“Christophersen and Friman have produced a masterful volume. The book is very thorough, covering symptoms, etiology, assessment, treatment, and outcome of enuresis and encopresis as well as numerous related disorders. The book is clearly written, yet reviews the relevant research in depth. This book will be a standard reference in the area.”

C. Eugene Walker, PhD, Professor Emeritus and Former Director of Training in Pediatric Psychology, University of Oklahoma Medical School, Oklahoma City, OK

“Enuresis and encopresis are two of the toughest problems in general pediatrics. Drs. Christophersen and Friman take a look at the available interventions and recommend an evidence-based, practical, multi-disciplinary approach.”

Barton D. Schmitt, MD, Medical Director, Enuresis-Encopresis Clinic, The Children’s Hospital, University of Colorado School of Medicine, Aurora, CO

“This is a strong treatise on evidence-based interventions for two common, but often misunderstood and mistreated childhood disorders, namely encopresis and enuresis. Christophersen and Friman, highly respected clinical researchers who have wide experience in their own clinical and pediatric psychology practices, integrate the scientific base with clinical implications and patient characteristics to provide an exceptional resource for use in clinical practice. Their book includes clear advice (and clinical handouts and forms) about implementing effective interventions, course, and prognosis. They have done the field a valuable service with this volume.”

Michael C. Roberts, PhD, ABPP, Professor and Director, Clinical Child Psychology Program, University of Kansas, Lawrence, KS

The aim of this book is to provide readers with a practical overview of the definitions, characteristics, theories and models, diagnostic and treatment recommendations, and relevant aspects and methods of evidence-based psychosocial treatments for encopresis and enuresis, primarily in children. Although treatments and research for elimination disorders are reviewed in general, particular attention is directed at constipation and encopresis, toileting refusal, and diurnal and nocturnal enuresis due to the high incidence of these conditions in children. Case vignettes, websites, and suggestions for further reading are provided for the interested reader.

Advances in Psychotherapy – Evidence-Based Practice
Volume 16: Elimination Disorders in Children and Adolescents

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Danny Wedding
Larry Beutler
Kenneth E. Freedland
Linda Carter Sobell
David A. Wolfe

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Elimination Disorders in Children and Adolescents
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Advances in Psychotherapy – Evidence-Based Practice

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The basic objective of this series is to provide therapists with practical, evidence-based treatment guidance for the most common disorders seen in clinical practice – and to do so in a “reader-friendly” manner. Each book in the series is both a compact “how-to-do” reference on a particular disorder for use by professional clinicians in their daily work, as well as an ideal educational resource for students and for practice-oriented continuing education.

The most important feature of the books is that they are practical and “reader-friendly:” All are structured similarly and all provide a compact and easy-to-follow guide to all aspects that are relevant in real-life practice. Tables, boxed clinical “pearls”, marginal notes, and summary boxes assist orientation, while checklists provide tools for use in daily practice.
Elimination Disorders in Children and Adolescents

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General Introduction

The elimination of bodily waste is a simple mammalian behavior with a multitude of meanings. It can mark territory, project anger, represent fear, initiate play, and even intensify sexual congress. It can also pose problems: Mammalian prey often meet an untimely demise when carnivorous predators track them by attending to the scent of their waste. Not surprisingly, the elimination of bodily waste of humans has generated the most meanings – almost bizarre in its range – and caused the most problems in the mammalian world. It extends from the psychosexual meanings supplied by Freud and his followers to the triad of characteristics (i.e., fire-setting, cruelty to animals, bedwetting) used historically (Hellman & Blackman, 1966) and spuriously (e.g., Slavkin & Shohov, 2004) to identify persons predisposed to violent crime. Human beings seem to enjoy generating complex meaning, even when the subject of their musings involves such simple substances as urine and feces. The range of problems created by the elimination of waste is also very broad, extending from health problems (e.g., infection, compaction, reflux) to social problems (e.g., rejection, ridicule) to family problems (e.g., abuse, neglect) to psychological problems (e.g., anxiety, depression).

