

UNDERSTANDING YOUR BLADDER FUNCTION

The Urinary System

1. Kidneys:

In your body you have two kidneys (right and left). The primary role of the kidneys is to produce urine.

2. Ureters:

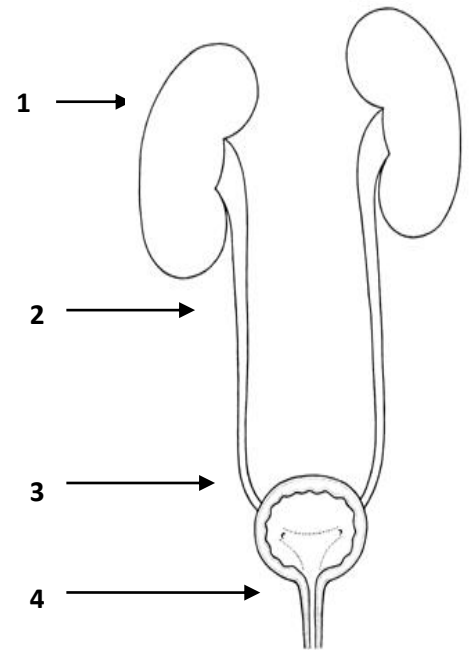
Extending from each kidney is a tube called a "Ureter". It is the role of the ureters to move the urine from your kidneys to your bladder.

3. Bladder:

The bladder is a hollow *muscular* organ that sits in the pelvis. The primary role of the bladder is to hold the urine until you are ready to go to the toilet.

4. Urethra:

The urethra is the thin tube through which urine travels when you "pass urine" at the toilet.

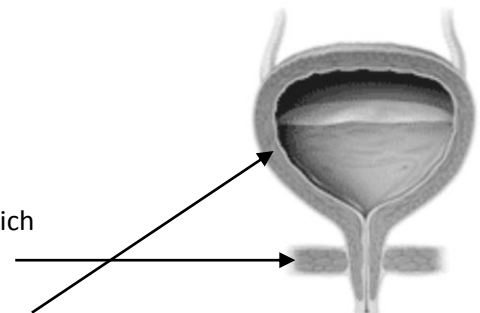


Pelvic Floor Muscles

The pelvic floor muscles are a sling of muscles that run across the base of the pelvis and surround the urethra.

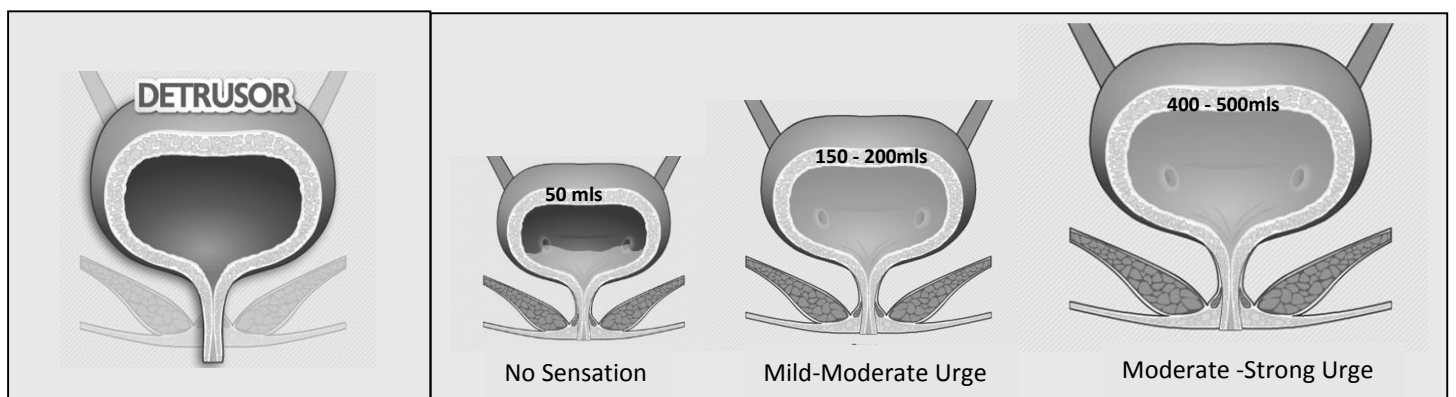
Tightening the pelvic floor muscles serves two functions:

1. Tightening the pelvic floor muscles squeezes the urethra closed which stops urine from passing through.
2. Tightening the pelvic floor muscles sends a message to the bladder that it must "stay relaxed" so that it can fill with urine.



