

# Female Urinary Incontinence

## ● Introduction

Urinary incontinence is a major problem right over the world and in New Zealand there are about 200,000 people suffering from incontinence. 80% of these are women. In the United States more than 10 million people suffer from incontinence.

## ● Factors maintaining continence

- ▶ A stable bladder muscle with the ability to expand without significant increase in pressure in the bladder.
- ▶ The muscles and blood vessels in the urethra (the outlet of the bladder) should function normally to close the urethra.
- ▶ The bladder and urethra are supported by important muscles and ligaments to keep it in the correct position and to maintain normal urinary function.

## ● Reasons for Incontinence

- ▶ The bladder muscle may be overactive and cause uncontrolled contractions, resulting in leakage without control. This is usually associated with an urge to pass urine. This form of incontinence is called **urge incontinence**. It is usually treated with medication that relaxes the bladder muscle.
- ▶ The bladder may be underactive without proper contraction in which case the patient is not able to empty the bladder. This is called **overflow incontinence**. The aim of treatment in this condition is to improve the bladder emptying which could be done with medication or certain surgical techniques and even intermittent catheterisation.
- ▶ Incontinence may also be due to the inability of the urethra to close off properly, or due to insufficient

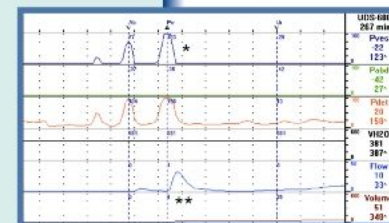
support by the pelvic floor muscles and ligaments. This causes leakage when the pressure in the bladder goes higher than the closing pressure of the urethra and usually happens when people cough, sneeze or do anything else that causes increased abdominal pressure. This embarrassing problem is called **stress incontinence**.

## ● Conservative treatment of stress incontinence

- ▶ General measures like losing weight, stopping smoking and treating chronic coughing.
- ▶ The female hormone (estrogen) is essential to maintain normal function of the urethra and pelvic floor. Patients with low hormone levels should receive hormone replacement therapy. If they are not able to use the tablets they should at least use local vaginal estrogen cream or pessaries.
- ▶ Certain blood pressure tablets (Alpha-blockers) can relax the urethral muscle and cause incontinence. These tablets should be changed to other tablets for the treatment of hypertension.
- ▶ Medication that stimulates the muscles in the urethra (Alpha stimulants) can be used under certain circumstances.
- ▶ Physiotherapy is also very important and should be done by people specialising in this field. By improving the pelvic floor muscle tone and strength, a lot of people may be cured or at least be greatly improved.

## ● Urodynamic studies

If conservative measures do not solve the problem, patients should be referred to specialists dealing with female incontinence. Apart from proper clinical evaluation and examination these people should undergo urodynamic studies to evaluate the exact pathology in the bladder.



## Surgery for Hypermobility of the Urethra

Bladderneck Suspension:

