for health professionals

Night Wakings in Children

AUSTRALASIAN sleep ASSOCIATION

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Sleep disturbance in children is a common problem but many symptomatic children remain undiagnosed. Reports in both Australia and America suggest that sleep difficulties in children are discussed in less than 20% of cases during consultation with general practitioners.

Primary care physicians and well child professionals such as maternal child health nurses are well placed to diagnose and provide help to parents to manage sleep problems in their child and to advocate for sleep education in the community.

Normal Sleep and Sleep Requirements in Childhood

Sleep is divided into stages one, two, three and four (called non-rapid eye movement sleep or NREM) and rapid eye movement sleep (REM). Both NREM and REM sleep are important in children's physiological and neuropsychological development.

Sleep requirements change considerably during childhood. Average sleep times across different age groups have been derived from community surveys. The average newborn infant sleeps for 16-18 hours per day with a sleep-wake period in three - four hour cycles throughout the day and night. Infants are generally physically capable of sleeping for more than 6 hours without an overnight feed from approximately age of 6 months. By 18 months of age, children generally have two sleep periods per 24 hour cycle, including overnight and one day time nap.

By school age sleep is usually consolidated into one night time sleep of 11-12 hours. Sleep duration then slowly reduces throughout childhood, from approximately 10 hours in pre-pubescent children to approximately 8 hours by 16 years of age. Individual children and adolescents may benefit from longer sleep times than these average figures.

Night wakings

Night wakings are common during childhood, are part of normal development patterns and are mostly transient. Problematic night wakings are frequent and may persist for months or years. Problematic night wakings in children are frequently amenable to simple treatment measures that can significantly improve the quantity of sleep and quality of life of parents and children.

Types of night wakings

According to the International Classification of Sleep Disorders (ICSD, 2005), sleep disruptions in children can be broken into two main groups: dyssomnias and parasomnias, both of which cause night wakings.

Dyssomnias are sleep disorders involving difficulty initiating or maintaining sleep. These are characterised by an awake, aware child, whose behaviours and those of their caregivers impacts on their ability to fall asleep and to stay asleep throughout the night.

Parasomnias are a manifestation of central nervous system activation during a period of incomplete arousal from sleep, and include sleep talking, confusional arousals, sleep terrors, nightmares, sleep walking and rhythmic movement disorders such as head banging and body rocking.

Dyssomnias

Behaviours used to help children fall asleep at bedtime can become habits that the children will consciously or subconsciously attempt to re-create when they wake during the night ("sleep associations"). These include being rocked, cuddled or soothed by a parent. All individuals wake briefly overnight, but if parental intervention is required for re-settling the wakings can become problematic.

Night terrors vs Nightmares

Parents and health care workers frequently have difficulty differentiating between these types of events. Key differentiating features between these types of events include:

Feature	Night terrors/ Confusional arousals*	Nightmares
Usual Timing	First third of the night	Middle to last third of the night
Stage of Sleep	Deep sleep/ non-REM sleep	REM sleep
Awareness during event	Not responsive to parental presence or reassurance	Fully awake and aware of surroundings; reassured by parental presence
Description of behaviour	Dramatic motor component with thrashing about in bed or getting up, vocalising/ agitation	Asleep during event, then distressed but consolable
Number of events	Can occur more than once per night	Usually infrequent
Recall for events if woken	Amnesia	Vivid recollection of event
Family history	Common (terrors or other parasomnias)	None

*Note: Confusional arousals are a milder form of sleep terrors; the child may vocalise and move about without progressing to a full night terror. Both night terrors and confusional arousals arise out of non-rapid eye movement sleep and can be thought of in a similar way to sleep walking in terms of triggers and treatment.

Triggers for night terrors, confusional arousals and sleep walking

Factors that increase the likelihood of parasomnias include inadequate sleep times (e.g. late nights, a change in sleep habits while on holiday or a chronic habit of insufficient sleep), settling to sleep in an aroused state (being very upset or excited at bedtime), illness (especially fevers) or changes in the environment.

Treatment

The optimal management of sleep disturbance depends on an accurate diagnosis, made through taking a detailed sleep history as outlined above.

1 Behavioural awakenings

Promoting a child's independence in falling asleep at the start of the night will avoid the need for parental intervention when they need to re-settle during the night. These habits are best established at the start of the night and should include:

- Regular predictable bedtime routine, including quiet activities for 30-60 minutes prior to bed. Avoid stimulating activities such as watching television.
- Ensure sleep times are adequate. Working towards an earlier bedtime should occur gradually, advancing only 10-15 minutes at a time.
- A favourite toy or comforter, can be introduced as part of the bedtime routine.
- Ensure the child settles to sleep in a consistent location, preferably in their own bed so that when they wake overnight, they are in the same place they fell asleep.
- Read about suggested methods to help a child fall asleep in their own bed. Consistency is important- parents should not give in and revert to old habits when the child becomes upset. It is often helpful to try and anticipate how the child will respond, and set up a programme that parents will be able to consistently follow.

2 Night terrors, confusional arousals, sleep walking

The first priority is the safety of the child. If the child becomes mobile during the events (walking or running), ensure that outside doors and windows are secure and remove potential obstacles in the room. If the events are frequent enough to require other intervention, some suggestions include:

- Establish the bedtime routines described above when first settling to sleep.
- Work towards an earlier bedtime so that the child gets a little more sleep; even 30 minutes extra may make a big difference.
- During events, ensure that the child is safe, but try not to touch or contain them since this can prolong the event. Children who are sleep walking are often able to be gently guided back to bed without being woken.

- Avoid discussing the events the next day, since this can make children worry about night time behaviours that that they are not aware of and cannot control.

Children who have problematic night wakings that do not respond to these simple recommendations may benefit from referral to a paediatric sleep centre or psychologist specialising in sleep disorders in children. If a sleep disorder appears to be a manifestation of other psychological problems such as pervasive anxiety, or in the context of other medical or mental health disorders, they should always be referred.

Further reading:

1. Blunden S, Lushington K, Lorenzen B, Ooi T, Fung F, Kennedy D. Are sleep problems under-recognised in general practice? Archives of Diseases in Childhood 89 (8): 708-712.
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3. Guilleminault, C. Ed. (1987). Sleep and its disorders in children. Raven Press : New York.
4. Mindell JA, Durand VM. Treatment of childhood sleep disorders: generalization across disorders and effects on family members. J Ped Psychol 1993;18 (6):731-750.
5. Mindell, JA and Owens JA. A Clinical Guide to Pediatric Sleep. Diagnosis and Management of Sleep Problems. Lippincott Williams & Wilkins: Philadelphia.
6. Owens J, Palermo TM, Rosen C. Overview of Current Management of sleep disturbances in children II – behavioural interventions. Current Therapeutic Res 2001;63suppl: B38–B52.
7. American Academy of Sleep Medicine. International classification of sleep disorders, 2nd ed: Diagnostic and coding manual, American Academy of Sleep Medicine, Westchester, IL 2005.

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