As in so many other domains of human life, the scientific approach to the elimination of bodily waste by humans has dramatically simplified and reduced the meanings attributed to it and solved – or at least simplified – almost all the problems it can cause. This book focuses on two of the many problems, namely, childhood encopresis and enuresis. Although many persons have contributed in the past to the scientific progress made in the study of these conditions, each has a scientific patron saint, as it were. For enuresis, Herbert Mowrer was the first and the foremost early investigator to explore the utility of the so-called urine alarm in the treatment of nocturnal enuresis (Mowrer & Mowrer, 1938). For encopresis, Murray Davidson was the first and the foremost early investigator to explore the utility of stool softeners in the treatment of encopresis (Davidson, 1958). In so doing, both individuals inaugurated lines of investigation that gradually grew, elbowed out arcane, speculative and nonproductive perspectives on enuresis and encopresis, and eventually resulted in the empirically supported biobehavioral approaches to assessment and treatment used today.

In this book we cover each condition comprehensively in a specified sequence: multicomponent descriptions (e.g., definition, diagnosis, epidemiology, etc.), influential theories and models, major approaches to treatment, problems encountered carrying out treatments, and case vignettes. The book is divided into three sections: The first covers constipation and encopresis, the second nocturnal enuresis, and the third diurnal enuresis. The encopresis section also includes a discussion on toileting refusal. Consistent with the theme
of the series of which this book is a part, we will strongly emphasize and favor evidence-based perspectives on all aspects of both conditions, particularly treatment.
The use of child-behavior rating scales, such as the Achenbach Child Behavior Checklist (Achenbach, 1991), revealed no systematic differences between children with encopresis and normal children of the same age and gender (Christophersen & Mortweet, 2001). Rating scales also showed that children with encopresis tend to be more well adjusted than same-age, same-sex samples of children with “behavior problems” (Gabel et al., 1986; Loening-Baucke et al., 1987). Friman et al. (1988) reported that children referred for management of encopresis did not differ significantly from the standardization sample for the Eyberg Child Behavior Inventory (Robinson, Eyberg, & Ross, 1980). Further, both the children with encopresis and the standardization sample differed significantly from children who were referred for diagnosis and management of behavior problems.

Loening-Baucke et al. (1987) examined the social competence and behavioral profiles of 38 children with encopresis, with a specific interest in children resistant to treatment. They concluded that the persistence of encopresis at 6-month and 12-month follow-ups after the initiation of treatment was not related to social competence or to behavior scores. Given the existence of research that clearly demonstrates the presence of significant physical findings and the absence of research demonstrating consistent behavior problems in the vast majority of children diagnosed and treated for encopresis, we propose that encopresis can and should be treated primarily as a dysfunction of the bowel.

Schonwald, Sherritt, Stadtler, and Bridgemohan (2004) compared 46 children referred for difficult toilet training with 62 comparison children, using three measures of temperament. They reported that difficult toilet training is associated with difficult temperament and constipation. They reported no differences in parenting styles. Interestingly, they noted that 55% of the children in the comparison group had histories of constipation compared to 78% of the children referred for difficult toilet training, leading the authors to conclude that constipation is very common in this age group. Their results were based on a “toileting history questionnaire” that is currently not in the public domain and thus not available for inspection. If this study were replicated, temperament could be added to the list of factors that contribute to difficult toilet training.

2.3 Treatment for Constipation and Encopresis

A first step in treating encopresis is to ensure that parents understand that their child is most likely not soiling on purpose.

2.3.1 Providing Education

After an initial assessment to ascertain the extent to which a child with encopresis also presents with behavioral or emotional problems, most authors seem to agree that the first step in treating encopresis is to ensure that parents understand that, in all likelihood, their child is not soiling on purpose, and that the child may not have control over his or her soiling.
procedure with the vast majority of new referrals of children with encopresis (Levine, 1982). Levine reported that parents often benefited from viewing a simple diagram explaining how abnormal bowel function, in the form of encopresis, can lead to the child’s colon being stretched such that they have diminished sensation when they need to have a bowel movement. He made the point that it was important that both parents and child be told that the child was not to blame for his or her abnormal bowel functioning, and that effective treatment methods are available (Christophersen & Mortweet, 2001).

Figure 1 is the diagram used by Levine (1982) to help parents understand that their child’s bowel “problem” is not intentional soiling. Clinicians can use this diagram to explain to both the child and the parents what factors are present in encopresis, including “the muscles that are thin, weak, and stretched” (i.e., the majority of children with encopresis have a larger diameter rectum than children without encopresis) as well as “warning nerves that don’t work” (i.e., children with encopresis often report – correctly – that they cannot feel the “call to stool”).

