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MEDICAL MEMO

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Bedwetting and its Treatment

The diagnosis of **Enuresis**, or **Bedwetting**, requires accidental or voluntary urination into clothes, bedclothes, or bedding etc at least twice a week for at least three months after the age of five (age six or older). Enuresis can occur only at night (nocturnal), which is more common, or only in the day (diurnal), or both. Enuresis can be primary or secondary. In primary enuresis the child was never successfully toilet trained for bladder control while secondary enuresis means that wetting has resumed after having been free of wetting for at least several months, and sometimes years. Bedwetting frequently runs in families and is often inherited. It is also more common in boys. **Encopresis** refers to fecal (bowel movement) staining or lack of bowel control and is covered in the article below although it may occur along with enuresis, especially in more severe cases. This article does not address the incontinence that may occur with older age, multiple childbirths, or certain health problems in some adults.

Fortunately, the prognosis of bedwetting is usually good. Most youth outgrow bedwetting during their elementary school years or teens probably due to the combination of social pressures and the natural course of brain maturation with age. However; up to 1% of 18 year olds, especially males, still wet the bed at least once a week.

The **first step** in treating enuresis is determining whether or not it happens only at night, whether or not it occurs after a prior period of bladder control, and whether or not there may be some other associated or causal medical or psychiatric problem(s). If neurologic problems (such as seizures or paralysis, etc.), health problems (such as urine infections, diabetes, kidney or bladder disorders), or psychiatric problems (such as sexual abuse, developmental delays, sleep disorders, or ADHD), exist, they are usually treated first. Medications that overly sedate the child (antihistamines, sleep aids, etc.) or increase urine flow (diuretics, aminophylline, caffeine, lithium, etc.) can cause bedwetting to occur or increase.

The **second step** is to next decide whether the bedwetting or day wetting even needs any additional treatment. If the wetting does not lead to social, self esteem, family, or other problems or if it is mild or infrequent, no therapy or standard pediatric management (below) may be advised. Frequently, however, the result of bedwetting is embarrassment, avoidance of sleep-overs, lessened self esteem, and or family conflict. Wetting during the day is often even more of a concern.

Once the decision to explore **treatment** has been made there are several possible approaches. The <u>first</u> is to provide the family with basic toilet training guidance emphasizing routine toileting scheduling and rewarding the child for success. This helps the primary enuretic (never successfully toilet trained) child learn to read and act appropriately on the body signals that urination is needed. Restricting fluids after supper and ensuring voiding just before sleep is advisable. This broad approach along with helping the family provide supportive understanding to the child who has resumed wetting (secondary) due to a move, birth of a sibling, parental separation, divorce, new parental relationship, or traumatic event; is often all that is necessary. These steps are what is called "<u>standard pediatric management</u>" and is often effective. Daytime wetting occurs most often because the youth fails to recognize the body signals that going to the bathroom is needed or is just too

busy and doesn't want to stop for a bathroom break and waits too long. Both of these can be helped by scheduling bathroom breaks regardless of perceived need and rewarding success.

Some cases need more in-depth treatment. The two most common treatments at this stage are psychotherapy, especially using specialized behavioral techniques, or medications. These approaches can also be used together.

Let's explore the special **behavioral techniques** first. These can be broken into two categories; bladder training and the bell or alarm pad method. Both are highly effective (60 to 80% for people able and willing to stick through the treatment) and may even cure but require sustained intensive effort and compliance by the child and parents. This approach is most effective with a dedicated family and child working with a skilled behavioral therapist. I refer the family to such an expert for this.

Medications have a lower rate of success and primarily suppress the problem until maturation and training kick in, but are generally easier to use. The three most reliable options are **Imipramine**, oxybutinin (Ditropan, Ditropan XL) and desmopressin (**DDAVP)**. Imipramine has been around for many years, is well known and studied, is very cheap, and has many other uses such as for depression, sleep, attention deficit, chronic pain, and preventing migraines. (See my medicine chart on the tricyclic antidepressants). The dosage for bedwetting is on the low end of the range, usually 25 to 100 mgs, and may require some monitoring of blood and heart rhythm (EKG). Response is generally partial and helps a lot about 40 to 60% of the time. Oxybutinin or its brand Ditropan and similar medicines is often used by general doctors or urologists for "overactive bladder" and can be used for enuresis as well. I usually prefer DDAVP. DDAVP is a synthetic version of the body hormone vasopressin which is also known as anti-diuretic hormone. DDAVP was invented to treat Diabetes Insipidus (not "sugar" diabetes which is known as Diabetes Mellitus) in which people don't produce enough vasopressin. We don't fully understand how Imipramine or DDAVP work but the theory on DDAVP is that it boosts the apparently inadequate nighttime body production of vasopressin in uncomplicated enuretic patients. DDAVP may rarely unbalance electrolytes (sodium, potassium, chloride, etc) in the blood and thus a check of a blood test after being on it awhile may make sense, especially if negative effects occur. This is probably not routinely necessary. I have not seen a single side effect with this medicine. DDAVP comes in both a nose spray and a now more commonly used pill form. The success rate of DDAVP is higher than imipramine but may not be as high as with behavioral treatment. DDAVP is easy to use. Both medicines are generally given at night and are most effective given every night. They can be given morning and night if wetting also occurs in the day. The medicine is generally taken for about six months and then stopped to see if wetting recurs. If it recurs the medicine may be restarted for another several months and the cycle repeated. The medicine success rates may appear lower at least partly because the treatment dropouts or refusers are typically subtracted before calculating the success rates with behavior treatment and may not be with the medicine treatments.

In **summary**, enuresis may affect day and or night; may be primary or secondary; may be mild or complicated; may be caused by genetic, psychiatric, or other medical reasons; and is often successfully treatable.