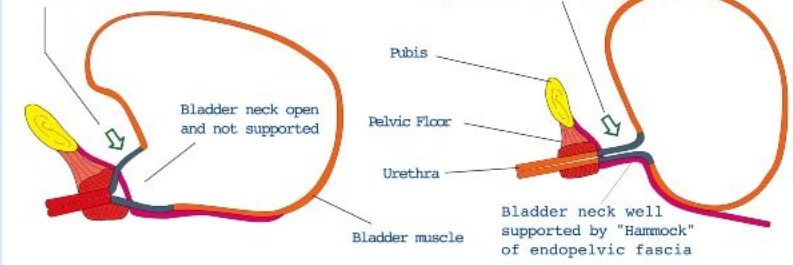
Burch Colposuspension

Before Operation

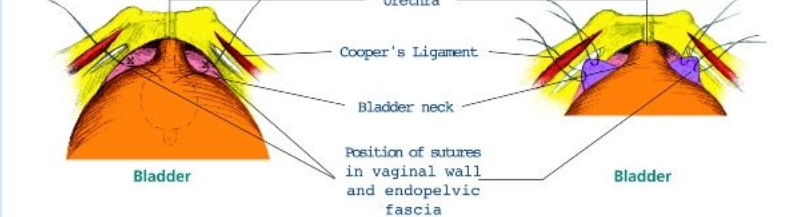
After Operation

Transmitted intra-abdominal pressure cannot close off the proximal urethra

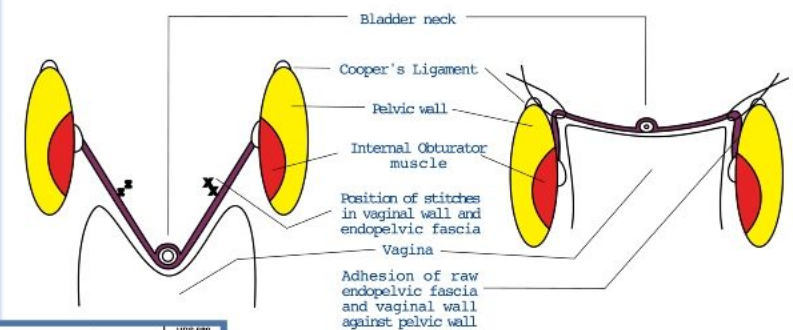
Transmitted intra-abdominal pressure closing off the proximal urethra



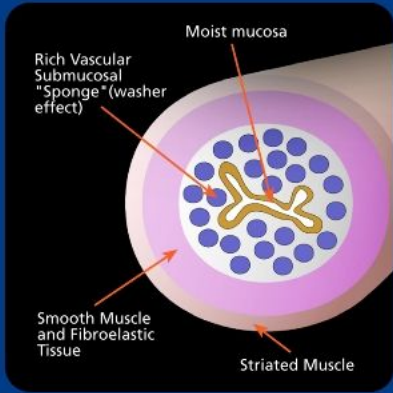
AP View



Transverse section at Bladder neck



Urodynamic studies are sophisticated computerised studies where the pressures in the bladder and rectum are measured while filling the bladder with fluid and also during micturition and coughing. This provides the necessary information for proper treatment and to perform the correct type of surgery if indicated.



## ● Cystoscopy

A cystoscope is used to look into the urethra and bladder to evaluate the function of the urethral muscles and to exclude any pathology in the bladder.

## ● Surgical treatment of stress incontinence

### Hypermobility of the urethra:

80-90% of patients with stress incontinence can be cured by a bladder neck suspension operation. Although there are many techniques to perform this operation the technique preferred by myself and by many other specialists is the Laparoscopic Burch Colposuspension. This is performed through the laparoscope with only a few small ports through the abdominal wall with very little pain postoperatively and early recovery and discharge from hospital. People could be back to work within two weeks. With this technique the tissue supporting the bladder neck is elevated and fixed to the pelvic bone so that it can never drop down again.

### Intrinsic sphincter deficiency:

In 10-20% of patients with stress incontinence the closing mechanism of the urethra may be so poor that different operations are indicated, such as a urethral sling and in certain patients, only injections into the urethra are necessary to close it off completely.

## ● Postoperative

### Urge incontinence

Although stress incontinence is normally cured instantly, many patients may experience increased frequency and urgency and even urge incontinence after the operation. This usually subsides in most patients as bladder irritability decreases.

### Urinary flow

The urinary flow may be slower than before the operation as the urethra is slightly constricted.

## ● Conclusion

The endopelvic fascia and ligaments support the vagina as well as the adjacent bladder, uterus and rectum. If this support is stretched out and weakened by childbirth or other factors, it can cause prolapse not only of the bladder neck and bladder but also of the uterus, rectum and vault of the vagina (after hysterectomy). If prolapse of any of these structures is present at the time of bladder neck suspension, it needs to be corrected simultaneously.

Indolent weakness of the vaginal vault or uterine support or posterior vaginal wall may not be visible at the time of surgery but prolapse of these structures may develop later on and may need surgical repair. (Sacropopexy or sacrospinous vault fixation for vault prolapse, sacrohysteropexy or hysterectomy for uterine prolapse and posterior repair or transrectal surgery for rectocele.)

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■ For more information, please visit my website.

■ A video of my surgical technique of the laparoscopic Burch colposuspension is available on CD

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