2.3.1.1 Relieving Constipation

After explaining the mechanics of encopresis to the child and parents, the clinician can then introduce the steps for successful treatment. The first step is to reduce or eliminate the large amounts of stool that many of these children have retained in their colon, often referred to as “cleaning out the colon” (Christophersen & Mortweet, 2001). Families can be told that, in order to help the muscles “heal,” one must first make sure that the intestine or colon is completely empty.
The most common way to effectively clean out the child’s colon, based on the individual works of Davidson and Levine, is the use of at least one enema. Since no studies exist comparing the oral route (stool softeners, laxatives, or lubricants) with the rectal route (enemas or suppositories) for relieving constipation, we recommend discussing treatment options with the child and parents. This step in encopresis management is vital: If a child with constipation is not adequately cleaned out, neither the constipation nor the encopresis is likely to resolve. For this reason, we routinely recommend that the clinician be quite thorough. So, initially, when deciding between 1 ml/kg or 2 ml/kg of mineral oil or 17 grams of MiraLax™, it is probably better to use too much rather than too little. For those practitioners who are not trained in these procedures, referral back to the primary-care physician may be necessary. And in those cases in which the primary-care physician is not comfortable handling the “cleanout,” referral to a pediatric gastroenterologist may be indicated.

2.3.1.2 Helping the Child Prevent Further Constipation

Once the child’s colon has successfully been cleaned out, the next step is to keep it from getting too full again. There are several components to this step, which can be implemented simultaneously: scheduled toilet sits, oral medications, and suppositories (Christophersen & Mortweet, 2001).

The simplest component is a scheduled toilet sit. The child is asked to sit on the toilet for approximately 5 minutes, 2 or 3 times a day, to facilitate good bowel habits. Many children will have a pattern to their soiling and bowel movements, and the toilet sits should be structured around these times. For example, if the child typically soils after school but before dinner, a toilet sit should be scheduled for right after school to train the child’s body to eliminate into the toilet at that time. Adherence to these toilet sits can be enhanced by allowing the child to have a special toy or book that can be played with only during toilet sits. Tangible reinforcers for cooperation, such as stickers or special time with a caregiver, can also be helpful. In the experience of the authors, it is of little use to coerce children to do their “toilet sits” at times when they are very unlikely to have a bowel movement. Therefore, the idea of having three toilet sits a day, one after each meal, is usually not necessary. Three toilet sits a day can be justified only for children who have regular bowel movements or bowel accidents in the morning, afternoon, and evening. In our experience, children who have accidents this often usually need to be cleaned out again.

Normally, the child’s physician should be able to offer recommendations to the parents on the use of oral medications. The interested practitioner is referred to Baker et al. (1999) for a thorough discussion of the oral medications and dosing that are available in the evidence-based medicine literature for the treatment of constipation.

Probably the most popular current treatment for constipation is MiraLax™ (polyethylene glycol or PEG). Several recent studies have examined the efficacy and tolerability of MiraLax™, a powder mixed with a liquid. Pashankar, Loening-Bauche, and Bishop (2003) assessed the clinical and biochemical safety profile of therapy with MiraLax™ with 83 children (54 with chronic constipation and 39 with constipation and encopresis), receiving PEG therapy for more than 3 months. At the time of publication, with a mean duration of 8.7 months of treatment, there were no major clinical adverse effects, all children
Once the child’s colon has successfully been cleaned out, the next step is to keep it adequately cleaned out, neither the constipation nor the encopresis is likely to resolve. For this reason, we routinely recommend that the clinician be quite thorough. So, initially, when deciding between 1 ml/kg or 2 ml/kg of mineral oil or 17 grams of MiraLax™, it is probably better to use too much rather than too little. For those practitioners who are not trained in these procedures, refer to Baker et al. (1999) for a thorough discussion of the oral medications preferred totreating encopresis.

