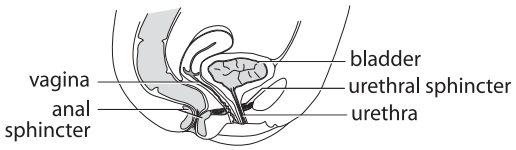
Dysfunctional elimination in children

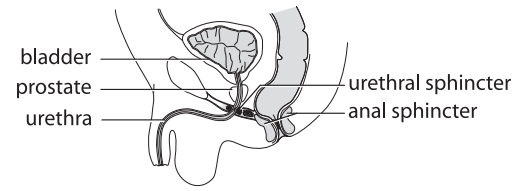
Dysfunctional elimination of urine and stool in children may be corrected with the encouragement and support of parents under the guidance of your doctor.

Body waste products are flushed out in the urine and stool. Urine is produced in the kidneys and then carried through long narrow tubes, the ureters, into the bladder. It is stored in the bladder until emptied through its outlet, the urethra. During emptying, the outlet control muscle (urethral sphincter) should relax completely while the bladder contracts to expel urine. Solid waste and unabsorbed food is eliminated in the stool.

Female urinary tract, side view



Male urinary tract, side view



In infants, the bowels and bladder empty by reflex. When full, the bladder or bowel empties automatically. Normally, a child gains control of bladder and bowel function by three years of age. A child's bladder normally fills and empties four to six times daily. Bowel movements usually occur every day or two.

Daytime control of urine usually occurs by the age of three with nighttime control occurring a bit later. Some children have persistent bedwetting for several more years, but most will be dry by the age of seven.

Dysfunctional elimination

Children with abnormal voiding (urine elimination) or defecation (bowel elimination) habits are felt to have a dysfunctional elimination syndrome. The cause of this condition is unknown. These children may be prone to urinary accidents during the day (diurnal enuresis) or night (nocturnal enuresis), bowel accidents (encopresis) or urinary tract infections.

Some children will have an **overactive bladder** with intense urges to void, frequent urination and wetting associated with these urges. You may notice your child dancing or squatting in an effort to suppress urges to void and prevent wetting.

Others resist the signal to void and may do so only two or three times daily. These children may develop an overstretched bladder which cannot contract and empty effectively. This may result in wetting or infection. This is also described as a **"lazy bladder"**.

In some cases, a child may not be able to relax the urethral sphincter completely when trying to void. The partially closed sphincter causes resistance to bladder emptying which causes, high bladder pressure. The incompletely emptied bladder often leads to wetting or infection. Rarely, high bladder pressure may lead to kidney damage.

Some children may have elements of several voiding dysfunctions at once.

Bowel function may also be a problem in children. **Constipation** may be present if bowel movements occur less than every other day or the stool is large or very hard. Bowel accidents is usually a sign of severe constipation.

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A child who is constipated will often tense the pelvic floor muscles to avoid stool accidents or to avoid having a painful bowel movement. These muscles also control bladder emptying and, as a result, bladder function may be affected. For this reason, urinary infection and wetting may be related to constipation. Bladder and bowel problems often occur together and must be treated together.

Investigations

Your doctor's assessment is the first step toward making a diagnosis and developing a treatment plan. Your child's bladder and bowel habits will be reviewed in detail. A voiding diary, recording times and amounts of urine voided, often will provide useful information. Physical examination may be helpful to uncover an underlying physical problem. Your doctor may recommend other investigations, as necessary.

Treatment

The aim of treatment for dysfunctional elimination is to normalize bladder and bowel function, decreasing or preventing daytime and nighttime urine accidents, bowel accidents and urinary tract infections. Often, a prolonged course of treatment (months to years), and ongoing parental patience and support are necessary to ensure success.

The treatment will generally involve ensuring that your child is drinking adequate amounts of fluid and consuming a balanced diet with plenty of fruit, vegetables and fibre. Such a plan should give your child a healthy foundation for the future and promote proper bowel evacuation.

When bowel function does not improve with dietary measures alone, a laxative is often recommended. Ensuring regular soft bowel movements is crucial to children developing normal, healthy habits.

Your child should be encouraged to void regularly, every two to three hours, to prevent bladder overfilling. The bladder should be emptied immediately upon getting up in the morning and at bedtime every night.

In some cases, medication may be recommended along with the above measures. If your child has an overactive bladder, a bladder relaxant medication, may decrease the urge to void and increase storage capacity.

The good news is that most children overcome their dysfunctional elimination problem. In the vast majority, there is no permanent damage to bladder, kidney or bowel function. The condition can be frustrating for parents and children given that improvement proceeds slowly. A dedicated doctor along with your encouragement and support will go a long way toward helping your child learn to void and defecate normally.

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