Normal Bladder Sensation:

As urine enters the bladder, the wall of your bladder (called the detrusor) *expands*. When expanding normally, it is not usually until there is **~150-200mls** in the bladder that the bladder wall becomes sufficiently stretched to create a sensation that there is some urine in your bladder. As more and more urine enters the bladder, the continued expansion of the wall should create a gradually increasing urge to pass urine. It is expected that once the bladder reaches approximately 400-500mls, most people will feel a reasonably strong urge to pass urine.



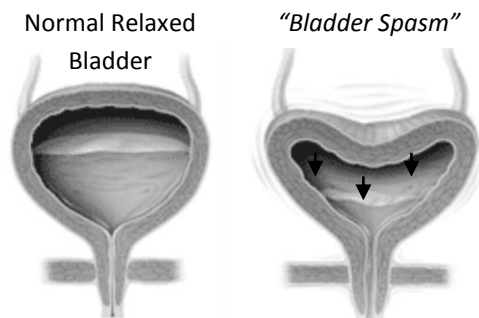
Overactive Bladder

An “overactive bladder” is one which causes a person to experience very sudden, intense, and often frequent desires to pass

There are three main causes of urgency / overactive bladder:

1. Detrusor Overactivity – “Bladder Spasms”

Detrusor overactivity is where the bladder intermittently squeezes whilst filling. These spasms of the bladder wall during filling can give a sudden intense urge to pass urine even though there may only be a small volume of urine in the bladder at that time.



2. Decreased Bladder Compliance – “Tight Bladder”

Decreased compliance is where the wall of the bladder is small and tight. As a result, as the bladder fills the bladder wall has difficulty stretching and expanding. This tightness of the bladder wall results in a stronger sensation of needing to pass urine than would normally be expected at low volumes.

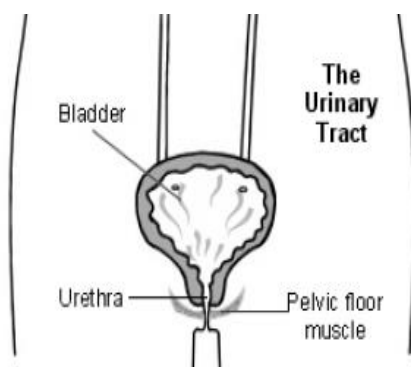


3. Increased Bladder Nerve Signal

There are a number of nerves that send messages from the bladder to tell the brain how full it is getting. Sometimes these nerves become overactive. Whilst there are a number of causes for the nerves to become overactive, ultimately overactive sensory nerves result in large sensory signals being sent even when there is only small volumes of urine present in the bladder.

Urge Incontinence:

Urge incontinence is where a person not only feels an intense urge to pass urine, but in addition they leak urine whilst trying to get to the toilet. Whilst urge incontinence can be made worse by a bladder that is “overactive”, an overactive bladder itself does not necessarily cause a woman to leak urine. Leakage of urine can also be related to a weakness of the pelvic floor muscles preventing the urethra staying closed.



Weak Pelvic Floor Muscles

Weak pelvic floor muscles can cause a number of problems:

- First, weak pelvic floor muscles have difficulty squeezing the urethra closed. This then allows urine to escape at inappropriate times (incontinence).
- Second, weak pelvic floor muscles have difficulty sending messages to the bladder to stay relaxed whilst filling. This can then lead to increased feelings of needing to go to the toilet (overactive bladder).

WHAT CAN BE DONE ABOUT OVERACTIVE BLADDER AND URGE INCONTINENCE??

There are many treatment options available for both overactive bladder and urge incontinence. These include:

Bladder Retraining Programs
Medication

Electrical Stimulation Treatments
Pelvic Floor Exercises / Re-education

Diet / Fluid Changes
Muscle therapy

Your women’s health physiotherapist is trained to be able to work out which treatment option is most likely to be of benefit to you.