Changes in dairy consumption may also be required for treatment. Davidson (1958), in addition to identifying constipation as a primary etiological factor in pediatric encopresis, also recommended a trial on reduced dairy consumption as one of the phases of his treatment regimen. Years later, Lacono et al. (1998) performed a double-blind, cross-over study comparing cow’s milk with soy milk in 65 children with chronic constipation. They reported that 44 of the 65 children had a favorable response to soy milk, while none of the children who received cow’s milk had a favorable response. They concluded that the reduction of cow’s milk in the diet to a level of less than 2% of total calories is likely to be a significant component in treating encopresis.
3.3.5 Empirically Supported Components of Conventional Programs

3.3.5.1 Retention control training (RCT)
The emergence of RCT followed the observation that many enuretic children had reduced functional bladder capacity (Muellner, 1960, 1961; Starfield, 1967). RCT expands functional bladder capacity by requiring children to drink extra fluids (e.g., 16 ounces of water or juice) and delay urination as long as possible to increase the volume of their diurnal urinations and expand the interval between urges to urinate at night. Parents are instructed to establish a regular time for RCT each day and conclude the training at least a few hours before bedtime. Progress can be assessed by monitoring the amount of time the child is able to delay urination and/or the volume of urine they are able to produce in a single urination. Either or both can be incorporated into a game context wherein children earn rewards for progress. RCT is successful in as many as 50% of cases (Starfield & Mellits, 1968).

3.3.5.2 Kegel/Stream Interruption Exercises
Kegel exercises involve purposeful manipulation of the muscles necessary to prematurely terminate urination or contraction of the muscles of the pelvic floor (Kegel, 1951; Muellner, 1960). Originally developed for stress and postpartum incontinence in women (Kegel), a version of these exercises – stream interruption – has been used in enuresis treatment packages for years (Friman, 2008). For children, stream interruption requires initiating and terminating urine flow at least once a day during a urinary episode. The use of stream interruption exercises in the treatment of enuresis is logical from a physiological perspective, because terminating an actual or impending urinary episode involves the same muscle systems. A major study of Kegel exercises showed their regular practice eliminated accidents in 47 of 79 children with diurnal enuresis.

3.3.5.3 Waking Schedule
This treatment component involves waking enuretic children and guiding them to the bathroom for urination. Results obtained are attributed to a change in arousal, increased access to the reinforcing properties of dry nights (Bollard & Nettlebeck, 1982), and urinary urge in lighter stages of sleep (Scharf & Jennings, 1988). In a representative study using a staggered waking schedule, four of nine children reduced their accidents to less than twice a week, suggesting that a waking schedule may improve (but is unlikely to cure) enuresis (Creer & Davis, 1975). The early use of waking schedules typically required full awakening, often with sessions that occurred in the middle of the night (e.g., Azrin et al., 1974; Creer & Davis, 1975), but two subsequent studies showed that partial awakening (e.g., Rolider & Van Houten, 1986; Rolider, Van Houten, & Chlebowski, 1984) or conducting waking sessions just before the parent’s normal bedtime (Bollard & Nettlebeck, 1982) was just as effective. In additional, evaluations of the role of the waking schedule, when included in DBT and FSHT, produced contrasting findings: When used in DBT, Bollard and Nettlebeck (1982) showed that a combination of only the alarm and a waking schedule produced positive results, comparable to the use
3. Nocturnal Enuresis

of the entire treatment package. However, when used in FSHT, Whelan and Houts (1990) found no differences between groups that received FSHT with and without a waking schedule. In light of the existing, somewhat conflicting, research results, when waking schedules are to be used, we recommend against waking in the middle of the night in favor of the less stringent approaches described previously (e.g., Friman, 2008).

3.3.5.4 Overlearning
An adjunct related to RCT involves overlearning. Like the RCT procedure, this method requires children to drink extra fluids – but just prior to bedtime. The overlearning procedure is a deliberate attempt to produce multiple accidents nightly through increased fluid intake and thereby increase learning trials in which the accidents instigate an alarm-based consequence. Overlearning is an adjunctive strategy only, used primarily to increase the maintenance of treatment effects already achieved through the urine alarm. Thus, it should not be initiated until a state of dryness has been reached (e.g., 7 dry nights; Houts & Liebert, 1985).

3.3.5.5 Cleanliness Training
Some form of effort directed toward returning soiled beds, bed clothing, and pajamas to a presoiled state is a standard part of DBT (Azrin et al., 1974), FSHT (Houts & Liebert, 1985; Houts, Peterson, & Liebert, 1984), and “package”-type treatments. It has, however, not been evaluated independently of other components, so that the extent of its contribution to outcome is unknown. Yet its contribution to the logic of treatment and consonance with conventional household expectations suggests its status as a treatment component is probably justified.

