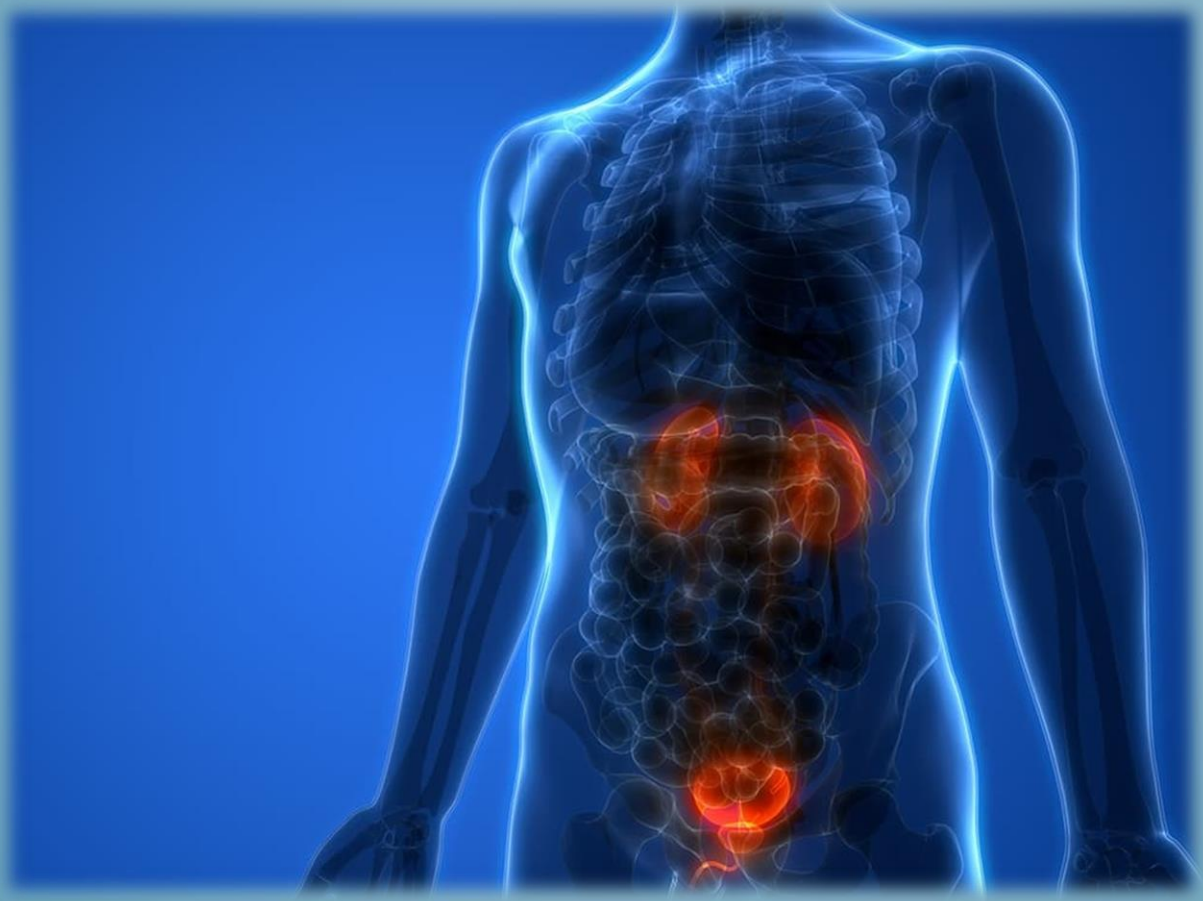
Urinary System (Female)
How to care for and avoid complications



