

Nocturnal enuresis in children and young people:

NICE clinical guideline

INTRODUCTION

Nocturnal enuresis, or bedwetting, is a common problem in children. It is a source of stress for them, as well as for their families, who may also incur significant financial costs. The Avon Longitudinal Study of Parents and Children found that the prevalence of bedwetting <2 nights per week is 30% at 4.5 years and 8% at 9.5 years, and the prevalence of bedwetting ≥ 2 nights per week is 8% at 4.5 years and 1.5% at 9.5 years.¹

Treatment has not usually been offered until children are 7 years old. The National Institute for Health and Clinical Excellence (NICE) has published a guideline on the assessment and treatment of children who have nocturnal enuresis;² this makes recommendations for those aged under 7 years and also provides some advice for parents of children who are under 5 years old. Assessment, general advice, and advice on the use of rewards is similar for all children aged over 5 years. The guideline does not suggest that children aged 5–7 years should be given interventions such as alarms or drugs, but acknowledges that some of these children will benefit from them — as such, they should not be excluded from these interventions on the basis of age alone.

GUIDANCE

Assessment of child and family

Table 1 gives some possible interpretations of a child's bedwetting history.

- Has the child been dry at night previously? If bedwetting is of recent onset, assess for signs and symptoms of ill health and for problems such as urinary tract infections (UTIs), diabetes, and constipation. Are there any medical or emotional triggers associated with bedwetting that require attention in their own right?
- What are the details of bedwetting? How

many nights a week does bedwetting occur? Does the child wet several times a night? Do they pass large amounts of urine? Do they also have daytime urinary symptoms, for example, frequency, urgency, straining?

- Does the child have an adequate fluid intake or are they, or their family, restricting fluids, either to treat bedwetting or to avoid using toilets in school or other circumstances?
- How are parents/carers coping? Are they expressing anger or negativity to the child? Do they need support?
- What are the family circumstances? Is the child sharing a bed or room with siblings?
- What is required by child and family? Is rapid onset/short-term dryness needed for a school trip or sleepover, or is long-term dryness the aim of treatment?
- Urinalysis is not required for all children unless there is a suspicion of diabetes, UTI, or other signs/symptoms of ill health.

General advice

- Emphasise that bedwetting is not the child's fault.
- Explain the importance of adequate fluid intake and advise both the child and parents/carers not to restrict fluid or diet as a treatment for bedwetting. A child's fluid requirements will vary according to factors such as their activity levels, diet, and ambient temperature. A guide to NICE's suggested fluid intake is given in Table 2.
- Encourage children to use the toilet regularly (4–7 times per day is considered normal).
- Rewards, such as star charts or other agreed incentives, can be useful. These should not be for dry nights but for behaviour such as drinking enough or engaging with aspects of other

N O'Flynn, PhD, MRCP, clinical director, National Clinical Guideline Centre for Acute and Chronic Conditions, Royal College of Physicians, London, UK.

Address for correspondence

Norma O'Flynn, Royal College of Physicians, National Clinical Guideline Centre for Acute and Chronic Conditions, 11 St Andrews Place, London, NW1 4LE.

E-mail: norma.oflynn@rcplondon.ac.uk

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Table 1. Bedwetting history and possible interpretations^a

Findings from history	Possible interpretation
Large volume of urine in the first few hours of night	Typical pattern for bedwetting only
Variable volume of urine, often more than once a night	Typical pattern for children and young people who have bedwetting and daytime symptoms with possible underlying overactive bladder
Bedwetting every night	Severe bedwetting, which is less likely to resolve spontaneously than infrequent bedwetting
Previously dry for >6 months	Bedwetting is defined as secondary
Daytime frequency/urgency/wetting; abdominal straining or poor urinary stream; pain passing urine	Any of these may indicate the presence of a bladder disorder such as an overactive bladder or, more rarely (when symptoms are very severe and persistent), an underlying urological disease
Constipation	A common comorbidity that can cause bedwetting and requires treatment (see <i>Constipation in Children and Young People</i> , NICE clinical guideline 99)
Soiling	Frequent soiling is usually secondary to underlying faecal impaction and constipation, which may have been unrecognised
Inadequate fluid intake	May mask an underlying bladder problem, such as overactive bladder disorder, and may impede the development of an adequate bladder capacity
Behavioural and emotional problems	These may be a cause or a consequence of bedwetting. Treatment may need to be tailored to the specific requirements of each child or young person and family
Family problems	A difficult or 'stressful' environment may be a trigger for bedwetting. These factors should be addressed alongside the management of bedwetting
Practical issues	Easy access to a toilet at night, sharing a bedroom or bed, and proximity of parents to provide support are important issues to take into account and address when considering treatment, especially that with an alarm