3.3.5.6 Reward systems
Contingent rewards alone are unlikely to cure enuresis, but they are an important component of DBT (Azrin et al., 1974). They have been included in many multiple component treatment programs since its development and are routinely recommended in papers describing effective treatment (e.g., Christophersen & Friman, 2004; Friman, 2008). With the current state of the literature, it is impossible to determine their independent role in treatment. One plausible possibility is that they sustain the enuretic child’s motivation to participate in treatment, especially when the system reinforces success in small steps. If dry nights are initially infrequent and motivation begins to wane, decreases in the size of the urine stain can be used as the criteria for earning a reward. In the initial report of this method, tracing paper was laid over the spot and the number of 1-inch squares contained within the spot was counted (Ruckstuhl, 2003).

An example of an often used reward system involves the dot-to-dot method described in Table 7. Using this method allows parents to reward their incontinent child for small amounts of progress made on the way to continence and, thus, potentially to increase motivation.

Obviously, there are numerous combinations and variations on the empirically supported treatments for enuresis. As indicated previously, those with the most supportive evidence are DBT (Azrin et al., 1974) and FSHT (Houts & Liebert, 1985; Houts et al., 1984). However, virtually every enuresis expert
Table 7
The Dot to Dot Reward System for Treatment of Enuresis

1. Identify an item the child wants and parents are willing to buy.
2. Draw (or have drawn) a picture of it using dots. If the item is expensive, use lots of dots. A rule of thumb is $.50–$1 per dot.
3. Have the parents post the drawing with the child’s name on top in a clearly visible place (e.g., refrigerator).
4. For every dry night, accident-free day, or episode with evidence of a smaller accident, have the parents permit the child to connect one dot.
5. When all of the dots have been connected, have the parents purchase and supply the item – immediately.
6. Warn parents that connected dots can never be taken away.
7. To make the program more interesting, add in a secondary system involving a grab bag.
8. Have parents write out small rewards on 25-50 slips of paper. These could include small manipulable toys, candy (if permitted), small amounts of money (dime, quarter), time with mother or father, extra bedtime, small privileges, etc. One or two large rewards could also be added (e.g., $5, select movie for family). Place all the slips in a bag (or bowl or hat).
9. Make every third dot in the dot to dot program bigger than the rest.
10. When the child reaches a big dot, have parents allow him or her to retrieve one slip from the grab bag and immediately deliver whatever is on the slip.
11. Have the parents return the slip to the bag.

Table 8
Summary of Moffat’s (1997) Urine Alarm Procedures

1. Contract with parent and child for a 3-month trial.
2. Have the child keep a diary, starting at least 2 weeks before the first visit. It should include the number of wet nights, the number of accidents per night, and the size of the stain.
3. Require that the parent be part of the alarm system (because many children do wake to the alarm on their own initially but after a few weeks of parental help they gradually do).
4. Encourage detection of, emphasis on, and reward for arousal.
5. See the parent and child at least every 3 weeks initially.
6. Use three signs of improvement: decreased frequency of wet nights, number of episodes per night, and size of urine stain.
7. Continue until the child achieves 14 consecutive dry nights (no alarm sound – even for a spot of urine).
8. After the initial goal is achieved, use overlearning – either at least 16 ounces of fluid before bed or gradual 2-ounce increments, increasing as each step is mastered, until 16 ounces is reached.
9. Continue overlearning until the child achieves 14 consecutive dry nights.
10. Relapses can be re-treated successfully in the same manner, in many cases.

### 4.3.3 Problems in Carrying Out the Treatments

As with nocturnal enuresis, the best results for treatment of diurnal enuresis have been attained with the urine alarm. The primary problem with its use is noncompliance. However, although there is a small body of research exploring the reasons for noncompliance with treatment for nocturnal enuresis, we found none exploring the reasons for noncompliance with treatment for diurnal enuresis. A plausible guess would be the effort involved increases in which often produce decreases in the rate of desirable behavior (e.g., Friman & Poling, 1995). As described above, the optimal treatment regimen includes multiple components, each of which involves parental and child effort. An additional problem involves the potential stigma of the urine alarm: Social detection of urinary accidents is a potentially highly aversive event for incontinent children, especially if they are attending school. Use of a sound-based alarm substantially heightens the probability that accidents will be detected by others. There are at least two ways to address this problem.

