

Spina Bifida & Urinary Tract Infections (UTIs)



Urinary Tract Infections (UTI's) are quite common in the Spina Bifida population. There are two types of UTI's: the bladder (cystitis) or the kidneys (pyelonephritis). These can present with no symptoms (asymptomatic) or with systems (symptomatic).

Signs of infection to look for are:

- urine looks or smells different e.g. a 'fishy' smell
- wet in between catheterisation when usually dry
- needing to go more often
- burning or stinging sensation
- blood in urine
- temperature, headaches, vomiting

When someone has cystitis, they generally need to pass urine more often than usual and if sensation is present they may have to hurry to the toilet (urgency). The urine looks cloudy instead of clear and may smell different from usual. Drink extra fluids and take your child to your GP or Paediatrician who may prescribe a course of antibiotics. Ensure that laboratory testing is carried out to confirm the presence of a UTI.

A much more serious situation arises in pyelonephritis in which the infection affects the kidneys causing a high temperature, tummy ache, backache, and sickness and may cause scarring to the kidneys.

Why UTIs are Common in Children with Spina Bifida?

Children with Spina Bifida often lack feeling and control of their bladder and bowel in the same way as they may lack feeling and control of their feet and legs. This is because the nerves in the spine connecting the brain to the bladder (or bowel or legs) have been interrupted, or disconnected, by the Spina Bifida. The result is that they cannot usually feel when their bladder is full, nor can they empty it properly. The bladder may still contain urine (the residual urine) after they have tried to empty it. The stagnant pool or residual urine left in the bladder gets smelly and easily becomes infected and over a period of time stones may develop (urinary calculi) as well. Bladder Infections may affect the kidneys causing pyelonephritis and kidney damage, making the child ill. This happens because the bladder does not empty out the infected urine. It may also happen with ureteric reflux when the infected urine travels up towards the kidneys.

Many children with Spina Bifida do not know when they have a urinary infection. Because they lack feeling they do not suffer from the scalding pain which other children feel when

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they get cystitis, nor do they know their bladder is not emptying properly. UTI's should be confirmed with laboratory testing before treatment is administered. Treating children with antibiotics and extra fluids works more slowly if the bladder is not emptying. The best way to prevent urinary infections damaging the kidneys is to be sure that the bladder empties regularly and completely. One way of doing this is by clean intermittent catheterisation and by being vigilant with a hygiene program and following strict hygiene guidelines. (see *"How to prevent UTI's"*)

How CIC Lessons the Chances of Urinary Infections

Clean Intermittent Catheterisation (CIC) means inserting a narrow tube (catheter) into the urinary passage (urethra) into the bladder. There are different length catheters available suitable for either boys or girls. The urine flows out of the bladder through the catheter into the lavatory, or into a container, until the bladder is completely empty and then the catheter is removed after complete emptying. This should be done 4 – 5 times a day. Regular drainage of the bladder will improve social continence and help to reduce UTIs. Catheterisation should take place at least four times a day but for those who have a smaller bladder this may need to be increased to six times. With practice catheterisation becomes quite easy and may take less than five minutes. Twenty-five years of experience of intermittent catheterisation has shown that it reduces infections and prevents damage to the kidneys as well as improving those already damaged, if CIC and hygiene regimes are consistent.

How to Prevent UTI's

- Maintain adequate fluid intake by encourage your child to drink at least 4 cups a day and carry a drink bottle with them at all times. (The aim is to increase this fluid intake to 2 litres)
- Ensure regular **complete** bladder emptying
- Relieve constipation
- Ensure the use of appropriate catheter size and type
- Maintain a strict hygiene routine

Bowels

People with Spina Bifida are often constipated and pressure from an overfull bowel may add to the difficulty of emptying the bladder. They may also have poor control over their bowel in the same way as they have over the bladder. Since most urinary infections are caused by bacteria which normally live in the bowel, it is important to wash this part of the body carefully. Girls should be taught always to wipe from front to back and not from back to front.

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Medicines

UTI's should be confirmed with laboratory testing before treatment is administered. Antibiotics and other medicines are sometimes given in small doses for months or years to prevent urinary infections. They are mainly used for children who have reflux or for anyone with damaged kidneys to protect them from further harm. In spite of this, urinary infections may still break through and need a course of a different treatment.

Other Remedies

Many remedies have been used over the years to prevent or relieve urinary infections and two of these are worth mentioning: Vitamin C (ascorbic acid) and cranberry juice. Vitamin C acts by making the urine acidic and this discourages some of the bacteria which cause urinary infections. Cranberry juice helps to clear infections and debris after operations on the bladder (specifically e. Coli)

Key points

- In children with Spina Bifida urinary tract infections are mainly due to the bladder not emptying properly.
- Poor drainage from the bladder encourages infections to spread to the kidneys where they may cause damage.
- Good drainage is as important as fluid intake.
- Intermittent catheterisation ensures good drainage and protects the kidneys. It may also encourage social continence.