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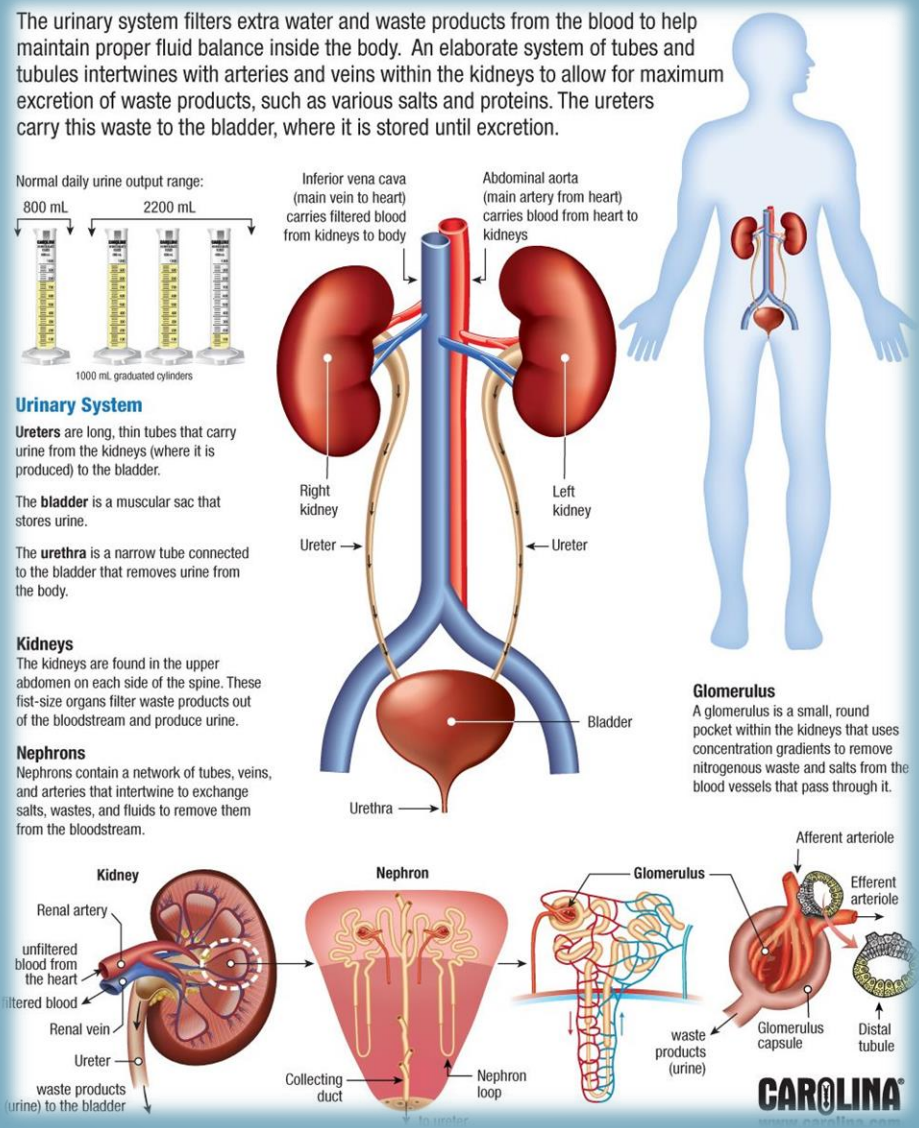
The Role of The Urinary System



