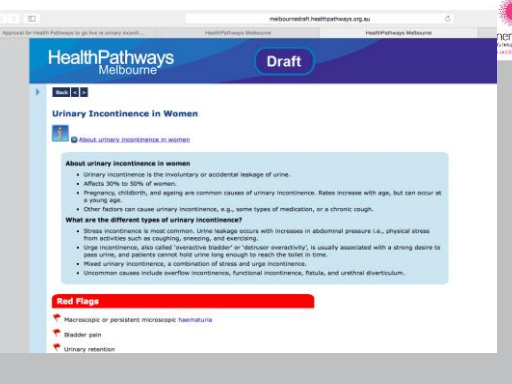
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1. **Check for contraindications**

2. **Obtain a clinical history**

3. **Perform a physical examination**

**Clinical examination**

- Body mass index (BMI) and general observations.
- Genital examination.
- Rectal digital prostate.
- Urinary catheter.
- Sub-urethral cysts or masses (prostatic diverticulum).
- Check patient's ability to perform a pelvic floor muscle squeeze and evaluate strength of contraction.
- Signs of inguinal or hernia protrusion.
- Ask the patient to cough or strain (Valsalva manoeuvre), and observe if there is any leakage of urine. Check if any leakage can be stopped if the patient is supine or reclined.

**Perineal examination**

- If the patient has a prostate, refer to the Prostate pathway for management, and continue with incontinence pathway.
- Significant perineal oedema, musculoskeletal, or neurological deficits.

4. **Complete a consultation**

**Management**

- Conservative management for all patients.
  - Assess or re-assess BMI to  $< 30$ .
  - Treat any suspected or confirmed urinary tract infection (UTI), as appropriate.
  - Advise on good dietary habits.
  - Recommended supervised pelvic floor muscle exercises for 4 months.
  - Consider referral to continence nurse for non-surgical advice.
  - Treat any medical conditions that cause chronic cough.
  - Publicly funded continence services available for:
    - continence management.
    - referrals to continence management schemes.
    - specialised continence appliance trials and product information.
    - appliance repairs/ replacement.
- Stress Incontinence**
  - After conservative management, consider referral for continence surgery, e.g., mid-urethral sling, Burch colposuspension, subpubic fascial slings, urethral

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