

# Urinary incontinence in women & men

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## Part 1: INCONTINENCE IN WOMEN

Urinary incontinence is common. About 1 in 4 young women, and almost half of older women, experience urinary incontinence. Incontinence is not diagnosed or treated in many of these women. Some are not bothered by it and choose not to get help from their doctor.

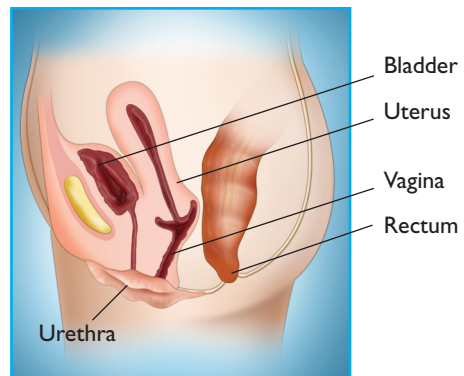
However, we know that incontinence is linked to falls and fractures in the elderly, skin breakdown because of the constant irritation of wearing wet pads, depression, more frequent visits to the doctor, and a lower quality of life. Incontinence affects all areas of life, including physical, mental and social life. In fact, the quality of life with incontinence has been shown to be lower than with some chronic diseases, such as heart disease, arthritis and diabetes.

Urinary incontinence has a large economic impact. Research suggests that \$16 billion is spent on incontinence in the United States. This number includes personal, healthcare and medication-related expenses, but 70% of this money is spent on routine management (the purchase of items such as pads and diapers, laundry and dry cleaning). Because of these costs, women spend on average \$750/year to manage their incontinence.

The body parts involved in urinary control are shown in Figure 1.

There are 2 types of incontinence:

1. **Stress incontinence:** This type of incontinence happens if urine leaks when you move, sneeze, cough or laugh.
2. **Urgency incontinence:** This type of incontinence happens if urine leaks at the same time as you get the urge to go to the bathroom. This is usually part of an overactive bladder (OAB). With OAB, you urinate more frequently (day and night) and you get an immediate urge to go to the bathroom (without the normal warnings); so you end up having to rush and find a bathroom. About 1 in 3 people with OAB have urgency incontinence.



**Figure 1.** The bladder stores the urine made by the kidneys. It sits between your pubic bone and vagina. The urine exits the body through the urethra. The urethra is surrounded by a muscle, called the urinary sphincter, which controls the urine flow. Behind the vagina are the rectum and the anus, which are responsible for bowel movements.

Many women have a mix of these two types – this is called “mixed incontinence.” Even in these cases, most women find that one type of urinary leakage (either stress or urgency) is more common. There are also less common causes of urinary incontinence:

- “**overflow incontinence**,” when a person cannot empty their bladder properly; and
- “**continuous incontinence**,” when there is an abnormal connection between your bladder and vagina. This is a rare complication, but can happen when you have surgery on your bladder, uterus or vagina.

The first thing to do is to determine the type of incontinence that you have; there are different treatments for different types.

There are many reasons why women develop urinary incontinence. It is mostly seen in older women, although a large number of younger women also experience incontinence.

## Reasons why women develop urinary incontinence

- Being overweight; a woman of average height (5’ 4”, or 1.6 m) who weighs more than 180 lbs (or 82 kg) has twice the risk of urinary incontinence.
- Women who have had vaginal deliveries are at a higher risk.
- A large part of a woman’s risk of incontinence is inherited from her parents.
- Specific medications and neurologic conditions (such as spinal cord injury, previous strokes, diabetes, multiple sclerosis, Parkinson’s disease and dementia) are associated with incontinence.

The reasons why a woman develops incontinence depends on the type of incontinence.

**Stress incontinence** usually occurs because of a weakness in the supports of the urethra. The urethra is a 4-cm tube that carries urine out of the bladder. Wrapped around this tube is the urinary sphincter, the muscle that controls urinary flow. Usually a combination of weak tissues holding the urethra in place and a weak urinary sphincter leads to stress incontinence.