The first involves implementing the alarm component of treatment only at home (e.g., at night and on weekends). The second involves use of the vibrating urine alarm, though it is not completely soundless and thus too increases the risk of social detection, although not to the degree that the sound-based alarm does. Nonetheless, because of children’s sensitivity to risk of social awareness of their condition, alarm-based treatment, whether with sound or the vibrating device, should not be conducted outside the home without clear evidence of child agreement.

### 4.4 Case Vignette: Diurnal Enuresis

**History.** Sam, a 6-year-old boy, lived at home with his natural parents and older brother, Tom, age 12. He was in the first grade. His teacher had no complaints about his academic progress, but she was concerned about emerging socially withdrawn behavior and a pattern of diurnal incontinence that she felt was at least partially responsible for the withdrawal. He presented at an Outpatient Behavioral Pediatric and Family Services Clinic for treatment of the daytime wetting problems. His medical, psychiatric, educational, and developmental histories were unremarkable. His father was a plumber and his mother held a part-time job as a sales clerk. Both parents had high-school educations. The clinical history indicated that with the exception of the incontinence and the emerging social problems, there were no other behavioral complaints. He had been toilet trained successfully at the age of 3 but began having urinary accidents when he entered kindergarten. He was continent at night. His parents managed his wetting accidents using absorptive undergarments (pull-ups), but following the advice of friends, they had made a small number of attempts to address the wetting with reward systems, scheduling, and removal of the absorptive undergarments. The results of their efforts were unfortunately unsuccessful and resulted in two accidents at school that were detected by his teacher and his peers. Subsequently, he returned to wearing the absorptive undergarments which he was using at the time of the referral.
The referring psychologist requested a physical examination to be conducted by his primary-care physician, which ruled out medical causes of the diurnal wetting. A family history revealed that an uncle on his mother’s side had been a bedwetter, though the parents could not recollect daytime wetting problems in their own histories nor in the histories of other close relatives. A developmental screening was negative for delays, and a psychological screening was negative for significant behavioral and emotional problems. However, the screening did indicate psychometric evidence of the social withdrawal noted by his teacher. In addition to avoiding others on the playground, he refused to attend camp and expressed little interest in having friends visit him at his home. He was also reluctant to visit friends at their homes, and at the time of the referral, the parents and the boy could not identify any classmate or neighbor as a close friend. An assessment of parental attitudes toward the wetting indicated tolerance on the mother’s part and intolerance on the father’s part. The father believed that Sam was inattentive and mildly lazy about his toileting responsibilities. His mother believed that he simply could not help it. Both the mother and Sam were highly motivated to pursue treatment, but the father did not participate in any clinic visits. The mother reported that the father was supportive but unable to find the time to come to the clinic.

**Assessment.** Assessment of Sam’s urinary patterns indicated that he was completely continent at night. Because he wore a pull-up, the frequency of his accidents during the day was impossible to determine on school days, but he came home wet at least 4 days a week. To estimate accident frequency during the assessment period, he did not wear pull-ups on the weekends, and the frequency across 4 weekend days was 1.25 accidents a day. Parental response to the accidents varied depending on the parent. The mother tended to note neutrally that he had had an accident, guide him to the bathroom, encourage him to attempt to urinate, and then change his clothing. His father was more firm and sometimes more critical, and supplied much less assistance. He would merely note that his boy had an accident, comment critically, and tell him to go change his clothes. The mother also assessed his urinary output using a glass measurement container on three occasions, and the result indicated an average of approximately 3.5 ounces per measure. She also estimated that he urinated an average of 7–9 times a day when he was not in his pull-up.

**Case Conceptualization.** Sam’s urinary accidents met criteria from the DSM-IV for Primary Diurnal Enuresis. It also fit criteria for a secondary classification because he had had a period of complete continence lasting longer than 6 months. There was modest evidence supporting its being an inherited condition. There was also evidence that the chronic accidents were producing an increasingly growing detrimental effect on Sam’s social life, largely because he had had accidents at school, and peers and teachers had detected them. There was also evidence of substantially reduced functional bladder capacity and overly frequent daytime urinations. There was no evidence that the onset of the accidents was occasioned by a trauma or chronic encounter with serious distressful events. These facts supported the view that it was an idiopathic (“garden variety”) case of diurnal enuresis.