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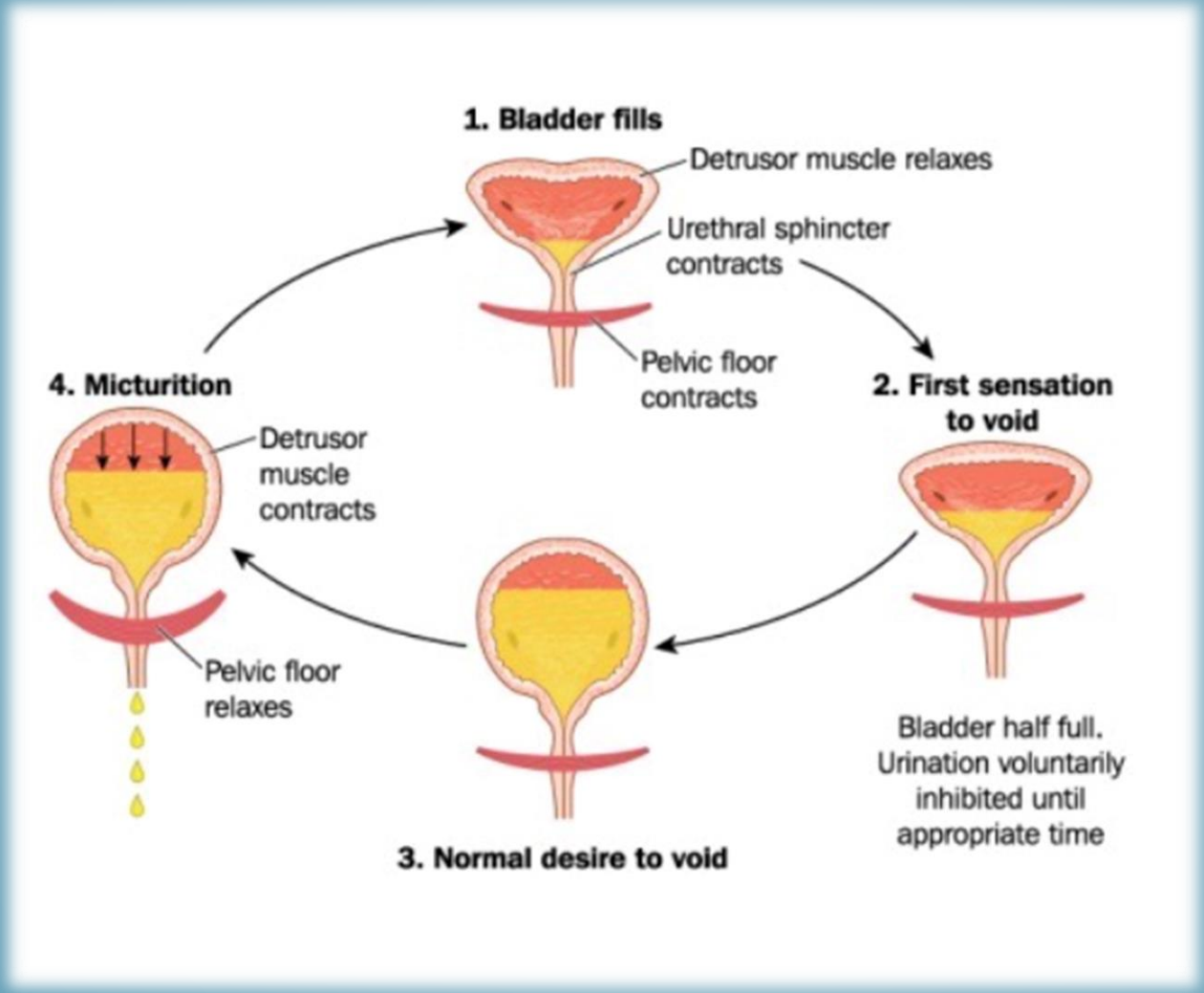
How The Bladder Works



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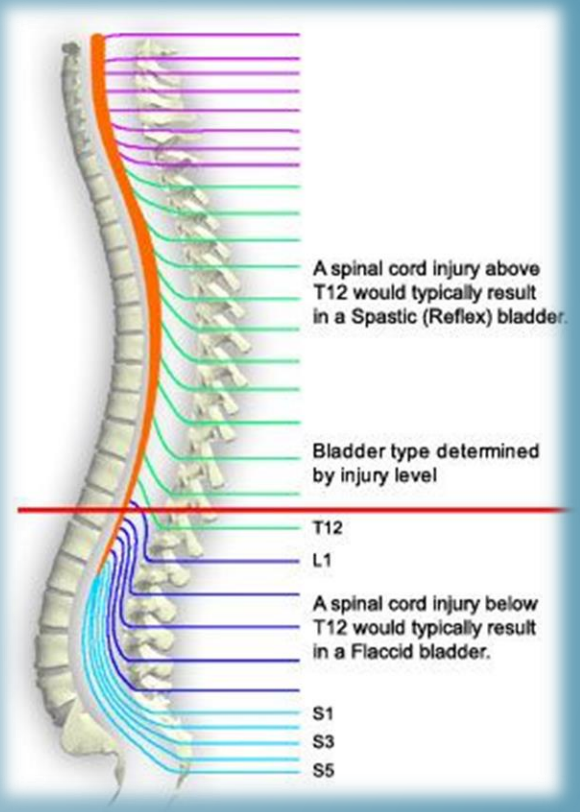
How A Spinal Cord Injury Affects The Bladder

Spastic Bladder (Upper Motor Neuron Injury)

- Injuries above T12
- Voiding reflex is intact between bladder and spinal cord.
- Increased bladder muscle and sphincter tone.
- Messages are blocked to the brain, resulting in frequent involuntary bladder emptying.
- Sphincter muscle may not open when bladder squeezes to empty.
- May have incomplete bladder emptying.



Flaccid Bladder (Lower Motor Neuron Injury)

- Injuries below T12
- Voiding reflex is not intact between bladder and spinal cord.
- Decreased/loss of bladder muscle and sphincter.
- Bladder will continue to fill (May leak urine when it gets too full).
- Unable to empty bladder voluntarily.

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How A Spinal Cord Injury Affects The Bladder

Although the urine is produced in the same way, the nerves are no longer working so the brain does not know when the bladder is full and can not control its emptying.