What Is Encopresis ? (soiling)

Encopresis is the repeated accidental or intentional soiling of clothes or other places (floor, etc.) by the passage of partial or full bowel movements beyond the age, or developmental level of, at least 4 or 5. The diagnosis is usually not given unless the problem occurs at least weekly for at least 3 months. The diagnosis of encopresis is not given if some other medical condition, except constipation, causes the problem. Such causes may include laxative misuse, dietary causes like lactose intolerance, problems with absorption, low thyroid, bowel or rectal structural abnormality, sexual abuse, etc. The diagnosis generally refers to children and adolescents and does not include the incontinence that may occur in

previously soiling free adults who have the symptom caused by some other health problem.

Encopresis may occur either with or without constipation and overflow incontinence. A recurrent alternating pattern of constipation and loose diarrhea-like stools is not unusual. Encopresis is 4 times more common in boys than girls. It occurs in about 1.5% of children, lessens with age and is uncommon in teens. It may run in the family. Higher rates are seen in people who are intellectually challenged, developmentally delayed, sexually abused, or have seizures. Soiling can occur up to multiple times daily and may involve the hiding of dirty underwear by a youth who may seem unaware or not caring about the problem.

The very young child often naturally experiences his or her bowel movements as a production to be proud of, even to play with - this may linger in some kids who have encopresis. The encopretic child has typically lost sensitivity to the gastro-colic reflex (see below) as well as to the smell, and to the rectal and anal area's remarkable ability to distinguish between and control the release of gas, liquid, and solid. It is natural to wonder if this is some neurologic disorder. The mechanism of this seeming loss of sensation and smell is best understood if you think about what happens if you spend the next month full time with an oily smelly moist rag wrapped around your hand or if your hand was immersed in a bucket of liquid for a month. Your body would adjust to this now constant condition and the sensory messages would fade into the background as more important changing stimuli take priority.

Encopresis, like enuresis, can be primary or secondary. *Primary* means that the youth has never had a significant period of full bowel control, such as at least 3 months. *Secondary* means the soiling returns after a significant period of bowel control.

Treatment: The **first step** is to make sure there is no other medical cause of the problem. A visit to the pediatrician or family doctor for a physical examination is advised strongly. The physical will often include a rectal exam and simultaneous feeling (palpation) of the abdomen (belly) to ensure there is no impaction. An impaction is a large hard mass of fecal material that may not pass on its own without laxatives or enemas as advised by the doctor. Such cases are often marked by daily leakage of liquid or very soft stool with a formed stool being rare or nonexistent. The later steps in treatment will often be unsuccessful unless this is cleared up and kept clear. The doctor will also assess whether any other factors may be causing the problem. This is generally done by listening to the history and doing the physical and may occasionally include other tests or referral to a gastrointestinal specialist or neurologist.

The **second step** is standard pediatric behavior therapy that takes advantage of the natural body rhythm of the gastro-colic reflex. When food goes into the stomach (gastro) the bowels (colic) soon move. The key is re-training the child's body to do what comes naturally. This is done by having the youth sit on the toilet for 10-15 minutes after, at least, breakfast and supper (lunch too, if feasible) for which he or she is rewarded whether he produces a bowel movement or not. An extra reward is earned for production of a BM; there is no punishment for failing to produce. The rewards chosen will depend on the child and his or her interests – video game time, a goody grab bag, points toward a pokemon card, etc. *This is the key to the treatment*; the child who never learned or resisted and lost touch with the body rhythm will be re-trained and become able to read bowel cues and will be rewarded for responding to the body cues to defecate. *Once normal control has been gained, this same basic at least twice daily toileting and reward system should be maintained for at least 2 months for mild cases, 4 months for moderate, and 6 months for severe cases in order to lessen the very high relapse rates.*

Stool softeners or laxatives, are used as part of the on-going behavior plan for all moderate to severe cases and anytime there has been an impaction or recurrent constipation, or tendency for the child to hold in the stool. The goal is to soften the feces enough so the child cannot "hold onto" it (thereby causing constipation) but not so liquid to cause uncontrolled diarrhea. Miralax or glycolax is often the best choice. This or an over the counter softener

such as Colace (DSS) can be advised by the physician and adjusted just right and weaned off with time.

If the youth or family cannot follow through with the above plan, **psychotherapy** is advisable or may be necessary. There are no psychiatric **medicines** for encopresis. Sometimes a medication may be useful for an accompanying depression, anxiety disorder, ADHD, etc. Treatment is made more difficult by a high frequency of soiling or a long duration of the problem, resistance to the treatment plan or inability to follow the plan, and by accompanying medical, emotional, or family problems. Generally, frequent long standing soiling is much tougher to successfully treat than bedwetting and tougher than many other childhood behavioral problems. Severe cases may also be marked by a very angry withholding child and very frustrated angry parent(s) wherein the parent child relationship may seem poisoned by the longstanding control and power conflicts. In these situations the child's character formation may be at risk. Fortunately, as even these youth progress through middle school and into high school, peer pressure and increasing awareness of the social costs often contribute to resolution of the encopresis.

When primary (never been successfully bowel trained) encopresis has been present for a short period of time and is uncomplicated by serious psychiatric problems like attachment disorder, serious developmental delays, or abuse and molest, the treatment is often a matter of improving the basic toilet training routine as outlined above. Inadequate, inconsistent, or punitive toilet training is often a factor and can be addressed by working with the parents primarily. The same is true for brief duration mild to moderate secondary encopresis (soiling has returned). Frequently some stressful event is the trigger and needs addressing. These events may include a move, starting or changing schools, parental separation, divorce or conflict, birth of a sibling, or a traumatic event. Complications and severe cases usually indicate the need for counseling, psychotherapy, and/or behavior management therapy for the family.

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