^aTaken from NICE guideline CG111 on nocturnal enuresis.²

Table 2. Suggested daily intake of drinks for children and young people^a

Age, years	Sex	Total drinks per day, ml
4–8	Female	1000–1400
	Male	1000–1400
9–13	Female	1200–2100
	Male	1400–2300
14–18	Female	1400–2500
	Male	2100–3200

^aTaken from NICE guideline CG111 on nocturnal enuresis.²

treatments being used. Rewards can be used alone for younger children, for example under 7 years, as well as alongside alarms or pharmacological treatment;

- Families may be using nappies/pull-ups at night to manage bedwetting. If so, they should be encouraged to try without these for a few nights if the child has been dry by day for some time.
- No further interventions may be required, as bedwetting will often improve on simple measure alone.
- Remember that parents or carers may also need support.

INTERVENTIONS

Enuresis alarms or desmopressin are the main interventions used to manage nocturnal enuresis.

Alarms

Alarms are recommended as a first-line treatment to be used after advice on fluids, toileting, and rewards, as the long-term success rate is better. They do take longer than pharmacological interventions to work and require effort from both the child and their family. Therefore, they may not be appropriate for families who are already struggling to cope with bedwetting or if parents are directing anger or negativity towards the child. Children and families require access to advice and support in learning to use alarms and monitoring their effectiveness.

When considering the use of alarms, the child involved, as well as the parents/carers, should be informed of the following:

- alarms have a high long-term success rate;
- using an alarm needs sustained commitment, involvement, and effort;
- using an alarm can disrupt sleep and parents/ carers may need to help the child or young person wake to the alarm;
- progress will need to be recorded;
- help will be needed regarding how to set, use, and maintain the alarm, together with what to do when it goes off and how to manage problems;
- it may take a few weeks before the alarm starts to have an effect, and it may take weeks before dry nights are achieved;
- early signs of a response to an alarm may include smaller wet patches, waking to the alarm, the alarm going off later and fewer times per night, and fewer wet nights;
- if bedwetting restarts after stopping treatment, use of the alarm can be restarted without consulting a health professional; and
- how to return the alarm when it is no longer needed.

Desmopressin

Desmopressin has a quicker onset of action and works while the child is taking it, but does not have the same long-term success as alarms. However, it is useful if a rapid-onset effect is required or if an alarm is inappropriate. Repeated courses of desmopressin can be used but the UK

product licence says this should be withdrawn every 3 months. Slow withdrawal, for example, either taking the drug on fewer days a week or reducing the dose taken, reduces the recurrence rate of nocturnal enuresis.

When considering using desmopressin, the child and their parents/carers should be informed of the following:

- many children and young people will experience a reduction in wetness, but many relapse when treatment is withdrawn;
- fluid should be restricted from 1 hour before taking desmopressin until 8 hours after having done so;
- desmopressin should be taken at bedtime;
- how to increase the dose if the response to the starting dose is not adequate;
- treatment should be continued for 3 months; and
- repeated courses can be used.

Alternative interventions

A combination of an alarm and desmopressin should be tried if there is a partial response to the use of an alarm. Children who do not respond to alarms and/or desmopressin should be evaluated by a specialist. Possible further treatments include a trial of imipramine or trialling a combination of desmopressin and an anticholinergic. The guideline is clear that these drugs should only be initiated by a health professional who is experienced in their use. Children using imipramine on a long-term basis require medical review every 3 months.

Children aged under 5 years

The information from prevalence studies indicates that >20% of children will be wetting the bed at the age of 5 years.¹ Reassurance about the common prevalence of bedwetting at this age may be helpful for parents.

The guideline recommends advising parents to start toilet training if it has not already been attempted. Enquiry into why toilet training has not been attempted would be required. Children who are toilet trained by day should try without nappies/pull-ups by night.

Constipation is a common problem that is associated with bedwetting and children should be assessed for its presence. If a child under 5 years is doing the appropriate behaviours associated with dryness, for example, going to the toilet, and not achieving dryness by day and night, further assessment should be considered.

CONCLUSION

GPs will be able to carry out an initial assessment and provide families and children with advice on fluids and toileting. More detailed advice and support is required for alarms. Children with bedwetting may also have daytime wetting, and constipation is a common comorbidity. School nurses and children's continence clinics provide these services for advice, assessment, and treatment in some areas. NICE's website has a joint list of resources for this guideline and its recent guideline on constipation in children³ including a paediatric continence service commissioning guide.

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Competing interests

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