**Urgency incontinence** occurs because of changes in the bladder muscle, the bladder lining or in the nerves that control the bladder. These changes cause the bladder muscle to contract without the usual signal from the brain. This causes a sudden urge to go to the bathroom.

## What to expect when seeing a doctor for incontinence

Your family doctor may refer you to a specialist to evaluate your incontinence, or may suggest some treatment options before considering a referral. Usually urologists or gynecologists are the specialists that deal with urinary incontinence. They may suggest operations to treat certain types of incontinence.

Topics your doctor will ask you about:

- Previous health
- Medications
- Allergies

To help your doctor determine the type of urinary incontinence that you have, you should keep track of what you are doing when you experience incontinence. You should be able to describe to your doctor how much urine leaks and how this bothers you and affects your life.

**Questions your doctor may ask you:**

- How frequently do you urinate (day and night)?
- Do you have urinary urgency (which is when you have the sudden urge to urinate that you can't easily put off)?
- Do you have trouble with your urinary stream (such as a slow stream)?
- Do you feel like you empty your bladder well?

Many doctors will ask you to fill out a form called a voiding diary (Figure 2). Completing this form will help you and your doctor see exactly what your urinary habits are like. An average person urinates up to eight times a day and 0–1 time overnight. The normal amount of urine passed with each urination is 200–400 mL (7–14 ounces).

Your doctor may also ask you about your urinary history, your drinking habits (especially caffeinated beverages or alcohol), new neurological symptoms (double vision, muscle weakness, tingling or numbness) and pelvic pain.

DAY 1 Day: <i>Monday</i> Date: <i>Dec. 10</i>					
	Time	Volume (ml or oz.)	Urgency (0-3)	Leakage (0-3)	Pain (0-3)
1	7:45	375ml	1	0	0
2	10:15	225ml	2	1	0
3	12:00	325ml	0	0	0

**Figure 2.** An example of a voiding diary. This is used to keep track of your urinary habits over 24 hours. You can get a blank form at

[http://www.cua.org/userfiles/files/patient\\_information/VoidingDiary\\_en.PDF](http://www.cua.org/userfiles/files/patient_information/VoidingDiary_en.PDF)

**The pelvic exam**

You will likely have a pelvic exam. The doctor will assess for any vaginal prolapse – when the bladder, uterus or rectum bulge into the vagina. Many women have mild pelvic organ prolapse that usually does not require treatment, however more severe cases may require a pessary (a device inserted to support your uterus or vagina) or surgery.

During the pelvic exam the doctor may ask you to perform a “Kegel.” This is the name of the exercise where the pelvic floor is contracted. This is the same muscle that you would use to stop your urination. Some people aren’t able to control this muscle very well, and may benefit from strengthening it. Finally, it is important to see if there is urinary leakage. This can be done with a “cough test.” You should have a full bladder, and then the doctor will ask you to cough or strain, and observe. It may have to be done in different positions to demonstrate the incontinence. At the same time, the amount of movement of the urethra is observed. If there is movement of the urethra, it is termed “hypermobility.”

**Urine tests**

Most women will be asked for urine tests to see if there is infection or blood in the urine. If there is blood in the urine, you should be evaluated by a urologist. If there is a urine infection, you should be treated to make sure that the infection isn’t causing some of your symptoms.

### Other specialized tests may be performed:

- A bladder scanner or urinary catheter can be used to see how well you empty your bladder after voiding.
- A cystoscopy may be performed to evaluate the inside of your bladder or urethra; this involves passing a small telescope into your bladder.
- Urodynamic testing is a specialized way of measuring how your bladder and urinary sphincter work. A small catheter (only a few millimeters in size) is placed into your bladder, and another one into your vagina or rectum. Your bladder is then filled with fluid, and the pressures in your bladder are measured during filling, and at the end when you are asked to urinate.