**Treatment.** The core component for treatment for Sam’s incontinence while at home was the vibrating urine alarm. But, because of the potential for enhanced detection at school by classmates, it was not used there. Because of
the elevated motivation of Sam and his mother, multiple components were assembled to create a treatment package. These included the following:

1. A motivational system involving the dot-to-dot program mentioned earlier. The ultimate reward he selected was a basketball.
2. A toileting schedule was implemented both at home and school. At school, he was directed to use the toilet between two classes in the morning and two classes in the afternoon.
3. A toileting pass program was implemented at school which allowed him to leave class whenever he felt the urge to urinate, at which point he would surrender his pass. For each unused pass, he was provided one sticker, and the accumulation of five stickers allowed him to withdraw one small reward from a classroom reward bag.
4. The use of pull-ups was discontinued at school.
5. Wet Kegel exercises were conducted 2–3 times a week at home.
6. RCT was conducted on the weekends.
7. A self-monitoring system with which Sam recorded accident-free days on a specially constructed chart at home was implemented.
8. A modification of the father’s typical response to accidents was requested and, according to the mother, actually realized. The father was simply asked to provide a neutral response to accidents and avoid any form of criticism.
9. Although Sam was too young to assist with laundry, he was required to bring his own soiled clothing to the laundry basket whenever he had an accident.

Outcome. Sam’s therapist monitored his progress through telephone contacts with the mother and periodic clinic visits. He would either inquire about or actually inspect the self-monitoring calendar and the dot-to-dot drawing. During a 2-week baseline, Sam was wet almost every day and slightly more frequently on the weekends. Immediately following the implementation of treatment, accidents at school stopped but continued periodically on the weekends. By week 4 he was completely accident-free, at which point the use of the alarm was discontinued. When he completed his dot-to-dot program and earned his reward, the system was discontinued as was the calendar-based monitoring system. At week 7 all major components of the program were discontinued. At the 6-month follow up, Sam had not had an accident for at least 4 months.

4.5 Summary and Conclusions

History has not been kind to children with enuresis. They have suffered at the hands of their parents, peers, friends, neighbors, and even professionals sought by parents to help with the problem. Although it is true that attitudes toward enuresis as well as parental and professional approaches to it have improved substantially overtime, especially in comparison with the approaches from antiquity, there is still much progress to be made. For example, despite abundant evidence of the problematic side effects from medication, including accidental death, in standard practice medical treatment still trumps psychological treatment. However, as documented in this book, although there are
“Christophersen and Friman have produced a masterful volume.... The book is very thorough, covering symptoms, etiology, assessment, treatment, and outcome of enuresis and encopresis as well as numerous related disorders. The book is clearly written, yet reviews the relevant research in depth. This book will be a standard reference in the area.”

C. Eugene Walker, PhD, Professor Emeritus and former Director of Training in Pediatric Psychology, University of Oklahoma Medical School, Oklahoma City, OK

“Enuresis and encopresis are two of the toughest problems in general pediatrics. Drs. Christophersen and Friman take a look at the available interventions and recommend an evidence-based, practical, multi-disciplinary approach.”

Barton D. Schmitt, MD, Medical Director, Enuresis-Encopresis Clinic, The Children’s Hospital, University of Colorado School of Medicine, Aurora, CO

“This is a strong treatise on evidence-based interventions for two common, but often misunderstood and mistreated childhood disorders, namely encopresis and enuresis. Christophersen and Friman, highly respected clinical researchers who have wide experience in their own clinical and pediatric psychology practices, integrate the scientific base with clinical implications and patient characteristics to provide an exceptional resource for use in clinical practice. Their book includes clear advice (and clinical handouts and forms) about implementing effective interventions, course, and prognosis. They have done the field a valuable service with this volume.”

Michael C. Roberts, PhD, ABPP, Professor and Director, Clinical Child Psychology Program, University of Kansas, Lawrence, KS

The aim of this book is to provide readers with a practical overview of the definitions, characteristics, theories and models, diagnostic and treatment recommendations, and relevant aspects and methods of evidence-based psychosocial treatments for encopresis and enuresis, primarily in children. Although treatments and research for elimination disorders are reviewed in general, particular attention is directed at constipation and encopresis, toileting refusal, and diurnal and nocturnal enuresis due to the high incidence of these conditions in children. Case vignettes, websites, and suggestions for further reading are provided for the interested reader.

Edward R. Christophersen · Patrick C. Friman

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