It is the aim to:

- Establish a safe method for emptying your bladder at intervals throughout the day, and remaining dry.
- Establish a routine which will be long lasting and achieve the independence that you need to carry out daily activities and enjoy life.
- Reduce the risk of complications such as bladder and kidney infections and formation of bladder stones.

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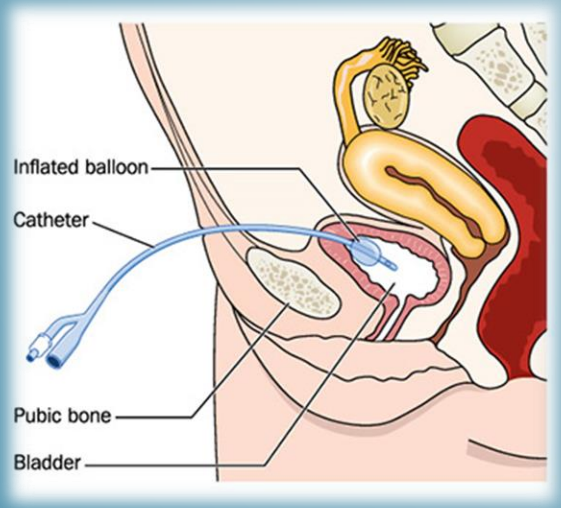
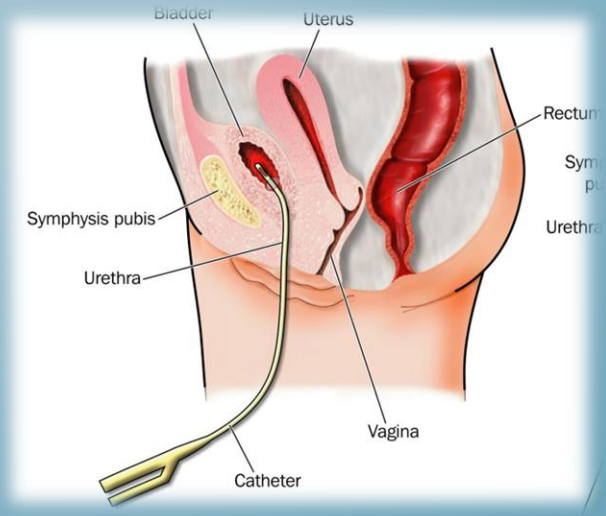
Methods for bladder management

Our team of health professionals will guide you in deciding what method of choice is recommended depending on your circumstances.

The common choices are:

- Intermittent catheterisation (Taught to do yourself)
- Suprapubic catheterisation
- Indwelling urethral catheter
- Medication with or without the above methods
- Surgical intervention





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Intermittent Catheterisation

- This means inserting a small tube into your bladder at regular intervals to drain the urine, up to usually every four hours.
- This allows your bladder to fill, maintaining bladder tone and ensures complete emptying at regular intervals.
- Reduces the risk of infections and reduces pressure to the kidneys, which may occur if your bladder is full.
- Suitable if you have sufficient hand control and often is the method of choice if you have a flaccid bladder.
- You are less likely to get an infection if you perform this yourself rather than if someone else changes it for you.
- Although it is better to perform this yourself, good technique and hygiene is important to avoid bladder infections.
- It is important to wash your hands and genital area thoroughly before passing the catheter.

The aims of intermittent self-catheterisation are:

- to empty your bladder completely at regular intervals
- to achieve continence without the need to wear an appliance.

Disadvantages:

- you need some privacy or access to a toilet
- privacy may be a problem when travelling or away from home.

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Indwelling Catheters

- The catheter is inserted through the urethra in the usual way, but kept in place by a small balloon on the end of the catheter inside the bladder. Once inserted, the balloon is inflated with sterile water, keeping it in place.
- This method of emptying the bladder is normally used for short periods of time, such as when first admitted into hospital.
- Your bladder can start being trained to hold onto urine by 'clamping and releasing' the valve that can be attached to the end of the catheter before other methods are explored.
- It can stay in for up to four weeks, depending on the catheter used.
- Long term use is usually avoided where possible as it can cause issues.

Disadvantages:

- Can be easily blocked by sediment that can gather around the balloon and grow into stones.
- May require bladder washouts if catheter is prone to blocking.
- Needs to be changed regularly and may be pulled out accidently, causing damage.
- Intake of fluid daily would need to be increased to keep the chances of infection low.