### Non-surgical, non-medical treatments

Some women choose to manage their urinary incontinence with absorptive pads. Either sanitary napkins or minipads can be used, although pads designed specifically for incontinence may work better. See Table 1 for an overview of the things you can do, without surgery or medicine, to help your incontinence.

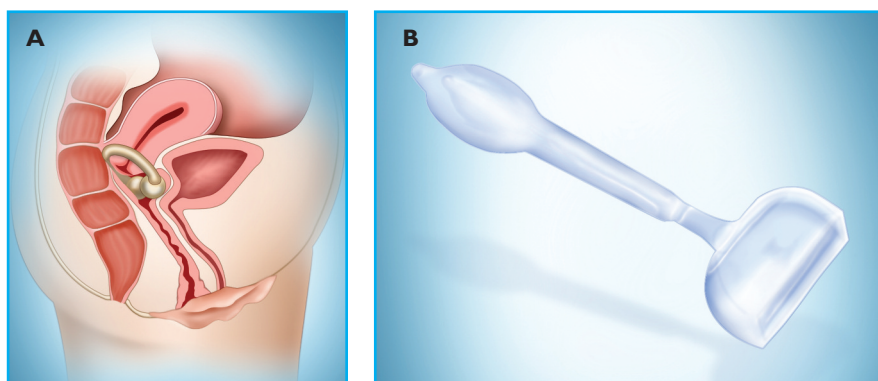
#### **Table 1. Non-medical non-surgical treatment options**

- Pads, liners, diapers
- Changing the types and amounts of fluids you drink
- Learning to suppress the sudden urge to void
- Pelvic floor muscle exercises (Kegel's exercises)
- Weight loss
- Vaginal pessaries, urethral plugs or catheters

Lifestyle changes can improve urinary incontinence. Examples include:

- Changing the amount or type of fluid you drink.
- Changing the number of times you urinate.
- Decreasing your caffeine intake.
- Decreasing the amount of fluids you drink in a day.
- Urinating on a regular schedule helps prevent you from being caught off guard by the sudden urge to urinate, and can help retrain your bladder to function on a more normal schedule. Urge suppression techniques can be used for urgency incontinence: when you feel the sudden urge to urinate you stop, tighten you pelvic floor (with a Kegel), and then wait for the urge to void to lessen.
- Weight loss has been shown to reduce urinary incontinence in women. In one study, overweight women who lost on average 8 kg (18 lbs) over six months were twice as likely to have an improvement in their incontinence.

- Pelvic floor muscle therapy (or Kegel's exercise) can strengthen your pelvic floor. It can reduce urinary incontinence. These exercises can be used for stress and urgency type incontinence. It is usually recommended that you do at least 30-50 contractions daily (usually split into 3-5 different sets done throughout the day). Some women have trouble isolating these muscles, and they may benefit from seeing a specialized nurse or physiotherapist who treats pelvic floor disorders (a list of these professions can be found online: <http://www.canadiancontinence.ca/english/list-professionals.php>). Biofeedback is the term used when these exercises are taught with the help of a device that shows you what your muscles are doing to make it easier for you to understand how to control and interpret your muscles.
- **Pessaries** are rubber inserts that are placed into the vagina. They can be used for vaginal prolapse, and for urinary incontinence (Figure 3, part a). There are several types available; you need a specialized nurse or physician to help you find the correct fit. Special incontinence pessaries have a knob that sits under the urethra to help support it, and reduce stress incontinence.
- **Urethral inserts** are also available. These are short “plugs” that are inserted into the urethra (Figure 3, part b). They are only used for a short time and then thrown away. They are useful for women who need only a short period of continence, such as during intense physical activity.
- **Catheters** are soft plastic tubes that are used to empty the bladder. There are catheters with balloons on the end of them that are held in place in your bladder; these are rarely used to manage urinary incontinence. Temporary catheters (often called clean intermittent catheters or CIC) are inserted into your urethra for a few minutes to empty the bladder, and then they are removed. They may be suggested by your doctor if you have overflow incontinence, and are not able to empty your bladder.



