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Curing Bed-wetting

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Bed-wetting, involuntary nighttime urination occurring beyond the age at which bladder control is expected, is a fairly common problem, and a frequently frustrating one for both parents and child. Bed-wetting (or nocturnal enuresis) occurs most often, though certainly not exclusively, in younger children, and it is twice as common in boys as in girls.

Parents often consider a child's bed-wetting an indication of laziness and react by punishing the child. Some parents see bed-wetting as an indication of an emotional problem and consequently overindulge their child. Still other parents view the problem as a developmental stage that the child will grow out of; these parents become indifferent to the problem, though it may persist for years. For the child, bed-wetting can cause shame and embarrassment. But with current medical knowledge and treatments, there is no need for punishment, indifference, or overindulgence on the part of the parents and mental anguish in the child.

In girls full bladder control is usually achieved by age five, and in boys, by age six. Therefore, although toddlers and preschoolers may be essentially toilet trained, at least during the day, wetting the bed at night will occur in about three-quarters of two-year-olds, one-half of three-year-olds, and one-fifth of five-year-olds. Brief regressions to wetting the bed in a toilet-trained child may also occur during stressful times—for instance, when a new baby comes home from the hospital. If enuresis persists beyond the age of

five or six, it becomes a diagnosable condition.

Among those children still wetting the bed at age five, about 15 percent will spontaneously stop doing so in each succeeding year. Nevertheless, 1 to 3 percent of children will still have the problem at the age of 20.

Contributing Factors

There is clearly a family tendency to enuresis; the likelihood of developing the problem is directly related to the number of close relatives with a similar history. If both parents were bed wetters, about three-quarters of their children will have the problem.

It was previously believed that deep sleep contributed to bed-wetting, but studies of sleep habits have shown that enuretic episodes occur at random during the different stages of sleep. Also, it was once believed that enuresis was caused by psychological problems. It is now believed that any increase in emotional difficulties in this group is an effect of enuresis and its stigma and not the cause of the enuresis.

Medical Causes

While the vast majority of children with enuresis do not have an identifiable medical problem or urologic abnormality, a number of disorders can cause or contribute to bed-wetting. These problems can be readily detected by a physician through routine examination and testing.

Urinary tract infections may result in bed-wetting. Screening for such infections can be done through urine analysis and culture. Various diseases that may cause enuresis need to be ruled out. These include conditions that cause larger volumes of urine to be excreted, such as diabetes or sickle-cell diseases (inherited disorders of the red blood cells); diseases that result in the blockage of urine flow, in fecal impaction, or in irritation of the vagina or genital area; and perhaps even food allergies, which may produce irritation of the bladder.

Certain neurological problems, such as spinal cord lesions and brain damage, can result in enuresis. Mental retardation or devel-

opmental delay is also associated with enuresis.

For the vast majority of bed wetters, no medical or urologic cause can be identified. In such cases the bed-wetting is called functional enuresis.

Drug Treatment

When no underlying medical problem can be identified, effective medical treatment for bed-wetting consists mainly of drug therapy. Of the large number of drugs that have been tried, the oral antidepressant drug imipramine (sold under the brand name Tofranil) has been shown to be effective in stopping bed-wetting and is the only drug approved for this use by the U.S. Food and Drug Administration. Imipramine is initially effective in as many as three-quarters of patients. However, this rate of effectiveness drops to less than one-half after only two weeks of therapy. Long-term cures are seen in only about one-quarter of patients. Thus, although there is often initial improvement, some patients do not respond to the medication at all, others become tolerant to the effects, and enuresis often recurs when the drug is discontinued.

How imipramine acts is unclear. Its effect on bed-wetting does not seem to be clearly related to its antidepressant effect because the anti-enuretic response usually occurs in the first week of use, whereas the antidepressant effect in general takes longer and requires higher doses. Nor does the effect seem to be achieved by causing increasing wakefulness. Rather, it is thought that imipramine works primarily by acting on the muscles of the bladder.

The side effects of imipramine are infrequent but can include dry mouth, dry eyes, changes in sleep and personality, and gastrointestinal symptoms. Overdoses can cause seizures, stupor, respiratory depression, high or low blood pressure, irregular heartbeat, or congestive heart failure and can be fatal. In some instances the

child has taken large doses in an effort to hasten progress. This must be prevented.

Antispasmodic drugs like oxybutinin (Ditropan) inhibit the muscular activity involved in urination. Although results with these drugs are generally disappointing, they may be helpful in some cases. But they often have side effects, such as drowsiness, nausea, and constipation.

A possible future addition to the medical arsenal against enuresis is a drug called desmopressin (brand name, DDAVP), which is used in treating certain forms of diabetes and hemophilia. It prevents bed-wetting by causing fluid retention. It rapidly ends bed-wetting, but enuresis resumes as soon as the patient stops taking the drug. The side effects have not yet been fully documented. The drug may be most valuable for occasional overnight visits away from home.

Parents and children must be fully informed of the possible dangers of anti-enuretic drugs. Because of the high relapse rate and the possible side effects of medications, restraint should be exercised in their use; they should be avoided in children under age six.

Behavior Therapy

Three types of behavior therapy have been tried for bed-wetting. The first suggests as a plausible cause of bed-wetting that the child's bladder has not developed a sufficient capacity. Treatment thus consists of rewarding the

child to delay daytime urination so as to build up the functional bladder capacity. Clinical tests have shown this simple method to be slightly beneficial.

In 1938 researchers first developed and tested a method of alerting the sleeping child and parents at the moment of bed-wetting. A thin pad containing a circuit sensitive to urine is placed on the mattress and sounds an alarm as soon as the child begins to urinate, causing the child to awaken. Eventually, the child will either wake up when there is an urge to urinate, or, more commonly, will remain asleep and not wet the bed. This method has been found to be about 80 percent effective in extensive clinical tests. About 20 percent of those cured by this method suffer a relapse after they stop using the apparatus, but retraining with the circuit and alarm usually eliminates the problem again.

The third treatment, called the dry-bed method, was developed more recently. Its proponents see bed-wetting as a deficiency in learning that requires special training and motivation to correct. Indeed, this method was initially developed for severely retarded people for whom alternative treatments were not effective. The child is taught to be more aware of bladder sensations, to take responsibility for the episodes by re-making the bed, to learn to retain the urine during the day or night for progressively longer periods, and to practice leaving the bed to go to the toilet when bladder urges arise. Extensive rewards are used for partial successes, to increase motivation. Clinical tests show that the method is more effective than either the bladder-capacity or the urine-alarm method. Bed-wetting is almost entirely decreased, and relapses are fewer and are almost always treated successfully by reinstating the training briefly. The bladder-training, urine-alarm, and dry-bed procedures may be used concurrently for increased effectiveness. □

Suggestions for Further Reading

- AZRIN, NATHAN H., and VICTORIA A. BE-SALEL. *A Parent's Guide to Bedwetting Control: A Step by Step Method*. New York, Pocket Books, 1981.
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- FOXX, RICHARD M., and NATHAN H. AZRIN. *Toilet Training the Retarded: A Rapid Program for Day and Night-time Independent Toileting*. Champaign, Ill., Research Press, 1973.