

# Managing Encopresis in the Pediatric Setting

By Edward R. Christophersen, PhD, FAAP (Hon) and Matthew Wassom, PhD  
Children's Mercy Hospitals and Clinics, Kansas City, Missouri

Encopresis is defined as a child over the age of 4 repeatedly passing feces into inappropriate places (such as clothing or the floor) at least once per month over a 3-month period. Encopresis can be primary, in which case the child has never been toilet trained, and secondary, in which case the child was toilet trained and accident free for a period of at least 6 months. Because constipation has been implicated in about 90% of cases of encopresis, most of the empirical work has focused on children with a history of constipation.

## Prevalence and Significance of Encopresis

Christophersen and Friman (2010) estimate the prevalence of encopresis to range from approximately 4% of 4-year olds to 1.6% of 10 year olds, with boys being affected 3 to 6 times more often than girls. Encopresis and constipation have been reported to account for 3% of pediatric referrals (Loening-Baucke, 1993) and 30% of referrals to pediatric gastroenterologists (Culbert & Banez, 2007). Har and Croffie (2010) reported that there are no correlations between encopresis and socioeconomic status, the child's position in the family, parental age, or family size. Population based studies on the prevalence of encopresis in children, beyond American populations, have been scarce. Van den Berg et al. (2006) reported no evidence that the rate of constipation occurs any less in non-Western societies.

Encopresis can lead to significant impairment in multiple areas. Parents have rated the child's lack of self-esteem as the most important consequence of constipation and encopresis while emerging evidence shows that these children may exhibit more emotional and behavioral difficulties than other children, perhaps as a result of the condition. Despite the commonality of this condition, encopresis has been referred to as the "hidden disease" and parents of children with encopresis often think that they are the only family who has a child with this problem (Christophersen & Friman, 2010). There has been very little discussion about encopresis in the popular press.

*continued on page 11*



**DB:PREP**

**Register Now!**

**An Intensive Review and Update of Developmental-Behavioral Pediatrics**

Atlanta, Georgia • January 29 - February 2, 2014

American Academy of Pediatrics  
DEDICATED TO THE HEALTH OF ALL CHILDREN™

Register online [www.aap.org/livecme](http://www.aap.org/livecme)  
Call toll-free **866/THE-AAP1** (866/843-2271)

### Etiology of Encopresis

Har & Croffie (2010) stated in their review that 90% of all cases of encopresis are functional in nature, with no obvious medical cause for the constipation. There may be some predisposing factors present that promote tendency toward constipation such as genetics towards slow motility, change in diet or poor diet, or dehydration. The most common condition that must be distinguished from functional constipation in infancy is Hirschsprung's disease.

There is support that stool-withholding behavior is a major cause for the development and persistence of constipation and encopresis. However, it is felt that stool withholding and anxiety about defecation are preceded by large, hard, and painful difficult to pass stools (Blum, Taubman, Nemeth, 2004). Because of this relationship between initial difficult stools, withholding behavior, and then subsequent increased problems with constipation, this condition is often thought of as a self-perpetuating condition. Long-term fecal retention due to stool withholding eventually may lead to chronic presence of a fecal mass and cause changes in the functioning of the rectum and lower GI system. Therefore, the maintenance of encopresis can be thought of as both a physical problem and a learned behavior problem that requires both medical and behavioral intervention.

There has been some limited research on the role that child temperament may play in the further maintenance of stool toileting refusal and thus encopresis. Taubman (1997) found that there was a trend toward children with stool withholding being rated by their parents as having a more difficult temperament. Burket and colleagues (2006) showed constipated children aged 2-7 years were rated by their parents to be more stubborn in general and regarding toileting behaviors.

### Evidence Based Assessment

Initial assessment of the child with encopresis should include a thorough medical history and a physical examination by the physician. It is important to fully evaluate the presence or history of constipation to determine treatment course, as treating encopresis in children with constipation will differ from treating encopresis when there is no history of constipation. A working group composed of gastroenterologists and pediatricians published the Rome III criteria for functional constipation which should be used as a guideline in this evaluation (Rasquin, Di Lorenzo, Forbes, Guiraldes, Hyams, et al., 2006) (See Table 1 for Rome III criteria).