**Figure 3.** An example of a urinary incontinence pessary (a) and a urethral insert (b).

## Medical treatments

There aren't many effective treatments for stress incontinence.

- A type of antidepressant called duloxetine may help treat stress urinary incontinence, however it is not officially recognized by Health Canada for this use.
- Other types of antidepressants may increase the strength of the urinary sphincter and can be used to treat stress or urgency incontinence, although there are not many studies looking at this use.
- Estrogen was previously used for stress incontinence. However, recently, it has not been shown to be effective.
- Topical vaginal estrogen may still be recommended for frequent urinary tract infections, as a temporary treatment prior to vaginal surgery, or for symptoms of vaginal dryness or pain with intercourse.

### Using oral medications

Urgency incontinence is usually treated with oral medications. The class of medications that is used is called anticholinergic medications (because of the effect they have on a certain type of receptor found in the body). See Table 2 for the different types of anticholinergic medications. There is a new class of medication that acts on the beta receptor in the bladder, and does not seem to have many of the side effects seen in anticholinergic medications (mirabegron, Table 2).

There are no clear differences in the actual effectiveness of these medications. Your doctor can help you choose the right one and make sure it is safe for you. Generally the long-acting forms (which are taken once a day) have less dry mouth compared to the short-acting forms (which are usually taken multiple times a day).

Coverage for these medications is different among the provinces in Canada, and may differ among private health plans.

You may need to try different medications before you find the right one. Usually the medications should have an effect within one to four weeks. This expected benefit is less urinary urgency, less frequent urinating, and less urinary leakage associated with the feeling of urgency. These medications will not improve stress urinary incontinence.

**Table 2. Examples of types of overactive bladder medications available in Canada.**

<b>Trade name</b>	<b>Generic name</b>	<b>Dose</b>	<b>Number of times per day</b>
Ditropan (also comes as an extended release pill, and a skin patch)	Oxybutynin	2.5-5 mg	Once to three times
Detrol LA (also comes as an immediate release pill)	Tolterodine ER	2-4 mg	Once
Enablex	Darifenacin	7.5-15 mg	Once
Toviaz	Fesoterodine	4-8 mg	Once
Trosec	Tropium	20 mg	Twice
Vesicare	Solifenacin	5-10 mg	Once
Myrbetriq	Mirabegron	25-50 mg	Once

**Common side effects for anticholinergic medications:**

- Dry mouth
- Constipation
- Blurred vision
- Dry eyes
- Headache
- Upset stomach

Not everyone has these side effects. If you experience bothersome dry mouth, you can try alcohol-free mouthwash, oral lubricants or sugar-free lozenges or gum. If constipation becomes a problem, increase your intake of dietary fibre or try over-the-counter laxatives or stool softeners. There may be other side effects that should be discussed with your doctor. These medications should not be taken if you have an untreated closed angle glaucoma of the eye, urinary retention (an inability to empty the bladder properly) or certain stomach problems.

## Surgery for stress incontinence

For your urethral sphincter to work properly, it must be correctly supported by the surrounding tissues, and the sphincter muscle itself must be working properly. The sphincter muscle may not work properly if it's been damaged by previous surgery, or if the sphincter is not properly supported by the tissue of the vagina and pelvis. There are different types of surgery to improve the function of the urethral sphincter by restoring support to the urethral sphincter.

**Urethral bulking treatments:** This is when semi-solid material is injected into the urethra, often through a cystoscope. This material helps the urethral sphincter close. This procedure is not very invasive, and in some women may be the best option.

- However, the long-term success of this procedure is low, and many patients need multiple treatments over time.
- Risks from this procedure usually include bleeding, infection, and an inability to urinate after the procedure (which is usually temporary).



