

Spina Bifida & Continence

Bladder and bowel function are controlled by the sacral nerves that are located in the lower section of the spinal cord. Since almost all of the damage to the spinal cord associated with spina bifida occurs above this level, almost all individuals with spina bifida experience some level of urinary and faecal incontinence.

Bladder function 'urinary system'

The kidneys filter waste products from the blood, forming urine. Urine flows through the ureters into the bladder, where it is stored until it becomes full. Sensory receptors tell the brain via nerves in the spinal cord that the bladder needs to be emptied. When ready to go to the toilet, the brain responds by sending messages back through the nerves of the spinal cord to the bladder allowing the urine to flow.

How does spina bifida affect the urinary system?

People with spina bifida are usually born with an undamaged urinary system but with interrupted messages between the bladder and brain. This condition is called neurogenic or neuropathic bladder. There are a number of bladder function problems that may arise from this condition and each individual is affected differently. The most common result is uncontrolled constant dribbling of urine but not always complete emptying of the bladder. Incomplete emptying of the bladder is potentially dangerous and increases the risk of urine infections, kidney stones and kidney failure.

Managing urinary function

Combinations of the following techniques are usually required for successful urinary continence management:

- Clean intermittent catheterisation (a catheter - a straw-like device- is inserted into the bladder, to empty it at regular intervals each day)
- Medication (to relax the bladder muscle)
- A toilet timing and training program
- Continence pads or shields
- Surgical procedures

Bowel function 'digestive system'

The food we eat passes from the stomach, through the small intestine, and then into the large intestine or bowel (colon). As it passes through the large intestine, water is absorbed and the waste (stool or faeces) becomes formed and solid. When the last segment of the bowel (rectum) is full it sends messages through the nerves of the spinal cord to the brain telling us we need to go to the toilet. The brain responds by sending messages back along the spinal cord to the bowel enabling a bowel movement to occur.

How does spina bifida affect bowel function?

In people with spina bifida this digestive process is impaired due to incomplete nerve signals. The effects vary depending on the level of the lesion and the amount of nerve damage, but common effects include:

- not knowing when it is time to go to the toilet
- having limited control over when the bowel will empty and,
- having to work hard to prevent constipation (the stool moving too slowly through the colon, losing too much moisture and becoming too hard).

These effects may lead to bowel accidents and this is called *faecal incontinence*.

Managing bowel function

For young children it is important to develop a continence routine such as timed bowel emptying. Toilet training for children with spina bifida will take extra time and the training process may not work in the usual way. For adults a combination of the following techniques are usually required for successful bowel management:

- a high fibre diet with plenty of fluids
- medication to soften stools
- a toilet timing & training program
- exercise
- manual evacuation
- enemas (bowel washout) and surgical procedures

As it is difficult for anyone to become fully independent if they have urinary or bowel accidents, this aspect of spina bifida requires enormous commitment and care.

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