**Table 1: Rome III criteria for functional constipation**

Must include 2 or more of the following in a child with a developmental age of at least 4 years:	
🍏	Two or fewer defecations in the toilet per week
🍏	At least 1 episode of fecal incontinence per week
🍏	History of retentive posturing or excessive volitional stool retention
🍏	History of painful or hard bowel movement
🍏	Presence of a large fecal mass in the rectum
🍏	History of large diameter stools that may obstruct the toilet
*Criteria fulfilled at least once per week for at least 2-months before diagnosis	

It is important for the history to include a review of the child's toilet training as well as their response to the training. Examination of the perineum and perianal area is essential and digital rectal examination, while rarely actually performed in practice, is also recommended. Some physicians also order a kidney, ureter, and bladder (KUB) x-ray to determine the extent of the fecal mass, which can also sometimes be used to help educate the family. Lastly, physicians should consider a brief screening of other behavioral concerns. A useful behavioral screening measure that can be implemented quickly in the physician office is the Pediatric Symptom Checklist (PSC) (Jellinek, & Murphy, 1988).

### Evidence Based Treatment

The medical-behavioral treatment approach is recommended for children with encopresis associated with functional constipation (Christophersen & Friman, 2010). This includes 4 major treatment components: 1) education about the condition, 2) disimpaction of constipation, 3) maintaining regular bowel movements, and 4) behavior strategies to improve toileting habits and behaviors. The

*continued on page 12*

## Managing Encopresis in the Pediatric Setting *continued from page 11*

---

North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition (NASPGHN) Clinical Practice Guidelines (2006) also further support this line of treatment approach for management of functional constipation.

### *Medical-Behavioral Treatment Approach*

The education component usually involves making sure that the family understands the role that constipation plays in the etiology of encopresis including a developmentally appropriate discussion of the anatomy and physiology of the lower GI tract and defecation. It is important to alter negative attributions of the parents about the cause or origin of the soiling accidents. Many parents of constipated children with encopresis think that the child is soiling on purpose or is being lazy or defiant. Parents should be educated that the encopresis or loss of feces in the underwear is involuntary and the result of overflow incontinence, deconditioning and altered functioning of the rectum, and learned withholding behavior. In our clinic we use Levine's (1982) schematic representation of the colon of a child with encopresis. The clinician uses the schematic to explain how constipation leads to the increased diameter of the colon and rectum as well as the decreased sensitivity to pressure in the colon. Parents are coached to maintain a consistent, positive, and supportive attitude in all aspects of treatment. It is important to include the child in this education and we often discuss being a team with the child to help this problem go away.

The second treatment component that can be discussed and carried out after providing the education is the treatment of the child's current constipation and/or impaction. It is important to again provide detailed education about why a "clean-out" is essential in the success of treatment and prepare parents for the process. It should be clarified with the child that this means taking medicine and having a lot of stool out. Disimpaction or "clean-out" typically involves medication (either oral or rectal - there are no published studies comparing the 2 routes of administration). The NASPGHN Clinical Practice Guidelines (2006) discuss the various medications and dosing for relief of constipation, which may involve enemas, suppositories, or oral medication (such as polyethylene glycol 3350 powder). Absent adequate management and monitoring of the child's constipation, the likelihood of significant progress is significantly reduced.

The third component is the maintenance of regular and consistent bowel functioning and making sure that the child does not get constipated again. Christophersen and VanScoyoc (2013) recommend including management of the diet (with increased consumption of dietary fiber and reduction in the intake of dairy products when indicated, and increased water consumption). Maintenance may also include the use of stool softeners and laxatives to prevent accumulation of stool and allow the rectum to return to normal functioning. The 2 most common agents are polyethylene glycol and lactulose, which draw fluid into the large intestine. Again, NASPGHN Clinical Practice Guidelines (2006) give recommendations for specific medical regimens for maintenance treatment of constipation.

The fourth component of treatment that occurs concurrently with maintenance medical treatment is behavioral strategies that promote healthy bowel habits and routines. One helpful approach discussed in the literature and used in our clinic is to work with parents (and include the older child in the process) to closely monitor bowel output for a period of time to ensure that medication and diet adjustments can be made when necessary. We routinely ask the parent(s) and child to complete a Bowel Symptom Rating Sheet (SRS) on a daily basis (See Table 2). This bowel symptom rating sheet helps track bowel movement details such as frequency of stools in the toilet, soiling accidents, size or volume of stools out, and consistency or appearance of stools out. Often children who are having slow and insidious onset of constipation can be managed by calculating estimates of weekly stool volumes and working towards consistency each week. In addition, the SRS can track medication doses given, amount of dietary fiber, amount of water intake, and other goals which provides the opportunity to quickly and efficiently review not only the patient's progress, but also their level of adherence to the treatment regimen. At the same time, the parent/child completing the SRS is reminded daily what the components of the treatment regimen are and this can be a motivating intervention.