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Suprapubic Catheters

- This is an indwelling catheter which is inserted into the bladder via a small surgical incision made in the abdomen below the belly button. Like the indwelling it is secured with a balloon inflated with sterile water.
- This may be a permanent or temporary method of emptying your bladder.
- This method may be necessary if you find it difficult to do intermittent catheters.
- The area should be kept clean and dry, if a dressing is used to secure, it is important the catheter is taped upwards.
- The incision made is not permanent and starts to close up within 24 hours if the catheter is permanently removed.
- It is changed every 4 to 6 weeks to prevent blockages, it is also easier to change and less infection risk than an indwelling catheter.
- If the catheter becomes blocked, urine may drain via the urethra, and you may not realise you are in wet clothing or sheets.
- If it becomes blocked, bladder washouts can help to remove the build up.

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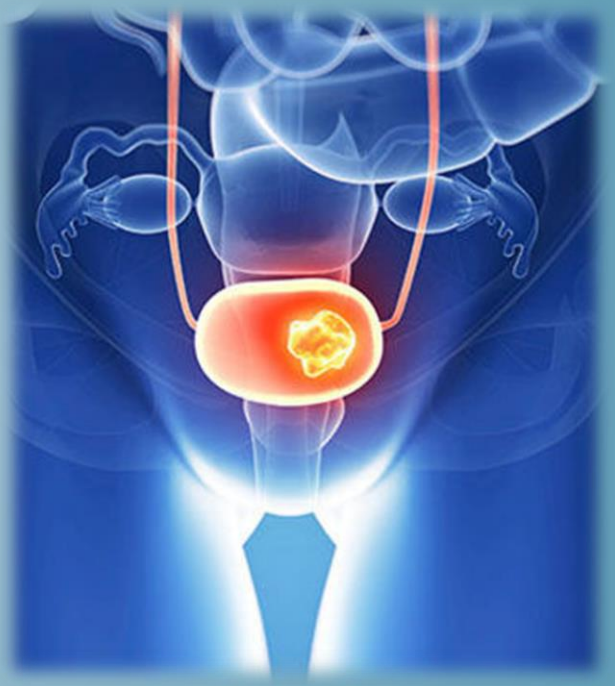
Urinary Tract Infection (UTI)

It is important to look for signs and symptoms of a UTI as it can lead to serious health issues such as triggering an Autonomic Dysreflexia incident. Or the infection might travel to the kidneys and cause damage.



Signs of infection

- Cloudy urine with possible sediment.
- Dark coloured urine.
- Strong smelling.
- A noticeable decrease in the amount of urine produced.
- More bladder accidents.

Symptoms

- An increase in spasms.
- Pain in lower abdomen, if you have sensation.
- High temperature.
- Headache.
- Shivering and sweating.

Treatment

- Increase fluid intake to flush the urinary system out.
- Ensure the bladder is emptied completely at regular intervals.
- Seek assistance from the GP for potential need for antibiotics.
- If you are having recurrent infections, contact your spinal injury unit for potential investigations into the cause.