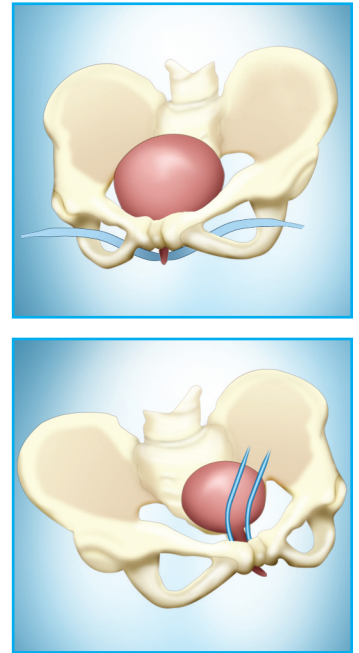
**Placing a midurethral sling:** This is the most common treatment. These slings are small pieces of mesh that are placed under the urethra by making a small incision in the vagina. They were first used in the mid 1990s. They are passed through the pelvis and either come out through a small incision in the inner thigh, or through a small incision on the lower abdomen. They provide a “backstop” to help close off the urethra when you are doing anything that involves straining. For some patients with mixed incontinence, they may also relieve symptoms of urinary urgency and urgency incontinence (Figure 4).

- These procedures are usually done in the operating room and take about 15-30 minutes.
- Usually you can go home the same day.
- You have to limit your physical activity for a few weeks afterwards, while the mesh heals in place.
- Risks of the surgery may include urinary infection, bleeding, and an inability to urinate afterwards (this requires the temporary placement of a urethral catheter). Other complications include erosion of the mesh into the urethra, or exposure of the mesh in vagina; this is rare, but may require a second surgery to fix. You may also have leg pain (if the sling is passed through the groin muscles) and the new feeling of urinary urgency. Your surgeon will discuss all the risks of this procedure with you before surgery.

There are also smaller slings, called “mini-slings.” These are meant to be less invasive than traditional midurethral slings, and allow you a quicker recovery with less discomfort. They may be a reasonable option for some women, as some studies show that they have similar results to the traditional midurethral slings. However, we need more information to make sure these slings are durable, and to determine which patients are best suited for these slings.

If you have severe or complicated incontinence, other surgical therapies may be recommended. These were popular surgical options before the invention of midurethral slings, and are still appropriate in certain situations.

- **Slings** can be constructed from your own tissue (such as part of your abdominal wall, termed autologous rectus fascial slings).
- **Bladder suspensions** (which are done through a lower abdominal incision or using a telescope and small instruments inserted into your abdomen) are another option.



**Figure 4.** Examples of the midurethral sling passed through the groin (a, the “transobturator” sling) or through the lower abdomen (b, “retropubic” sling).



## Surgery for urgency incontinence

Surgery is not usually needed. However, certain procedures can treat this type of incontinence.

- **Stimulation of a nerve** in the ankle with a small amount of electrical current is called “percutaneous tibial nerve stimulation.” This is more of a procedure than a surgery. A special needle and machine are used, and the treatment usually lasts for 30 minutes a day, and is done once a week for several weeks. Some people have had good results from this technique, but it requires the long-term use of the machine.
- **Botox** is another option if you have severe urgency incontinence. This medication works by decreasing the ability of the bladder muscle to have abnormal contractions. This treatment is often used in patients with a known neurological problem (such as multiple sclerosis or spinal cord injury). This treatment is also temporary, and usually needs to be repeated every 6-9 months. The Botox is injected into the bladder using a small needle and a cystoscope, and is usually done in a procedure or operating room. The main risks are urinary tract infections and not being able to urinate afterwards. If you are unable to urinate after the procedure, you will have to use intermittent catheters to empty your bladder. If this happens, it may take several weeks before your bladder is able to empty properly on its own.
- **Sacral neuromodulation** is a procedure where the nerves in the lower back are stimulated to change the way the bladder works. This is usually done in patients who have failed all other treatments. A temporary needle is inserted in the back and connected to a control device. Then your response is followed for a few weeks to see if the treatment works. If it does appear to be working, then a permanent needle and generator are implanted. Only a few centres in Canada currently offer this procedure.

