# Nocturnal enuresis: improving treatment outcomes

Bladder & Bowel UK

## A guide for healthcare professionals

### Why is it important to treat enuresis?

Left untreated enuresis can result in low self-esteem and self-confidence, social isolation and parental stress. Enuresis also frequently results in disturbed sleep that may impact on behaviour and educational achievement. Treatment has been shown to improve or resolve these issues.

### At what age should you start treating children with enuresis?

Bedwetting is recognised as a medical condition from a child's fifth birthday. Studies have identified that children with severe bedwetting (those wetting more than four nights a week) are least likely to experience resolution of symptoms without treatment. NICE (2010) makes recommendations that younger children should not be excluded from treatment based on age alone. Therefore, treatment should be offered when the child and family present and particularly if the child is bothered by symptoms[1].

### What is the difference between monosymptomatic (MNE) and nonmonosymptomatic enuresis (NMNE)?

Monosymptomatic enuresis (MNE) is used to describe the child who has no other symptoms, than bedwetting. Nocturnal polyuria is common in MNE. Children with nonmonsymptomatic enuresis (NMNE) tend to have more difficulties with bladder storage than children with MNE. However, there is overlap between both forms of enuresis and both nocturnal polyuria and bladder storage difficulties may be present in the same child[1].

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## What are the main comorbidities of bedwetting?

Children with constipation, snoring or sleep apnoea as well as children with ADHD are more likely to have bedwetting. It is important to assess for constipation and treat this prior to or alongside initiating treatment for bedwetting. About half of children with sleep disordered breathing will become dry after adenotonsillectomy[2]. Therefore, it is important to consider referral if snoring or sleep apnoea are reported by the family. Children with ADHD may benefit from treatment for this alongside treatment for enuresis to improve compliance1.

## What is the best treatment for bedwetting?

Treatment should be based on the findings of the assessment and be tailored to the child's individual needs and the child and family's preferences. The family should be advised that wetting is not due to something either they or the child have done or have not done. It should also be explained that lifting or waking the child to go to the toilet during the night and day time fluid restriction are unhelpful. The use of nappies or pull ups to contain the wetting is an individual decision for the child and family, but a trial three or four nights without should be considered.

Lifestyle advice, including encouraging a good daytime fluid intake, regular voiding, avoiding constipation, emptying the bladder before sleep, using charts for monitoring progress and rewarding behaviours the child can control are recommended. However, although useful for children with NMNE, the benefit of these for children with MNE is unclear1. Therefore timely review should be offered and proactive treatment should be considered if there is no improvement at review.

## Adjusting treatment according to the underlying pathophysiology

Constipation should be treated if there is any suspicion it may be present.

Any daytime lower urinary tract symptoms should be treated prior to or at the same time as treating the enuresis1. Usual treatments are bladder training and anticholinergics.

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If there is normal nocturnal urine output, no daytime bladder symptoms and average bladder capacity:

- Consider either alarm or Desmopressin as first line treatment, taking into account the child's age, motivation, previous experiences of treatment, if any, and family expectations and preferences.

If there is nocturnal polyuria (defined as urine production that is 130% or more of expected bladder capacity, which may be indicated by large wet patches within a few hours of going to sleep:

- Consider Desmopressin as first line treatment, if acceptable to the child and family. There is more information about using Desmopressin on the Bladder & Bowel UK website at www.bbuk.org.uk/bedwetting

If there is small bladder capacity, apparent high arousability, good motivation and family support:

- Consider an alarm as first line treatment, if acceptable to the child and family and there are no concerns about parental intolerance. There is more information about using alarms on the Bladder & Bowel UK website at www.bbuk.org.uk/bedwetting

If single first line treatment does not result in complete treatment success, then combination treatment may be warranted:

- Consider Desmopressin with an alarm, if there is nocturnal polyuria with low maximum voided volumes and a high arousal threshold.
- Consider Desmopressin with an anticholinergic if there is nocturnal polyuria and suspected nocturnal bladder overactivity.
- Consider an alarm with an anticholinergic for low maximum voided volumes with high arousal threshold and overactive bladder.

## Management of children who have not responded to initial treatment with Desmopressin

- Consider increasing the dose of Desmopressin. The melt may be increased from 120mcg to 240mcg and the tablet may be increased from 200mcg to 400mcg.
- Consider advising giving Desmopressin an hour before going to bed, if the child is able to restrict fluid intake for an hour prior to administration i.e. two hours before going to bed. (This may not be practicable for younger children).
- Consider switching formulations of Desmopressin.

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- If wetting resumes on withdrawal of Desmopressin, consider recommencing Desmopressin or a gradual withdrawal programme.

## Management of children who have not responded to treatment

- Ensure that constipation has been excluded or treated, including if there is initial success with treatment and then wetting resumes.
- Ensure that there is no residual urine after bladder emptying1.
- Consider a trial of anticholinergic therapy as there is some evidence that anticholinergics can be beneficial in enuresis, including when given in addition to Desmopressin[3]. If there are no daytime symptoms, consider giving a single dose of anticholinergic an hour before bedtime1.
- Consider further trials with an enuresis alarm, particularly if it has not been used over the preceding two years1. Consider using an alarm with Desmopressin if there is nocturnal polyuria[4].
- Advise overlearning in children using an alarm, who have relapsed after previous successful treatment with an alarm[5]: After 14 consecutive dry nights the child should be instructed to drink extra water prior to bed (Desmopressin should NOT be used if giving fluids during this time). When the child has had a further 14 consecutive dry nights with the additional fluid the likelihood of further relapse will be reduced[1].

## Treating children with disabilities and additional needs

Children with additional needs should be offered the same individualised assessment as other children. Treatment should be tailored to the outcome of the assessment and the needs and preferences of the family. An alarm can be an appropriate treatment for children with learning disabilities.

Information about enuresis for families of children with learning disabilities is available on the Bladder & Bowel UK website.

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Information about enuresis for families of children with learning disabilities is available on the Bladder & Bowel UK website at www.bbuk.org.uk/wp-content/uploads/2018/05/Understanding-Bedwetting-for-Children-with-Downs-Other-LD.pdf

## References


1. Neveus T et al (2020) Management and treatment of nocturnal enuresis – an updated standardization document from the International Children's Continence Society.
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2. Kovacevic L et al (2013) Enuretic Children with obstructive sleep apnea syndrome: should they see otolaryngology first? J Pediatr Urol 9 145-150

3. Austin PF et al (2008) Combination therapy with desmopressin and an anticholinergic medication for nonresponders to desmopressin for monosymptomatic nocturnal enuresis: randomizeddouble-blind, placebo-controlled trial Pediatrics 122 5 1027-32

4. Kamperis K et al (2008) Combination of the enuresis alarm and desmopressin. Second line treatments for enuresis nocturna. J Urol 179 3 1128-31

5. Kosko J (2006) Summary of alarm interventions for nocturnal enuresis in children Evidence Based Child Health 1 98-100


## Further information

Find more information about child bladder and bowel health in our information library at www.bbuk.org.uk. You can also contact the Bladder & Bowel UK confidential helpline (0161 214 4591).

For further advice on bladder and bowel problems speak to your GP or other healthcare professional.