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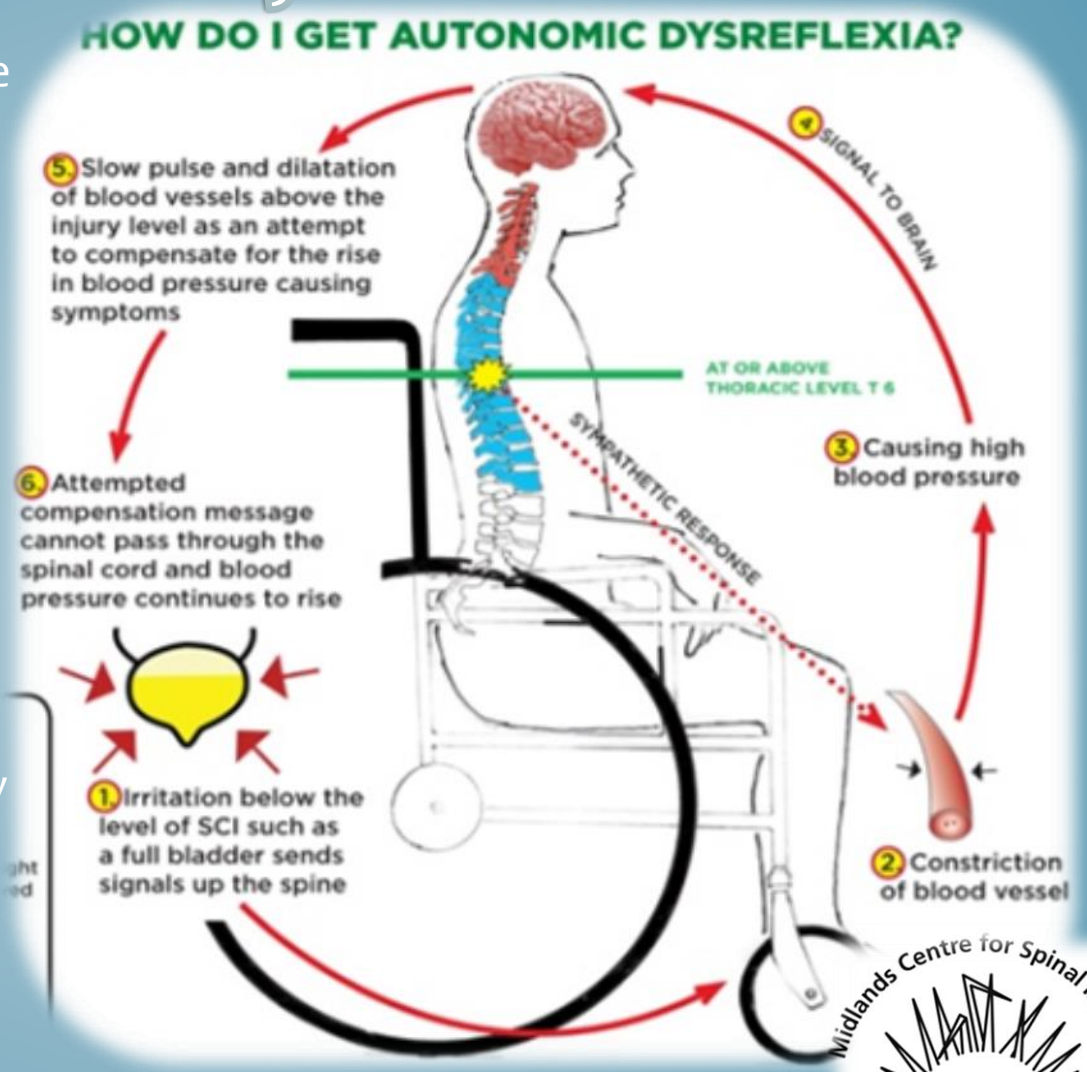
Autonomic Dysreflexia

- It is a term used to describe the body's autonomic response to a painful stimulus perceived below the level of injury with can cause severe, sudden hypertension (high blood pressure).
- If left untreated it can lead to stroke, epileptic fit or even death so it is paramount that it is treated as a medical emergency.
- It is frequently seen at an injury level of T6 or above.



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What Are The Signs And Symptoms?

- Pounding headache
- Flushing of the face
- Blotching of the skin
- Blurred vision
- Tight chest
- Sweating- above level of injury
- Pale & goose bumps- below level of injury
- Nasal congestion
- “Sense of impending doom”
- High blood pressure
- Slow heart rate

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Treatment

Treat the cause:

- Empty the bladder, unblock or remove the catheter.
- Sit upright – this will bring your blood pressure down slightly.
- Take G.T.N. (Glycerin Trinitrate tablet).
- Dial 999 if you are unable to control the situation.

It is better to prevent in the first place.

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Investigations

Urodynamic studies

- A diagnostic test carried out in the X-ray department to see how your bladder is working following your spinal cord injury.
- It measures the pressure inside the bladder and shows whether you have any pressure to your kidneys which could cause kidney damage.
- During the tests, your bladder is filled and then emptied while pressure reading are taken from the bladder.
- This shows the doctors how your bladder is working so that the best bladder management can be recommended to you.

Cystoscopy

- Cystoscopy is a procedure that allows your doctor to examine the lining of your bladder and the tube that carries urine out of your body (urethra). A hollow tube (cystoscope) equipped with a lens is inserted into your urethra and slowly advanced into your bladder.
- Cystoscopy may be done in a testing room, using a local anaesthetic jelly to numb your urethra. Or it may be done as an outpatient procedure, with sedation. Another option is to have cystoscopy in the hospital during general anaesthesia.

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Outpatient Appointments

Outpatient appointments are important, as you have investigations such as X-rays, ultrasound scans and renograms . These can detect any problems with your urinary system.

Blood tests can help us to detect any change in the way your urinary system is working.

If you require any support or have any concerns then get in contact with your Spinal Unit.

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