## Future directions

Exciting research is being done in the area of tissue engineering to treat stress urinary incontinence. This includes experimental procedures which take your own muscle stem cells, grow them in a lab, and then inject them into your urethra. This procedure tries to “grow back” the urethral sphincter, and so far the results are promising. New medications that work on different areas of the bladder are also being developed, and may improve the symptoms of urgency incontinence and overactive bladder.

Visit:

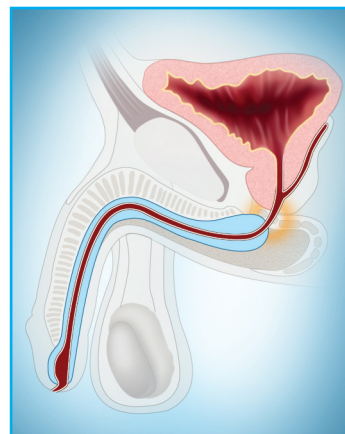
Women’s Bladder Health: <http://www.womensbladderhealth.com/index.html>

The Canadian Continence Foundation <http://www.canadiancontinence.ca/>

## Part 2: MALE INCONTINENCE

Men are less likely to experience urinary incontinence than women because of the prostate, which is located between the base of the bladder and the urinary sphincter (Figure 5). However, men can still experience the same types of incontinence that affect women:

1. **Stress incontinence** is when urinary leakage occurs with movement or activity, sneezing, coughing, or laughing. In men this mostly happens as a complication of surgery on or near the prostate.
2. **Urgency incontinence** is when urinary leakage occurs at the same time as the urge to go to the bathroom. Urgency incontinence is often part of the syndrome of overactive bladder (OAB). Up to 10% of older men may experience urgency incontinence.
3. **Overflow incontinence** can occur in men when they can't empty their bladder well. The bladder stays full, and there is a constant leakage of urine often with small, frequent episodes of urination. This can be the result of a blockage in the urinary flow, often from an enlarged prostate, or scar tissue in the urinary passage.



**Figure 5.** Male anatomy. The bladder stores the urine. The urethra is the tube that drains the urine. The prostate wraps around the first part of the urethra, and just below this is the urinary sphincter, which controls the urinary flow.

### Causes of urinary incontinence in men:

- Urinary incontinence becomes more common as men grow older.
- Up to one in four men will have some urinary incontinence after prostate cancer treatment (with either surgery or radiation therapy) – half of these men will consider it a problem. Urinary incontinence usually improves during the first year after surgery.
- Operations to treat a non-cancerous enlargement of the prostate (such as a “TURP”, which involves resecting the inner portion of the prostate through a telescope), or operations to treat scars in the urinary passageway (urethral strictures) can sometimes cause urinary incontinence.
- The same neurologic diseases that cause incontinence in women can also cause incontinence in men (such as spinal cord injury, previous strokes, diabetes, multiple sclerosis, Parkinson’s disease and dementia).

### What to expect from your doctor

Your family doctor may refer you to a urologist to evaluate your incontinence, or may suggest some treatment options before considering a referral.

### Topics your doctor will ask you about you:

- Previous health
- Medications
- Allergies

Your urologist will carefully look at your history of previous prostate surgery, or other surgery performed by a urologist (especially operations or procedures on the prostate or urethra). These answers will help your doctor determine your type of urinary incontinence (stress, urgency, or overflow).

### ***Questions your doctor will ask you:***

- How frequently do you urinate (day and night)?
- How is your urinary stream – is it a slow or weak stream, a stream that starts and stops, or a stream that takes a while to start?
- Do you have urinary urgency (which is when you have the sudden urge to urinate that you can't easily put off)?
- Do you feel like you empty your bladder completely?

