



# BEDWETTING

## What Causes Nighttime Incontinence?

After age 5, wetting at night, often called bedwetting or sleepwetting, is more common than daytime wetting in boys. Experts do not know what causes nighttime incontinence. Young people who experience nighttime wetting tend to be physically and emotionally normal. Most cases probably result from a mix of factors including slower physical development, an overproduction of urine at night, a lack of ability to recognize bladder filling when asleep, and, in some cases, anxiety. For many, there is a strong family history of bedwetting, suggesting an inherited factor.

## Slower Physical Development

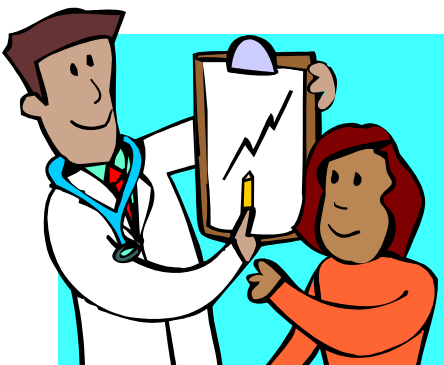
Between the ages of 5 and 10, incontinence may be the result of a small bladder capacity, long sleeping periods, and underdevelopment of the body's alarms that signal a full or emptying bladder. This form of incontinence will fade away as the bladder grows and the natural alarms become operational.

## Excessive Output of Urine During Sleep

Normally, the body produces a hormone that can slow the making of urine. This hormone is called antidiuretic hormone, or ADH. The body normally produces more ADH at night so that the need to urinate is lower. If the body doesn't produce enough ADH at night, the making of urine may not be slowed down, leading to bladder overfilling. If a child does not sense the bladder filling and awakes to urinate, then wetting will occur.

## Anxiety

Experts suggest that anxiety-causing events occurring in the lives of children ages 2 to 4 might lead to incontinence before the child achieves total bladder control. Anxiety experienced after age 4 might lead to wetting after the child has been dry for a period of 6 months or more. Such events include angry parents, unfamiliar social situations, and overwhelming family events such as the birth of a brother or sister.



Incontinence itself is an anxiety-causing event.

Strong bladder contractions leading to leakage in the daytime can cause embarrassment and anxiety that lead to wetting at night.



## Genetics

Certain inherited genes appear to contribute to incontinence. In 1995, Danish researchers announced they had found a site on human chromosome 13 that is responsible, at least in part, for nighttime wetting. If both parents were bedwetters, a child has an 80 percent chance of being a bedwetter also. Experts believe that other, undetermined genes also may be involved in incontinence.

## Obstructive Sleep Apnea

Nighttime incontinence may be one sign of another condition called obstructive sleep apnea, in which the child's breathing is interrupted during sleep, often because of inflamed or enlarged tonsils or adenoids. Other symptoms of this condition include snoring, mouth breathing, frequent ear and sinus infections, sore throat, choking, and daytime drowsiness. In some cases, successful treatment of this breathing disorder may also resolve the associated nighttime incontinence.

## Structural Problems

Finally, a small number of cases of incontinence are caused by physical problems in the urinary system in children. Rarely, a blocked bladder or urethra may cause the bladder to overfill and leak. Nerve damage associated with the birth defect spina bifida can cause incontinence. In these cases, the incontinence can appear as a constant dribbling of urine.

## Growth and Development

Most urinary incontinence fades away naturally. Here are examples of what can happen over time:

- Bladder capacity increases
- Natural body alarms become activated
- An overactive bladder settles down

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- Production of ADH becomes normal
- The child learns to respond to the body's signal that it is time to void
- Stressful events or periods pass

Many children overcome incontinence naturally (without treatment) as they grow older. The number of cases of

incontinence goes down by 15 percent for each year after the age of 5.

## Medications

Nighttime incontinence may be treated by increasing ADH levels. The hormone can be boosted by a synthetic version known as desmopressin, or DDAVP, which recently became available in pill form. Patients can also spray a mist containing desmopressin into their nostrils. Desmopressin is approved for use by children.

Another medication, called imipramine, is also used to treat "sleepwetting". It acts on both the brain and the urinary bladder. Unfortunately, total dryness with either of the medications available is achieved in only about 20 percent of patients.

If a young person experiences incontinence resulting from an overactive bladder, a doctor might prescribe a medicine that helps to calm the bladder muscle. This medicine controls muscle spasms and belongs to a class of medications called anticholinergics.

## Bladder Training and Related Strategies

Bladder training consists of exercises for strengthening and coordinating muscles of the bladder and urethra, and may help the control of urination. These techniques teach the child to anticipate the need to urinate and prevent urination when away from a toilet. Techniques that may help nighttime incontinence include:

- determining bladder capacity
- stretching the bladder (delaying urinating)
- drinking less fluid before sleeping
- developing routines for waking up

Unfortunately, none of the above has demonstrated proven success. Techniques that may help daytime incontinence include

- urinating on a schedule, such as every 2 hours (this is called timed voiding)
- avoiding caffeine or other foods or drinks that you suspect may contribute to your child's incontinence
- following suggestions for healthy urination, such as relaxing muscles and taking your time

*Source: National Kidney and Urologic Diseases Information Clearinghouse: 3 Information Way, Bethesda, MD 20892-3580 Email: [nkudic@info.niddk.nih.gov](mailto:nkudic@info.niddk.nih.gov)*