*continued on page 13*



## Managing Encopresis in the Pediatric Setting *continued from page 13*

the child's general compliance with instructions. This may include providing guidance on positive attending and describing desired behaviors, consistent limit setting, and using immediate and consistent consequences for noncompliance. Other children may have significant fears of the toilet or full toilet refusal and need a more gradual approach or "systematic desensitization" to toilet sitting. Some children may need more specific behavioral guidance and training for effective defecatory pushing and evacuation of stools. A particular intervention that was found to be effective, using random controlled assignment to alternative treatments, was "enhanced toilet training", which teaches children appropriate defecation pushing and works on correcting paradoxical contraction and learned withholding behaviors (Borowitz, Cox, Sutphen, & Kovatchev, 2002).

Adopted from: Christophersen, E.R. & Wassom, M.C. (In Press). Encopresis. In R. Cautin & S. Lilienfeld (Eds.), *Encyclopedia of Clinical Psychology*, New York: Wiley-Blackwell.

### References

1. Achenbach, T. M. (1991). *Manual for the Child Behavior Checklist: 4-18 and 1991 profile*. Burlington: University of Vermont, Department of Psychiatry.
2. Blum, N.J., Taubman, B., Nemeth, N. (2004). During toilet training, constipation occurs before stool toileting refusal. *Pediatrics*, *113*, e520-522.
3. Borowitz, S.M., Cox, D.J., Sutphen, J.L., Kovatchev, B. (2002). Treatment of childhood encopresis: a randomized trial comparing three treatment protocols. *Journal of Pediatric Gastroenterology and Nutrition*, *34*, 378-384.
4. Burket, R.C., Cox, D.J., Tam, A.P., Ritterband, L., Borowitz, S., et al. (2006). Does "stubbornness" have a role in pediatric constipation? *Journal of Developmental and Behavioral Pediatrics*, *27*, 106-111.
5. Christophersen, E. R., & Friman, P. C. (2010). *Elimination Disorders in Children and Adolescents*. Cambridge, MA: Hogrefe.
6. Christophersen, E.R. & Wassom, M.C. (In Press). Encopresis. In R. Cautin & S. Lilienfeld (Eds.), *Encyclopedia of Clinical Psychology*, New York: Wiley-Blackwell.
7. Christophersen, E.R. & VanScoyoc, S.M. (2013). *Treatments that work with children: Empirically supported strategies for managing common childhood problems (Second Edition)*. Washington, D.C.: American Psychological Association.
8. Clinical Practice Guideline: Evaluation and treatment of constipation in infants and children: Recommendations of the North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition. (2006). *Journal of Pediatric Gastroenterology and Nutrition*, *43*, e1-e13.
9. Culbert, TP & Banez, GA. (2007). Integrative approaches to childhood constipation and encopresis. *Pediatric Clinics of North America*, *54*, 927-947.
10. Har, A.F. & Croffie, J.M. (2010). Encopresis. *Pediatrics in Review*, *31*, 368-374.
11. Jellinek, M.S. & Murphy, J.M. (1988). *Pediatric Symptom Checklist*. Boston, MA: Massachusetts General Hospital.
12. Launing-Baucke, V. (1993). Chronic constipation in children. *Gastroenterology*, *105*, 1557-1564.
13. Levine, M.D. (1982). Encopresis: Its potentiation, evaluation, and alleviation. *Pediatric Clinics of North America*, *29*, 315-330.
14. McGrath, ML, Mellon, MW, & Murphy, L. Empirically supported treatments in pediatric psychology: constipation and encopresis. *Journal of Pediatric Psychology*, *25*, 225-254.
15. Rasquin, A., Di Lorenzo, C., Forbes, D., Guirdes, E., Hyams, J.S., et al. (2006). Childhood functional gastrointestinal disorders: child/adolescent. *Gastroenterology*, *130*, 1527-1537.
16. Taubman, B. (1997). Toilet training and toileting refusal for stool only: a prospective study. *Pediatrics*, *99*, 54-58.
17. van den Berg, M.M., Benninga, M.A., Di Lorenzo, C. (2006) Epidemiology of childhood constipation: a systematic review. *American Journal of Gastroenterology*, *101*, 2401-2409.

### About the authors:



**Edward R Christophersen, PhD, ABPP** is a Professor of Pediatrics at the Children's Mercy Hospitals and Clinics, Kansas City, MO. He can be reached at [echrist@cmh.edu](mailto:echrist@cmh.edu).

**Matthew Wassom, PhD** is an Assistant Professor of Pediatrics, at the Children's Mercy Hospitals and Clinics, Kansas City, MO.