Your doctor may also ask you about your urinary history, your drinking habits (especially caffeinated beverages or alcohol), new neurological symptoms (double vision, muscle weakness, tingling or numbness) and pelvic pain. Your doctor will also check for urinary infections, blood in your urine, your bowel function, and prostate cancer treatment status (such as your most recent prostate-specific antigen level).

### **The physical exam**

- Abdominal exam to see if the bladder can be felt. If so, it may indicate overflow incontinence.
- A genital exam
- A rectal exam

### **Other possible tests**

- A **urinalysis** to check for blood or infection in the urine
- A **uroflow** test to measure the “speed” of your urination (for this test, you will be asked to urinate in a special toilet to measure the speed your urine). Your doctor will compare your value with expected values for your age.
- A **bladder scanner** to determine how full your bladder is after you have voided (known as your PVR, or post-void residual). If this is elevated it may indicate a problem with emptying your bladder properly.
- **Cystoscopy** is a small flexible telescope placed into your bladder through the urethra – to make sure there is no urethral scarring, and to assess the prostate size, and the appearance of the bladder.

- A **urodynamics** test measures how your bladder and urinary sphincter work. A small catheter (only a few millimeters in size) is placed into your bladder, and another one into your rectum. Your bladder is then filled with fluid, and the pressures in your bladder are measured during filling, and at the end when you are asked to urinate.

## Non-surgical, non-medical treatments

Some men may not be very bothered by their incontinence, and may choose to manage it with pads. See Table 3 for an overview of some things you can do, without medicine or surgery, to help with your incontinence.

**Table 3. Non-medical non-surgical treatment options**

- Pads, liners, diapers
- Changing the types and amounts of fluids you drink
- Pelvic floor muscle exercises (Kegel's exercises)
- Catheters, condom catheters, penile clamps

Some non-operative options to manage urinary incontinence:

- Various **penile clamps** can be used to manage stress incontinence. These devices act like a clothespin on the penis, and help stop the urinary leakage. However, they can cause penile and urethral damage, and damage to the skin of the penis. These are best used by men who want to use them only for infrequent, short periods of time (such as a few hours during a weekly golf game).
- **Condom catheters** are condoms that are attached to the penis with adhesive, and drain into a catheter bag worn on the leg. These can also cause skin irritation on the penis, but may be appropriate for some men.
- **Catheters** may be required for some men with overflow incontinence. These catheters can be left in all the time, (and then changed every four to six weeks). An alternative to a catheter in the bladder all the time is to learn how to pass a catheter into the bladder only when you need to urinate (usually one to four times a day).
- **Doing pelvic floor muscle exercises** (or Kegel's exercise) is a good way to strengthen your pelvic floor. They are commonly used in women, and are also appropriate for men. They can be used for both stress and urgency type incontinence. It is usually recommended that you do at least 30-50 contractions daily (usually split into three to five different sets done throughout the day). If you have trouble with this, see a specialized nurse or physiotherapist who treats pelvic floor disorders (a list of these professions can be found online: <http://www.canadiancontinence.ca/english/list-professionals.php>). Biofeedback is the term used when these exercises are taught with the help of a device that shows you what your muscles are doing in order to make it easier for you to understand how to control and interpret your muscles. You should do these exercises after your prostate surgery to speed up the return of your urinary continence.

## Medical treatments

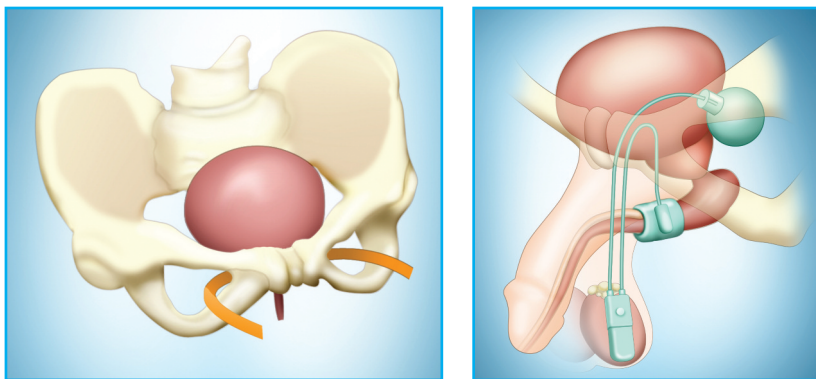
- If you have **overflow incontinence**, you can use the same medications that are used to treat an enlarged prostate. These include alpha blockers (such as tamsulosin or alfuzosin), and 5-alpha reductase inhibitors (such as finasteride or dutasteride). Alpha blockers generally work quickly, and should start to help within a few days; they relax the muscle fibres in the prostate. 5-alpha reductase inhibitors take 3-6 months to have an effect; they work by actually shrinking the prostate.
- If you have **urgency type incontinence**, you can take anticholinergic medications. There is a small risk these medications cause problems when you empty your bladder. This risk is very low if the residual urine left in the bladder after voiding is small (under 150 mL). If you cannot urinate after taking an anticholinergic medication, you will need to be reassessed by your doctor, and may have to stop taking the medication.

## Surgery for stress incontinence

Urethral bulking agents are materials that are injected into the urethra to help the urethral sphincter close. They have been used to treat men with incontinence after radical prostatectomy, however the results are modest. Only a few men are completely cured, and these results are often temporary.

Various types of male slings are available. These slings act to either compress the urethra, prevent leakage, or move the urethra into a different position to improve the way the urethral sphincter works (Figure 6).

These operations are usually performed for patients with incontinence after prostate surgery. The advantage of these procedures is that they don't need you to press on anything to urinate (unlike the artificial sphincter, which is reviewed later). However, they are not right for all men, and may not work as well for men with a lot of incontinence.



**Figure 6.** An example of the male urethral sling (a) and artificial urinary sphincter (b).

## Risks

There are risks to sling surgery for stress incontinence, such as:

- Not being able to urinate after the surgery (and needing a urinary catheter for a period of time)
- Bleeding
- Infection
- Pain or numbness in the inner thighs or scrotum
- Failure of the procedure

The most common surgery for incontinence after prostate surgery in men is an **artificial urinary sphincter** (AUS). This device has three parts:

1. A balloon is placed in the lower abdomen,
2. An inflatable cuff is placed around the urethra, and
3. A control pump is placed in the scrotum.

The control pump is the only part you have to use: by pushing on the button, the cuff opens and allows urination to occur. After a few minutes, the cuff automatically closes, and is ready for you to use again next time you need to urinate.

The AUS has been around for decades, and works well even for severe incontinence.

It does have some risks with it. Over time, the device can leak, or stop working; about 1 in 4 men will need to have a second surgery to fix part of the device within 5 years. The device can become infected, or can erode into the urethra (both of which require removal of the device). Over time, the tissue that the cuff presses on can thin out, and the incontinence can return.

## Surgery for urgency incontinence

The same surgical procedures that are used in women can be used in men (please see the section in Part 1 on surgical treatment of urgency incontinence).

## Future directions

Research is continuing to look at ways to decrease the risks of artificial urinary sphincter. One of these ideas is using an antibiotic coating on the device to reduce the risk of infection. New slings for male incontinence are being developed which will increase the types of procedures that can be offered. New medications that work on different areas of the bladder and prostate are also being developed, and these may improve the symptoms of urgency incontinence.

### Visit:

<http://www.prostatecancer.ca/PCCN/Prostate-Cancer/Life-Beyond-Cancer/Managing-Treatment-Effects/Incontinence>

<http://www.webmd.com/urinary-incontinence-oab/male-incontinence-9/default.htm>